Morgan Lewis

Kenneth M. Kulak

Partner +1.215.963.5384 Ken.kulak@morganlewis.com

December 14, 2021

VIA ELECTRONIC FILING

Rosemary Chiavetta, Secretary Pennsylvania Public Utility Commission Commonwealth Keystone Building 400 North Street Harrisburg, PA 17105-3265

Re: Joint Petition of Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company, and West Penn Power Company for Approval of Their Default Service Programs Docket Nos.

Dear Secretary Chiavetta:

Enclosed for filing is the **Joint Petition of Metropolitan Edison Company**, **Pennsylvania Electric Company**, **Pennsylvania Power Company**, **and West Penn Power Company for Approval of Their Default Service Programs** ("Joint Petition"), and accompanying Direct Testimony and Exhibits.

The Companies respectfully request that notice of this filing and deadline for intervention be published in the December 25, 2021 issue of the *Pennsylvania Bulletin*. Copies of the Joint Petition have been served on the parties in the manner indicated, as shown on the attached Certificate of Service.

If you have any questions, please do not hesitate to contact me directly at 215.963.5384.

Very truly yours,

Kenneth M. Kulak

Enclosures

c: Per Certificate of Service

th M. Rill

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

JOINT PETITION OF	:	DOCKET NO. P-2021
METROPOLITAN EDISON COMPANY,	:	
PENNSYLVANIA ELECTRIC	:	DOCKET NO. P-2021
COMPANY, PENNSYLVANIA POWER	:	
COMPANY, AND WEST PENN POWER	:	DOCKET NO. P-2021
COMPANY, FOR APPROVAL OF	:	
THEIR DEFAULT SERVICE	:	DOCKET NO. P-2021
PROGRAMS		

CERTIFICATE OF SERVICE

I hereby certify and affirm that I have this day served copies of the **Joint Petition of Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company, and West Penn Power Company, for Approval of Their Default Service Programs** on the persons listed below, in the manner specified in accordance with the requirements of 52 Pa. Code § 1.54:

VIA FEDERAL EXPRESS (CD and Hardcopy)

Christine M. Hoover
Patrick M. Cicero
Interim Acting Consumer Advocate
Office of Consumer Advocate
5th Floor Forum Place
555 Walnut Street
Harrisburg PA 17101-1923
choover@paoca.org
pcicero@paoca.org

Steven C. Gray
Senior Supervising Assistant Small
Business Advocate
Office of Small Business Advocate
Forum Place – First Floor
555 Walnut Street
Harrisburg, PA 17101
sgray@pa.gov

Richard Kanaskie
Director & Chief Prosecutor
Pennsylvania Public Utility Commission
Bureau of Investigation and Enforcement
Commonwealth Keystone Building
400 North Street
Harrisburg, PA 17120
rkanaskie@pa.gov

VIA FIRST CLASS MAIL (CD and Hardcopy)

Christopher O'Hara
Senior Vice President, General Counsel, Law
& Chief Compliance Officer
PJM Interconnection LLC
2750 Monroe Boulevard
Audubon, PA 19403-2497
christopher.ohara@pjm.com

Elizabeth R. Marx
Executive Director
Coalition for Affordable Utility Services and
Energy Efficiency in Pennsylvania
118 Locust Street
Harrisburg, PA 17101
emarxpulp@palegalaid.net

Stephan S. Dunham
Vice President & General Counsel
The Pennsylvania State University Office of
the General Counsel
108 Old Main
University Park, PA 16802
ssd13@psu.edu

Ian Salada Manager, Engineering Services Pennsylvania State University 101P Office of Physical Plant University Park, PA 16802 ims101@nw.opp.psu.edu

Mike Prinkey, P.E. Energy Engineer The Pennsylvania State University 152M Office of Physical Plant University Park, PA 16802 mip103@psu.edu Charis Mincavage
McNees, Wallace & Nurick, LLC
100 Pine Street
P.O. Box 1166
Harrisburg, PA 17108-1166
cmincavage@mcneeslaw.com
Counsel for MEIUG/PICA/PPUG and WPPII

Deanne M. O'Dell Eckert Seamans Cherin & Mellott, LLC 213 Market Street, 8th Floor P.O. Box 1248 Harrisburg, PA 17101 dodell@eckertseamans.com Counsel for RESA

Thomas J. Sniscak
Hawke McKeon & Sniscak LLP
100 North 10th Street
P.O. Box 1778
Harrisburg, PA 17105
tjsniscak@hmslegal.com
Counsel for Penn State University

Richard Harris
Utility Engineer
The Pennsylvania State University
113 Office of Physical Plant
University Park, PA 16802
rsh3@nw.opp.psu.edu

Chuck Dobbins
Utility Engineer
The Pennsylvania State University
155G Office of Physical Plant
University Park, PA 16802
ccd10@psu.edu

James L. Crist Lumen Group, Inc. 4226 Yarmouth Drive, Suite 101 Allison Park, PA 15101 jlcrist@aol.com Rob Cooper, P.E. Director, Energy and Engineering The Pennsylvania State University 208 Office of Physical Plant University Park, PA 16802 Rec3@psu.edu

AGGRESSIVE ENERGY LLC

VIA FIRST CLASS MAIL ELECTRIC GENERATION SUPPLIERS (CD only)

AEP ENERGY INC. 1 Easton Oval, Suite 200 Columbus, OH 43219

, Suite 200 78 Rapelye Street H 43219 Brooklyn, NY 11231

AGWAY ENERGY SERVICES LLC 5793 Widewaters Parkway Syracuse, NY 13214 ALL AMERICAN POWER & GAS PA LLC 25166 Marion Avenue, Suite 113 Punta Gorda, FL 33950

ALPHA GAS AND ELECTRIC LLC 12 College Road, Suite 100 Monsey, NY 10952 AMBIT NORTHEAST LLC 6555 Sierra Drive Irving, TX 75039

AMERICAN POWER & GAS OF PENNSYLVANIA LLC 10601 Belcher Road South Seminole, FL 33777 AMERICAN POWERNET MANAGEMENT LP 45 Commerce Drive Reading, PA 19610-1038

AP GAS & ELECTRIC (PA) LLC 6161 Savoy Drive, #500 Houston, TX 77036

APN STARFIRST LP 45 Commerce Drive Wyomissing, PA 19610

ASTRAL ENERGY LLC 25 Phillips Parkway, Suite 207 Montvale, NJ 07645

ATLANTIC ENERGY MD LLC 1166 West Newport Center Drive, Suite 112 Deerfield Beach, FL 33442

CAPITAL ENERGY PA LLC 1770 St. James Place, Suite 606 Houston, TX 77056 CALPINE ENERGY SOLUTIONS LLC 401 West A Street, Suite 500 San Diego, CA 92101

CHAMPION ENERGY SERVICES LLC 1500 Ramkin Road, Suite 200 Houston, TX 77073 CATALYST POWER & GAS LLC 600 Franklin Avenue, #268 Garden City, NY 11530 CLEANCHOICE ENERGY INC. 1055 Thomas Jefferson Street, Suite 650

Washington, DC 20007

CHOICE ENERGY LLC 601 SW 9th Street, Suite F Des Moines, IA 50309-4528

CLEVELAND-CLIFFS STEEL LLC

3300 Dickey Road East Chicago, IN 46312 CLEARVIEW ELECTRIC INC. 901 Main Street, Suite 4700

Dallas, TX 75202

COLUMBIA BOROUGH

308 Locust Street Columbia, PA 17512 COMMUNITY ENERGY INC. Three Radnor Corporate Center 100 Matsonford Road, Suite 300 Radnor, PA 19087

CONOCOPHILLIPS COMPANY

600 N. Dairy Ashford CH-1081 Houston, TX 77079 CONSTELLATION NEWENERGY INC.

1310 Point Street, 8th Floor Baltimore, MD 21231

DIRECT ENERGY BUSINESS LLC

1001 Liberty Avenue, Suite 1200

Pittsburgh, PA 15222

DIRECT ENERGY BUSINESS

MARKETING LLC

194 Wood Avenue South, Suite 200

Iselin, NJ 08830

DIRECT ENERGY SERVICES LLC

c/o Eckert Seamans / Dan Clearfield 213 Market Street, 8th Fl Harrisburg, PA 17101 DISCOUNT POWER INC.

6 Armstrong Road Shelton, CT 06484

DUQUESNE LIGHT ENERGY LLC

411 Seventh Avenue, 16-1 Pittsburgh, PA 15203 DYNEGY ENERGY SERVICES (EAST) LLC

6555 Sierra Drive Irving, TX 75039

ECOPLUS POWER LLC

631 Middleton Avenue, Suite 1

New Haven, CT 06513

EDF ENERGY SERVICES LLC

601 Travis Street, Suite 1700

Houston, TX 77002

ELIGO ENERGY PA LLC

201 West Lake Street, Suite 151

Chicago, IL 60606

ENERGY COOPERATIVE ASSOCIATION

OF PENNSYLVANIA

1315 Walnut Street, Suite 1000

Philadelphia, PA 19107

ENERGY COOPERATIVE OF AMERICA INC. 1408 Sweet Home Road, Suite 8 Amherst, NY 14228 ENERGY HARBOR LLC 168 E. Market Street Akron, OH 44308

ENERGY PLUS HOLDINGS LLC 3711 Market Street, Suite 910 Philadelphia, PA 19104 ENERGY SERVICES PROVIDERS INC. 6555 Sierra Drive Irving, TX 75039

ENERGY TRANSFER RETAIL POWER LLC 100 North 10th Street Harrisburg, PA 17105 ENERGYMARK LLC 6653 Main Street Williamsville, NY 14221

ENERPENN USA LLC 7660 Woodway Drive, Suite 471A Houston, TX 77063 ENGIE POWER & GAS LLC P.O. Box 629 920 Railroad Avenue Woodmere, NY 11598-0629

ENGIE RESOURCES LLC 1360 Post Oak Boulevard, Suite 400 Houston, TX 77056 ENGIE RETAIL LLC 1360 Post Oak Boulevard, Suite 400 Houston, TX 77056

ENTRUST ENERGY EAST INC. 1301 McKinney Street, Suite 2950 Houston, TX 77010-3113

EVERYDAY ENERGY LLC 6555 Sierra Drive Irving, TX 75039

FIRST POINT POWER LLC 2000 Chapel View Boulevard, Suite 450 Cranston, RI 02920

FREEPOINT ENERGY SOLUTIONS LLC 3050 Post Oak Boulevard, Suite 1330 Houston, TX 77056

FRONTIER UTILITIES NORTHEAST LLC 20455 State Highway 249, Suite 200 Houston, TX 77570 GATEWAY ENERGY SERVICES CORPORATION 12 Greenway Plaza, Suite 250 Houston, TX 77046

GREAT AMERICAN POWER LLC 2622 McKinney Avenue, Suite 130 Dallas, TX 75204-8630

GREEN MOUNTAIN ENERGY COMPANY 3711 Market Street, Suite 1000 Philadelphia, PA 19104

HOLCIM (US) INC. 6211 N. Ann Arbor Road Dundee, MI 48131-9527 GRID POWER DIRECT LLC 1 Metrotech Center North, 3rd Floor Brooklyn, PA 11201 IDT ENERGY INC.

315 No. Main Street, Suite 300 Jamestown, NY 14701-5124

INSIGHT SOURCING GROUP LLC

5555 Triangle Parkway, Suite 300

Norcross, GA 30092

INTERSTATE GAS SUPPLY INC.

1379 Butter Churn Drive Herndon, VA 20170-2051

JOSCO ENERGY USA LLC

200 Route 17 South, Suite 200C

Mahwah, NJ 07430

LIBERTY POWER DELAWARE LLC

2100 W. Cypress Creek Road, Suite 130

Fort Lauderdale, FL 33309

LIGHT POWER & GAS LLC

1481 47th Street Brooklyn, NY 11219

MC SQUARED ENERGY

SERVICES LLC

175 W. Jackson Boulevard, Suite 240

Chicago, IL 60604

MESSER ENERGY SERVICES INC.

1 Greenwich Street, Suite 200

Stewartsville, NJ 08886

MP2 ENERGY NE LLC

21 Waterway Avenue, Suite 450

The Woodlands, TX 77380-3098

NATIONAL GAS & ELECTRIC LLC

12140 Wickchester Lane, Suite 100

Houston, TX 77079

HUDSON ENERGY SERVICES LLC

5251 Westheimer Road, Suite 1000

Houston, TX 77056

INDEPENDENCE ENERGY GROUP LLC

3711 Market Street, Suite 1000

Philadelphia, PA 19104

INSPIRE ENERGY HOLDINGS LLC

3402 Pico Boulevard, Suite 300

Santa Monica, CA 90405

JACK RICH, INCORPORATED

617 Altamond Boulevard

Frackville, PA 17931

JUST ENERGY PENNSYLVANIA CORP.

5251 Westheimer Road, Suite 1000

Houston, TX 77056

LAND O'LAKES INC.

4001 Lexington Avenue North

Arden Hills, MN 55126-2998

LIBERTY POWER HOLDINGS LLC

2100 W. Cypress Creek Road, Suite 130

Fort Lauderdale, FL 33309

MARATHON POWER LLC

100 Elwood Davis Road

Syracuse, NY 13212

MEDIAN ENERGY PA LLC

1 Lethbridge Plaza, Suite 2

Mahwah, NJ 07430

MIDAMERICAN ENERGY SERVICES LLC

4299 NW Urbandale Drive

Urbandale, IA 50322

NEXTERA ENERGY SERVICES

PENNSYLVANIA, LLC

20455 State Highway 249, Suite 200

Houston, TX 77070

MPOWER ENERGY NJ LLC

NEW WAVE ENERGY CORP.

24 Hillel Place

Brooklyn, NY 11210

NORDIC ENERGY SERVICES LLC

One Tower Lane, Suite 300 Oakbrook Terrace, IL 60181 410 Main Street Buffalo, NY 14203

NTHERM LLC

1624 Market Street, Suite 202

Denver, CO 80202

NITTANY ENERGY LLC

321 N. Front Street

Phillipsburg, PA 16866

PARK POWER LLC

2098 West Chester Pike

Broomall, PA 19008

NORTH AMERICAN POWER AND GAS LLC

1500 Rankin Road, Suite 200

Houston, TX 77073

PILOT POWER GROUP, LLC

8910 University Center Lane, Suite 520

San Diego, CA 92122

PALMCO POWER PA LLC

8751 18th Avenue

Brooklyn, NY 11214

PLANET ENERGY (PENNSYLVANIA)

CORP.

5255 Yonge Street, Suite 1500

PENNSYLVANIA GRAIN PROCESSING LLC

250 Technology Drive Clearfield, PA 16830

Toronto, ON M2N 6P4

POWER UP ENERGY

PENNSYLVANIA LLC

148 New Dorp Lane

Staten Island, NY 10312

PINNACLE POWER LLC

5847 San Felipe Street, # 3700

Houston, TX 77057

PSEG ENERGY SOLUTIONS LLC

80 Park Plaza T4B

Newwark, NJ 07102

POLARIS POWER SERVICES LLC

3 E. Evergreen Road

New City, NY 10956

PURE ENERGY USA PA LLC

3 Columbus Circle, 15th Floor

New York, NY 10019

POWERVINE ENERGY LLC 2100 West Loop South, Suite 800

Houston, TX 06586

RESIDENTS ENERGY LLC

520 Broad Street

Newark, NJ 07102

PUBLIC POWER LLC

6555 Sierra Drive

Irving, TX 75039-2479

ROBINDALE RETAIL POWER

SERVICES LLC 1501 Ligonier Street Latrobe, PA 15650 RELIANT ENERGY NORTHEAST LLC

1000 Main Street Houston, TX 77002

RPA ENERGY INC.

P.O. Box 1508

Huntington, NY 11743

RESPOND POWER LLC

12140 Wickchester Lane, Suite 100

Houston, TX 77079

SANTANNA NATURAL GAS

CORPORATION

7701 San Felipe Boulevard, Suite 200

Austin, TX 78729

ROBISON ENERGY (COMMERCIAL) LLC

One Gateway Plaza, 4th Floor

Port Chester, NY 10573

SHIPLEY CHOICE LLC

100 Kindig Lane Hanover, PA 17331 RUSHMORE ENERGY LLC

P.O. Box 2640

Sugar Land, TX 77478

SMARTESTENERGY US LLC

333 West Washington Street, Suite 140

Syracuse, NY 13202

SFE ENERGY PENNSYLVANIA INC.

100 Milverton Drive, Suite 608

Mississauga, ON L5R 4H1

SOUTH JERSEY ENERGY CO

#1 South Jersey Plaza, Route 54

Folsom, NJ 08037

SMARTENERGY HOLDINGS LLC

2040 Avenue C, #200N

Bethlehem, PA 18017-2118

SPRING ENERGY RRH LLC

1 Blue Slip, Apt. 8H

Brooklyn, NY 11222

SOUTH BAY ENERGY CORP.

700 Veterans Memorial Highway, #210

Hauppauge, NY 11788

STARION ENERGY PA INC.

P.O. Box 845

Middlebury, CT 06762

SPARK ENERGY LLC

12140 Wickchester Lane, Suite 100

Houston, TX 77079

STREAM ENERGY

PENNSYLVANIA LLC

14675 Dallas Parkway, Suite 150

Dallas, TX 75254

STAR ENERGY PARTNERS LLC

3340 W. Market Street

Akron, OH 44333

SUNWAVE GAS AND POWER

PENNSYLVANIA INC.

100 Cambridge Street, 14th Floor

Boston, MA 02114

STATEWISE ENERGY PENNSYLVANIA LLC

608-100 Milverton Drive

Mississauga, ON L5R 4H1

TENASKA POWER
MANAGEMENT LLC
Suite 1100
300 E. John Carpenter Freeway
Irving, TX 75062

SUMMER ENERGY MIDWEST LLC 300 N. Lasalle, Suite 4000, Quarles & Brady LLP Chicago, IL 60654

TITAN GAS LLC 3355 W. Alabama, Suite 500 Houston, TX 77098 TALEN ENERGY MARKETING LLC 600 Hamilton Street, Suite 600 Allentown, PA 18101-2130

TOWN SQUARE ENERGY EAST LLC 3950 E. Riggs Road, Suite 1 Chandler, AZ 85249 TEXAS RETAIL ENERGY LLC 2608 SE J Street Bentonville, AR 72716

VERDE ENERGY USA INC. 12140 Wickchester Lane, Suite 100 Houston, TX 77079 TOMORROW ENERGY CORP. 3151 Briarpark Drive, Suite 100 Houston, TX 77041

VISTA ENERGY MARKETING L P 4306 Yoakum Boulevard, Suite 600 Houston, TX 77006

TRIEAGLE ENERGY LP 6555 Sierra Drive Irving, TX 75039-2479

UGI ENERGY SERVICES LLC 835 Knitting Mills Way Wyomissing, PA 19610 VIRIDIAN ENERGY PA LLC 6555 Sierra Drive Irving, TX 75039-2479

XOOM ENERGY PENNSYLVANIA LLC 11208 Statesville Road, Suite 200 Huntersville, NC 28078

Dated: December 14, 2021

Kenneth M. Kulak (Pa. No. 75509)

Catherine G. Vasudevan (Pa. No. 210254)

Learth M. Lile

Brooke E. McGlinn (Pa. No. 204918)

Morgan, Lewis & Bockius LLP

1701 Market Street

Philadelphia, PA 19103-2921 Telephone No.: 215.963.5384

Fax No.: 215.963.5001

ken.kulak@morganlewis.com

 $\underline{catherine.vasudevan@morganlewis.com}\\$

brooke.mcglinn@morganlewis.com

Counsel for Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company, and West Penn Power Company

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

JOINT PETITION OF

METROPOLITAN EDISON COMPANY DOCKET NO. P-2021-_____

PENNSYLVANIA ELECTRIC COMPANY DOCKET NO. P-2021-_____

PENNSYLVANIA POWER COMPANY DOCKET NO. P-2021-_____

WEST PENN POWER COMPANY DOCKET NO. P-2021-_____

FOR APPROVAL OF THEIR DEFAULT SERVICE PROGRAMS

For the Period June 1, 2023 to May 31, 2027

December 14, 2021

Joint Petition

Met-Ed/Penelec/Penn Power/West Penn St. No. 1 – Direct Testimony of Joanne M. Savage

•	Exhibit JMS-1	Index of the Companies' Response to the Topics Set
		Forth in the Secretarial Letter Issued on January 23, 2020
		at Docket No. M-2019-3007101

- Exhibit JMS-2 Customer Referral Program Agreement
- Exhibit JMS-3 Purchase of Receivables Clawback Charge Calculations

Met-Ed/Penelec/Penn Power/West Penn St. No. 2 – Direct Testimony of James H. Catanach

- Exhibit JHC-1 Proposed Procurement Schedule
- Exhibit JHC-2 CRA International-Bidding Rules
- Exhibit JHC-3 Appendix 1-Part 1 Application
- Exhibit JHC-4 Appendix 2-Part 2 Application
- Exhibit JHC-5 Alternative Energy Portfolio Standards Act Percentages
- Exhibit JHC-6 Long-Term Solar Request for Proposals
- Exhibit JHC-7 Independent Credit Requirement Per Tranche Schedule

Met-Ed/Penelec/Penn Power/West Penn St. No. 3 – Direct Testimony of Wanyun Zhong

• Exhibit WZ-1 Default Service Supplier Master Agreement

Met-Ed/Penelec/Penn Power/West Penn St. No. 4 – Direct Testimony of James D. Reitzes and Nicholas E. Powers

Exhibit JDR- Comparisons of Default Service Full Requirements Auction
 NEP-1 Price to Expected Wholesale Market Costs

Met-Ed/Penelec/Penn Power/West Penn St. No. 5 – Direct Testimony of Patricia M. Larkin

• Exhibit PML-1 Price-to-Compare ("PTC") History

- Exhibit PML-2 Comparison of Three-Month and Six-Month PTC E-Factors
- Exhibit PML-3 Met-Ed Electric Pa. P.U.C. No. 52 ("Tariff No. 52")
 Definitions
- Exhibit PML-4 Penelec Electric Pa. P.U.C. No. 81 ("Tariff No. 81")
 Definitions
- Exhibit PML-5 Penn Power Electric Pa. P.U.C. No. 36 ("Tariff No. 36")
 Definitions
- Exhibit PML-6 West Penn Electric Pa. P.U.C. No. 40 ("Tariff No. 40") Definitions
- Exhibit PML-7 Met-Ed PTC Default Service Rate Rider
- Exhibit PML-8 Penelec PTC Default Service Rate Rider
- Exhibit PML-9 Penn Power PTC Default Service Rate Rider
- Exhibit PML-10 West Penn PTC Default Service Rate Rider
- Exhibit PML-11 Met-Ed Hourly Pricing ("HP") Default Service Rider
- Exhibit PML-12 Penelec HP Default Service Rider
- Exhibit PML-13 Penn Power HP Default Service Rider
- Exhibit PML-14 West Penn HP Default Service Rider Tariff No. 40
- Exhibit PML-15 West Penn HP Default Service Rider Tariff No. 38
- Exhibit PML-16 Met-Ed Default Service Support Rider ("DSS")
- Exhibit PML-17 Penelec DSS Rider
- Exhibit PML-18 Met-Ed Electric Generation Supplier Coordination Tariff ("Supplier Tariff") (Relevant Pages)
- Exhibit PML-19 Penelec Supplier Tariff (Relevant Pages)
- Exhibit PML-20 Penn Power Supplier Tariff (Relevant Pages)
- Exhibit PML-21 West Penn Supplier Tariff (Relevant Pages)
- Exhibit PML-22 Met-Ed/Penelec/Penn Power/West Penn System Total Peak Usage Analysis

- Exhibit PML-23 Met-Ed Commercial Customer Class Pricing Analysis and Time-of-Use Pricing Analysis
- Exhibit PML-24 Penelec Commercial Customer Class Pricing Analysis and Time-of-Use Pricing Analysis
- Exhibit PML-25 Penn Power Commercial Customer Class Pricing Analysis and Time-of-Use Pricing Analysis
- Exhibit PML-26 West Penn Commercial Customer Class Pricing Analysis and Time-of-Use Pricing Analysis
- Exhibit PML-27 Met-Ed Time-of-Use Default Service Rider
- Exhibit PML-28 Penelec Time-of-Use Default Service Rider
- Exhibit PML-29 Penn Power Time-of-Use Default Service Rider
- Exhibit PML-30 West Penn Time-of-Use Default Service Rider
- Exhibit PML-31 Met-Ed/Penelec/Penn Power/West Penn Estimated DSP VI Administrative Costs

Met-Ed/Penelec/Penn Power/West Penn St. No. 6 – Direct Testimony of Tiffanne L.Cowan

- Exhibit TLC-1 Met-Ed Third-Party Data Access Tariff
- Exhibit TLC-2 Penelec Third-Party Data Access Tariff
- Exhibit TLC-3 Penn Power Third-Party Data Access Tariff
- Exhibit TLC-4 West Penn Third-Party Data Access Tariff

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

JOINT PETITION OF METROPOLITAN :

EDISON COMPANY, PENNSYLVANIA : DOCKET NOS. P-2021-

ELECTRIC COMPANY,

PENNSYLVANIA POWER COMPANY
AND WEST PENN POWER COMPANY
FOR APPROVAL OF THEIR DEFAULT
SERVICE PROGRAMS
:

JOINT PETITION OF METROPOLITAN EDISON COMPANY, PENNSYLVANIA ELECTRIC COMPANY, PENNSYLVANIA POWER COMPANY AND WEST PENN POWER COMPANY

> Tori L. Giesler (Pa. No. 207742) Darshana Singh (Pa. No. 330971) FirstEnergy Service Company 2800 Pottsville Pike P.O. Box 16001 Reading, PA 19612-6001 610.921.6658 (bus)

Kenneth M. Kulak (Pa. No. 75509) Catherine G. Vasudevan (Pa. No. 210254) Brooke E. McGlinn (Pa. No. 204918) Morgan, Lewis & Bockius LLP 1701 Market Street Philadelphia, PA 19103-2921 215.963.5384 (bus)

Counsel for Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company and West Penn Power Company

Dated: December 14, 2021

TABLE OF CONTENTS

	F	Page		
I.	INTRODUCTION AND OVERVIEW	3		
II.	DEFAULT SERVICE PROCUREMENT PLAN	7		
	A. Default Service Products B. Residential Class C. Commercial Class D. Industrial Class E. Procurement Schedule And Method F. Supplier Master Agreement G. AEPS Act Requirements H. Independent Evaluator I. Requirements Of PJM J. Contingency Plans	8 9 . 10 . 10 . 12 . 12 . 13		
III.	RATE DESIGN AND COST RECOVERY A. PTC Default Service Rate Rider B. Hourly Pricing Default Service Rider C. Default Service Support Rider D. Solar Photovoltaic Requirements Charge Rider E. Non-Utility Generation ("NUG") Charge Rider F. Reconciliation G. TOU Rates	. 16 . 17 . 17 . 18 . 18 . 18		
IV.	CUSTOMER REFERRAL PROGRAM			
V.	PURCHASE OF RECEIVABLES			
VI.	CAP CUSTOMER SHOPPING	. 23		
VII.	THIRD-PARTY DATA ACCESS TARIFF	. 24		
VIII.	GENERATION SUPPLY ISSUES	. 25		
IX.	NOTICE	. 26		
X.	PROPOSED SCHEDULE	. 27		
XI.	REQUEST FOR WAIVERS	. 27		
XII.	PUBLIC INTEREST CONSIDERATIONS 28			
XIII.	CONCLUSION			

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

JOINT PETITION OF METROPOLITAN

DOCKET NOS. P-2021-

EDISON COMPANY, PENNSYLVANIA ELECTRIC COMPANY, PENNSYLVANIA

POWER COMPANY AND WEST PENN POWER COMPANY FOR APPROVAL OF

THEIR DEFAULT SERVICE PROGRAMS

JOINT PETITION OF METROPOLITAN EDISON COMPANY, PENNSYLVANIA ELECTRIC COMPANY, PENNSYLVANIA POWER COMPANY, AND WEST PENN POWER COMPANY

Pursuant to Pennsylvania's Electric Generation Customer Choice and Competition Act, 66 Pa.C.S. § 2801 *et seq.* (the "Competition Act"), as amended by Act 129 of 2008 ("Act 129"), the default service regulations of the Pennsylvania Public Utility Commission ("Commission") at 52 Pa. Code §§ 54.181-54.190 ("Regulations"), and the Commission's Policy Statement on default service at 52 Pa. Code §§ 69.1801-1817 ("Policy Statement"), Metropolitan Edison Company ("Met-Ed"), Pennsylvania Electric Company ("Penelec"), Pennsylvania Power Company ("Penn Power"), and West Penn Power Company ("West Penn") (each individually a "Company" and collectively, the "Companies"), hereby petition the Commission for approval of their sixth default service programs ("DSP(s)") (hereinafter the "Program(s)" or "DSP VI") as set forth herein. The Companies file this Joint Petition in accordance with their responsibilities as default service providers to establish the terms and conditions under which they will procure default service supplies, provide default service to non-shopping customers, satisfy requirements imposed by the

Alternative Energy Portfolio Standards ("AEPS") Act,¹ and recover all associated costs on a full and current basis for the period from June 1, 2023 through May 31, 2027.

Consistent with the Competition Act, Regulations, Policy Statement, and AEPS Act, the Companies' Programs are designed to produce the least cost over time by procuring a prudent mix of long-term, short-term, and spot-market generation supplies and are structured to satisfy their obligation to furnish adequate and reliable service to default service customers. Accordingly, the Companies respectfully request that the Commission enter an order: (1) granting this Joint Petition; (2) approving the Companies' proposed Programs, including each procurement plan, implementation plan, and contingency plan, as well as the related bidder rules, supplier master agreement ("SMA"), credit documents, and other associated agreements for default service supply from June 1, 2023 through May 31, 2027; (3) approving the Companies' proposed rate design and tariffs for default generation service, including the Companies' proposed time-of-use ("TOU") rate options and recovery of all of the Companies' costs associated with the provision of default service; (4) approving continuation of the Companies' existing Customer Referral Programs ("CRPs") from June 1, 2023 through May 31, 2027, including the cost recovery method approved in their current default service programs ("DSP V Programs");² (5) approving CRA International, Inc. d/b/a Charles River Associates ("CRA") as the independent third-party evaluator for the Companies' Program procurements and The Brattle Group as the independent third-party evaluator

-

¹ 73 P.S. §§ 1648.1 – 1648.8 and related provisions of 66 Pa.C.S §§ 2813-2814.

² See *Joint Petition of Metro. Edison Co.*, *Pennsylvania Elec. Co.*, *Pennsylvania Power Co.*, and West Penn Power Co. for Approval of their Default Serv. Programs for the Period Beginning June 1, 2019 through May 31, 2023, Docket Nos. P-2017-2637855, et al. (Opinion and Order entered Sept. 4, 2018) ("September 2018 Order"). In the September 2018 Order, the Commission approved a partial settlement of the Companies' DSP V proceeding ("DSP V Settlement") and resolved the remaining contested issues, including the residential procurement schedule, continuation of the CRP, and shopping by customers enrolled in each Company's Customer Assistance Program ("CAP"). On February 28, 2019, the Commission entered a Final Order ("February 2019 Order" and together with the September 2018 Order, the "DSP V Orders") adopting rules and procedures for the CAP shopping programs approved in the September 2018 Order and revising the Companies' CRP scripts.

for the Companies' long-term solar procurement; (6) finding that neither the Companies nor their affiliates have withheld from the market any generation supply in a manner that violates federal law; (7) finding that the Programs include prudent steps necessary to negotiate favorable generation supply contracts; (8) finding that the Programs include prudent steps necessary to obtain least-cost generation supply on a long-term, short-term, and spot-market basis; (9) granting a waiver of the rate design provisions of 52 Pa. Code § 54.187 and transmission-related, price-to-compare ("PTC") provisions at 52 Pa. Code §§ 54.182 and 54.187, to the extent necessary; (10) approving the permanent continuation of the Companies' clawback charges related to their purchase of receivables ("POR") programs; (11) approving the Companies' proposed continuation of the rules and procedures for CAP customer shopping established in the DSP V proceeding; and (12) approving the Companies' proposed new tariffs governing access to customer data by third parties who are not licensed electric generation suppliers ("EGS").

I. <u>INTRODUCTION AND OVERVIEW</u>

1. Met-Ed is a wholly owned subsidiary of FirstEnergy Corp. that provides service to more than 580,000 electric utility customers in eastern Pennsylvania. Penelec is a wholly owned subsidiary of FirstEnergy Corp. that provides service to nearly 590,000 electric utility customers in central and western Pennsylvania. Penn Power is a wholly owned subsidiary of the Ohio Edison Company, which, in turn, is a wholly owned subsidiary of FirstEnergy Corp. Penn Power provides service to more than 170,000 electric utility customers in western Pennsylvania. West Penn is a wholly owned subsidiary of FirstEnergy Corp that provides service to approximately 735,000 electric utility customers in western Pennsylvania.

- 2. Each Company is an electric distribution company ("EDC") as defined in the Competition Act and is the electric generation default service provider within its service territory for retail customers who do not choose an alternative EGS or whose EGS fails to provide service.
- 3. The Competition Act became effective on January 1, 1997, and, among other things, restructured the electric utility industry in Pennsylvania by deregulating the generation of electricity, creating the framework for retail customers to choose alternative suppliers of generation, and establishing caps on unbundled rates that EDCs could charge during the transition to competition.
- 4. Section 2806(d) of the Competition Act, 66 Pa.C.S. § 2806(d), required EDCs to file restructuring plans for Commission approval that, in relevant part, "unbundled" (functionally disaggregated) their rates into distribution, transmission, and generation components. Each of the Companies filed restructuring plans which, subject to certain modifications, were approved by the Commission.³
- 5. Following the transition to competition, the Companies retained the obligation to serve as the default service providers for their respective retail customers. The Companies' current Commission-approved DSP V Programs expire on May 31, 2023.⁴ The Companies are proposing a four-year term for their proposed DSP VI, which is the same term length of their currently effective DSP V Programs.⁵

³ See Docket Nos. R-00974008 and R-00974009 (Met-Ed and Penelec) (Order entered October 20, 1998); Docket No. R-00974149 (Penn Power) (Orders entered July 22, 1998 and Sept. 17, 1999); Docket No. R-00973981 (West Penn) (Order entered Nov. 19, 1998).

⁴ September 2018 Order at 2.

⁵ The Policy Statement provides default service program terms should be for two years, unless otherwise directed by the Commission. 52 Pa. Code § 69.1804. The Commission has recently approved longer terms for other default service programs, noting that a four-year term would minimize future litigation expenses and reduce administrative costs. See, e.g., Petition of Duquesne Light Co. for Approval of its Default Serv. Program for the Period from June 1, 2021 through May 31, 2025, Docket No. P-2020-3019522 (Opinion and Order entered Jan. 14, 2021) ("DLC DSP IX Order") at 27; Petition of PECO Energy Co. for Approval of its Default Serv. Program for the Period from June

- 6. Section 54.185(a) of the Regulations provides that a default service provider should file a DSP with the Commission no later than twelve months before its current DSP will expire. To have sufficient time to undertake the competitive procurement process to obtain default generation supplies for service on and after June 1, 2023, the Companies need to have final, approved, unappealable DSPs in place by approximately August 25, 2022. Accordingly, the Companies are filing this Joint Petition to obtain approval by that date.⁶
- 7. On February 26, 2019, the Commission entered an Order at Docket No. M-2019-3007101 to initiate an investigation of potential opportunities to better reflect wholesale cost causation in default service rates and incentivize customer behavior to lower peak demand. In that proceeding, the Commission subsequently requested that EDCs address several topics in upcoming DSP filings. Those topics include wholesale capacity and transmission cost allocation methodologies, TOU rates in the context of electric vehicle ("EV") expansion, intervals of adjustment of default service rates, and CAP customer shopping for generation service. All of these issues are addressed in the testimonies filed by the Companies in support of their Joint Petition.
- 8. This Joint Petition sets forth the Program for each of the Companies and, as such, identifies and describes the Companies' procurement plans, implementation plans, contingency plans, and rate design for the recovery of all reasonable costs on a full and current basis.
- 9. This Joint Petition also incorporates the proposed standard default service SMA; auction rules; requests for proposal ("RFP") rules; associated form agreements; and proposed tariff

^{1, 2021} through May 31, 2025, Docket No. P-2020-3019296 (Opinion and Order entered Dec. 3, 2020) ("PECO DSP V Order") at 30-31.

⁶ See 66 Pa.C.S. § 2807(e)(3.6) (providing that the Commission shall issue a final order approving or disapproving a proposed default service program within nine months of filing).

⁷ Investigation into Default Serv. and PJM Interconnection, LLC Settlement Reforms, Docket No. M-2019-3007101 (Secretarial Letter issued Jan. 23, 2020) ("January 2020 Secretarial Letter").

changes, along with the following direct testimonies supporting various components of the Programs:

- Met-Ed/Penelec/Penn Power/West Penn Statement No. 1, Direct Testimony of
 Joanne M. Savage (DSP V Commitments, Customer Benefits and Notice, Plan
 Term, Customer Referral Program, POR Clawback Charge, CAP Shopping Rules)
- Met-Ed/Penelec/Penn Power/West Penn Statement No. 2, Direct Testimony of
 James H. Catanach (Product Definitions, Procurement Process and Schedule,
 AEPS Act Requirements, Long-Term Solar Procurement, Additional Protections
 Against Supplier Default)
- Met-Ed/Penelec/Penn Power/West Penn Statement No. 3, Direct Testimony of
 Wanyun Zhong (Default Service Supplier Master Agreement, Contingency Plans)
- Met-Ed/Penelec/Penn Power/West Penn Statement No. 4, Direct Testimony of James D. Reitzes, PhD and Nicholas E. Powers, PhD (Analysis of Default Service Supply Plans)
- Met-Ed/Penelec/Penn Power/West Penn Statement No. 5, Direct Testimony of Patricia D. Larkin (Rate Design and Cost Recovery, Time of Use Default Service Rider, Other Related Matters)
- Met-Ed/Penelec/Penn Power/West Penn Statement No. 6, Direct Testimony of Tiffanne L. Cowan (Peak Load Contribution and Network Service Peak Load, Third-Party Data Access Tariff)
- 10. As explained in the Joint Petition and supporting testimonies, the Companies are proposing limited changes to their existing, Commission-approved DSP V Programs.

II. <u>DEFAULT SERVICE PROCUREMENT PLAN</u>

A. Default Service Products

- and 16 below, the Companies seek to procure full-requirements, load-following energy and energy-related products for all default service customers through a competitive procurement process. For procurement purposes, non-shopping load will be segregated into residential, commercial, and industrial customer classes. Each customer class will have its own product specifications, as described below. The load of each class will be divided into tranches, with each tranche constituting a fixed percentage of each Company's default service load corresponding to approximately 50 megawatts ("MW"), although the actual load served will vary based on many factors, including customer migration to EGSs. As explained by Ms. Larkin, the Companies are proposing to maintain the customer class definitions that were approved by the Commission in the DSP V proceeding.
- 12. Consistent with the Companies' current default service plans, winning full-requirements suppliers in the competitive procurement process must fulfill all obligations imposed on a load serving entity ("LSE") by PJM Interconnection, L.L.C. ("PJM") and, as LSEs, will be required to: (i) provide energy, capacity, and transmission service; (ii) pay all ancillary service costs and PJM administrative expenses; and (iii) provide any other services and pay any other fees as required by PJM of an LSE. As explained by Mr. Catanach, with certain limited exceptions for

⁸ As explained in Section III.C., *infra*, the Companies will continue to assume responsibility for Regional Transmission Expansion Plan charges ("RTEP"); Expansion Cost Recovery Charges; Reliability Must Run/generation deactivation charges associated with generating plans for which specific RMR charges begin after July 24, 2014; historical out-of-market tie line, generation, and retail customer meter adjustments; unaccounted for energy; or any Federal Energy Regulatory Commission ("FERC") approved reallocation of PJM RTEP charges related to Docket No. EL05-121-009 (collectively, referred to as "non-market based charges" or "NMB charges"). These NMB charges will be assumed by the Companies for both default service suppliers and EGSs that serve load in the Companies' service areas, and the associated costs will be recovered from customers in a competitively neutral manner through the Companies' non-bypassable Default Service Support ("DSS") Riders.

solar photovoltaic requirements, default service suppliers will also be responsible for meeting 100% of the Tier I and Tier II AEPS Act requirements.

delivery to the PJM load zone that corresponds to the Company with which it has contracted for the sale of power, as follows: "METED_RESID_AGG" for Met-Ed products, "PENELEC_RESID_AGG" for Penelec products, "PENNPOWER_RESID_AGG" for Penn Power products, and "APS_RESID_AGG" for West Penn products. All load zones are located within the control area for which PJM is the regional transmission organization ("RTO"). Winning full-requirements suppliers must be members of PJM and must comply with all regulations, business rules, scheduling protocols, and all other aspects of doing business within PJM.

B. Residential Class

- 14. Each residential class tranche for load that is not served by the Companies' proposed long-term solar procurement includes a 95% fixed-price product, the price for which will be established through the Companies descending-price clock auction process, and a 5% variable-price spot portion. The 5% spot portion will be priced at the hourly PJM real-time zonal locational marginal price ("LMP") for each of the Companies plus a \$20 per megawatt hour ("MWh") adder to cover costs for other supply components associated with serving the contracted load, including capacity, ancillary services, AEPS compliance, and other costs. Residential products, apart from energy obtained through the long-term solar procurement, will have staggered 12- and 24-month terms.
- 15. During DSP VI, the Companies will continue to support the development of the Pennsylvania solar industry by procuring through multi-year, fixed-price power purchase agreements ("PPAs") the energy and solar photovoltaic alternative energy credits ("SPAECs")

generated by one or more new in-state solar photovoltaic projects with total capacity of at least 7 MW and up to 20 MW. The winning project(s) will be selected through a competitive procurement process. The energy generated by the selected project(s) will be paired with spot purchases to satisfy a fixed quantity of residential default service load. The SPAECs procured through the proposed solar PPAs are expected to meet up to an estimated 32% of the Companies' solar AEPS requirements under DSP VI.

16. The RFP for the solar PPAs will use a two-part, competitive bid process in which bidders are first qualified and then permitted to submit a bid. Consistent with the competitive procurement process the Companies are currently using for SPAECs, an independent third-party evaluator will participate throughout the entire procurement process and submit the final results for Commission review and approval. If an RFP bid is accepted and approved, the winning bidder will be required to enter into the PPA provided in Appendix 1 to the solar RFP (Exhibit JHC-6) with the applicable Company.

C. Commercial Class

17. Each commercial tranche features a 100% fixed-priced product, served in approximately 50 MW tranches to be bid through the Companies' descending-price clock auction process. Commercial products will have staggered 6-, 12-, and 24-month terms. Commercial customers with demand less than 100 kilowatts ("kW") are eligible for this product. The Companies are proposing to replace the three-month commercial product in their current supply portfolios with a six-month commercial product to align with their proposed semi-annual rate adjustments for the residential and commercial classes discussed in paragraph 37 below and to smooth out the price swings from the three-month commercial product.

D. Industrial Class

18. The industrial class product is an hourly-priced service ("HPS") based upon the PJM real-time zonal hourly market price. Suppliers will bid for the right to serve a portion of the HPS load for 12-month terms (commencing on June 1 in 2023, 2024, 2025, and 2026). Each tranche will be approximately 100 MW, although the actual load served will vary based on many factors, including customer migration to EGSs. Winning suppliers will be paid the winning price bid in the hourly-priced auction, the hourly PJM real-time zonal LMP, and an additional fixed adder of \$4/MWh to capture the estimated costs of other supply components, including capacity, ancillary services, AEPS compliance, and other costs.

E. Procurement Schedule And Method

- 19. The Companies propose plans for the residential and commercial classes that consist of semi-annual procurements. The first auction for DSP VI will occur in November 2022 due to the timing of the DSP VI filing. From 2023 to 2026, auctions would be conducted in March and September. For the industrial class, the Companies are proposing four procurements occurring in March 2023, 2024, 2025 and 2026. Exhibit JHC-1 of Mr. Catanach's direct testimony provides a detailed breakdown of the proposed procurements.
- 20. The Companies propose to procure the previously described full-requirements default service products through simultaneous, multiple-round, descending-price clock auctions similar to those used, and being used, by the Companies under their current default service plans. The proposed auction process allows suppliers to efficiently switch between the different products being procured by Met-Ed, Penelec, Penn Power, and West Penn. Potential suppliers will have to meet certain credit and financial criteria in order to participate in the auction. Winning bids will be chosen from pre-qualified participants solely on the basis of price (i.e., the low-price bidders

will be the procurement winners). Bidding proceeds in rounds. In a round, the procurement manager announces a price for each product. Participants in the procurement then make bids for the number of tranches that they are willing to supply for each of the specified products at the announced prices. If the number of tranches supplied by all suppliers is greater than the number of tranches needed for a product at a particular price, the price for that product is reduced in the next round. In that round, suppliers are given an opportunity to bid again and are permitted to switch their bids from one product to another, if applicable.

- 21. The format described above is characterized as a "descending clock" auction because prices "tick down" as rounds progress, starting at an initial price and being reduced until the number of tranches that all bidders are willing to supply is just enough to match the load to be supplied.
- 22. The "descending clock" procurement process has many benefits. Its multi-product design allows all products to be procured in a single auction, which provides a cost-effective, economically efficient means to obtain multiple products while also allowing for instantaneous market-based pricing. Suppliers receive feedback from the results of each round. Because pricing is transparent, some suppliers will withdraw, and the least-cost suppliers will prevail. The Companies have successfully employed the descending clock auction to obtain default supplies under their current DSPs, and the Commission is familiar with the process and the results it obtains.
- 23. The Companies' current DSPs employ a 75% load cap for both fixed- and hourly-product auctions, which restricts the amount of supply any one bidder can win in an auction. Mr. Catanach discusses the Companies' proposal to reduce the load cap to 40% on an aggregated load basis across all products in each fixed-price auction. Reducing the load cap for fixed-price auctions will diversify the load to additional suppliers, reduce the concentration risk, and reduce the

potential collateral requirements on any one supplier that could lead to a default. Mr. Catanach also describes the Companies' proposed credit-based tranche cap to limit bidders with poor or no credit ratings from having the ability to bid on a large number of tranches as well as the Companies' proposed Independent Credit Requirement per Tranche ("ICRT") for winning bidders.

F. Supplier Master Agreement

- 24. In this proceeding, the Companies are proposing to continue the use of their current Commission-approved SMAs for their DSPs, with modifications to reflect changes the Companies are proposing for DSP VI in the areas of AEPS compliance, protections against supplier default, and contingency planning.
- 25. As described in the testimony of Mr. Catanach (Met-Ed/Penelec/Penn Power/West Penn Statement No. 2) and Ms. Zhong (Met-Ed/Penelec/Penn Power/West Penn Statement No. 3), the principal differences between the proposed SMAs and the Companies' current Commission-approved SMAs are: (1) modifications to reflect the changes in default service supplier responsibility for AEPS compliance discussed in paragraph 26 of this Joint Petition; (2) the addition of several protections against supplier default, including adoption of a more conservative credit exposure methodology, an ICRT for winning bidders, and a standard supplier assignment agreement; and (3) revisions to introduce a capacity proxy price ("CPP") in the Companies' auctions in the event PJM does not conduct a base residual auction ("BRA") discussed in paragraph 34 below.

G. AEPS Act Requirements

26. In accordance with Section 54.185(e)(1) of the Regulations, the Companies propose to satisfy most of their AEPS Act requirements as part of the solicitation of default service supply. Specifically, winning suppliers of full-requirements default service products in the Companies'

service territories will be responsible for meeting all Tier I and Tier II requirements, including solar photovoltaic requirements, with two exceptions. First, in the first year of DSP VI, Met-Ed, Penelec, and Penn Power will continue to allocate SPAECs obtained through existing long-term contracts that expire on May 31, 2024 to default service suppliers and EGSs on a load ratio basis. Second, the SPAECs that the Companies purchase through their proposed solar PPAs will be allocated to default service suppliers in proportion to the amount of residential load served over the course of the energy year.

H. Independent Evaluator

- 27. Consistent with the Regulations' requirements and the Policy Statement's recommendation, the Companies have retained CRA to be the independent third-party evaluator for their default service procurements. CRA has extensive expertise in the operation of competitive wholesale energy markets and is serving as the independent third-party evaluator for the Companies' current Commission-approved DSPs.
- 28. The Companies have selected The Brattle Group to serve as the independent third-party evaluator for the long-term solar procurement. The Brattle Group has considerable expertise in competitive energy matters and has been involved in several RFP design and management processes, including the procurement of electric power and renewable energy supplies under long-term contracts. The Brattle Group has served as the independent evaluator in past SPAEC procurements held by the Companies.
- 29. The auction and RFP rules that guide the bid solicitation process are designed to comply with the Commission's codes of conduct and to ensure that bidder qualification requirements are fair and nondiscriminatory.⁹

⁹ See 52 Pa. Code §§ 54.186(b)(6)(ii) and 54.186(c)(2).

I. Requirements Of PJM

30. As required by Section 54.185(e)(4) of the Regulations, the Companies' Programs are consistent with the legal and technical requirements of PJM pertaining to the generation, sale, and transmission of electricity. The Companies' proposed SMA requires suppliers to maintain specific qualifications under applicable PJM agreements and rules. Before suppliers may participate in the bid process, they will have to demonstrate that they can fulfill the technical and regulatory requirements of the SMA, including becoming an LSE, as defined under PJM's rules.

J. Contingency Plans

- 31. The Companies propose to continue utilizing the contingency plans in their current Commission-approved DSP V Programs, which address the following possible scenarios: (i) an individual solicitation is not fully subscribed or the Commission rejects the bid results from a solicitation; and (ii) a winning supplier defaults prior to the start of the delivery period or at any time during the delivery period. In addition, for DSP VI, the Companies are proposing an additional contingency plan in the event PJM does not conduct its BRA in time for default service suppliers to incorporate capacity prices into their bids.
- 32. For full-requirements, load-following products, if a scheduled solicitation is not fully subscribed following the initial proposed procurement or if the Commission rejects the bid results from a solicitation, the Companies will rebid the unfilled tranches from that solicitation in the next scheduled procurement for which there is sufficient calendar time to include the tranches. For any unfilled tranches still remaining, the Companies will purchase the necessary physical supply through PJM-administered markets. The Companies will not enter into hedging transactions to attempt to mitigate the associated price or volume risks to serve such unfilled

tranches. The Companies propose to secure any AEPS Act compliance requirements for unfilled tranches at market prices.

- 33. If a winning bidder defaults prior to the start of, or during, the delivery period, the Companies will offer the unfilled tranches to the other qualified bidders who participated in the most recent solicitation of full-requirements, load-following products. The Companies may enter into an agreement with the qualified bidder(s) offering the best terms for the unfilled tranches resulting from the default, provided the prices offered by such bidder(s) are consistent with the original prices at which the unfilled tranches were procured, giving due consideration to changes in market conditions from the time when the original tranches were procured. If the Companies are not able to enter into such an agreement and at least thirty calendar days remain prior to the start of the delivery period, the Companies will seek to bid the defaulted tranches in a separate supplemental competitive solicitation. If insufficient time exists to conduct an additional competitive solicitation, or if the supplemental solicitation is unsuccessful, the Companies will supply the tranches by purchasing power in the PJM-administered markets in the same manner described in the preceding paragraph.
- 34. If PJM does not conduct the BRA in time for default service suppliers to incorporate the auction results in their bids, the CPP will be the average of the capacity prices from the previous two known delivery year capacity market auctions conducted by PJM. The Companies will calculate reconciliations for those default service suppliers impacted by utilizing their daily unforced capacity obligation by class, tranches served by class, and the differential between the CPP and the final capacity price. Once capacity prices are determined through the BRA for the applicable delivery year, the Companies will commence true-ups in the next billing month, which initially may include a "catch up" reconciliation for any months where the BRA was not known.

35. In the event that the Companies' proposed long-term solar procurement is not fully subscribed, the Companies will develop and file a RFP with the Commission to procure SPAECs for a five-year period in an amount designed to satisfy up to an estimated 32% of the solar AEPS requirements for the Companies' default service load. If the RFP is undersubscribed, the Companies will go to the spot market to procure the SPAEC shortfall. The five-year block will be open to projects that are not grid connected. Because the projects may not be grid connected, energy will not be procured in the contingency plan.

III. RATE DESIGN AND COST RECOVERY

A. PTC Default Service Rate Rider

- 36. The Companies currently recover the cost of default service for the residential and commercial customer classes through their respective PTC Default Service Rate Riders (hereinafter "PTC Riders"). The Companies propose to maintain the same rate design for their PTC Riders approved by the Commission in DSP V, with two modifications described below.
- 37. Under DSP V, the Companies adjust default service rates under the PTC Riders each quarter. In accordance with the January 2020 Secretarial Letter, the Companies considered a six-month, instead of three-month, adjustment schedule for default service rates based on the history of the Companies' PTC. Based on this assessment, the Companies found that six-month PTC changes will provide benefits to customers, including price stability, for the reasons discussed in the testimony of Drs. Reitzes and Powers (Met-Ed/Penelec/Penn Power/West Penn Statement No. 4) and Ms. Larkin (Met-Ed/Penelec/Penn Power/West Penn Statement No. 5). Thus, for DSP VI, the Companies are proposing to modify the PTC Riders to adjust rates semi-annually, instead of on a quarterly basis, with rate change filings to be made the latter of forty-five days prior to the effective date or seven days after the last supply auction.

- 38. The Companies are also proposing limited tariff revisions to align their PTC Riders and Hourly Pricing Default Service Riders (the "HP Riders") with the procurement plans discussed in Section II above.
- 39. Pursuant to the Commission's regulations (52 Pa. Code § 54.187(i)) default service rates shall be adjusted on a quarterly basis, or more frequently, for customers with load requirements between 25 and 500 kW. The Commission has approved six-month intervals for rate adjustments for those customers that are not receiving hourly-priced default service proposed by other EDCs.¹⁰ Therefore, the Companies request a waiver of these regulations, to the extent necessary, to implement a semi-annual rate adjustment schedule for the commercial class under the PTC Riders.

B. Hourly Pricing Default Service Rider

40. The Companies currently recover the cost of default service for the industrial customer class through their HP Riders. The HP Riders will apply to commercial and industrial customers with a demand of 100 kW and above.

C. Default Service Support Rider

- 41. The Companies currently have DSS Riders that impose non-bypassable charges. The Companies will continue to assume responsibility for NMB charges for both default service suppliers and EGSs that serve load in the Companies' service areas and recover the costs from customers under the DSS Riders.
- 42. Consistent with the Companies' existing tariffs, the Companies are proposing to continue a flat per-kWh rate design for the residential and commercial customer classes and a

17

¹⁰ See, e.g., DLC DSP IX Order at 15-16; Petition of PPL Elec. Utils. Corp. for Approval of Its Default Serv. Program for the Period from June 1, 2021 through May 31, 2025, Docket No. P-2020-3019356 (Dec. 17, 2020) ("PPL DSP V Order") at 13, 153.

demand-based rate design for the industrial customer class. The demand for the industrial customer class will continue to be the single coincident peak kW network service peak load, as calculated by the Companies in accordance with PJM rules and requirements.

43. The Companies respectfully request a waiver, if necessary, of the Regulations (specifically with regard to the inclusion of transmission costs in the PTC addressed at 52 Pa. Code §§ 54.182 and 54.187) so that they may continue to recover the NMB charges through the non-bypassable DSS Riders rather than the PTC Riders.

D. Solar Photovoltaic Requirements Charge Rider

44. Met-Ed, Penelec, and Penn Power each currently have a Solar Photovoltaic Requirements Charge Rider ("SPVRC Rider") that applies to all delivery service customers and are not proposing any changes to the SPVRC Rider at this time to continue recovering costs associated with legacy solar contracts that expire in 2024 as explained by Mr. Catanach.

E. Non-Utility Generation ("NUG") Charge Rider

45. As explained by Ms. Larkin, Met-Ed and Penelec propose to eliminate their NUG Riders because all NUG contracts have expired and the NUG Charge Riders are no longer active. They also propose limited revisions to eliminate any references to the NUG Riders throughout their tariffs.

F. Reconciliation

- 46. As described in the testimony of Ms. Larkin, the PTC, HP, and SPVRC Riders currently include "E" factor reconciliation mechanisms. The Companies are not proposing any changes to their reconciliation mechanism for the SPVRC Riders.
- 47. Currently, the Companies compare their actual default service supply costs to the revenue that is billed to customers under the PTC and HP Riders and reconcile the differences in

these amounts quarterly, which means that any over-or-under difference will be refunded or recovered beginning three months after the end of the quarter that gave rise to the difference. This timing, in combination with billing cycle lag (the time between when default service supply costs are incurred and revenue to pay those costs is billed) can produce significant fluctuations in the PTC that are not directly related to the underlying cost of default service supply. The Companies are proposing to reconcile the over-and-under-collection component of the PTC and HP Riders on a semi-annual basis. This change will reduce potentially significant fluctuations in default service rates and provide better information for customer shopping decisions.

48. The Commission has recognized that more extended periods for over-and-under-collection reconciliation may help keep default service rates more market reflective, ¹¹ and the Commission has granted other EDCs a waiver from these regulations in recent default service proceedings to implement a semi-annual E-Factor reconciliation for commercial and industrial customers. ¹² The Companies request a waiver of the Commission's regulations at 52 Pa. Code §§ 54.187(i) and (j), to the extent necessary, to implement a semi-annual reconciliation schedule for all customer classes throughout DSP VI to mitigate potential default service rate volatility due to billing cycle lag.

G. TOU Rates

- 49. The Companies currently offer optional TOU pricing rates through their Rider K, Residential TOU Default Service Riders.
- 50. As part of the DSP V Settlement, the Companies agreed to make a specific proposal regarding their residential TOU rate offerings in the earlier of their first base rate case or DSP

1

¹¹ See Investigation of Pennsylvania's Retail Elec. Mkt.: Recommendations Regarding Upcoming Default Serv. Plans, Docket No. I-2011-2237952, at pp. 54-55 (Order entered Dec. 16, 2011).

¹² See, e.g., PECO DSP V Order at 66.

following full implementation of smart meter back-office functionality. The Companies' smart meter back-office functionality is in place, and the smart meter plan are expected to be fully implemented as of December 31, 2022. Accordingly, in compliance with their DSP V settlement commitment, the Companies are proposing to implement new TOU rates in this proceeding to comply with Act 129 and Commission requirements.¹³

- 51. The TOU rate options will be available to residential and commercial default service customers. CAP customers and virtual net metering customers will not be eligible for the reasons explained by Ms. Larkin in her direct testimony (Met-Ed/Penelec/Penn Power/West Penn Statement No. 5). Customers who select the TOU Rider may leave at any time without incurring related penalties or fees. However, if these customers subsequently leave the TOU Rider for any reason, they may not re-enroll for twelve months after switching off the TOU rate.
- 52. The Companies' proposed TOU rates will differentiate prices across three periods (on-peak, off-peak, and super off-peak) shown in the table below that are constant throughout the year.

TOU Pricing Period	Year-Round Days/Hours Included
On-Peak	2 p.m. – 9 p.m.
	Monday through Friday
Super Off-Peak	11 p.m. – 6 a.m.
	Every day
Off-Peak	All other hours

¹³ As explained by Ms. Larkin, since the Commission first approved Rider K, the scope of an EDC's obligation to offer TOU rates to default service customers was the subject of litigation before the Commission and Commonwealth Court. See Petition of PPL Elec. Utils. Corp. for Approval of a New Pilot Time-of-Use Program, Docket No. P-2013-2389572 (Order entered Sept. 11, 2014) (holding that Act 129 did not require PPL Electric Utilities Corp. ("PPL") to offer TOU rates directly to customer-generators); Dauphin Cty. Indus. Dev. Auth. v. Pa. P.U.C., 123 A.3d 1124, 1136 (Pa. Cmwlth. 2015) ("DCIDA") (holding that Act 129 does not authorize default service providers to delegate the obligation to offer TOU rates to customers with smart meters to EGSs); Petition of PPL Elec. Utils. Corp. for Approval of a New Pilot Time-of-Use Program, Docket Nos. P-2013-2389572 and M-2016-2578051 (Secretarial Letter issued Apr. 6, 2017) ("April 2017 Secretarial Letter") (proposing a TOU design for PPL in accordance with the DCIDA decision and noting that the proposed TOU design "may provide future guidance to all EDCs" for incorporation into their own TOU proposals in their individual default service proceedings).

- 53. The Companies defined the on-peak period as 2 p.m. to 9 p.m. on weekdays based on PJM's zonal load data and energy prices over a five-year historic period (2016-2020). Consistent with the January 2020 Secretarial Letter, the Companies' proposed TOU rates include a super off-peak pricing period from 11 p.m. to 6 a.m. every day to encourage EV charging during overnight low-priced energy hours based on the Companies' system load patterns. These TOU pricing periods will be identical for the residential and commercial classes.
- 54. To determine the TOU default supply rates for each period, the Companies will adjust the standard TOU Rider rates for each class using pricing multipliers that reflect the ratios calculated from the Companies' PJM zone spot market prices and the cost of capacity during onpeak hours. The Companies are proposing to allocate the cost of capacity to on-peak hours only to send cost-based price signals and create larger price differentials that are more likely to motivate customers to adjust the time of day they use electricity. The development of the TOU pricing multipliers is discussed in more detail by Ms. Larkin.
- 55. The Companies will source both the standard and TOU default service for residential and commercial customers from the same supply portfolio for each class. TOU rates will be adjusted on a semi-annual basis, synchronized with the PTC Rider adjustment periods for the residential and commercial classes, using the Companies' proposed pricing multipliers. Any mismatches between revenues from TOU rates and supply costs paid to default service suppliers will be recovered or refunded within the existing TOU Rider customer class reconciliation. This approach will mitigate potential large swings in over-and-under collections that could arise if customers switch between standard and TOU default service rates under the PTC Riders.
- 56. Additional details regarding the Companies' proposed TOU Riders are provided in Ms. Larkin's direct testimony (Met-Ed/Penelec/Penn Power/West Penn Statement No. 5).

IV. <u>CUSTOMER REFERRAL PROGRAM</u>

- 57. Each Company currently has a CRP for residential and small commercial customers and proposes to continue offering each one from June 1, 2023 to May 31, 2027.
- 58. Consistent with their current CRPs and the Companies' existing tariffs, the Companies propose to continue to recover CRP costs through an EGS participant fee not to exceed \$30 per enrolled customer with any remaining program costs recovered, on a non-bypassable basis, through the Companies' applicable DSS Riders.

V. PURCHASE OF RECEIVABLES

59. Consistent with the Commission's Policy Statement at 52 Pa. Code § 69.1814, each of the Companies agreed to provide, and the Commission approved, POR programs for residential and small commercial accounts served by EGSs. ¹⁴ Under each of the Companies' existing POR programs, accounts receivable are purchased from participating EGSs at a zero discount rate (meaning the Companies pay the face value of the account receivable regardless of what they are actually able to collect from customers), which eliminates the risk to EGSs of uncollectible accounts expense associated with serving residential and small commercial customers.

A. Purchase Of Receivables Clawback Charge

60. Consistent with the September 2018 Order, the Companies extended the pilot for the POR clawback charge for the four-year period beginning with the twelve-months ended August 31, 2018 and continuing annually through August 31, 2021. The clawback charge is assessed to EGSs whose write-offs as a percentage of revenues are 200% higher than their peers and whose

¹⁴ See Joint Petition of Metro. Edison Co. and Pennsylvania Elec. Co. for Approval of Their Default Serv. Programs, Docket Nos. P-2009-2093053 and P-2009-2093054 (Opinion and Order approving settlement entered Nov. 6, 2009) (Met-Ed and Penelec); Petition of Pennsylvania Power Co. for Approval of its Default Serv. Program, Docket No. P-2010-2157862 (Opinion and Order approving settlement entered Nov. 17, 2010) (Penn Power); Joint Petition of Metro. Edison Co., Pennsylvania Elec. Co., Pennsylvania Power Co., and West Penn Power Co. for Approval of Their Default Serv. Programs, Docket Nos. P-2013-2391368 et al. (Opinion and Order approving settlement entered Jul. 24, 2014) (revising West Penn).

average price per kWh is greater than 150% of the average PTC of the Company that is the default service provider for the customers served by the EGS in question. In addition, as required by the September 2018 Order, the Companies developed and now distribute an EGS-specific customer arrears report with unpaid aged account balances for EGSs participating in the Companies' POR programs.

61. The clawback charge, as approved in the Companies' prior two DSPs, is designed to collect a portion of uncollectible accounts expense from EGSs – specifically, those EGSs whose pricing practices are driving significantly higher write-offs as compared to other EGSs due to the types of offers they make to customers. Any charges assessed under the clawback provision are imposed based on the principle of cost causation. EGSs that have much higher-than-average write-offs and charge prices that are significantly higher than the PTC impose costs that, absent the clawback charge, would be borne entirely by the Companies and their customers. The charge has been effective in achieving the Companies' goal of reducing the uncollectible accounts expense that would otherwise have to be collected from the Companies' customers through retail rates. Accordingly, the Companies propose to continue the clawback charge as a permanent part of their POR programs.

VI. <u>CAP CUSTOMER SHOPPING</u>

- 62. Prior to their DSP V Programs, the Companies allowed CAP customers to shop in the competitive market without restriction. However, effective June 1, 2019, the Companies implemented CAP shopping rules that limit the terms of offers from EGSs in accordance with the Commission's direction in the DSP V Orders.
- 63. On the same day as the February 2019 Order, the Commission issued a Policy Statement on Electric Customer Assistance Program Participant Shopping designed to set

guidelines for CAP participants shopping with EGSs.¹⁵ In the Proposed Policy Statement Order, the Commission outlined uniform CAP shopping policies and requirements for Pennsylvania EDCs.¹⁶

64. For DSP VI, the Companies are proposing to continue the CAP shopping programs approved in the DSP V Orders that are consistent with the guidelines provided in the Proposed Policy Statement Order. EGSs must charge CAP customers a rate for generation service that is always at or below the applicable Company's residential PTC. To ensure EGS compliance with this limitation on rates, the Companies' billing system only accepts rate-ready, percentage-off rates on CAP customer accounts. Also, in accordance with the Proposed Policy Statement Order, EGSs serving CAP customers may not enter contracts that impose early cancellation and termination fees or other fees unrelated to generation service.

VII. THIRD-PARTY DATA ACCESS TARIFF

65. The Commission recently directed the Law Bureau, Bureau of Technical Utility Services, and Office of Competitive Market Oversight to initiate a new proceeding to determine if a safe, acceptable path exists for registered conservation service providers and other third parties to potentially gain access to customer data electronically from EDC data systems, with customer consent.¹⁷ However, in light of the increasing number and variety of requests the Companies are receiving and the time that is likely needed to complete such proceedings, the Companies believe

¹⁵ See Elec. Distribution Co. Default Serv. Plans – Customer Assistance Program Shopping, Proposed Policy Statement and Order, Docket No. M-2018-3006578 (entered Feb. 28, 2019) ("Proposed Policy Statement Order"). The Commission has not yet issued a final CAP shopping policy statement.

¹⁶ The CAP shopping requirements include: (1) a CAP shopping product rate at or below the EDC's PTC for the duration of the contract; (2) a prohibition in EGS-CAP customer contracts against fees unrelated to the provision of electric generation service, including early termination and cancellation fees; and (3) specific options for CAP customers upon expiration of the current contract period, who may (i) enter into another contract with their existing EGS with the same CAP protections, (ii) switch to another supplier offering a contract with the same CAP protections, or (iii) return to default service. Proposed Policy Statement Order at 5, 9-10.

¹⁷ License Application of Enerwise Global Technologies, LLC d/b/a CPower for Approval to Offer, Render, Furnish, or Supply Elec. or Elec. Generation Servs., Docket No. A-2019-3009271 (Final Order entered Oct. 7, 2021).

that a structured framework governing electronic access to the Companies' customer usage and usage-related data by third parties that are not licensed EGSs is appropriate to create now. Accordingly, the Companies are proposing Third-Party Data Access Tariffs.

- 66. The proposed Third-Party Data Access Tariffs would establish a registration process for a non-EGS entity seeking electronic access to customer data. As part of that registration process, the entity would be required to accept all terms and conditions outlined in the proposed tariff, including a warrant that by sending an electronic request for individual customer data to a Company, the entity has obtained valid customer authorization to access or retrieve, or both, data specific to such customer.
- 67. The Companies will provide automated solutions for the third party to register and request customer-specific data and for the Companies to deliver the data securely in electronic form. These automated solutions will adopt the self-service tools that exist on the supplier portal today for EGSs, as well as electronic data interchange protocols, to minimize customer costs.
- 68. The Companies are also proposing several continuing obligations for registered third parties to ensure the confidentiality of customer data. Further details regarding the Third-Party Data Access Tariffs are provided in Ms. Cowan's testimony (Met-Ed/Penelec/Penn Power/West Penn Statement No. 6).

VIII. GENERATION SUPPLY ISSUES

69. Section 2807(e)(3.7)(III) of the Public Utility Code requires the Commission, when approving default service programs, to find that "[n]either the Default Service Provider nor its affiliated interest has withheld from the market any generation supply in a manner that violates federal law." The Companies and their affiliates do not own generation and have not withheld generation supply from the wholesale market in violation of federal law.

IX. NOTICE

- 70. In accordance with Sections 54.185 and 54.188 of the Regulations, the Companies will provide notice of this filing in several ways:
 - Within thirty days of filing this Joint Petition, each of the Companies will provide public notice of the filing by publishing a notice in the major newspapers serving their respective service areas. The notice will contain information about the Companies' tariff filings, their proposed competitive solicitations of generation resources, how the Companies' Programs may affect customers, where the filings are available for public inspection, how comments or complaints can be filed, and how customers can participate in this proceeding.
 - The Companies' Joint Petition and their direct testimony and accompanying exhibits will be posted to the Companies' public internet domain, where it will be available electronically for public inspection.
 - The Companies will provide additional public notice by means of a press release to inform customers of the filing.
 - The Companies have also served copies of this Joint Petition and direct testimony and accompanying exhibits on the Commission's Bureau of Investigation and Enforcement, the Office of Consumer Advocate, the Office of Small Business Advocate, PJM, the Coalition for Affordable Utility Service and Energy Efficiency in Pennsylvania, Met-Ed Industrial Users Group, Penelec Industrial Customer Alliance, Penn Power Users Group, West Penn Power Industrial Intervenors, the Retail Energy Supply Association, the Pennsylvania State University, and all EGSs registered to provide service in their respective service territories.

- The Companies will provide additional notice as directed by the Commission.
- 71. The Companies believe these communication efforts will provide potential interested parties with ample notice as well as an opportunity to participate in the Commission's proceeding addressing the Companies' Programs.

X. PROPOSED SCHEDULE

72. Pursuant to § 2807(e)(3.6) of the Public Utility Code, the Commission will have nine months from the date of this filing to issue a final order. In accordance with that timeline, the Companies suggest the following schedule for this proceeding:

Joint Petition Filing December 14, 2021 Publication in the Pennsylvania Bulletin December 25, 2021 Pre-Hearing Conference January 18, 2022 Other Parties' Direct Testimony February 22, 2022 Rebuttal Testimony March 24, 2022 Surrebuttal Testimony April 6, 2022 Oral Rejoinder and Hearings April 12-13, 2022 Main Briefs May 4, 2022 Reply Briefs May 18, 2022 Recommended Decision July 1, 2022 **Commission Order** August 25, 2022

XI. REQUEST FOR WAIVERS

73. To the extent necessary, the Companies request: (1) a waiver of 52 Pa. Code §§ 54.187(h) – (j) in order to continue to use their proposed residential, commercial, and industrial customer class definitions, which the Commission has previously approved; (2) a waiver of 52 Pa. Code §§ 54.187(i) – (j) to implement semi-annual rate adjustments and reconciliation for commercial customers under the PTC Rider and semi-annual reconciliation of HP Rider over-and-

under collections for the industrial class; and (3) a waiver of the Commission's requirements at 52 Pa. Code §§ 54.182 and 54.187 with regard to including certain transmission-related costs in the PTC so that they may recover the NMB charges through the non-bypassable DSS Riders rather than the PTC Riders as previously explained.

XII. PUBLIC INTEREST CONSIDERATIONS

74. The Companies' proposed Programs are in the public interest for all of the reasons previously explained and for the following reasons: (1) the Programs will utilize a competitive and transparent bid solicitation process; (2) the Programs will utilize fair and nondiscriminatory bidder qualification requirements; (3) an independent third party evaluator will be utilized for all procurements; (4) the Programs are consistent with the legal and technical requirements established by PJM and align with its planning year; (5) the Programs provide for compliance with AEPS requirements; (6) the Programs provide for hourly or semi-annual adjustments of the default service rate components, as applicable (subject to the waiver for commercial customers served under the PTC Riders as previously discussed); (7) the Programs include viable contingency plans; (8) the Programs ensure that the PTC is designed to recover all default service costs (subject to the waiver for certain transmission-related costs, as previously explained); (9) the Programs have a procurement schedule that diversifies the times when procurements occur; (10) the Programs utilize a prudent mix of long-term, short-term, and spot-market generation supply to yield the least cost to customers over time; and (11) the Companies are providing ample notice of their proposed Programs to interested parties.

XIII. <u>CONCLUSION</u>

75. Pursuant to the requirements of 66 Pa. C.S. § 2807(e)(3.7), the Companies request that the Commission enter an order: (1) granting this Joint Petition; (2) approving the Companies'

proposed Programs, including each procurement plan, implementation plan, and contingency plan, as well as the related bidder rules, SMA, credit documents, and other associated agreements for default service supply from June 1, 2023 through May 31, 2027; (3) approving the Companies' proposed rate design and tariffs for default generation service, including recovery of all of the Companies' costs associated with the provision of default service; (4) approving continuation of the Companies' existing CRPs and associated cost recovery; (5) approving CRA as the independent third-party evaluator for the Companies' default supply procurements and The Brattle Group as the independent third-party evaluator for the Companies' long-term solar procurement; (6) finding that neither the Companies nor their affiliates have withheld from the market any generation supply in a manner that violates federal law; (7) finding that the Programs include prudent steps necessary to negotiate favorable generation supply contracts; (8) finding that the Programs include prudent steps necessary to obtain least-cost generation supply on a long-term, short-term, and spot market basis; (9) finding that the Companies' proposed TOU rate options for the residential and commercial classes satisfy the Companies' obligations under 66 Pa.C.S. § 2807(f)(5); (10) granting a waiver of the rate design provisions of 52 Pa. Code § 54.187 and transmission-related PTC provisions at 52 Pa. Code §§ 54.182 and 54.187, to the extent necessary; (11) approving the continuation of the Companies' clawback charges within their supplier tariffs; (12) approving the continuation of the Companies' current CAP shopping rules; and (13)

approving the Companies' proposed tariffs governing non-EGS entities' access to customer data maintained by the Companies.

Respectfully submitted,

Tori L. Giesler (Pa. No. 207742)

Jenth M. Lile

Darshana Singh (Pa. No. 330971)

FirstEnergy Service Company

2800 Pottsville Pike

P.O. Box 16001

Reading, PA 19612-6001

610.921.6658 (bus)

tgiesler@firstenergycorp.com

singhd@firstenergycorp.com

Kenneth M. Kulak (Pa. No. 75509)

Catherine G. Vasudevan (Pa. No. 210254)

Brooke E. McGlinn (Pa. No. 204918)

Morgan, Lewis & Bockius LLP

1701 Market Street

Philadelphia, PA 19103-2921

215.963.5384 (bus)

ken.kulak@morganlewis.com

catherine.vasudevan@morganlewis.com

brooke.mcglinn@morganlewis.com

Counsel for Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company and West Penn Power Company

Dated: December 14, 2021

DB1/ 126159411.3

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

METROPOLITAN EDISON COMPANY Docket No. P-2021
PENNSYLVANIA ELECTRIC COMPANY
Docket No. P-2021
PENNSYLVANIA POWER COMPANY
Docket No. P-2021
WEST PENN POWER COMPANY
Docket No. P-2021
DEFAULT SERVICE PROGRAMS
June 1, 2023 to May 31, 2027

Direct Testimony Of Joanne M. Savage

List of Topics Addressed

DSP V Commitments
Customer Benefits and Notice
Plan Term
Customer Referral Program
Purchase of Receivables Clawback Charge
Customer Assistance Program Shopping Rules

TABLE OF CONTENTS

		Page
I.	INTRODUCTION AND BACKGROUND	1
II.	SUMMARY OF DSP AND COMPLIANCE WITH DSP V COMMITMENTS AND OBLIGATIONS	4
III.	CUSTOMER BENEFITS AND NOTICE	8
IV.	PLAN TERM	10
V.	CUSTOMER REFERRAL PROGRAM	11
VI.	POR CLAWBACK CHARGE	12
VII.	CUSTOMER ASSISTANCE PROGRAM SHOPPING RULES	17
VIII.	CONCLUSION	18

1	DIRECT TESTIMONY
2	OF
3	JOANNE M. SAVAGE

4 I. <u>INTRODUCTION AND BACKGROUND</u>

- 5 Q. Please state your name and business address.
- 6 A. My name is Joanne M. Savage, and my business address is 2800 Pottsville Pike, Reading,
- 7 Pennsylvania.

8 Q. By whom are you employed and in what capacity?

9 A. I am employed by FirstEnergy Service Company as the Director of the Rates and 10 Regulatory Affairs Department – Pennsylvania. This department provides regulatory 11 support for each of FirstEnergy Corp.'s wholly owned Pennsylvania distribution operating 12 Companies, which are: Metropolitan Edison Company ("Met-Ed"), Pennsylvania Electric Company ("Penelec"), Pennsylvania Power Company ("Penn Power"), and West Penn 13 Power Company (individually referred to as "Company" and in any combination as the 14 15 "Companies"). I report directly to the Vice President, Rates and Regulatory Affairs and am responsible for the development, coordination, preparation, and presentation of the 16 Companies' rate-related matters before the Pennsylvania Public Utility Commission 17 18 ("Commission") and New York Public Service Commission. I am also responsible for the 19 Companies' tariffs, including developing retail electric rates, rules, and regulations as well 20 as their uniform application and interpretation.

Q. What is your educational background?

21

- A. I received a Bachelor of Science in Accounting and Finance from Albright College and a
- 23 Master of Business Administration in Corporate Finance from Alvernia University. I have

been employed by FirstEnergy Service Company since 2005. During the period of my employment, I have held various positions of increasing responsibility in the Rates and Regulatory Affairs Department. In March 2019, I was named to my current position. My work experience is more fully described in Appendix A of my testimony.

5 Q. Have you ever testified before the Commission?

6 A. Yes. I have testified before the Commission in various rate-related proceedings.

7 Q. On whose behalf are you testifying in this proceeding?

8 A. I am testifying on behalf of Met-Ed, Penelec, Penn Power, and West Penn. My testimony 9 equally applies to all of the Companies, unless otherwise stated.

10 Q. What is the purpose of your direct testimony?

11 My testimony will describe the following elements of the Companies' sixth default service A. 12 programs ("DSPs") (hereinafter "DSP VI") that are the subject of these proceedings: (i) 13 compliance with Commission directives and settlement commitments arising from the 14 Companies' fifth DSP proceedings ("DSP V") decided in Docket Nos. P-2017-2637855 15 (Met-Ed), P-2017-2637857 (Penelec), P-2017-2637858 (Penn Power), and P-2017-16 2637866 (West Penn); (ii) customer benefits and notice; (iii) plan term; (iv) the Customer Referral Program ("CRP"); (v) the purchase of receivables ("POR") clawback charge; and 17 18 (vi) Customer Assistance Program ("CAP") participant shopping rules.

1	Q.	On J	anuary 23, 2020, the Commission issued a Secretarial Letter requesting that		
2		electric distribution companies ("EDCs") address several topics in upcoming DSP			
3		filing	s. Have the Companies addressed those topics?		
4	A.	Yes.	The January 2020 Secretarial Letter requested the Companies and other EDCs		
5		addre	ss the following topics:		
6 7		(1)	Cost allocation based on peak load contribution ("PLC") and network service peak load ("NSPL");		
8 9		(2)	The manner in which time of use ("TOU") rates for electric vehicle operators may be made available;		
10 11		(3)	How each EDC's DSP proposal complies with the "prudent mix" requirements under the Pennsylvania Public Utility Code ("Code");		
12 13 14 15		(4)	Analysis and history of the price paid by customers for the EDC's default service (the "Price to Compare" ("PTC")), including consideration of the benefits of an adjustment to the PTC every six months to reflect current costs instead of an adjustment every three months;		
16 17 18		(5)	The issues and concerns raised by the Commission in prior proceedings relating to shopping for electric generation service by customers participating in universal service programs; and		
19 20 21		(6)	Recent Commission rulings relating to the scripts used in EDC standard offer customer referral programs to encourage customers receiving default service to shop with electric generation suppliers ("EGSs").		
22		Becau	ise these topics are addressed in this proceeding by different witnesses, I have		
23		attach	ed an exhibit to my testimony (Met-Ed/Penelec/Penn Power/West Penn Exhibit JMS-		
24		1) tha	at lists the topics and identifies each witness who addresses the topics. In my		
25		testim	nony, I will address Topic Nos. 5 and 6 from the above list.		

¹ Investigation into Default Serv. and PJM Interconnection, LLC Settlement Reforms, Docket No. M-2019-3007101 (Secretarial Letter issued Jan. 23, 2020) ("January 2020 Secretarial Letter").

1 Q. Have you prepared any exhibits to accompany your testimony?

- 2 A. Yes. Met-Ed/Penelec/Penn Power/West Penn Exhibits JMS-1 through JMS-3 were
- 3 prepared by me or under my supervision and are described in detail later in my testimony.

4 II. SUMMARY OF DSP AND COMPLIANCE WITH DSP V COMMITMENTS AND OBLIGATIONS

6 Q. Please describe the Companies' default service obligations.

A. The Companies are obligated to arrange for and provide electric generation service (default service) to all customers within their service territories who do not select an EGS or who return to default service after being served by an EGS that becomes unable or unwilling to serve. By law, the Companies are required to file a plan with the Commission that sets forth how they will meet their default service obligations, including a strategy for procuring generation supply, a schedule for implementation, and a rate design to recover the Companies' reasonable costs.

Q. Why are the Companies filing new DSPs?

15 A. The Companies' current DSPs (collectively, the "DSP V Programs") will expire on May
16 31, 2023. To comply with the Commission's default service regulations, the Companies
17 must file new DSPs to establish supply plans to obtain market-based generation supply for
18 their customers that choose not to, or are unable to, shop for generation service not less
19 than 12 months prior to the conclusion of their currently effective Commission-approved
20 DSP V Programs.²

7

8

9

10

11

12

13

14

² 52 Pa. Code § 54.181-54.189.

For the most part, the Companies propose to continue the framework of their existing DSP V Programs, which, as noted above, were previously approved by the Commission. In addition, the Companies have used the Commission's default service regulations,³ the associated Policy Statement,⁴ the Electricity Generation Customer Choice and Competition Act (the "Competition Act"), Act 129 of 2008 ("Act 129"),⁵ and the January 2020 Secretarial Letter as guides in developing their proposed DSPs. As explained in the direct testimony submitted by the Companies in this proceeding, the Companies believe that the DSPs set forth in their filing: (1) comply with the Commission's default service regulations and Policy Statement, as well as applicable provisions of the Competition Act and Act 129; (2) are consistent with Commission decisions in similar prior proceedings; and (3) are in the public interest.

- Q. Please describe the DSP V Settlement commitments and Commission directives in the DSP V Orders that are relevant to the Companies' proposed DSPs in this proceeding, and explain how the Companies have complied with their obligations related thereto.
- A. The provisions and the Companies' compliance actions are as follows:

³ See Joint Petition of Metro. Edison Co., Pennsylvania Elec. Co. (Penelec), Pennsylvania Power Co., and West Penn Power Co. for Approval of their Default Serv. Programs for the Period Beginning June 1, 2019 through May 31, 2023, Docket Nos. P-2017-2637855, et al. (Opinion and Order entered Sept. 4, 2018) ("September 2018 Order"). In the September 2018 Order, the Commission approved a partial settlement of the Companies' DSP V proceeding ("DSP V Settlement") and resolved the remaining contested issues, including the residential procurement schedule, continuation of the CRP, and shopping by customers enrolled in the Companies' CAPs for products priced above the PTC. On February 28, 2019, the Commission entered a Final Order ("February 2019 Order" and together with the September 2018 Order, the "DSP V Orders") adopting rules and procedures for the CAP shopping programs approved in the September 2018 Order and revising the Companies' CRP scripts.

⁴ Commission Policy Statement on Default Service, 52 Pa. Code §§ 69.1801- 69.1817 ("Policy Statement").

⁵ 66 Pa.C.S. § 2801 et. seq.

As part of the DSP V Settlement, the Companies agreed to put forth a specific proposal regarding their residential TOU rate offerings in the earlier of their first base rate case or DSP proceeding following full implementation of smart meter back-office functionality. The Companies' smart meter back-office functionality is in place, and the smart meter plan is expected to be fully implemented as of December 31, 2022. Accordingly, in compliance with their DSP V commitment, the Companies are proposing to implement new TOU rates in this proceeding to comply with Act 129 and Commission requirements. The Companies' witness, Ms. Patricia Larkin, will explain the proposal for residential and small commercial default service customers in her direct testimony (Met-Ed/Penelec/Penn Power/West Penn Statement No. 5).

1.

2. Consistent with the September 2018 Order, the Companies extended the pilot for the POR clawback charge for the four-year period beginning with the twelve-months ended August 31, 2018 and continuing annually through August 31, 2021. The clawback charge is assessed to EGSs whose write-offs as a percentage of revenues are 200% higher than their peers and whose average price per kilowatt hour ("kWh") is greater than 150% of the average PTC of the Company that is the default service provider for the customers served by the EGS in question. The results of the pilot are reviewed later in my testimony, where I also discuss the Companies' proposal to continue the clawback charge in DSP VI. In addition, as required by the September 2018 Order, the Companies developed EGS-specific customer arrears reports with unpaid aged account balances for EGSs participating

in the Companies' PORs.	The Companies have provided these reports to POR-
participating EGSs on a gu	arterly basis since October 19, 2018.

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

4.

3.

In the DSP V Orders, the Commission adopted rules and procedures for CAP customer shopping programs where CAP customers may only enter a contract with an EGS for a rate that is at or below the applicable Company's PTC and does not contain any early termination, cancellation, or other fees. Those rules imposed new requirements for EGSs who choose to serve CAP customers, including use of the Companies' "rate-ready" EDC consolidated billing, and established contractexpiration- and change-notice procedures. The Companies will routinely update their sync lists of suppliers' customers, Eligible Customer Lists, and account number access portals to allow EGSs to identify CAP customers and tailor products and service options for those customers in accordance with the DSP V Orders. The Companies implemented the CAP rate protections and other CAP shopping rules consistent with the DSP V Orders effective June 1, 2019, the start date of DSP V. As discussed later in my testimony, the Companies are not proposing any revisions to their existing Commission-approved CAP shopping programs in this proceeding. The February 2019 Order required the Companies to modify the CRP scripts for the program administrator and the Companies' customer service representatives ("CSRs"). For DSP V, the Companies modified those scripts to incorporate the

specific language and disclosures prescribed by the February 2019 Order.

III. CUSTOMER BENEFITS AND NOTICE

2	Q.	Are the Companies proposing any changes to their DSP V Programs that will benefit
3		customers?
4	A.	Yes. The Companies are proposing several changes to their DSP V Programs that will
5		provide customer benefits, including:

- an introduction of credit enhancements as described in the direct testimony of James H. Catanach (Met-Ed/Penelec/Penn Power/West Penn Statement No. 2);
- a new TOU option as described in the direct testimony of Patricia M. Larkin (Met Ed/Penelec/Penn Power/West Penn Statement No. 5);
 - a change to the frequency of the PTC rate from quarterly to semi-annual updates as described in the direct testimony of Patricia M. Larkin (Met-Ed/Penelec/Penn Power/West Penn Statement No. 5);
 - an introduction of a Solar Purchase Power Agreement as described in the direct testimony of James H. Catanach (Met-Ed/Penelec/Penn Power/West Penn Statement No. 2) and James D. Reitzes and Nicholas E. Powers (Met-Ed/Penelec/Penn Power/West Penn Statement No. 4); and
 - a continuation of the CRP, POR Clawback Charge and CAP Shopping rules as described below.

Q. Please describe how the Companies will provide notice to customers of this DSP filing.

A. Pursuant to 52 Pa. Code § 54.188(e)(1), the Companies must provide all customers with notice of their DSP filings in a manner similar to that described in 52 Pa. Code § 53.68. Accordingly, within thirty days of filing their Joint DSP VI Petition, each of the Companies will provide public notice of the filing by publishing a notice in the major newspapers

serving their respective service areas. The notice will contain information about the Companies' Joint Petition; the Companies' proposed competitive solicitations of generation resources; how the Companies' plans may affect customers; where the filings are available for public inspection; how comments or complaints can be filed; and how customers can participate in this proceeding. Additionally, the Companies' Joint Petition and supporting testimony and exhibits will be posted on each Company's public internet domain, where those materials will be available electronically for public inspection. Finally, the Companies are providing additional public notice by means of a press release. In accordance with 52 Pa. Code § 54.185(c), the Companies are also serving complete copies of their Joint Petition on the Pennsylvania Office of Consumer Advocate ("OCA"), the Pennsylvania Office of Small Business Advocate ("OSBA"), the Commission's Bureau of Investigation and Enforcement ("I&E"), PJM Interconnection L.L.C., and all EGSs registered to provide service in the Companies' service territories. As a courtesy, the Companies are also serving complete copies of their Joint Petition on the Coalition for Affordable Utility Service and Energy Efficiency in Pennsylvania, the Met-Ed Industrial Users Group, the Penelec Industrial Customer Alliance, the Penn Power Users Group, and the West Penn Power Industrial Interveners (collectively, the "Industrials"), the

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

A.

Q. Please describe the proposed customer notices that will be provided for any default service rate changes.

Pennsylvania State University ("PSU"), and the Retail Energy Supply Association.

The Companies will continue to submit tariff supplements to recover the costs reasonably incurred in acquiring electricity at market prices the later of forty-five days prior to the effective date of each change in their default service rate, seven days after the last supply

auction for that delivery period, or more frequently. The tariff supplements will be accompanied by the calculations that convert procurement plan results into retail rates. Written notice of the submission of these tariff supplements will be provided to the OCA, OSBA, I&E, the Industrials, PSU, and other parties included on the service list of this proceeding. The tariff supplements will be posted on the Companies' public internet domain when they are filed with the Commission. In addition, the Companies will continue to post the filed PTC rates for the residential and commercial classes on the Commission's website at www.papowerswitch.com. Also, within one business day of the effective date of the revised PTC for the residential and commercial customer classes, the revised PTC will be posted on the Companies' public internet site. Consistent with the Companies' current practice, as approved in their DSP V Programs, customers will be provided notice, via bill message, that new default service rates will take effect. The notices will enable customers to analyze how the new rates will affect their bills and provide an opportunity for them to seek competitive alternatives from EGSs.

15 IV. PLAN TERM

16 Q. What is the proposed term of DSP VI?

- 17 A. If approved, DSP VI would span the forty-eight month period of June 1, 2023 through May
 18 31, 2027. This term is consistent with the four-year DSP V term approved by the
 19 Commission in its September 2018 Order.
- 20 Q. What are the benefits of a four-year DSP term?
- A. As recently noted by the Commission, a four-year DSP term would minimize future litigation expenses and reduce administrative costs due to fewer DSP filings/proceedings

as compared to shorter-term DSPs, which must be filed more frequently.⁶ A four-year DSP term is permitted under the Policy Statement, which states that DSPs should be for two-year periods unless the Commission directs otherwise.⁷ The Commission has recently approved longer terms for other default service programs, including the Companies' DSP V.⁸

V. CUSTOMER REFERRAL PROGRAM

1

2

3

4

5

6

7 Q. Are the Companies proposing to continue the CRP in DSP VI?

8 Yes. The Companies propose to continue the CRP throughout DSP VI (i.e., May 31, 2027, A. 9 the proposed end date of DSP VI). The Companies' current CRP is consistent with Section 10 69.1815 of the Commission's Policy Statement on default service, which provides: "[t]he public interest would be served by consideration of customer referral programs in which 11 retail customers are referred to EGSs". An extension of the CRP is consistent with the 12 13 Commission's conclusion in the Companies' DSP V proceeding that continuation of the 14 CRP with the script improvements set forth in the February 2019 Order was in the public interest and compliant with the Commission's guidance and regulations. 10 15

⁶ See, e.g., Petition of Duquesne Light Co. for Approval of Its Default Serv. Plan for the Period from June 1, 2021 through May 31, 2025, Docket No. P-2020-3019522, at 27 (Opinion and Order entered Jan. 14, 2021); Petition of PECO Energy Co. for Approval of Its Default Serv. Program for the Period from June 1, 2021 through May 31, 2025, Docket No. P-2020-3019290, at 30-31 (Opinion and Order entered Dec. 3, 2020).

⁷ 52 Pa. Code § 69.1804.

⁸ September 2018 Order 2, at 61; see also note 8, supra.

⁹ 52 Pa. Code § 69.1815.

¹⁰ See, e.g., September 2018 Order at 31-32; February 2019 Order at 38-42. The January 2020 Secretarial Letter directed EDCs to review standard offer customer referral program scripts in their upcoming DSP filings in light of the Commission's "most recent statement on SOP scripting" in the February 2019 Order. See January 2020 Secretarial Letter at 10. The Companies' current CRP scripts reasonably present the opportunity to enroll in the CRP to customers and incorporate appropriate customer protections in accordance with the DSP V Orders.

1 Q. What is the Customer Referral Program Agreement ("CRP Agreement")?

A. The CRP Agreement is the contract established between each Company and qualified EGSs that wish to participate in the CRP. The CRP Agreement outlines the terms and conditions to which a supplier must agree and meet to qualify to serve load through the CRP.

6 Q. Are the Companies proposing any modifications to the CRP Agreement?

Yes. Minor modifications are being made to extend the date of the CRP Agreement between the Companies and participating EGSs through May 31, 2027, and to support the Companies' proposal to modify the PTC rate change from quarterly to semi-annually, as discussed more fully in the direct testimony of Patricia Larkin (Met-Ed/Penelec/Penn Power/West Penn Statement No. 5). Met-Ed/Penelec/Penn Power/West Penn Exhibit JMS-2 reflects the limited changes proposed to the CRP Agreement.

13 VI. POR CLAWBACK CHARGE

14 Q. Please describe the POR program included in the Companies' supplier tariffs.

15 A. Consistent with the Commission's Policy Statement at 52 Pa. Code § 69.1814, each of the
16 Companies agreed to provide, and the Commission approved, POR programs for
17 residential and small commercial accounts served by EGSs. 11 Under each of the
18 Companies' existing POR programs, accounts receivable are purchased from participating
19 EGSs at a zero discount rate (meaning, the Companies pay the face value of the account

¹¹ See Joint Petition of Metro. Edison Co. and Pennsylvania Elec. Co. for Approval of Their Default Serv. Programs, Docket Nos. P-2009-2093053 and P-2009-2093054 (Opinion and Order entered Nov. 6, 2009); Petition of Pennsylvania Power Co. for Approval of Its Default Serv. Programs, Docket No. P-2010-2157862 (Opinion and Order entered Nov. 17, 2010); Joint Petition of Metro. Edison Co., Pennsylvania Elec. Co., Pennsylvania Power Co., and West Penn Power Co. for Approval of Their Default Serv. Programs, Docket Nos. P-2013-2391368, et al. (Opinion and Order entered July 24, 2014).

receivable regardless of what they are actually able to collect from customers), which eliminates the risk to EGSs of uncollectible accounts expense associated with serving residential and small commercial customers. As such, the POR program offers a significant benefit to participating EGSs.

A.

Q. How do the Companies recover uncollectible accounts expense associated with theirPOR programs?

- Adjusted allowances for uncollectible accounts expense were approved in the Companies' most recent base rate cases. These Commission-approved allowances split uncollectible expense into a portion attributable to base distribution rates and a separate portion attributable to default service and POR rates, with the default service/POR-related portion recovered through the Companies' Default Service Support ("DSS") Riders. The default service/POR-related portion of uncollectible accounts expense for each Company is incurred, in part, as a result of the Companies' POR programs.
- Q. Please explain the purpose of the POR clawback charge as it relates to the default
 service/POR-related portion of uncollectible accounts expense.
 - A. The clawback charge, as approved in the Companies' prior two DSPs, was designed to collect a portion of uncollectible accounts expense from EGSs—specifically, those EGSs whose pricing practices are driving significantly higher write-offs as compared to other EGSs. Any charges assessed under the clawback provision are imposed based on the principle of cost causation. EGSs that have much higher-than-average write-offs and charge prices that are significantly higher than the PTC impose costs that, absent the clawback charge, would be borne entirely by the Companies and their customers.

Q. Please describe the POR clawback charge calculation.

A.

A.

The clawback charge calculation is a two-prong test. The first prong identifies those EGSs in the POR program whose average percentage of write-offs as a percentage of revenues over a twelve-month period exceed 200% of the average percentage of total EGS write-offs as a percentage of revenues per operating company. The second prong of the test identifies those EGSs identified under the first prong whose average price charged over the same twelve-month period exceeds 150% of the operating company average PTC for the period. For those EGSs that fail both prongs of the test, the annual clawback charge assessed is the difference between that EGS's actual write-offs and their actual write-off amount calculated at 200% of the average EGS percentage of write-offs per operating company. The charge recovers the amount of EGS write-offs over 200% of the operating company average and is billed to the EGS annually.

Q. What do the Companies do with the amounts collected from EGSs?

This depends on the situation. A Company retains the amount charged to EGSs if that Company's actual uncollectible accounts expense is higher than the amount of uncollectible expense in base rates, plus the amount included in the DSS Riders for the twelve-month period ended August 31st of each year. Alternatively, a Company will refund the EGS charge to customers through a reduction to its DSS Rider if that Company's actual uncollectible expense is less than the amount of uncollectible expense recovered in base rates and the DSS Rider.

- Q. A reconciliation of uncollectible accounts expense is prohibited under provisions of Section 1408 of the Code, 66 P.S. § 1408. Is that what you are doing?
- A. No. Section 1408 prohibits the full reconciliation of all revenues and expenses associated with uncollectible accounts expense. The clawback charge is a supplemental means of cost recovery which relieves customers of having to pay for the uncollectible accounts expense driven by EGS pricing that result in excessive write-offs. The uncollectible accounts expense billing procedure and mechanism is clearly not a reconciliation of any type and is thus permissible under the Code.

- The uncollectible accounts expense cost recovery also provides customers with the benefits of any collections obtained from EGSs by passing back a portion of those collections under certain circumstances. In this way, the Companies will collect uncollectible accounts obligations through the three sources of cost recovery available: (1) base distribution rates; (2) DSS Rider rates; and (3) POR clawback billings, if applicable. This clawback provision is designed to serve as a customer protection from those EGSs that are driving uncollectible accounts expense to unreasonable levels.
- Q. What were the results of the POR clawback charge over the four-year pilot period,and what did the Companies do with the amounts collected?
- A. Table 1 below presents a summary of the POR clawback charges assessed for the twelve months ended August 31 in each year of the pilot, including the amount of the charges, the number of EGSs that incurred the charges, and a description of the disposition of the funds collected from EGSs.

Year	ME	PN	PP	WP	Total	# of EGSs
2018	\$ 358,477	\$ 322,083	\$ 13,522	\$ 238,340	\$ 932,422	17
	Refunded	Refunded	Refunded	Refunded		
2019	\$ 330,187	\$ 504,433	\$ 28,404	\$ 132,369	\$ 995,393	19
	Refunded	Refunded	Refunded	Refunded		
2020	\$ 231,211	\$ 111,597	\$ 76,090	\$ 195,054	\$ 613,953	25
	Refunded	Retained	Retained	Retained		
2021	\$ 104,865	\$ 122,330	\$ 25,138	\$ 203,642	\$ 455,975	22
	Refunded	Refunded	Retained	Refunded		

Met-Ed/Penelec/Penn Power/West Penn Exhibit JMS-3 provides the clawback charge calculation for each year of the pilot and the uncollectible expense analysis that determined whether the Companies would retain or refund to customers the charges collected from EGSs.

6 Q. Are the Companies proposing to continue the POR clawback charge?

A.

Yes. The POR clawback charge reduces the Companies' and customers' exposure to unreasonable EGS-driven uncollectible accounts expense by providing a source of cost recovery from those same EGSs who are benefiting from the PORs, while at the same time incentivizing EGSs to consider the results of their pricing programs as they relate to a customer's ability to pay. In turn, the revenues generated by this mechanism accrue to customers over time by reducing uncollectible accounts expense that would otherwise have to be collected from the Companies' customers through retail rates. The charge has been effective in achieving the Companies' goal of reducing the uncollectible expense borne by the Companies and their customers. As such, the Companies are proposing to continue the clawback charge as a permanent element of its POR program as outlined in their existing supplier coordination tariffs.

1 Q. Are the Companies proposing any changes to the POR clawback charge calculation?

2 A. No. The Companies believe the charge is effective as currently designed.

3 VII. <u>CUSTOMER ASSISTANCE PROGRAM SHOPPING RULES</u>

4 Q. Are the Companies' CAP customers able to shop for electric generation supply today?

A. Yes. Prior to their DSP V Programs, the Companies allowed CAP customers to shop in the competitive market without restriction. However, as I discussed earlier in my testimony, effective June 1, 2019, the Companies implemented CAP shopping rules that limit the terms of offers from EGSs in accordance with the Commission's direction in the

DSP V Orders.

On the same day as the February 2019 Order, the Commission issued a Policy Statement on Electric Customer Assistance Program Participant Shopping designed to set guidelines for CAP participants shopping with EGSs.¹² In the Proposed Policy Statement Order, the Commission outlined uniform CAP shopping policies and requirements for Pennsylvania EDCs. The CAP shopping requirements include: (1) a CAP shopping product rate at or below the EDC's PTC for the duration of the contract; (2) a prohibition in EGS-CAP customer contracts against fees unrelated to the provision of electric generation service, including early termination and cancellation fees; and (3) specific options for CAP customers upon expiration of the current contract period, who may (i) enter into another contract with their existing EGS with the same CAP protections, (ii) switch to another

¹² See Elec. Distrib. Co. Default Serv. Plans – Customer Assistance Program Shopping, Proposed Policy Statement and Order, Docket No. M-2018-3006578 (entered Feb. 28, 2019) ("Proposed Policy Statement Order"). The Commission has not yet issued a final CAP shopping policy statement.

- supplier offering a contract with the same CAP protections, or (iii) return to default service. 13
- 3 Q. Are the Companies proposing any changes to CAP shopping as part of this proceeding?
- 5 A. No. The Companies' CAP shopping program approved in the DSP V Orders is consistent 6 with the guidelines provided in the Proposed Policy Statement Order. EGSs must charge 7 CAP customers a rate for generation service that is always at or below the Company's 8 residential PTC during the contract. To ensure EGS compliance with this limitation on 9 rates, the Companies' billing system only accepts rate-ready, percentage-off rates on CAP 10 customer accounts. Also, in accordance with the Proposed Policy Statement Order, EGSs 11 serving CAP customers may not enter into contracts that impose early cancellation and 12 termination fees or other fees unrelated to generation service. This prohibition ensures that 13 the overall rate charged to a CAP customer does not exceed the applicable PTC.

14 VIII. CONCLUSION

- 15 Q. Does this complete your direct testimony?
- 16 A. Yes, it does.

¹³ Proposed Policy Statement Order at 5, 9-10.

Witness: Joanne M. Savage

Appendix A

Appendix A

Resume: Education and Experience of Joanne M. Savage

Education:

2006	Bachelor of Science Degree in Accounting and Finance – Albright College
2010	Master of Business Administration Degree in Corporate Finance – Alvernia University

Experience:

6/05 – 5/06	Intern – Rates & Regulatory Affairs – Pennsylvania – FirstEnergy Service Company
5/06 – 2/11	Analyst – Rates & Regulatory Affairs – Pennsylvania – FirstEnergy Service Company
2/11 – 4/16	Analyst – Rates & Regulatory Affairs – Ohio – FirstEnergy Service Company
5/16 – 3/19	Manager, Revenue Requirements – Rates & Regulatory Affairs – Ohio – FirstEnergy Service Company
3/19 – present	Director – Rates & Regulatory Affairs –Pennsylvania – FirstEnergy Service Company

Prepared and presented testimony in the following rate-related cases:

Pennsylvania Public Utility Commission Cases: Docket Nos.

M-2010-2162846

M-2010-2162848

M-2010-2186760

M-2010-2186764

M-2010-2186772

M-2011-2228497

M-2011-2228617

P-2019-3012628

C-2020-3019347

M-2021-3026675

Public Utilities Commission of Ohio Cases: Case Nos.

13-2145-EL-CSS

14-1297-EL-SSO

16-925-EL-UNC

17-993-EL-UNC

18-857-EL-UNC

19-361-EL-RDR

New York Public Service Commission Case: Case No:

Case 21-E-0252

Index of the Companies' Response to the Topics Set Forth in the Secretarial Letter Issued on January 23, 2020 at Docket No. M-2019-3007101

Secretarial Letter Topic	Met- Ed/Penelec/Penn Power/West Penn Witness	DSP VI Filing Reference
1. "[W]e request that the large EDCs, in their next DSP filings, provide information and analysis on their NSPL/PLC cost allocation calculations and why they use such cost allocation for consideration by the Commission. This analysis should also include a discussion on why any large EDC may still be using monthly summary usage data instead of actual customer usage data to determine PLCs/NSPLs, and what steps and timelines, would be needed to implement a change to their current practice, as well as any associated costs."	Tiffanne H. Cowan	Met-Ed/Penelec/Penn Power/West Penn St. 6, pp. 2-4.
Secretarial Letter, p. 5.		
2. "While the adoption rate of EVs is a matter of speculation, it is indisputable that during the timeframe covered by the upcoming DSP's, EV use will increase. With that said, we find that TOU rates, especially in the context of EV expansion, needs to be explored further, especially whether the lack of TOU rate offerings for operators of EVs presents a barrier to EV adoption. Accordingly, we urge all parties participating in the upcoming DSP proceedings to consider how EV specific TOU rate offerings could be made available to consumers."	Patricia M. Larkin	Met-Ed/Penelec/Penn Power/West Penn St. 5, pp. 17- 18.
Secretarial Letter, pp. 6-7.		
3. "We request that the EDCs include in their filings evidence showing how its DSP proposal complies with the prudent mix requirements of the Public Utility Code and case law." Secretarial Letter, p. 8.	James H. Catanach	Met-Ed/Penelec/Penn Power/West Penn St. 2, pp. 3- 16.
Secretarian Letter, p. 6.	James D. Reitzes and Nicholas E. Powers	Met-Ed/Penelec/Penn Power/West Penn St. 4, pp. 20- 31.
4. "We find that it may be worthwhile for the Commission and the large EDCs to closely examine the history of PTC changes over the past few years to see if a 6-month PTC change interval would have provided more stability.	James D. Reitzes and Nicholas E. Powers	Met-Ed/Penelec/Penn Power/West Penn St. 4, pp. 15- 19.
Accordingly, we request that the large EDCs include in their upcoming DSP filings a 10 year history of their PTC changes and assess the benefits of a 6 month PTC change compared to a 3-month PTC change. EDCs are also free to propose other PTC change intervals that change no more frequently than on a quarterly basis."	Patricia M. Larkin	Met-Ed/Penelec/Penn Power/West Penn St. 5, pp. 5-6.
Secretarial Letter, pp. 8-9.		

C F A C C C C C C C C C C C C C C C C C	While not a topic of the proceeding at this docket, the Commission wants to take this opportunity to remind the EDCs and all interested parties to assess how Customer Assistance Program (CAP) customers can participate in the competitive market in future DSP proceedings. This topic has been addressed in various dockets, and we refer all parties to these dockets for more information. In addition, parties should review the most recent Commission actions on this topic, including how CAP-shopping was addressed in the Commission's proposed CAP-shopping policy statement. While we acknowledge that the proposed policy statement is unlikely to be final and effective in time for some of the apcoming DSP proceedings, we still think the EDCs and interested stakeholders should consider the issues and concerns raised by the Commission and commenters in that conceeding in any future DSP proceeding. We suggest that all the EDCs with CAP programs, as well as interested stakeholders, consider the issues and concerns raised by the Commission in the above-noted prior proceedings when developing their CAP shopping proposals in the upcoming DSP filings.	Joanne M. Savage	Met-Ed/Penelec/Penn Power/West Penn St. 1, pp. 7, 17-18.
ti li li ((Another topic not included in this docket, but again we hink it prudent to mention because it has been a subject itigated in past DSP proceedings, is Standard Offer Program SOP) scripting language. These are the scripts used by the EDCs and their vendor call centers to refer customers to the SOPs. We direct the EDCs and all interested parties to our most recent statement on SOP scripting as found in the 2018-2019 FirstEnergy DSP proceeding; specifically, the February 28, 2019 order, in that proceeding. We suggest that EDCs, when preparing their upcoming DSP filings, review the Commission's actions in the above-noted FirstEnergy proceeding and to include in their filings analyses of their SOPs, the current scripting, and any proposed scripting that adequately informs customers about the SOPs while maintaining important safeguards and protections."	Joanne M. Savage	Met-Ed/Penelec/Penn Power/West Penn St. 1, p. 7.

Customer Referral Program Agreement

Residential and Small Commercial Customer Class Full Requirements

for

{Insert EDC Here}

CUSTOMER REFERRAL PROGRAM AGREEMENT

THIS CUSTOMER REFERRAL PROGRAM AGREEMENT ("Agreement") is made and entered into as of {Insert Date} ("Effective Date") by and between {Insert EDC Name Here} ("Company"), a corporation organized and existing under the laws of the Commonwealth of Pennsylvania and ______ ("Customer Referral Supplier")) a corporation organized and existing under the laws of [State of or Commonwealth of.....]. The Company and the Customer Referral Supplier hereinafter are sometimes referred to collectively as the "Parties," or individually as a "Party."

WITNESSETH:

WHEREAS, the Company is an electric public utility engaged, inter alia, in providing retail electric service within its service territory located in the Commonwealth of Pennsylvania; and

WHEREAS, the Pennsylvania Public Utility Commission ("PaPUC" or "Commission") has found that it would serve the public interest for the Company to establish a Customer Referral Program to refer customers that contact the Company to licensed Electric Generation Suppliers ("EGSs"), -and the PaPUC has approved the Program; and

WHEREAS, the undersigned EGS desires to participate in the Customer Referral Program.

WHEREAS, the Customer Referral Supplier is licensed by the PaPUC to offer and supply competitive retail electric services in Pennsylvania, and is a registered supplier under the Company's Supplier Coordination Tariff.

NOW, THEREFORE, in consideration of the mutual covenants and promises set forth below, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereto, intending to be legally bound, hereby covenant, promise and agree as follows:

Article 1 Definitions

Any capitalized or abbreviated term not elsewhere defined in this Agreement shall have the definition set forth in this Article.

- 1.1 **Agreement** This Agreement for an EGS to become a Customer Referral Supplier and to participate in the Company's Customer Referral Program together with attached Appendices.
- 1.2 **Applicable Legal Authorities** Those federal and Pennsylvania statutes and administrative rules, regulations and Orders that govern the electric utility industry in Pennsylvania, as they may be amended from time to time.
- 1.3 **Business Day** Any day on which the Company's corporate offices are open for business.
- 1.4 **Company** Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company or West Penn Power Company individually, or in combination as the "Companies."
- 1.5 **Consolidated EDC Billing** Shall have the meaning set forth in the Company's Supplier Tariff as filed with the PaPUC and available on the Company's website.
- 1.6 **Customer** Any person or entity who enters a contractual agreement with the Company to receive retail electric service including, without limitation, all persons or entities taking service under a retail tariff that are eligible to receive competitive electricity supply from an EGS or Default Service in accordance with the Applicable Legal Authorities.
- 1.7 **Customer Referral Customer(s)** Customers who are provided competitive retail electric service as part of the Customer Referral Program in accordance with the terms of this Agreement.
- 1.8 **Customer Referral Program or "CRP"** The Customer Referral Program as defined in this agreement
- 1.9 **Customer Referral Program Implementation Team** customer service representatives trained in Pennsylvania customer choice issues and processes and the Customer Referral Program, employed by the Company directly or as independent contractors to implement the Customer Referral Program on behalf of the Company.

- 1.10 Customer Referral 12 Month Fixed Price The 12 month fixed price set forth each quartersemi-annually in the Confirmation Sheet, which shall be in the form provided in Appendix A. The fixed price includes all EGS charges for Basic Electricity Supply including generation charges, market based transmission charges, and all Independent System Operator charges and gross receipt taxes. The fixed price shall be billed to an enrolled customer for 12 consecutive billing periods.
- 1.11 **Customer Referral Supplier** An entity that: (i) has accepted the obligations and associated rights to provide competitive retail electric service under the terms of this Agreement to retail customers in accordance with the Applicable Legal Authorities; (ii) has entered into this Agreement with the Company; (iii) is a full member of PJM and registered with PJM as a Load Serving Entity; (iv) is licensed by the PaPUC to offer and supply electric generation services in Pennsylvania, and (v) is in compliance with the terms and conditions of the Company's Supplier Tariff.
- 1.12 **Customer Referral Supplier Representative** Any officer, director, employee, consultant, contractor, or other agent or representative of the Customer Referral Supplier having actual or apparent authority to act on behalf of the Customer Referral Supplier in connection with the Customer Referral Supplier's performance under this Agreement. To the extent the Customer Referral Supplier is a division or group of a Company, the term Customer Referral Supplier Representative does not include any person in that Company who is not part of the Customer Referral Supplier's division or group.
- 1.13 **Default Service** Shall mean Default Service as defined in 52 Pa. Code § 54.182.
- 1.14 **Electric Distribution Company or "EDC"** A public utility providing facilities for the transmission and distribution of electricity to retail Customers in Pennsylvania subject to the jurisdiction of the Commission.
- 1.15 **Electric Generation Supplier or "EGS"** A person or entity that is duly certified by the Commission to offer and provide competitive retail electric service to retail customers located in the Commonwealth of Pennsylvania.
- 1.16 **Electronic Data Interchange or "EDI"** The standardized format for the electronic transfer of data between different entities.
- 1.17 **FERC** The Federal Energy Regulatory Commission.
- 1.18 **Price-to-Compare** Shall mean "price-to-compare" as defined in 52 Pa. Code § 54.182.
- 1.19 **Participating EGSs** All EGSs that have executed this Agreement.
- 1.20 **PJM** PJM Interconnection, LLC.
- 1.21 **Rate Schedule(s)** The Customer rate schedule(s) in the electric service tariff of the Company on file with the Commission as they may be modified from time to time.

- 1.22 **Rate Ready** Shall have the meaning set forth in the Company's Supplier Tariff as filed with the PaPUC and available on the Company's website.
- 1.23 **Residential Customer** Customers on: Rate Schedules RS and GS-Volunteer Fire Company and Non-Profit Ambulance Service, Rescue Squad and Senior Center Service. (Metropolitan Edison Company and Pennsylvania Electric Company); Rate Schedules RS and GS Special Provision for Volunteer Fire Companies, Non-Profit Senior Citizen Centers, Non-Profit Rescue Squads, and Non-Profit Ambulance Services (Pennsylvania Power Company); or Domestic Service Schedule 10 and Rate Schedule 20 special provision for Volunteer Fire Company, Non-Profit Ambulance Service, Non-Profit Rescue Squad and Non-Profit Senior Citizen Center (West Penn Power Company), each as defined in the electric service tariff of the Company on file with the Commission as they may be modified from time to time.
- 1.24 **Seller** means the Customer Referral Supplier.
- 1.25 **Service Territory** The service territory in which the Company is authorized to furnish retail electric service in Pennsylvania.
- 1.26 Small Commercial Customer Customer on Rate Schedule GS-Small (Metropolitan Edison Company and Pennsylvania Electric Company); General Service Small (Pennsylvania Power Company); or General Service Schedule 20 (West Penn Power Company) as defined in each respective Company's electric service tariff on file with the Commission as such may be modified from time to time.
- 1.27 **Supplier Tariff** –The PaPUC-approved Electric Generation Supplier Tariff for the Company.

Article 2 General Terms and Conditions

2.1 Term

This Agreement shall be effective upon execution by the Parties and with the approval of the PaPUC and shall terminate on May 31, 20232027. This Agreement may be terminated prior to the end of each such term by the existence of any of the following conditions: (1) if the Customer Referral Program is terminated by governmental action; (2) if the Customer Referral Supplier is no longer a certified EGS; (3) if either Party is in material breach of this Agreement or the Supplier Tariff; or (4) pursuant to Article 3 of this Agreement.

2.2 Customer Referral Supplier Participation and Suspension of Participation

Customer Referral Suppliers will be able to begin participation in the Program effective on the following dates each year: June 1, September 1, or December 1-or March 1. In order to participate, a Customer Referral Supplier must provide initial notice of its intent to participate in the Customer Referral Program at least sixty days prior to its desired effective date. A Customer Referral Supplier that has previously participated in the Company's Customer Referral Program must provide notice of its intent to participate at least thirty days prior to its desired effective date. A Customer Referral Supplier may suspend its participation in the Customer Referral Program effective on those same fourtwo dates (June 1, September 1, or December 1 or March 1) and must provide notice of its intent to suspend participation at least thirty days prior to its desired effective suspension date. Notice of participation or suspension of participation shall be provided in the Form of Appendix C attached hereto.

2.3 Supplier Tariff

Except as otherwise stated herein, all the terms and conditions of the Company's Supplier Tariff, as filed with the PaPUC and available on the Company's website, and as modified from time to time with the approval of the Commission, are incorporated herein by reference, are in full force and effect and are binding upon the Parties for the duration of this Agreement.

2.4 CRP Charges – Calculation

Each Company will incur the following types of cost related to the Customer Referral Program: (1) capital and <u>start upstartup</u> costs, such as costs associated with programming, development of phone scripts, administration of developing third party

vendor arrangements, etc. (the "Initial CRP Costs"); and (2) ongoing monthly costs, such as third party contractor charges and continuing internal administrative costs (the "Ongoing CRP Costs"; collectively, "CRP Costs"). The Companies will update their estimate of the CRP Costs prior to soliciting EGS participation in the CRP.

Each Company will track and record its CRP Costs separately, and each Company will recover CRP Costs from Customer Referral Suppliers by assessing a standard, percustomer charge (the "CRP Charge"), not to exceed \$30. The CRP Charge is subject to change by order of the Pa PUC or a Court of competent jurisdiction, and such change might be retroactive. A Customer Referral Supplier will be assessed a CRP Charge for every CRP customer enrollment that has been completed for that Customer Referral Supplier. The CRP Charge will be calculated on an annual basis, with a new CRP Charge becoming effective June 1 of each year.

The CRP Charge will be calculated by dividing CRP Costs by a projected number of customer enrollments in the CRP during the applicable year. Three cost components will be included in the CRP calculation: (1) Initial CRP Costs; (2) Ongoing CRP Costs; and (3) a reconciliation component for each year beyond the first year of the CRP (the "Reconciliation Component"). The Initial CRP Costs will be recovered utilizing a 12-month amortization period, and will include a return at the legal rate of interest.

In the event that the actual CRP Costs result in a cost per customer that exceeds the CRP Charge, the Companies will recover the resulting difference between their actual costs and the amount recovered by their CRP Charge through a non-bypassable surcharge applied to the bills of all Customers eligible to participate in the CRP.

2.5 CRP Charges

- (a) Consistent with the calculation methodology in Section 2.4, the Companies will provide updates of the CRP Charge to the Customer Referral Suppliers annually and will communicate the annual CRP Charge to Customer Referral Suppliers through a modification to Appendix B attached hereto, by May 1 of each year.
- (b) The Companies shall charge any Customer Referral Supplier in confirmed violation of the CRP Agreement an hourly fee, consistent with the Technical Support and Assistance Charge allowed for under the Supplier Tariff, for time spent researching, manually verifying and confirming a Customer Referral Customer's account. The Companies will notify the affected Customer Referral Supplier and such Supplier will have ten days to submit a formal objection to the Companies' initial determination. The formal objection shall be processed consistent with Section 18 of the Companies' Supplier Coordination Tariffs.
- (c) The Companies shall charge any Customer Referral Supplier in confirmed violation of the CRP Agreement all legal fees resulting from customer complaints from Customer Referral Customers caused by the action or inaction of the Customer Referral Supplier.

2.6 Company Obligations and Authority

The Company shall:

(a) Record the Customer's intent to participate and then transmit the following to each participating EGS via a secure website post or secure EDI transmittal: (1) the Customer's intent to participate; (2) the Company's twenty-digit customer identification number; and (3) the Customer's billing address. This transmission will provide the EGS with a valid referral for processing an enrollment.

- (b) Bill the Customer Referral Customers on behalf of the Customer Referral Supplier under Rate Ready Consolidated EDC Billing utilizing the Customer Referral 12-Month Fixed Price in effect when the Customer enrolls, as set forth in Appendix A (the "Confirmation Sheet");
- (c) Assign to the Customer Referral Supplier all eligible Customer accounts enrolled by the Customer Referral Supplier, with the requisite Customer consent, consistent with the Supplier Tariff as filed with the PaPUC and available on the Company's website;
- (d) Inform Residential and Small Commercial Default Service Customers that contact the Company regarding a high bill, a new service request, or electric choice inquiry, that they have the ability to purchase power from an EGS and offering such Customers the opportunity to have their call transferred to the Company's Customer Referral Program Implementation Team;
- (e) Have the Customer Referral Program Implementation Team inform the customer that the Company can refer the customer to an EGS with a 12-month fixed price that is below the EDC's current Price-To-Compare default service rate.
- (f) The Company will give the Customer an opportunity, at the Customer's election, to choose an EGS or to be referred to an EGS on a rotating basis. The rotation process is designed to provide each EGS participating in the Customer Referral Program generally equivalent numbers of rotation-assigned customers, by service type. EGSs must serve all such Residential or Small Commercial Customers referred through a Customer Referral Program.

(g) Secure PaPUC approval to implement the Customer Referral Program for the period June 1, 2021-201923 to May 31, 20232027.

2.7 Obligations of the Customer Referral Supplier

The Customer Referral Supplier shall:

- (a) Provide Competitive Energy Supply (as defined in the Supplier Tariff) to Customer Referral Customers, consistent with the terms and conditions of service set forth in this Agreement ("Customer Referral Supply"), and PaPUC Orders regarding the Customer Referral Program;
- (b) Meet all of the obligations and requirements of a PaPUC-licensed EGS under the then current Supplier Tariff;
- (c) Cooperate, at its own expense, with the Company in any regulatory compliance efforts that may be required to maintain the ongoing validity and enforceability of the terms of this Agreement, and fulfill any regulatory reporting requirement associated with the provision of the Customer Referral Supply, before the PaPUC, FERC or any other regulatory body asserting jurisdiction;
- (d) Use EDC Rate Ready Consolidated Billing to bill Customer Referral Customers the Customer Referral 12-Month Fixed Price in effect when the Customer enrolled in the Customer Referral Program as set forth in the applicable Confirmation Sheet for 12 consecutive billing periods, unless the contract is terminated by the customer;
- (e) After receiving a valid referral for enrollment, issue a standard disclosure statement, consistent with the Terms and Conditions of the Customer Referral Program

and welcome kit to the customer at least 3 days prior to transmitting an EDI 814 enrollment transaction to the EDC;

- (f) Transmit an EDI 814 enrollment transaction to the EDC consistent with Commission regulations and comply with the switching rules in the Company's Supplier Tariff;
- (g) Pay bills rendered from the EDC relating to the CRP (including the CRP Charge) within 30 days; and
- (h) Comply with Commission regulations regarding notice of a price change and changes in the terms and conditions of service following the 12-month initial contract period.

2.8 No Guarantee of Customer Referral Customers

The Company makes no guarantee or representation as to the number of Residential or Small Commercial Customers, if any, that will become Customer Referral Customers or will become Customer Referral Customers of any particular EGS during the term of this Agreement.

2.9 Fees, Penalties, and Exceptions

Customer Referral Customers will be billed the Customer Referral 12-Month Fixed Price, as applicable, set forth in the applicable Confirmation Sheet under and subject to the terms and conditions set forth herein and in applicable PaPUC Orders.

Customer Referral Suppliers will be paid by the Company pursuant to the Customer Referral 12-Month Fixed Price, as applicable, set forth in the applicable Confirmation

Sheet and the terms and conditions of the Supplier Tariff. Customer Referral Suppliers will not impose any penalties or fees on Customer Referral Customers.

2.10 Guaranteed Power Supply to Customer Referral Customers for One Year

All Customer Referral Customers enrolled in the Customer Referral Program shall receive power at the Customer Referral 12-Month Fixed Price, as applicable, as set forth in the applicable Confirmation Sheet from the Customer Referral Customer's initial meter read date during the contract terms set forth in Appendix A and ending with the Customer Referral Customer's last meter read date during the 12 month contract term such that the Customer will receive 12 consecutive bills calculated using the Customer Referral 12-Month Fixed Price applicable to the Customer at the time of enrollment.

2.11 Enrollment Procedures and Policies

Customer Referral Customers can enroll or switch to an EGS, including an alternative offer from the Customer Referral Supplier, or return to Default Service at any time during the 12 month period that the 12-Month Fixed Price is billed without restriction or penalty.

2.12 Service Inquiries and Notices to Customer Referral Customers

Customer Referral Customers may direct inquiries regarding this Agreement and any power supply or billing questions regarding the Customer Referral Program to the Customer Referral Supplier, whose address and phone number shall be provided in all communications with Customer Referral Customers regarding the Customer Referral Program.

Article 3 Early Termination of Agreement

The Customer Referral Supplier may only terminate its Consumer Contract and Disclosure Statement with Customer Referral Customers during the initial 12 month billing period upon 30 days' prior written notice to the customer due to a change in law or other act beyond the Customer Referral Supplier's reasonable control or if the Customer Referral Supplier is no longer able to serve the customer. In addition, the Customer Referral Supplier may reject the enrollment or terminate its Consumer Contract if the Customer does any of the following:

- Moves within or outside of the EDC's service territory or fails to remain an EDC distribution Customer throughout the term under the applicable residential or small commercial electric rate class;
- Fails to be eligible for EDC consolidated billing throughout the term;
- Provides any false, inaccurate or misleading information to the Customer Referral Supplier or the EDC.

Article 4 Energy Efficiency and Conservation Programs

The Customer Referral Supplier acknowledges that Customer Referral Customers may participate in energy efficiency and conservation programs offered by the Company (as required by Applicable Legal Authorities or otherwise), by PJM, or by other third parties, and that such participation may reduce or change the amount of Customer Referral Supply that Customer Referral Supplier is required to provide and, therefore, the amount of money it may receive under this Agreement. Customer Referral Supply does not include the load which the Customer Referral Supplier may have served in the absence of such programs, and the Company shall have no obligation whatsoever to Customer Referral Supplier with respect to the effect, if any, of such programs. Customer Referral Supplier is solely responsible for determining the effect, if any, of such programs on future load requirements.

Article 5 Entire Agreement

This Agreement and Appendices attached hereto constitute the entire Agreement and understanding between the Parties with respect to the services that are being provided hereunder. All prior written and verbal agreements and representations, if any, with respect to these services are merged into and superseded by this Agreement. No revisions or modifications to this Agreement will be valid, unless written and executed by all Parties and approved by the PaPUC.

Article 6 Authorization

Each Party to this Agreement represents and warrants that it has full and complete authority to enter into and perform this Agreement. Each person who executes this Agreement on behalf of either Party represents and warrants that he or she has full and complete authority to do so and that such Party will be bound by the Agreement.

Article 7 Jurisdiction

Any and all matters of dispute between the Parties, whenever arising, shall be governed, construed and enforced in accordance with the laws of the Commonwealth of Pennsylvania regardless of the theory upon which such matter is asserted.

Met-Ed/Penelec/Penn Power/West Penn Exhibit JMS-2 Page 15 of 18

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed by their duly authorized representatives to be effective as of the day and year first written above.

ATTEST:	{INSERT EDC HERE}
D.	D.
Name: [Insert Name]	Name: [Insert Name]
Title: [Insert Title]	Title: [Insert Title]

APPENDIX A

RESIDENTIAL OR SMALL COMMERCIAL CUSTOMER REFERRAL PROGRAM PRICING CONFIRMATION SHEET

FOR CUSTOMER ENROLLMENTS FOR THE PERIOD XX/XX/XXXX TO XX/XX/XXXX

The Customer Referral Supplier shall bill Customer Referral Customers in the [Name of EDC and name of Class] program that have been enrolled* during the period XX/XX/XXXX to XX/XX/XXXX at the prices set forth below. The following Fixed Rate shall be in effect through the last meter read date for 12 monthly billing periods after Enrollment.

Residential Customer Referral 12-Month Fixed Rate \$0.XXXX per kWh

Small Commercial Customer Referral 12-Month Fixed Rate \$0.XXXX per kWh

*Enrolled shall mean the day the customer accepts the EGS proposal for service

<u>Customers Referral Customers shall be enrolled using Rate Code xxxxxx for the Period xx/xx/xxxx to xx/xx/xxxx</u>

APPENDIX B

CUSTOMER REFERRAL PROGRAM CHARGE

PER CUSTOMER ENROLLED FOR THE PERIOD XX/XX/XXXX TO XX/XX/XXXX

The Companies shall charge the Customer Referral Suppliers for each customer enrolled during the period XX/XX/XXXX to XX/XX/XXXX at the CRP Charge set forth below.

CRP Charge Rate

\$XX.XX per customer enrolled

APPENDIX C

EGS PARTICIPATION OR SUSPENSION OF PARTICIPATION NOTICE

The Customer Referral Supplier shall be permitted to participate or suspend participation

June 1, September 1, or December 1 or March 1_ upon providing the Companies with

proper notice, as set forth below.

CUSTOMER REFERRAL SUPPLIER NOTICE TO PARTICIPATE IN OR WITHDRAW FROM THE ENROLLMENT OF NEW CRP CUSTOMERS

{INSERT EGS Name HERE} did not previously participate in the Company's Customer Referral Program and is hereby providing the Company 60_-days notice of intent to enroll new customers in the [Name of EDC and Class] Customer Referral Program beginning XX/XX/XXXX.

{INSERT EGS Name HERE} previously participated in the Company's Customer Referral Program and is hereby providing the Company 30_-days notice of intent to enroll new customers in the [Name of EDC and Class] Customer Referral Program beginning XX/XX/XXXX.

{INSERT EGS Name HERE} is hereby providing the Company 30-days notice of intent to withdraw from enrolling new customers in the [Name of EDC and Class]

Customer Referral Program beginning XX/XX/XXXX.

EGS Representative_	
Date	

DSP V POR Clawback Charge 12-Months Ended August 31, 2018 **Calculation Summary**

			First I	Prong				Second Pr	•			Charge	
				EGS Write-		200% of			OpCo	150%			
				Offs as a	OpCo	OpCo			Weighted	Weighted	EGS Write-Offs		Total Op
			EGS Write-	% of	Average	Average		Average	Avg PTC	Avg PTC	Calculated at 200% of	Clawback	Clawbac
Co	EGS	EGS Revenues	Offs	Revenues	%	%	kWh	Rate ¢/kWh	¢/kWh	¢/kWh	OpCo Average %	Charge	Charge
		(1)	(2)	(3) = (2)/(1)	(4)	(5) = (4)x2	(6)	7) = ((1)/(6))x10	(8)	(9) = (8) x 1.5	(10) = (1)x(5)	(11) = (2)-(10)	(12)
ME	EGS-1	7,041,215.58	273,888.25	3.89%	1.26%	2.51%	74,518,631	9.45	6.26	9.39	176,841.50	97,046.75	\$ 358,47
	EGS-2	632,551.47	42,104.27	6.66%	1.26%	2.51%	6,378,540	9.92	6.26	9.39	15,886.65	26,217.62	
	EGS-3	882,915.03	48,395.34	5.48%	1.26%	2.51%	8,930,761	9.89	6.26	9.39	22,174.58	26,220.76	
	EGS-4	1,458,101.37	127,412.45	8.74%	1.26%	2.51%	14,200,099	10.27	6.26	9.39	36,620.50	90,791.95	
	EGS-5	2,816,057.03	150,916.15	5.36%	1.26%	2.51%	29,123,898	9.67	6.26	9.39	70,725.82	80,190.33	
	EGS-6	123,000.29	10,217.39	8.31%	1.26%	2.51%	1,093,232	11.25	6.26	9.39	3,089.18	7,128.21	
	EGS-7	5,519,060.56	149,047.56	2.70%	1.26%	2.51%	58,247,750	9.48	6.26	9.39	138,612.28	10,435.28	
	EGS-8	1,103,298.75	45,080.03	4.09%	1.26%	2.51%	11,042,274	9.99	6.26	9.39	27,709.56	17,370.47	
	EGS-9	331,937.90	11,412.62	3.44%	1.26%	2.51%	3,356,264	9.89	6.26	9.39	8,336.69	3,075.93	
PN	EGS-2	354,479.15	16,721.08	4.72%	1.19%	2.38%	3,820,922	9.28	6.12	9.18	8,423.52	8,297.56	\$ 322,08
	EGS-4	1,762,936.04	114,048.74	6.47%	1.19%	2.38%	18,858,238	9.35	6.12		41,892.80	72,155.94	,
	EGS-10	289.535.17	17,928.52	6.19%	1.19%	2.38%	3,002,912	9.64	6.12	9.18	6,880.25	11,048.27	
	EGS-5	4,471,776.13	117,799.99	2.63%	1.19%	2.38%	42,964,042	10.41	6.12	9.18	106,263.19	11,536.80	
	EGS-6	1,461,339.88	100,791.54	6.90%	1.19%	2.38%	15,772,923	9.26	6.12		34,725.94	66,065.60	
	EGS-11	2,343,210.87	89,785.23	3.83%	1.19%	2.38%	24,349,453	9.62	6.12	9.18	55,681.91	34,103.32	
	EGS-7	6,338,901.89	155,841.04	2.46%	1.19%	2.38%	68,882,961	9.20	6.12	9.18	150,631.85	5,209.19	
	EGS-12	1,802,544.13	137,930.70	7.65%	1.19%	2.38%	14,805,743	12.17	6.12	9.18	42,834.01	95,096.69	
	EGS-8	61,992.43	3,187.67	5.14%	1.19%	2.38%	564,289	10.99	6.12	9.18	1,473.13	1,714.54	
	EGS-9	400,203.48	26,364.70	6.59%	1.19%	2.38%	4,215,214	9.49	6.12	9.18	9,510.07	16,854.63	
PP	EGS-5	1,104,414.94	23,875.57	2.16%	0.77%	1.55%	9,815,416	11.25	7.04	10.56	17,063.27	6,812.30	\$ 13,52
	EGS-13	373,692.62	6,307.77	1.69%	0.77%	1.55%	3,450,345	10.83	7.04	10.56	5,773.57	534.20	Ψ 10,01
	EGS-8	305,986.42	10,902.81	3.56%	0.77%	1.55%	2,800,139	10.93	7.04	10.56	4,727.51	6,175.30	
WP	EGS-5	6,277,399.39	143,984.66	2.29%	1.06%	2.11%	57,088,085	11.00	5.72	8.58	132,490.82	11.493 84	\$ 238,34
	EGS-2	449,186.95	13,862.26	3.09%	1.06%	2.11%	4,502,210	9.98	5.72		9,480.54	4,381.72	
	EGS-6	2,512,411.13	140,290.32	5.58%	1.06%	2.11%	29,028,508	8.65	5.72		53,026.96	87,263.36	
	EGS-14	249,269.05	19,755.47	7.93%	1.06%	2.11%	2,592,743	9.61	5.72		5,261.07	14,494.40	
	EGS-12	634,225.81	59,472.32	9.38%	1.06%	2.11%	5,257,864	12.06	5.72		13,385.97	46,086.35	
	EGS-15	723,504.31	25,066.40	3.46%	1.06%	2.11%	7,071,524		5.72		15,270.28	9,796.12	
	EGS-8	372,386.31	8,358.37	2.24%	1.06%	2.11%	3,600,384	10.34	5.72		7,859.59	498.78	
	EGS-16	660,456.52	24,586.82	3.72%	1.06%	2.11%	6,891,581	9.58	5.72		13,939.60	10,647.22	
	EGS-17	1,519,391.48	77,096.14	5.07%	1.06%	2.11%	16,924,318	8.98	5.72		32,068.28	45,027.86	
	EGS-9	511,868.95	19,453.99	3.80%	1.06%	2.11%	5,155,297	9.93	5.72	8.58	10,803.51	8,650.48	
											Total Clawback Charge		\$ 932,42

DSP V POR Clawback Charge 12-Months Ended August 31, 2019 Calculation Summary

		First Prong									Charge			
								Second Pr						
Co	EGS	EGS Revenues	EGS Write- Offs	EGS Write- Offs as a % of Revenues	OpCo Average %	200% of OpCo Average %	kWh	EGS Average Rate ¢/kWh	OpCo Weighted Avg PTC ¢/kWh	150% OpCo Weighted Avg PTC ¢/kWh	Calculat	Write-Offs ed at 200% of Average %	Clawback Charge	Total OpCo Clawback Charge
	200	(1)	(2)	(3) = (2)/(1)	(4)	(5) = (4)x2	(6)	7) = ((1)/(6))×10		(9) = (8) x 1.5) = (1)x(5)	(11) = (2)-(10)	(12)
		(-)	(=)	(=) (=) (=)	(-)	(=) (-)	(-)	., ((=),(=),=	(-)	(0) (0) =	,	, (=,(=)	(, (, (,	(,
ME	EGS-1	6,658,035.74	193,474.26	2.91%	1.12%	2.23%	65,961,893	10.09	6.24			148,584.82	44,889.44	\$ 330,187.15
	EGS-2	1,051,412.37	45,208.84	4.30%	1.12%	2.23%	10,243,955	10.26	6.24	9.37		23,463.96	21,744.88	
	EGS-3	575,898.37	13,678.63	2.38%	1.12%	2.23%	5,133,263	11.22	6.24	9.37		12,852.10	826.53	
	EGS-4	2,192,429.84	117,139.93	5.34%	1.12%	2.23%	21,247,036			9.37		48,927.61	68,212.32	
	EGS-5	2,922,184.49	84,749.42	2.90%	1.12%	2.23%	28,297,134					65,213.26	19,536.16	
	EGS-6	476,328.60	14,915.95	3.13%	1.12%	2.23%	4,881,985					10,630.04	4,285.91	
	EGS-7	2,139,236.37	79,894.05	3.73%	1.12%	2.23%	21,492,076					47,740.51	32,153.54	
	EGS-8	496,189.57	14,964.96	3.02%	1.12%	2.23%	4,710,735			9.37		11,073.27	3,891.69	
	EGS-9	4,810,634.15	122,303.88	2.54%	1.12%	2.23%	48,333,676			9.37		107,357.07	14,946.81	
	EGS-10	2,059,117.65	121,786.76	5.91%	1.12%	2.23%	21,351,025					45,952.53	75,834.23	
	EGS-11	729,226.80	29,281.42	4.02%	1.12%	2.23%	6,479,026					16,273.87	13,007.55	
	EGS-12	286,547.12	8,453.34	2.95%	1.12%	2.23%	2,983,411					6,394.76	2,058.58	
	EGS-13	300,242.21	35,499.92	11.82%	1.12%	2.23%	2,954,382	10.16	6.24	9.37		6,700.39	28,799.53	
PN	EGS-1	3,611,754.35	143,320.00	3.97%	0.92%	1.84%	37,508,782	9.63	6.03	9.04		66,412.77	76,907.23	\$ 504,433.01
r IN	EGS-2	846,261.25	19,565.09	2.31%	0.92%	1.84%	8,395,071					15,561.01	4,004.08	3 304,433.01
	EGS-3	54,447.87	6,917.38	12.70%	0.92%	1.84%	475,133					1,001.18	5,916.20	
	EGS-4	3,421,588.72	121,792.11	3.56%	0.92%	1.84%	33,639,478		6.03			62,916.02	58,876.09	
	EGS-5	2,566,930.42	126,193.28	4.92%	0.92%	1.84%	25,837,840					47,200.60	78,992.68	
	EGS-6	202,525.14	30,931.44	15.27%	0.92%	1.84%	1,993,030					3,724.02	27,207.42	
	EGS-8	1,180,322.58	46,961.59	3.98%	0.92%		11,264,168			9.04		21,703.72	25,257.87	
	EGS-14	149,472.05	8,425.39	5.64%	0.92%	1.84%	1,398,175					2,748.49	5,676.90	
	EGS-15	1,621,345.46	67,941.35	4.19%	0.92%	1.84%	15,159,619					29,813.23	38,128.12	
	EGS-16	1,519,905.08	117,163.59	7.71%	0.92%	1.84%	16,391,032		6.03			27,947.94	89,215.65	
	EGS-10	1,390,248.33	81,988.28	5.90%	0.92%		9,917,093					25,563.82	56,424.46	
	EGS-17	510,730.90	36,526.05	7.15%	0.92%	1.84%	5,488,636	9.31	6.03	9.04		9,391.30	27,134.75	
	EGS-12	481,455.78	17,063.97	3.54%	0.92%	1.84%	4,819,265	9.99	6.03	9.04		8,852.99	8,210.98	
	EGS-13	25,291.78	2,945.64	11.65%	0.92%	1.84%	231,812	10.91	6.03	9.04		465.06	2,480.58	
PP	EGS-14	83,892.53	5,745.44	6.85%	0.65%	1.29%	719,379	11.66	7.17	10.76		1,084.56	4,660.88	\$ 28,404.25
	EGS-15	1,209,653.84	20,687.67	1.71%	0.65%	1.29%	10,325,815					15,638.32	5,049.35	
	EGS-10	217,996.87	15,612.56	7.16%	0.65%	1.29%	1,643,852			10.76		2,818.25	12,794.31	
	EGS-11	176,748.48	6,907.73	3.91%	0.65%	1.29%	1,470,642					2,284.99	4,622.74	
	EGS-12	520,545.96	7,831.96	1.50%	0.65%	1.29%	4,640,730					6,729.58	1,102.38	
	EGS-13	12,766.10	339.62	2.66%	0.65%	1.29%	115,093	11.09	7.17	10.76		165.04	174.58	
WP	FCC 1	0.600.577.04	244 220 24	2 100/	1.000/	2.100/	101 220 050	0.50	F 03	0.75		200 002 00	2 245 50	ć 122.260.72
WP	EGS-1	9,690,577.91	211,238.24	2.18%	1.08% 1.08%	2.16%	101,339,850					208,992.66		\$ 132,368.72
	EGS-5	4,512,678.37	122,061.87	2.70%	1.08%	2.16%	46,194,289					97,323.06	24,738.81	
	EGS-6 EGS-14	214,331.24 198,885.49	7,897.60 6,372.05	3.68% 3.20%	1.08%	2.16% 2.16%	2,315,767 1,910,699					4,622.39 4,289.28	3,275.21 2,082.77	
	EGS-14 EGS-15	2,676,364.26	90,937.03	3.40%	1.08%	2.16%	24,357,562					57,720.03	33,217.00	
	EGS-15	421,583.04	23,055.93	5.47%	1.08%	2.16%	2,983,468					9,092.11	13,963.82	
	EGS-10 EGS-11	197,143.34	8,560.48	4.34%	1.08%	2.16%	1,843,365					4,251.71	4,308.77	
	EGS-11	1,515,823.41	48,144.68	3.18%	1.08%	2.16%	17,083,593					32,691.13	15,453.55	
	EGS-19	217,475.16	10,663.06	4.90%	1.08%	2.16%	2,482,727					4,690.20	5,972.86	
	EGS-17	429,200.81	32,388.18	7.55%	1.08%	2.16%	4,139,793		5.83			9,256.40	23,131.78	
	EGS-17	43,575.17	4,918.33	11.29%	1.08%	2.16%	409,095					939.77	3,978.56	
		.5,5,5,11	.,520.55	/0		0/0	.05,055	20.03	3.33	5.75	Total Cla	wback Charge	2,3.0.50	\$ 995,393.14
											. ota. ciu			, 111,000.17

DSP V POR Clawback Charge 12-Months Ended August 31, 2020 Calculation Summary

			First I	Prong				Second Pr	ong			Charge	
				EGS Write-		200% of			OpCo	150%	EGS Write-Offs		
			EGS Write-	Offs as a	OpCo	OpCo			Weighted	Weighted	Calculated at 200% of	Clawback	Total OpCo
		EGS Revenues	Offs	% of	Average	Average		Average	Avg PTC	Avg PTC	OpCo Average %	Charge	Clawback
Со	EGS	(\$)	(\$)	Revenues	%	%	kWh	Rate ¢/kWh	¢/kWh	¢/kWh	(\$)	(\$)	Charge
CO	LGS	(1)	(2)	(3) = (2)/(1)	(4)	(5) = (4)x2	(6)	7) = ((1)/(6))×10		(9) = (8) x 1.5	(10) = (1)x(5)	(11) = (2)-(10)	(12)
		(1)	(2)	(3) - (2)/(1)	(4)	(3) - (4),12	(0)	7) - ((1)/(0)/x10	(0)	(5) - (6) X 1.3	(10) - (1)x(3)	(11) - (2)-(10)	(12)
ME	EGS-1	5,367,928.56	131,176.08	2.44%	1.03%	2.07%	49,350,603	10.88	5.73	8.59	111,098.58	20,077.50	\$ 231,211.49
	EGS-2	890,476.02	58,087.72	6.52%	1.03%	2.07%	7,644,297	11.65	5.73	8.59	18,429.94	39,657.78	
	EGS-3	388,112.53	13,117.12	3.38%	1.03%	2.07%	3,552,905	10.92	5.73	8.59	8,032.66	5,084.46	
	EGS-4	2,174,578.12	85,846.80	3.95%	1.03%	2.07%	22,755,933	9.56	5.73	8.59	45,006.66	40,840.14	
	EGS-5	535,362.81	17,719.55	3.31%	1.03%	2.07%	6,025,979	8.88	5.73	8.59	11,080.26	6,639.29	
	EGS-6	4,251,722.52	91,919.24	2.16%	1.03%	2.07%	41,757,310	10.18	5.73	8.59	87,996.77	3,922.47	
	EGS-7	948,574.57	50,041.10	5.28%	1.03%	2.07%	7,613,753	12.46	5.73	8.59	19,632.39	30,408.71	
	EGS-8	3,879,505.50	83,402.29	2.15%	1.03%	2.07%	35,209,634	11.02	5.73	8.59	80,293.09	3,109.20	
	EGS-9	847,711.89	21,796.40	2.57%	1.03%	2.07%			5.73	8.59	17,544.87	,	
	EGS-10	1,945,166.56	51,566.44	2.65%	1.03%	2.07%			5.73	8.59	40,258.59		
	EGS-11	118,686.53	12,163.26	10.25%	1.03%	2.07%	,,-		5.73	8.59	2,456.42	,	
	EGS-12	188,772.96	4,635.40	2.46%	1.03%	2.07%	, ,		5.73	8.59	3,906.98		
	EGS-13	189,685.58	32,202.46	16.98%	1.03%	2.07%			5.73	8.59	3,925.87		
	EGS-14	215,683.79	31,391.50	14.55%	1.03%	2.07%			5.73	8.59	4,463.95		
	EGS-15	1,617.37	306.66	18.96%	1.03%	2.07%	15,090	10.72	5.73	8.59	33.47	273.19	
PN	EGS-2	687,873.36	40,374.81	5.87%	1.16%	2.32%	6,627,933	10.38	5.63	8.44	15,990.28	24.384.53	\$ 111,597.39
	EGS-3	28,718.46	2,908.04	10.13%	1.16%	2.32%			5.63	8.44	667.59		, ,
	EGS-4	3,296,448.82	95,925.91	2.91%	1.16%	2.32%			5.63	8.44	76,629.12	,	
	EGS-5	235,968.99	12,583.94	5.33%	1.16%	2.32%			5.63	8.44	5,485.33		
	EGS-16	201,708.33	4,933.76	2.45%	1.16%	2.32%			5.63	8.44	4,688.90		
	EGS-17	1,166,165.34	34,364.04	2.95%	1.16%	2.32%	10,636,280	10.96	5.63	8.44	27,108.63	7,255.41	
	EGS-18	1,204,557.82	36,396.04	3.02%	1.16%	2.32%	13,193,266	9.13	5.63	8.44	28,001.10	8,394.94	
	EGS-8	2,785,511.90	77,496.99	2.78%	1.16%	2.32%	26,481,792	10.52	5.63	8.44	64,751.90	12,745.09	
	EGS-11	63,085.97	9,349.97	14.82%	1.16%	2.32%	732,738	8.61	5.63	8.44	1,466.49	7,883.48	
	EGS-19	616,602.11	26,825.24	4.35%	1.16%	2.32%	6,250,729	9.86	5.63	8.44	14,333.51	12,491.73	
	EGS-12	288,963.46	16,278.73	5.63%	1.16%	2.32%	3,280,733	8.81	5.63	8.44	6,717.23	9,561.50	
PP	EGS-20	700,443.83	11,136.79	1.59%	0.73%	1.46%	6,481,203	10.81	6.83	10.25	10,235.73	901.06	\$ 76,089.79
••	EGS-21	526,847.23	9,471.27	1.80%	0.73%	1.46%			6.83	10.25	7,698.92		+ ,0,003.73
	EGS-16	85,076.42	1,937.70	2.28%	0.73%	1.46%			6.83	10.25	1,243.24		
	EGS-17	840,569.06	20,215.25	2.40%	0.73%	1.46%			6.83	10.25	12,283.40		
	EGS-18	705,674.13	27,865.38	3.95%	0.73%	1.46%	6,541,718	10.79	6.83	10.25	10,312.16	17,553.22	
	EGS-6	2,080,972.00	55,313.50	2.66%	0.73%	1.46%	20,100,138	10.35	6.83	10.25	30,409.66	24,903.84	
	EGS-7	150,564.99	16,356.13	10.86%	0.73%	1.46%			6.83	10.25	2,200.24		
	EGS-22	129,067.59	3,055.68	2.37%	0.73%	1.46%	1,067,550	12.09	6.83	10.25	1,886.09	1,169.59	
	EGS-23	1,154,380.71	23,876.72	2.07%	0.73%	1.46%	10,769,070	10.72	6.83	10.25	16,869.20	7,007.52	
WP	EGS-5	215,506.45	10,374.70	4.81%	1.16%	2.32%	2,502,120	8.61	5.59	8.39	4,990.71	5 382 00	\$ 195,054.32
VV F	EGS-24	16,147,576.54	426,013.93	2.64%	1.16%	2.32%			5.59	8.39	373,946.68	,	y 193,034.32
	EGS-25	3,265,453.75	88,776.65	2.72%	1.16%	2.32%			5.59	8.39	75,621.60	,	
	EGS-2	1,226,216.39	40,789.42	3.33%	1.16%	2.32%			5.59	8.39	28,396.80		
	EGS-17	1,947,226.69	65,667.92	3.37%	1.16%	2.32%	17,164,410		5.59	8.39	45,094.01	,	
	EGS-7	245,687.36	30,871.44	12.57%	1.16%	2.32%			5.59	8.39	5,689.64	,	
	EGS-8	4,721,381.08	153,955.67	3.26%	1.16%	2.32%	41,763,817		5.59	8.39	109,338.07		
	EGS-11	138,091.39	10,523.83	7.62%	1.16%	2.32%			5.59	8.39	3,197.93	,	
	EGS-19	523,262.50	20,643.57	3.95%	1.16%	2.32%			5.59	8.39	12,117.75		
	EGS-12	796,516.76	20,215.15	2.54%	1.16%	2.32%			5.59	8.39	18,445.79		
	EGS-14	81,153.09	5,940.37	7.32%	1.16%	2.32%	899,004		5.59	8.39	1,879.35		
							,				Total Clawback Charge		\$ 613,953.00
													,

DSP V POR Clawback Charge 12-Months Ended August 31, 2021 Calculation Summary

		First Prong						Second Pro	ong		Charge			
				EGS Write- Offs as a	OpCo	200% of OpCo			OpCo Weighted	150% Weighted	EGS Write-Offs		Total OpCo	
Со	EGS	EGS Revenues	EGS Write- Offs	% of Revenues	Average %	Average %	kWh	Average Rate ¢/kWh	Avg PTC ¢/kWh	Avg PTC ¢/kWh	Calculated at 200% of OpCo Average %	Clawback Charge	Clawback Charge	
		(1)	(2)	(3) = (2)/(1)	(4)	(5) = (4)x2		7) = ((1)/(6))×10	(8)	(9) = (8) x 1.5	(10) = (1)x(5)	(11) = (2)-(10)	(12)	
ME	EGS-1	890,476.02	12,250.35	1.38%	0.56%	1.11%	6 7,644,297	11.65	5.98	8.97	9,917.99	2,332.36	\$ 104,865.41	
	EGS-2	2,174,578.12	34,251.34	1.58%	0.56%	1.11%	6 22,755,933	9.56	5.98	8.97	24,220.12	10,031.22		
	EGS-3	15,782,916.78	236,016.22	1.50%	0.56%	1.11%	6 172,514,827	9.15	5.98	8.97	175,787.72	60,228.50		
	EGS-4	174,685.35	2,976.56	1.70%	0.56%	1.11%	6 1,457,971	11.98	5.98	8.97	1,945.62	1,030.94		
	EGS-5	4,251,722.52	51,531.19	1.21%	0.56%	1.11%	6 41,757,310	10.18	5.98	8.97	47,355.04	4,176.15		
	EGS-6	948,574.57	14,290.50	1.51%	0.56%	1.11%	6 7,613,753	12.46	5.98	8.97	10,565.08	3,725.42		
	EGS-7	61,114.82	1,223.64	2.00%	0.56%	1.11%	6 563,458	10.85	5.98	8.97	680.69	542.95		
	EGS-8	4,773,370.65	59,045.81	1.24%	0.56%	1.11%	6 50,490,620	9.45	5.98	8.97	53,165.08	5,880.73		
	EGS-9	189,685.58	10,119.89	5.34%	0.56%	1.11%	6 1,745,381	10.87	5.98	8.97	2,112.69	8,007.20		
	EGS-10	215,683.79	10,698.36	4.96%	0.56%	1.11%	6 2,083,004	10.35	5.98	8.97	2,402.25	8,296.11		
	EGS-11	5,310.41	672.97	12.67%	0.56%	1.11%	6 54,518	9.74	5.98	8.97	59.15	613.82		
PN	EGS-1	687,873.36	24,175.99	3.51%	0.48%	0.95%	6,627,933	10.38	5.73	8.60	6,536.45	17,639.54	\$ 122,330.23	
	EGS-2	3,296,448.82	56,739.62	1.72%	0.48%	0.95%	6 29,630,871	11.13	5.73	8.60	31,324.18	25,415.44		
	EGS-3	8,701,063.76	92,528.47	1.06%	0.48%	0.95%	6 98,616,589	8.82	5.73	8.60	82,680.99	9,847.48		
	EGS-4	201,708.33	5,269.88	2.61%	0.48%	0.95%	6 1,789,812	11.27	5.73	8.60	1,916.71	3,353.17		
	EGS-12	2,785,511.90	40,813.32	1.47%	0.48%	0.95%	6 26,481,792	10.52	5.73	8.60	26,469.05	14,344.27		
	EGS-13	63,085.97	1,255.34	1.99%	0.48%	0.95%	6 732,738	8.61	5.73	8.60	599.47	655.87		
	EGS-8	2,407,428.26	39,918.04	1.66%	0.48%	0.95%	6 26,220,165	9.18	5.73	8.60	22,876.35	17,041.69		
	EGS-14	616,602.11	32,551.21	5.28%	0.48%	0.95%	6,250,729	9.86	5.73	8.60	5,859.20	26,692.01		
	EGS-15	288,963.46	6,144.34	2.13%	0.48%	0.95%	6 3,280,733	8.81	5.73	8.60	2,745.85	3,398.49		
	EGS-10	65,259.06	2,714.25	4.16%	0.48%	0.95%	668,133	9.77	5.73	8.60	620.12	2,094.13		
	EGS-16	51,332.11	2,335.91	4.55%	0.48%	0.95%	6 580,298	8.85	5.73	8.60	487.78	1,848.13		
PP	EGS-17	526,847.23	13,273.58	2.52%	0.44%	0.88%		10.89	6.84	10.26	4,641.41		\$ 25,137.53	
	EGS-4	85,076.42	2,443.31	2.87%	0.44%	0.88%		11.38	6.84	10.26	749.50	1,693.81		
	EGS-6	150,564.99	11,214.53	7.45%	0.44%	0.88%		11.90	6.84	10.26	1,326.44	9,888.09		
	EGS-18	129,067.59	2,872.23	2.23%	0.44%	0.88%	6 1,067,550	12.09	6.84	10.26	1,137.06	1,735.17		
	EGS-19	1,154,380.71	13,299.36	1.15%	0.44%	0.88%		10.72	6.84	10.26	10,169.84	3,129.52		
	EGS-9	7,380.10	123.79	1.68%	0.44%	0.88%	62,689	11.77	6.84	10.26	65.02	58.77		
WP	EGS-20	3,511,592.27	36,626.79	1.04%	0.46%	0.91%		10.97	5.36	8.04	32,113.76	4,513.03	\$ 203,641.70	
	EGS-3	16,147,576.54	199,354.12	1.23%	0.46%	0.91%		9.16	5.36	8.04	147,670.73	51,683.39		
	EGS-21	156,867.11	1,649.11	1.05%	0.46%	0.91%		8.55	5.36	8.04	1,434.56	214.55		
	EGS-22	605,729.04	21,645.80	3.57%	0.46%	0.91%	, - ,	8.30	5.36	8.04	5,539.43	16,106.37		
	EGS-1	1,226,216.39	32,677.08	2.66%	0.46%	0.91%		12.51	5.36	8.04	11,213.84	21,463.24		
	EGS-4	209,794.84	5,647.13	2.69%	0.46%	0.91%		11.72	5.36	8.04	1,918.59	3,728.54		
	EGS-12	4,721,381.08	70,904.75	1.50%	0.46%	0.91%		11.30	5.36	8.04	43,177.36	27,727.39		
	EGS-19	4,047,787.95	63,383.94	1.57%	0.46%	0.91%		8.60	5.36	8.04	37,017.31	26,366.63		
	EGS-8	2,936,169.06	46,523.75	1.58%	0.46%	0.91%		8.60	5.36	8.04	26,851.47	19,672.28		
	EGS-14	523,262.50	30,271.30	5.79%	0.46%	0.91%		10.49	5.36	8.04	4,785.27	25,486.03		
	EGS-16	200,635.80	6,098.20	3.04%	0.46%	0.91%		9.26	5.36	8.04	1,834.83	4,263.37		
	EGS-10	81,153.09	3,159.04	3.89%	0.46%	0.91%	6 899,004	9.03	5.36	8.04	742.15	2,416.89		
											Total Clawback Charge		\$ 455,974.88	

Uncollectible Expense Analysis

12-Months Ended August 31, 2018

12-Months Ended August 31, 2019

ME PN	\$ \$	Actuals 12,823,682 13,840,821	Ra \$ \$	ate Recovery 19,733,268 18,095,846	Company Retains or Refunds Clawback Charge Refunds Refunds	\$ \$	Actuals 13,114,665 12,773,878	F \$ \$	Rate Recovery 19,733,268 18,095,846	Company Retains or Refunds Clawback Charge Refunds Refunds
PP	\$	2,929,653	\$	3,697,364	Refunds	\$	3,080,473	\$	3,697,364	Refunds
WP	\$	13,394,794	\$	16,073,309	Refunds	\$	13,874,023	\$	16,073,309	Refunds
		12-Mor	nths	Ended August 3			12-Mor	nths	Ended August 3	
					Company Retains or Refunds					Company Retains or Refunds
		Actuals	Ra	ate Recovery	Clawback Charge		Actuals	F	Rate Recovery	Clawback Charge
ME	\$	17,128,858	\$	19,733,268	Refunds	\$	15,304,302	\$	19,733,268	Refunds
PN	\$	18,988,226	\$	18,095,846	Retains	\$	17,136,724	\$	18,095,846	Refunds
PP	\$	4,186,394	\$	3,697,364	Retains	\$	4,829,434	\$	3,697,364	Retains
WP	\$	18,500,768	\$	16,073,309	Retains	\$	14,163,870	\$	16,073,309	Refunds

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

METROPOLITAN EDISON COMPANY
DOCKET NO. P-2021-_____

PENNSYLVANIA ELECTRIC COMPANY
DOCKET NO. P-2021-____

PENNSYLVANIA POWER COMPANY
DOCKET NO. P-2021-____

WEST PENN POWER COMPANY
DOCKET NO. P-2021-____

DEFAULT SERVICE PROGRAMS
June 1, 2023 - May 31, 2027

Direct Testimony Of James H. Catanach

List of Topics Addressed

Procurement Plan Product Definitions
Procurement Process and Schedule
Alternative Energy Portfolio Standards Act Requirements
Network Integration Transmission Service Charge Collection
Long-Term Solar Procurement
Credit Enhancements

TABLE OF CONTENTS

		Page
I.	INTRODUCTION AND PURPOSE	1
II.	PROCUREMENT PLAN PRODUCT DEFINITIONS	3
III.	PROCUREMENT PROCESS AND SCHEDULE	11
IV.	ALTERNATIVE ENERGY PORTFOLIO STANDARDS ACT REQUIREMENTS	17
V.	LONG-TERM SOLAR PROCUREMENT	21
VI.	ADDITIONAL PROTECTIONS AGAINST SUPPLIER DEFAULT	24
VII.	CONCLUSION	29

DIRECT TESTIMONY
\mathbf{OF}
JAMES H. CATANACH

4 I. <u>INTRODUCTION AND PURPOSE</u>

1 2 3

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

A.

- 5 Q. Please state your name and business address.
- A. My name is James H. Catanach. My business address is 2800 Pottsville Pike, Reading,
 Pennsylvania 19605.

8 Q. By whom are you employed and in what capacity?

I am employed by FirstEnergy Service Company as Manager, Regulated Commodity Sourcing Department ("RCS"). RCS is primarily responsible for procuring power and power-related products for all of FirstEnergy Corp.'s ("FirstEnergy") regulated utilities. In my role, I am primarily responsible for the procurement and management of the regulated energy supply and renewable energy portfolio that FirstEnergy's electric distribution utilities are required to maintain in their role as load serving entities ("LSEs") on behalf of their Pennsylvania and New Jersey retail electric customers. I have either directed or participated in sixty competitive power- and renewable-energy-credit procurements in Pennsylvania and New Jersey utilizing both auction and request for proposal ("RFP") formats. As a result, I am very familiar with the attributes of these procurement processes, which are tailored for the specific markets in which the solicitations are conducted. One of the primary functions of RCS is to provide oversight in the implementation of these power-procurement processes, including, but not limited to, supporting the procurement plans of the FirstEnergy utilities in regulatory proceedings; developing both solicitation and contract materials; interacting with independent evaluators; executing contracts; and handling many of the operational aspects of these

- solicitations as they relate to regional transmission organizations (e.g., PJM Interconnection, L.L.C. ("PJM")).
- 3 Q. Please describe your educational background and professional experience.
- 4 A. I graduated from the University of Rhode Island with a Bachelor of Science in Mechanical
- 5 Engineering and earned a Master of Business Administration from the Pennsylvania State
- 6 University. I also have a professional engineering license in the Commonwealth of
- 7 Pennsylvania.
- 8 I have been employed in the energy field since 1982 with General Public Utilities and
- 9 FirstEnergy. My professional experience has primarily been in the Regional Operation at
- FirstEnergy: Customer Service, Meter Reading, Meter Engineering, Planning and
- 11 Protection, Line Design and Maintenance, Asset and Project Management, Revenue
- Protection, Business Office Operations. While in Operations I have held several Manager
- positions: Easton/Stroudsburg Line and Business Office Operations, Cleveland Electric
- 14 Illuminating Engineering Department, Customer Support, Meter Reading and Engineering,
- and Asset Strategy. Since December 2015, I have been a Manager in the Regulated
- 16 Commodity Sourcing Department. My professional experience is more fully detailed in
- 17 Appendix A.
- 18 Q. Have you ever testified before the Commission?
- 19 A. Yes. I have testified before the Commission in prior default service proceedings.
- 20 On whose behalf are you testifying in this proceeding?
- 21 A. I am testifying on behalf of Metropolitan Edison Company ("Met-Ed"), Pennsylvania
- Electric Company ("Penelec"), Pennsylvania Power Company ("Penn Power"), and West

- Penn Power Company ("West Penn") (individually referred to as "Company" and in any combination as the "Companies").
- 3 Q. Please describe the purpose of your testimony.
- A. The purpose of my testimony is to describe the Companies' proposed: (i) products to be procured under each Company's Default Service Program ("DSP") for the period June 1, 2023 through May 31, 2027; (ii) procurement process and schedule for the multiple procurements by the Companies; (iii) compliance with Pennsylvania's Alternative Energy Portfolio Standards ("AEPS") Act; (iv) long-term solar procurement; and (v) credit-related enhancements.
- 10 Q. Have you prepared any exhibits to accompany your testimony?
- 11 A. Yes. Met-Ed/Penelec/Penn Power/West Penn Exhibits JHC-1 through JHC-7 were 12 prepared by me or under my supervision and are described in detail later in my testimony.

13 II. PROCUREMENT PLAN PRODUCT DEFINITIONS

- 14 Q. Please provide an overview of the Companies' DSPs.
- In this proceeding, the Companies are proposing a four-year term for their DSPs. As such,
 each plan would span the forty-eight months beginning June 1, 2023 and ending May 31,
 2027. The proposed DSPs will procure the required power supply in the wholesale
 marketplace, by Company and rate class, through multiple solicitations. Power to serve
 the non-shopping loads of each of the Companies will be procured in tranches of
 approximately 50 megawatts ("MW") each for the residential and commercial rate classes
 and in tranches of approximately 100 MW each for the industrial rate class.

The DSPs are designed to offer non-shopping customers power through a prudent mix of products. Specifically, the Companies are proposing a variable-priced product for industrial customers at each Company. A blend of 5% variable-priced products and 95% fixed-price, 12- and 24-month products are being proposed for residential customers. And a blend of fixed-price 6-, 12-, and 24-month products are proposed for commercial customers. Default service suppliers who are successful bidders in the competitive procurement process will be responsible for satisfying the AEPS Act requirements.

8 Q. What products do the Companies' DSPs include?

1

2

3

4

5

6

7

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

A.

Under the DSPs, customers will be served by products reflecting market-based generation rates, which will provide opportunities for electric generation suppliers ("EGSs") to offer competitive alternatives in accordance with the provisions of the Electricity Generation Customer Choice and Competition Act and the Commission's default service regulations. For residential and commercial customers, the DSPs will offer fixed generation rates that change on a semi-annual basis and will be synchronized with the PJM energy year beginning June 1. For industrial customers, the DSPs will continue to offer hourly pricing. The DSPs will enable the Companies to procure their generation supplies through multiple solicitations, providing price diversity to the DSP rates while protecting residential customers from short-term price variations due to anomalies in the generation marketplace. In particular, the 24- and 12-month fixed products will provide some price stability for residential and commercial customers and both the 24- and 12-month fixed products will reduce residential customers' exposure to significant price volatility associated with shorter-term products (e.g., variable and 6-month) due to short-term market anomalies as experienced during the 2014 Polar Vortex and the 2015 Siberian Express. At the same

time, the 5 percent variable priced component included in the DSP product for residential customers and the 6-month product for commercial customers for both residential and commercial customers will refresh default service rates to make those rates more reflective of current market trends over the term of the DSPs. The Companies will simultaneously procure their generation supplies through a descending price clock auction ("DCA") process, a feature which is expected to increase the number of bidders and, in turn, the competitiveness of the procurement process. In fact, based on the six DSP V auctions conducted through November 8, 2021, the number of registered bidders has ranged from ten to sixteen and winning suppliers has ranged from four to twelve. In total, the Companies' DSPs are designed to yield market-reflective rates through a prudent mix of products acquired at the least cost over time, which is a key requirement of Act 129 of 2008 ("Act 129"). In Met-Ed/Penelec/Penn Power/West Penn Statement No. 4, Drs. James Reitzes and Nicholas Powers further describe how the Companies' proposed DSPs comport with Act 129's least-cost-over-time mandate.

A.

Q. What is the nature of the products the Companies seek to obtain under the DSPs?

The Companies propose to procure full-requirements, load-following energy and energy-related products for their non-shopping customers. Each Company's non-shopping load will be segregated into customer classes, and each class will have its own product specifications. The load of each class will be divided into tranches, with each tranche representing a fixed percentage of the Company's non-shopping load. Procurement winners will be responsible for fulfilling all obligations of a PJM LSE. As such, winning suppliers will be required to provide energy, capacity, and transmission service, as well as all PJM administrative expenses and any other services or fees required by PJM of an LSE,

with some limited exceptions. Specifically, winning bidders will not be responsible for (i) Regional Transmission Expansion Plan ("RTEP") charges, (ii) Expansion Cost Recovery Charges, (iii) Reliability Must Run/Generation Deactivation Charges associated with generating plants for which specific RMR charges began being assessed following July 24, 2014, (iv) historical out-of-market tie line, generation, and retail customer meter adjustments, (v) unaccounted for energy, and (vi) any approved reallocation by the Federal Energy Regulatory Commission ("FERC") of PJM Regional Transmission Expansion Plan charges related to Docket No. EL05-121-009 (collectively, referred to as "non-market based charges" or "NMB charges").

Under the Companies' proposal, default service suppliers in the Met-Ed, Penelec, Penn Power, and West Penn service territories will also be responsible for meeting 100% of the solar, non-solar Tier I and Tier II AEPS Act requirements. AEPS Act compliance is discussed further in Section IV of my testimony.

The NMB charges will be paid by the Companies on behalf of all customers and recovered from all customers through the Default Service Support ("DSS") Rider in each Company's tariff. Ms. Patricia Larkin discusses these costs and their proposed recovery in her direct testimony (Met-Ed/Penelec/Penn Power/West Penn Statement No. 5).

Q. What customer classes are being proposed by the Companies?

19 A. The Companies propose to segregate load into the same three classes that they have 20 traditionally used for default service purposes—residential, commercial, and industrial.

- 1 Q. How many and what size customer class tranches are being proposed by the Companies?
- A. For the residential class, the Companies propose to bid out a total of ninety-five (95) tranches of approximately 50 MW each. A total of thirty-five (35) tranches of approximately 50 MW each is proposed for the commercial class, and thirty-two (32) tranches of approximately 100 MW each of an hourly pricing service are proposed for industrial customers. A tranche represents a defined percentage of the load of a particular customer class that the default service supplier must serve, including the provision of energy, capacity, ancillary services, and transmission services but excluding NMB charges.
- 10 Q. You stated that the Companies proposed to hold simultaneous procurement 11 processes. Will residential, commercial, and industrial class products be offered 12 concomitantly using the same type of procurement process as well?
- 13 A. Yes. As was the case with DSP V, the Companies propose to employ procurement
 14 processes for their fixed-price residential and commercial products and the hourly-priced
 15 service for industrial customers that occur on the same day. Each will feature a DCA
 16 process that will be administered by CRA International, Inc. d/b/a Charles River Associates
 17 ("CRA"), the Companies' proposed DSP VI independent auction manager (i.e.,
 18 independent evaluator). CRA presently serves in this role under the Companies' extant
 19 DSPs as it has for the majority of the Companies' prior DSPs.
- 20 Q. Please describe the residential class products proposed by the Companies.
- A. For the residential-class tranche, the Companies propose a 95% fixed-price, load-following, full-requirements product, with either a 12- or 24-month term. The remaining 5% is the real-time hourly load locational marginal price ("LMP") for the delivery point

plus a fixed adder of \$20.00 per megawatt hour ("MWh"). This additional adder is intended to capture an estimate of costs of other supply components associated with meeting this full-requirements obligation, including capacity, ancillary services, AEPS compliance, and other costs. The fixed adder is consistent with the Companies' prior DSPs. All required residential tranches will be secured over eight procurement dates.

Q. Please describe the commercial class products proposed by the Companies.

A.

A.

The commercial-class tranche proposed by the Companies is a fixed-price, load-following, full requirements product, with either a 6-, 12-, or 24-month term. All tranches would be secured over nine procurement dates. The Companies are proposing to replace the 3-month commercial product currently used in DSP V with a 6-month commercial product to align with their proposed semiannual PTC adjustments and to smooth out the price swings from the 3-month commercial product. This will also reduce the number of auctions conducted in a year from four to two, which will reduce the procurement costs recovered from default service customers.

15 Q. Please describe the industrial class products proposed by the Companies.

Consistent with the Companies' current DSPs, the Companies propose to secure power supply for the industrial class utilizing a service referred to as the "hourly pricing service" ("HPS"). Contracts for HPS will be for 12-month terms beginning June 1 in 2023, 2024, 2025, and 2026. The HPS is not a fixed-price service; rather, it is a variable hourly service that is priced to the PJM real-time hourly total LMP for each Company's PJM delivery point. Default service suppliers will be bidding for the right to serve a portion of a Company's HPS load: a total of thirty-two tranches will be up for bid across all of the Companies. Customers on HPS will pay, and winning default service suppliers will

receive: 1) the winning price bid by the winning default service supplier in the hourly-priced auction; 2) the applicable PJM zonal real-time hourly LMP; and 3) a fixed adder of \$4/MWh. This additional adder is intended to capture an estimate of costs of other supply components associated with meeting this full-requirements obligation, including capacity, ancillary services, AEPS compliance, and other costs.

Q.

A.

Do the residential, commercial, and industrial products proposed by the Companies comply with Act 129 and the Commission's default service regulations and policy statement?

Yes. The proposed product mix, including the long-term solar procurement, meets the current legislative standard under Act 129 and the Commission's default service regulations and policy statement, which require a default service procurement plan to include a prudent mix of variable market purchases, short-term contracts, and long-term purchase contracts that provides adequate and reliable service and is designed to ensure least cost to customers over time. This is further described in the testimony of James D. Reitzes and Nicholas E. Power (Met-Ed/Penelec/Penn Power/West Penn Statement 4). This conclusion is supported by the fact that the Commission approved a similar product mix as part of the Companies' previous DSPs.

Q. Please describe the general obligations imposed by PJM on default service suppliers.

A. Winning default service suppliers must schedule delivery to the applicable PJM delivery point of the Company for which it won tranches to supply load. Winning default service suppliers must be members of PJM and cognizant of and compliant with all regulations,

¹ See 66 Pa.C.S. § 2807(e); 52 Pa. Code § 54.186; 52 Pa. Code § 69.1805.

business rules, scheduling protocols, and all other aspects of doing business within PJM—
including, the introduction of new billing line items that are not otherwise specified as the
responsibility of the Companies. All operational supply risk to perform under this
procurement process will be borne by the winning default service suppliers.

5 Q. Are the Companies proposing any modifications to the procurement process?

6 A. Yes. The changes will be discussed in Section VI below.

7

8

9

10

11

12

13

14

15

16

A.

Q. Have the Companies experienced a default by any of their default service suppliers?

No. The Companies have not experienced a default by any of their default service suppliers since the inception of their default service programs. However, in the wake of the recent run-up in energy prices, the Companies have witnessed retail supplier defaults and have had to work with wholesale suppliers who were having difficulty maintaining the margin requirements imposed by the Supplier Master Agreement ("SMA" or "Agreement"). Given the significant customer harm that could result from a default by one of the Companies' default service suppliers, the Companies believe this is the time to ensure their customers are adequately protected. This will be discussed later in my testimony in Section VI.

17 Q. Do you have plans in place to address a supplier default?

18 A. Yes. There are contingency plans to address a supplier default. Ms. Wanyun Zhong will
19 address the contingency plans in her direct testimony (Met-Ed/Penelec/Penn Power/West
20 Penn Statement No. 3).

III. PROCUREMENT PROCESS AND SCHEDULE

- 2 Q. Are the Companies proposing any changes to the frequency and timing of default
- 3 **service auctions?**

1

- 4 A. Yes. The Companies are proposing to conduct auctions twice a year, rather than the four-
- 5 auction annual cycle that is currently in place under DSP V. The first auction for DSP VI
- 6 would be conducted in November 2022. From 2023 to 2026, auctions would be conducted
- 7 semiannually in March and September. The proposed procurement schedule is shown in
- 8 Met-Ed/Penelec/Penn Power/West Penn Exhibit JHC-1

9 Q. What auction design is being proposed for the default service auctions?

- 10 A. The Companies propose to continue their current approach of using a version of the
- simultaneous, multiple-round, DCA format to procure default service supplies. This
- auction platform is commonly used for multiple commodity types and has been
- successfully used in numerous electricity procurements, including the Companies', in
- Pennsylvania and across various states since the late 1990s.
- The bidding format is simultaneous: multiple products or tranches, or both, are bid on
- simultaneously. Bidding takes place online using web-based software in a series of bidding
- 17 rounds, with pre-specified starting and ending times for each round. Prior to the start of
- each round, the announced price for each product is disclosed to bidders. The announced
- 19 price is the same for each tranche for a product but may differ across products. The
- announced round 1 starting price for each product is set sufficiently high enough to
- 21 encourage bidder participation. At the end of each round, the bidding software (through
- 22 CRA's oversight) determines which products are over-subscribed and which products are
- 23 under-subscribed. A product is over-subscribed if suppliers bid to supply more tranches

than the number of tranches needed of that product. Conversely, a product is undersubscribed if fewer tranches were bid on it than the number that is needed. If a product is over-subscribed, the announced price for that product will be reduced by a decrement for the next round. If a product is not over-subscribed, its announced price will not change for the next round. The bidding process continues in this manner, with prices tending to tick down like a countdown clock. As prices change across the products, bidders are allowed to change the number of tranches they bid, with certain restrictions. Subject to these restrictions, in each round a bidder simply specifies the number of tranches it is willing and able to supply for each product at the announced price for each product. There is no predetermined number of rounds before the auction closes. The auction closes after the first round in which no product is over-subscribed. The clearing price for a product is the lowest price at which the product is not under-subscribed. Winning tranches for the product are tranches that were bid at a price no higher than the clearing price. Winning bidders are those bidders who bid the winning tranches. Throughout the auction, the pricing for each product is known to the suppliers, which provides price transparency.

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

This price transparency allows the bidders flexibility to switch products throughout the auction, as is described in the direct testimony of Messrs. Reitzes and Powers (Met-Ed/Penelec/Penn Power/West Penn Statement No. 4).

The Bidding Rules and appendices for the default service procurement auctions are included as Met-Ed/Penelec/Penn Power/West Penn Exhibits JHC-2, JHC-3 and JHC-4 and provide a more detailed description of the bidding process.

Q. How are the Companies proposing to qualify prospective bidders for participation in the DSP auctions?

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

A.

The Companies propose to qualify prospective bidders for participation in their respective DSP auctions in the same manner that they currently employ. That is, prospective bidders would be required to satisfy financial and non-financial requirements through a two-part application process designed to demonstrate their ability and commitment to meet the dual requirements of participating in the auction process and being a default service supplier. The Part 1 Application and Part 2 Application forms, as well as pre-bid credit documents, are included in Met-Ed/Penelec/Penn Power/West Penn Exhibits JHC-3 and JHC-4 and will be available through the CRA web-based data room, as in past auctions. If a prospective bidder is interested in participating in the 95% fixed-priced and 5% variablepriced residential, fixed-price commercial, or the hourly-priced industrial auctions, it will need to complete and submit one Part 1 Application and, subsequent to that, one Part 2 Application. As much as possible, the application process will be conducted electronically via the CRA web-based data room using protocols CRA has used successfully in other similar auction processes, including the Companies' current DSPs. The CRA process is designed to be secure and to make it easier and less time consuming for applicants to submit application materials. The process further provides for: (i) the review and assessment of the applications; (ii) timely feedback to applicants; (iii) the ability of applicants to easily check on the status of their applications; and (iv) the ability of applicants to cure any deficiencies.

1 (Q.	Are the bidding rul	es and associated	l appendices reflecte	ed in Met-Ed/Penele	c/Penn
-----	----	---------------------	-------------------	-----------------------	---------------------	--------

- 2 Power/West Penn Exhibits JHC-2, JHC-3 and JHC-4 consistent with those that are
- 3 being used by the Companies in their current DSPs?
- 4 A. Yes. The bidding rules and associated Appendices in Met-Ed/Penelec/Penn Power/West
- 5 Penn Exhibits JHC-2, JHC-3 and JHC-4 are virtually identical to those currently used in
- 6 the Companies' DSP V auctions. Each exhibit includes a redline version of the document
- showing all changes made to the document utilized currently in DSP V. Proposed therein,
- 8 however, are mostly minor updates related to dates and addresses and the addition of an
- 9 option to electronically sign and submit documents. Apart from those items, the Part 1
- Application and Part 2 Application processes to qualify and register bidders, the web-based
- data room, the frequently asked question ("FAQ") process, the communications protocol,
- the bidding format, and the post-auction process will all be the same as under the
- Companies' current DSPs.

14 Q. When will the Companies and the independent evaluator hold information sessions

- 15 for interested participants?
- 16 A. A bidder information session will be held generally at least a month before each auction.
- 17 The purpose of these sessions will be to describe the bid rules, the two-part qualification
- process, the SMA, and the procurement information website and its contents, as well as
- other pertinent information bidders will need to evaluate this procurement opportunity.
- 20 O. How can prospective default service suppliers learn more about the load
- 21 characteristics of the Companies' default service products?
- 22 A. Prospective default service suppliers will have access to the web-based data room
- administered by CRA as part of the auction information website which will be operational

prior to the start of the procurement process. The data room will include hourly historical load characteristics of each product and the most current customer shopping statistics by customer class by Company, which is updated monthly. This will afford prospective default service suppliers an opportunity to view product load volatility over a period of time, which should help them gauge volume risk. Furthermore, participants will have the opportunity to ask questions about any of the default service products in the procurement process at an information session or via a FAQ feature in the CRA web-based data room.

Q. Please describe the process following the close of the default service auctions.

A.

After the last round of the auction, bidders who remained active in the auction will see preliminary auction results on the bidding website. The bidders will see the clearing price for each product and the number of tranches the bidder tentatively won for each product. CRA will also provide the Companies the identities of the winning bidders, the number of tranches each winning bidder has won for each product, and the associated clearing prices. Of note, auction results are subject to Commission approval.

After the close of the auction, CRA will provide a confidential report to the Commission that will include, among other things, the list of winning bidders and the clearing price for each product. The Commission will have one business day after receiving the CRA auction report to approve the results of the auction.

Upon approval by the Commission, the winning bidders and the Companies will execute an SMA, the form of which is attached as Met-Ed/Penelec/Penn Power/West Penn Exhibit WZ-1 to Wanyun Zhong's direct testimony (Met-Ed/Penelec/Penn Power/West Penn Statement No. 3). Pre-bid security will be returned to all bidders upon execution of the

SMA on or before the third business day after the Commission has rendered its decision on the auction results. Pre-bid security may be held for any bidder that violated any of the rules or certifications of the auction process.

A.

Q. Do you believe that the use of a DCA is the appropriate design for the default service auctions?

Yes. As previously mentioned, the Companies' proposed DCA process is identical to the auction process used under the Companies' current and past DSPs and is similar to auction processes used in other jurisdictions to successfully procure electric power supply. It is a process that default service suppliers and other stakeholders accept and are experienced with. Further, its design encourages participation because it is fair, open, transparent, and non-discriminatory, and it provides low barriers to participation for a variety of prospective bidders. The tranche sizes and the range of contract durations appeal to various bidders because they are consistent with products available in energy markets. With the simultaneous bidding on products that are related in value (the residential and commercial products across the Companies, and the industrial products across the Companies), bidders are able to switch their bid quantities across the Companies' products and bid simultaneously on substitutable products or complementary products, or both, in response to changes in pricing. Because these factors encourage active participation and allow participants to bid efficiently, a DCA auction design foments competitive outcomes.

IV. ALTERNATIVE ENERGY PORTFOLIO STANDARDS ACT REQUIREMENTS

1

- Q. What requirements does the AEPS Act impose on Pennsylvania's default serviceproviders?
- 4 The AEPS Act requires the Companies and other electric distribution companies ("EDCs") A. 5 and EGSs in Pennsylvania to obtain a percentage of electricity sold to the Commonwealth's 6 retail customers from certain alternative energy sources—such as, wind, solar energy and, 7 biomass. Compliance is measured through alternative energy credits or "AECs," which are equal to one MWh of energy from approved "Tier I" or "Tier II" alternative energy 8 9 sources. The AEPS Act also includes a solar "set-aside," which mandates that a specific 10 portion of the Companies' Tier I requirements be satisfied through AECs derived from 11 solar photovoltaic energy (i.e., Solar Photovoltaic Alternative Energy Credits or "SPAECS").2 The AEPS Act defines Tier I and Tier II alternative energy sources and the 12 dates and percentages of supply required for compliance. The Tier I, Tier II, and SPAEC 13 14 percentage requirements during the term of the proposed DSPs are more fully described in 15 Met-Ed/Penelec/Penn Power/West Penn Exhibit JHC-5.
- Q. Are the Companies proposing to make winning default service suppliers responsible for the AEPS Act requirements described in Met-Ed/Penelec/Penn Power/West Penn Exhibit JHC-5?
- 19 A. Yes, with two exceptions. First, in the initial year of the proposed DSPs only, default service and retail suppliers for Met-Ed, Penelec, and Penn Power will be allocated SPAECs obtained through existing long-term contracts which expire on May 31, 2024. The

² In addition, pursuant to Commission directives implementing Act 40 of 2017, SPAECs must be generated by facilities located within the Commonwealth (subject to limited exceptions). *See* Docket No. M-2017-2631527.

allocations will be based on the load served by the default service and retail suppliers. Second, the Companies will allocate SPAECs from long-term solar power purchase agreements ("PPAs"), described later in my testimony, to their respective default service suppliers, in proportion to the residential load they served in a compliance year. This allocation is expected to satisfy up to an estimated 32% of residential default service suppliers' SPAEC obligations.

Q. Is this a change from DSP V?

A.

A.

Yes. Met-Ed, Penelec and Penn Power currently procure all necessary SPAECs on behalf of both default service suppliers and retail suppliers. In addition, pursuant to long-term contracts which expired May 31, 2021, West Penn allocated Tier I AECs and SPAECs to default service suppliers. The Companies have several 10-year SPAEC contracts that are ending during the DSP V period. The Companies entered into those contracts to encourage and incent investment in solar energy projects. However, with the solar energy market now becoming increasingly mature, SPAECs are readily available to suppliers for compliance, and the suppliers have the ability to hedge their positions. For those reasons, the Companies believe it is appropriate for default service suppliers to be responsible for a substantial portion of their SPAEC obligations.

Q. Will the Companies continue to procure SPAECs for retail suppliers?

No. After completing the allocations from certain existing long-term contracts which end on May 31, 2024, Met-Ed, Penelec, and Penn Power will no longer be procuring SPAECs on behalf of retail suppliers. As I stated above, the solar energy market is becoming increasingly mature. SPAECs are readily available to retail suppliers for compliance, and suppliers have the ability to hedge their positions. With the increasingly mature solar

- 1 market, retail suppliers will be able to offer their customers tailored solutions that meet
- 2 their customers environmental needs including, but not limited to, AEPS compliance.
- 3 Q. Will default service suppliers be responsible for any changes to the AEPS
 4 requirements going forward?
- 5 A. Yes. If AEPS requirements change, due to federal or state law or any other reason, the suppliers will be responsible for any incremental AEPS compliance obligations.
- Q. What procedure will the Companies use to verify that winning default service suppliers have complied with the AEPS Act?
- 9 A. The Companies will continue to only accept AECs from Tier I and Tier II sources that are 10 approved by the Commission's AEPS Program Administrator and generated through PJM 11 Environmental Information Services Inc.'s Generation Attributes Tracking System 12 ("GATS"), which the Commission has designated under the AEPS Act as the "registry" 13 for tracking and issuing AECs. It will be incumbent on the winning default service supplier 14 to open and maintain, at its own expense, a GATS account in order to satisfy the AEPS Act requirements. This process is currently and successfully being used by the Companies to 15 16 comply with AEPS Act requirements.
- 17 Q. What happens if a portion of a default service supplier's sourced AECS are found by
 18 the Commission to be non-compliant with the AEPS Act requirements, and a penalty
 19 is levied against the Companies?
- A. Any default service supplier that fails to acquire the necessary AECs during the compliance periods will be identified by the Companies and assessed an alternative compliance payment or other penalty imposed by the Commission for the AEPS non-compliance.

- Q. Is the Companies' proposed plan for meeting AEPS Act obligations consistent with
 Act 129 and the Commission's default service regulations?
- A. Yes. Act 129's requirement that EDCs procure power through a competitive process also applies to the Companies' procurement of SPAECs or AECs to satisfy AEPS Act obligations.³ Further, the Commission's AEPS regulations state that a default service provider "shall demonstrate compliance" with the AEPS regulations and default service regulations "by identifying a competitive procurement process for acquiring alternative energy credits" in its default service plan.⁴ The Companies propose to use competitive processes to fulfill their AEPS obligations through the default service procurement.
- 10 Q. Are the Companies making any proposals relative to the procurement of short-term

 11 market AECs?
- 12 A. Yes. If necessary for compliance purposes, the Companies plan to conduct short-term AEC

 13 procurements at market prices to fulfill any compliance needs. During the current DSP V

 14 term, such procurements include bilateral purchases from Commission-approved AEC

 15 providers/facilities or transactions conducted through AEC brokers. Under the proposed

 16 DSPs, the Companies will continue to address potential compliance needs through market

 17 purchases.
 - Q. How are the Companies proposing to treat excess AECs?
- A. Should Met-Ed, Penelec, Penn Power, or West Penn have excess AECs, the Company in question will first see if they can be used by one of the other Companies. If that Company still has excess AECs, the Companies propose to sell the excess AECs to the open market.

18

³ See 66 Pa.C.S. § 2807(e)(3.5).

⁴ See 52 Pa. Code § 75.67(b).

- 1 Proceeds from the sale of excess AECs will be recovered through the Companies' DSS
- 2 Riders.
- 3 Q. How would the Companies ensure that intercompany purchases would be conducted
- 4 at market prices?
- 5 A. On the date of the transaction, bid/offer market quotes will be obtained from three AEC
- brokers through their published broker sheets. The offer portion of the quote for the
- 7 applicable AEC product from the three AEC brokers would be averaged to determine a
- 8 representative market price for the intercompany purchase.

9 V. <u>LONG-TERM SOLAR PROCUREMENT</u>

- 10 Q. Please describe the Companies' long-term solar proposal.
- 11 A. The Companies propose to use an RFP process to procure up to 20 MWs of solar capacity
- for energy and SPAECs through PPAs with terms of greater than four and no more than 10
- years from utility-scale and grid connected solar projects located in Pennsylvania.
- 14 O. Why are the Companies proposing a long-term solar procurement?
- 15 A. The Companies have previously supported the development of solar projects through 10-
- 16 year SPAEC contracts. The proposed solar PPAs continue this support by providing solar
- projects that successfully bid in response to the Companies' RFP with long-term
- procurement of energy and SPAECs. The solar PPAs also contribute to AEPS compliance
- and align with FirstEnergy's commitment to environmental sustainability. Additionally,
- the solar PPAs will serve as the long-term component of each Company's "prudent mix"
- of default service contracts. Drs. Reitzes and Powers discuss the Act 129 "prudent mix"

requirements in their direct testimony (Met-Ed/Penelec/Penn Power/West Penn Statement
No. 4).

Q. Please explain the procurement approach and PPA in more detail.

A.

A. The Companies propose to conduct a single RFP where winning bidders would execute a separate PPA with each Company. The Companies intend to purchase both the energy and SPAECs from the selected project(s). Projects must be located in the Commonwealth of Pennsylvania and preference will be given to projects located within the Companies' service territories. The Companies' proposed RFP documents, attached as Met-Ed/Penelec/Penn Power/West Penn Exhibit JHC-6, detail the RFP format, requirements for bidders and bidder proposals, and the bid evaluation process.

The entire procurement process will be overseen by an independent RFP monitor, The Brattle Group ("Brattle"), who will evaluate the bids and develop an opinion concerning the RFP process and results. Brattle will submit a confidential RFP report to the Commission. The Commission will have a ten-day review period to evaluate the RFP report and results and decide whether to approve the RFP results and the prices obtained. If a bid is accepted and approved, the winning bidder will be required to execute a PPA with each of the Companies that is consistent with the form PPA appended to the RFP.

Q. Do the Companies believe the form PPA includes appropriate terms and conditions?

Yes. The agreement includes terms and conditions that are typical of power purchase and solar renewable energy credit agreements, including provisions for default and termination and representations and warranties regarding the energy and SPAECs that will be delivered to each Company.

Q. Will the energy procured be used to offset default service load?

1

16

17

18

19

20

21

22

2 A. Yes. A block of residential default service load will be carved out from each of the
3 Companies to be served by energy from the solar PPAs. The size of load carved out will
4 be determined based upon the final MWs procured in the RFP, and the Companies will use
5 spot purchases from PJM, as needed, to ensure adequate supply is obtained for each carve6 out. The carve out could be set to zero MWs if the solar facility cannot produce energy
7 due to, for example, a catastrophic facility failure or the bankruptcy of the facility owner.

8 Q. What do the Companies plan to do with the SPAECs received from the solar PPA?

9 A. The SPAECs will be allocated to default service suppliers based on the percentage of residential load they served in a compliance year.

11 Q. Why are the Companies proposing a 20 MW procurement?

A. 20 MW is expected to produce enough SPAECs to satisfy up to an estimated 32% of the residential default service suppliers' SPAEC requirements based on the current Solar Tier I requirement of 0.5%.

15 Q. Do the Companies have a contingency plan if the Solar PPAs are not successful?

A. Yes. As is further explained in the testimony of Wanyun Zhong (Met-Ed/Penelec/Penn Power/West Penn Statement No. 3), to satisfy the long-term procurement portion of the plan, the Companies propose to conduct a solicitation for a five-year block of SPAECs if there are no bidders for the solar procurement or due to rejection of bids by the Commission. The five-year block will be open to projects that are not utility-scale and grid connected. Because the projects may not be utility-scale and grid connected, energy will not be procured in the contingency plan.

1 VI. ADDITIONAL PROTECTIONS AGAINST SUPPLIER DEFAULT

- 2 Q. Please summarize the additional measures the Companies are proposing to protect
- 3 customers from supplier default.
- 4 A. The Companies are proposing to make modifications to the Maximum Unsecured Credit
- 5 Limits, Credit Rating Determination Methodology and load caps as well as implement a
- 6 new credit-based tranche cap and an Independent Credit Requirement per Tranche. As I
- 7 mentioned earlier in my testimony, such protections are appropriate in light of challenges
- 8 being faced by suppliers.
- 9 Q. Please describe the "maximum unsecured credit limit".
- 10 A. The maximum unsecured credit limit is the lesser of the applicable percentage of Tangible
- 11 Net Worth ("TNW") or the Credit Limit Cap and means an amount of credit, based on the
- creditworthiness of a supplier or its guarantor, if applicable, determined pursuant to Section
- 6.4 of the SMA, granted by the Companies to such supplier to be applied towards the Total
- Exposure Amount for such supplier.
- 15 Q. Is a maximum unsecured credit limit currently provided to a supplier on an
- individual-Company basis?
- 17 A. Yes.
- 18 Q. What changes to the maximum unsecured credit limit do the Companies propose?
- 19 A. The Companies propose to have a supplier's maximum unsecured credit limit be in
- aggregate and made available in total across the Companies. The current process is
- 21 additive and provides suppliers with a greater total unsecured credit limit value if they serve
- 22 more than one Company. Specifically, under the current DSP V process, pursuant to

Section 6.4 and Appendix A of the SMA, a maximum unsecured credit limit is established for all eligible suppliers who satisfy the requirements set forth therein and enter into an Agreement with one of the Companies for the provision of default supply. Because suppliers must enter into an SMA with each Company for which they will provide default supply, those suppliers who win tranches with more than one Company will have one SMA in place with each. In light of the fact that each Company currently establishes a maximum unsecured credit limit for each eligible supplier who has an SMA in place with it for the provision of default supply, suppliers who have an SMA with more than one Company end up having a maximum unsecured credit limit with each such Company, thereby artificially inflating that supplier's actual maximum unsecured credit limit.

For example, a supplier that qualifies with one Company for a maximum unsecured credit limit of \$25,000,000 based on an 8% TNW and current credit ratings, which is defined as the minimum senior unsecured debt rating, could have up to \$100,000,000 in total maximum unsecured credit limits if they win tranches with all four Companies. The proposed change would limit the maximum unsecured credit limit to \$25,000,000 in total for all four Companies combined, with the supplier having the option to apportion this maximum aggregated amount amongst the Companies as it deems fit.

Q. What is the credit rating determination methodology?

A. The credit rating determination methodology is based on the most current senior unsecured debt rating (or, if unavailable, the most current corporate issuer rating). For a default service supplier to be granted an unsecured line of credit, the supplier must be rated by at least two of the following rating agencies: S&P, Moody's, or Fitch.

- Q. What changes do the Companies propose to the credit rating determination methodology?
- A. The Companies are proposing to modify the treatment of split ratings. To this end, the
 Companies propose to add the following language to the SMA and Bidding Rules, where

5 applicable:

6

7

8

9

10

11

12

13

14

If the DS Supplier or Guarantor is rated by only two rating agencies, and the ratings are split, the lower rating will be used. If the DS Supplier or Guarantor is rated by three rating agencies, and the ratings are split, the lower of the two highest ratings will be used; provided, however, that in the event that the two highest ratings are common, such common rating will be used.

The Companies have found that ratings splits are common. Utilizing the 'lower' of two ratings is a more conservative approach that will help protect customers from higher-risk suppliers being provided excessive maximum unsecured credit limits.

15 Q. What is a load cap?

- 16 A. Load caps are a restriction on the amount of supply any one bidder can win in an auction.

 17 Load caps, which have the potential to attract additional bidders, are generally used in
 18 competitive solicitations to encourage supplier diversity and mitigate the impact of a
 19 supplier default on retail customers.
- 20 Q. What is the current load cap, and are the Companies proposing to change it?
- A. The current load cap is 75% for both fixed- and hourly-product auctions. The Companies are proposing to reduce the load cap to 40% on an aggregated load basis across all products in each fixed price auction such that no bidder may bid on and win more tranches than the load cap. The load cap will remain at 75% on an aggregated load basis across all products in each hourly product auction such that no bidder may bid on and win more tranches than

the load cap. Load caps for other EDCs in Pennsylvania are lower than the current 75% and bidder participation has not been impacted. In addition, over the course of several years of auctions, the Companies have seen an increasing number of below-investment-grade suppliers with large obligations and exposures. As power prices have increased, some suppliers are stretched to meet the collateral requirements, which are significant. Reducing the load cap will diversify the load to additional suppliers, reduce the concentration risk, and reduce the potential collateral requirements on any one supplier that could lead to a default.

9 Q. What is a credit-based tranche cap?

1

2

3

4

5

6

7

8

- A. A credit-based tranche cap is a limit to which bidders with poor or no credit ratings will be limited from having the ability to bid on a large number of tranches.
- 12 Q. Do the Companies currently utilize a credit-based tranche cap?
- A. No, but the Companies are proposing to include a credit-based tranche cap in the DSP VI
 Bidding Rules.
- 15 Q. What is the benefit of a credit-based tranche cap?
- 16 A. The proposed credit-based tranche cap will limit bidders with poor or no credit ratings from
 17 having the ability to bid on a large number of tranches. Without such a cap, these bidders
 18 could potentially win more load obligations than they can serve and result in exposures that
 19 they are not able to cover with collateral requirements.

- 1 Q. Please explain the parameters of the credit-based tranche cap being proposed by the
- 2 Companies.
- 3 A. As described in the proposed Bidding Rules, the Companies propose allowing any bidder
- 4 with investment-grade credit ratings (BBB- and higher by S&P/Fitch and Baa3 and higher
- by Moody's) to bid on unlimited tranches up to the auction's tranche target. A step-down
- 6 tranche cap would be put in place for bidders with lower credit ratings from a limit of 8
- tranches down to a maximum of 4 tranches for bidders with no credit ratings or ratings of
- BB- and below by S&P/Fitch and Ba3 and below by Moody's. If a bidder is only rated by
- 9 one rating agency, that rating will be used. If it is rated by two rating agencies, the lower
- of the two ratings will be used.

11 Q. Do the Companies have any additional credit-related proposals?

- 12 A. Yes. The Companies are proposing an Independent Credit Requirement per Tranche
- 13 ("ICRT") for winning bidders.

14 Q. What is an ICRT?

- 15 A. An ICRT is a financial security requirement which requires suppliers to provide collateral
- based on the number of tranches they win. The ICRT requires a set amount of collateral
- per tranche.

18 Q. What are the benefits of implementing an ICRT?

- 19 A. The ICRT would provide more security and protection above the mark-to-market ("MtM")
- collateral requirements in cases of a supplier default. An ICRT is utilized successfully in
- 21 other state jurisdictions and does not impact supplier participation. The security would be
- provided to the Companies regardless of the MtM positions. The ICRT would be reduced

- over time as the supplier completes load obligations during the duration of the SMA. A
- proposed schedule for the ICRT is appended hereto as Met-Ed/Penelec/Penn Power/West
- 3 Penn Exhibit JHC-7.
- 4 Q. Will the implementation of an ICRT impact the MtM credit exposure?
- 5 A. Yes. When an ICTR is implemented, the total MtM credit exposure will be equal to the
- 6 MtM credit exposures for each Billing Month instead of the MtM credit exposures being
- 7 multiplied by 1.1.
- 8 Q. Why is the multiplier being reduced?
- 9 A. The multiplier is reduced to reflect the additional security provided by the ICRT.
- 10 VII. <u>CONCLUSION</u>
- 11 Q. Does this conclude you direct testimony?
- 12 A. Yes, it does.

EDUCATION AND PROFESSIONAL BACKGROUND

My name is James H. Catanach and my business address is 2800 Pottsville Pike, Reading, PA 19605. I am employed by FirstEnergy Service Company ("FirstEnergy") as Manager of the Regulated Commodity Sourcing Department. This position is primarily responsible for the procurement and management of the regulated energy supply portfolio, including compliance with renewable energy / alternative energy portfolio standard requirements, that FirstEnergy's electric utilities are required to maintain as load serving entities to serve their West Virginia, Ohio, Pennsylvania, New Jersey and Maryland retail electric customers.

I have prepared supporting case materials in various jurisdictions including the Pennsylvania Public Utility Commission and the New Jersey Board of Public Utilities. Such cases include but are not limited to:

State & General Description	Case / Docket #
Pennsylvania	
Joint Petition of Metropolitan Edison Company,	P-2015-2511333
Pennsylvania Electric Company,	P-2015-2511351
Pennsylvania Power Company	P-2015-2511355
and West Penn Power Company	P-2015-2511356
For Approval of Their Default Service Programs	
Joint Petition of Metropolitan Edison Company,	P-2017-2637855
Pennsylvania Electric Company,	P-2017-2637857
Pennsylvania Power Company	P-2017-2637858
and West Penn Power Company	P-2017-2637866
For Approval of Their Default Service Programs	

Met-Ed/Penelec/Penn Power/West Penn Power Statement No. 1

Witness: James H. Catanach Appendix A Page 2 of 2

T T	_
New	Jersev
11011	OCIBET

In the Matter of the Provision of Basic Generation Service For the Period Beginning June 1, 2017	ER16040337
In the Matter of the Provision of Basic Generation Service For the Period Beginning June 1, 2018	ER17040335
In the Matter of the Provision of Basic Generation Service For the Period Beginning June 1, 2019	ER19040428
In the Matter of the Provision of Basic Generation Service For the Period Beginning June 1, 2020	ER20030190
In the Matter of the Provision of Basic Generation Service For the Period Beginning June 1, 2021	ER21030631

	Hourly Price Service Tranche Procurement Schedule										
Auction Date	Percent Load	# Tranches	# Mos to Delivery	6/1/23 to 11/30/23	12/1/23 to 5/31/24	6/1/24 to 11/30/24	12/1/24 to 5/31/25	6/1/25 to 11/30/25	12/1/25 to 5/31/26	6/1/26 to 11/30/26	12/1/26 to 5/31/27
March 2023	100.00%	32	2	12-M	lonths						
March 2024	100.00%	32	2			12-M	lonths				
March 2025	100.00%	32	2					12-N	lonths		
March 2026	100.00%	32	2							12-N	lonths
	ı	Co	mmercial I	Full Require	ements Tra	anche Proc	urement So	chedule			
November 2022	8.57%	3	6		24-N	lonths					
November 2022	22.86%	8	6	12-M	lonths						
March 2023	17.14%	6	2		24-N	lonths					
March 2023	22.86%	8	2	12-M	lonths						
March 2023	28.57%	10	2	6-Months							
September 2023	0.00%	0	8				24-M	onths			1
September 2023	11.43%	4	8			12-M	lonths				
September 2023	28.57%	10	2		6-Months						
March 2024	11.43%	4	2				24-M	onths			
March 2024	22.86%	8	2			12-M	lonths				
March 2024	28.57%	10	2			6-Months					
September 2024	8.57%	3	8						24-M	onths	
September 2024	11.43%	4	8					12-N	lonths		
September 2024	28.57%	10	2				6-Months				
March 2025	17.14%	6	2						24-M	onths	
March 2025	22.86%	8	2					12-N	lonths		
March 2025	28.57%	10	2					6-Months			
September 2025	20.00%	7	8							12-N	lonths
September 2025	28.57%	10	2						6-Months		
March 2026	22.86%	8	2							12-N	lonths
March 2026	31.43%	11	2							6-Months	
September 2026	31.43%	11	2								6-Months
		Re	sidential F	ull Require	ements Tra	nche Proci	urement So	hedule			
November 2022	21.05%	20	6		24-N	lonths					
November 2022	25.26%	24	6	12-M	lonths						
March 2023	24.21%	23	2			lonths					
March 2023	29.47%	28	2	12-M	lonths						
September 2023	2.11%	2	8				24-M	onths			
September 2023	21.05%	20	8			12-M	lonths				
March 2024	5.26%	5	2				24-M	onths			
March 2024	26.32%	25	2			12-M	lonths				
September 2024	20.00%	19	8							onths	
September 2024	23.16%	22	8					12-N	lonths		
March 2025	24.21%	23	2							onths	
March 2025	25.26%	24	2					12-N	lonths		
September 2025	26.32%	25	8							12-N	lonths
March 2026	29.47%	28	2						1	12-N	lonths

Bidding Rules

For Fixed-Price and Hourly-Priced Auctions

To Procure Default Service Products

Under Default Service Program DSP-VI for

Metropolitan Edison Company ("Met-Ed")

Pennsylvania Electric Company ("Penelec")

Pennsylvania Power Company ("Penn Power")

West Penn Power Company ("West Penn")

Table of Contents

			<u>Page</u>
1.		INTRODUCTION	1
	1.1	Independent Evaluator	2
2.		THE PRODUCTS BEING PROCURED	2
	2.1	Default Service Load	2
	2.2	Full Requirements Service	
	2.3	Tranches	3
3.		PRICES PAID TO DEFAULT SERVICE SUPPLIERS	
	3.1	Prices Paid to Winning Suppliers in the Fixed-Price Auction	4
	3.2	Prices Paid to Winning Suppliers in the Hourly-Priced Auction	4
4.		PRIOR TO THE START OF BIDDING	
	4.1	Information Provided to Bidders	5
	4.1.1	Data	5
	4.1.2	Minimum and Maximum Starting Prices	5
	4.1.3	Tranche Size, Tranche Targets	5
	4.2	Qualification Process	
	4.2.1	Part 1 Application: Certifications and Other Qualified Bidder Requirements	6
	4.2.2	Part 2 Application: Certifications, Indicative Offer, and Pre-Bid Security	7
	4.2.3	Sanctions for Failing to Comply with the Part 1 and Part 2 Applications	
	4.3	Starting Prices (Round 1 Prices)	
	4.4	Extraordinary Events	
5.		BIDDING FORMAT	
	5.1	Descending-Price Clock Format	12
	5.1.1	Rounds	13
	5.1.2	The Announced Prices and a Bid	13
	5.1.3	Reservation Prices and Starting Prices	13
	5.1.4	Restrictions on What a Bidder Can Bid	14
	5.1.5	Multiple Bids by a Bidder	14
	5.1.6	Default Bid	15
	5.1.7	The EOR Procedure	16
	5.1.8	Price Decrements	18
	5.2	Determination of Winning Tranches, Winning Bidders, and Winning Prices	18
	5.2.1	Bid Stack for a Product has All Tranches at the Same Price	18
	5.2.2	Bid Stack for a Product has Tranches at Two Different Prices	18
	5.3	Example of Round-by-Round Bidding	18
	5.4	Reporting Round Results	19
	5.5	Frequency of Rounds	19
	5.6	Auction Pause Declared by Independent Evaluator	19
6.		AFTER THE AUCTION CLOSES	
	6.1	Notification of Results	20
	6.2	Execution of SMA	
	6.3	Sanctions for Failure to Execute the SMA	20
7.		USE OF THE BIDDING WEBSITE	20
	7.1	Importance of Confirmed Bids	21
	72	Requirements for Using the Ridding Website	21

	7.3	Messaging	21
8.		BACKUP BIDDING PROCEDURES	
9.		WHO TO CONTACT IN CASE OF PROBLEMS DURING THE AUCTION	23
10.		CONTINGENCY PLAN	23
	10.1	If an Auction is Not Fully Subscribed	24
	10.2	If a Winning Bidder Defaults	24
	10.3	If a Capacity Proxy Price ("CPP") is Used	24
11.		COMMUNICATIONS PROTOCOLS	25
	11.1	The Companies and Affiliates	25
	11.1.1	Internal Communications	25
	11.1.2	Communications with Bidders	25
	11.1.3	Part 1 Application Process	25
	11.1.4	Part 2 Application Process	25
	11.2	General Public and Media	25
	11.2.1	The Information Website	26
	11.2.2	Frequently Asked Questions	26
	11.2.3	Registered Users	26
	11.2.4	Press Releases	26
	11.2.5	Answering Inquiries from the General Public or Media	26
	11.3	Bidders	27
	11.3.1	Communications Among Bidders	27
	11.3.2	Communications between the Independent Evaluator and Bidders	27
	11.3.3	Bidding Process	27
	11.3.4	Limitations on Disclosures by Bidders	27
	11.4	The Commission	28
	11.4.1	Communications with the Independent Evaluator	28
	11.4.2	Communications with the Companies	28
	11.4.3	Communications with Bidders	28
	11.4.4	Information on Auction Participation	28
	11.4.5	Round-by-Round Bids	28
12.		CONFIDENTIAL INFORMATION, CERTIFICATIONS, AND SANCTIONS	28
	12.1	Confidential Information	28
	12.2	Certifications and Disclosures to Be Made	29
	12.3	Actions to Be Taken if Certifications Cannot Be Made	30
	12.4	Sanctions for Failure to Comply	30
13.		BIDDER ASSOCIATIONS	31
	13.1	Procedure Followed by the Independent Evaluator	31
	13.1.1	Following the Receipt of the Part 1 Applications	31
	13.1.2	Following the Receipt of the Part 2 Applications	32
	13.2	Remedies and Actions Related to Participation by Associated Bidders	33
	13.3	Handling of Confidential Information	33
14.		MISCELLANEOUS	33
	14.1	Warranty on Information	33
	14.2	Hold Harmless	34
	14.3	Bid Submissions Become the Companies' Property	
	14.4	Bidder's Acceptance	
	14.5	Permits, Licenses, Compliance with the Law and Regulatory Approvals	
	14.6	Auction Intellectual Property	
API	PENDIX	A — EXAMPLE OF ROLIND-BY-ROLIND BIDDING	

1. INTRODUCTION

These Bidding Rules apply to the auctions to procure Default Service products for Metropolitan Edison Company ("Met-Ed"), Pennsylvania Electric Company ("Penelec"), Pennsylvania Power Company ("Penn Power") and West Penn Power Company ("West Penn") (each of which may be referred to as a "Company", and/or in combinations as "Companies") for all of their retail customers that take retail generation service from the Companies.

Default Service products for residential and commercial customers will be procured in a separate auction ("Residential/Commercial Auction" or "Fixed-Price Auction" or "FP Auction") from the auction for industrial customers ("Industrial Auction" or "Hourly-Priced Auction" or "HP Auction"). Unless otherwise noted, these Bidding Rules apply to each auction.

Bidders need to be familiar with the Supplier Master Agreement ("SMA"), the Bidding Rules, and all other documents for the auctions, including the Part 1 Application and the Part 2 Application which apply to both auctions. Bidders should visit the Information Website regularly for up-to-date information, including information specific to each auction. The Information Website contains relevant data, the schedule and key dates for participating in the auction process, frequently asked questions, and other information.

The following documents are appended to, and shall be considered integral parts of, these Bidding Rules:

Appendix 1 Part 1 Application for Fixed-Price and Hourly-Priced Auctions to Procure Default

Service Products

Appendix 2 Part 2 Application for Fixed-Price and Hourly-Priced Auctions to Procure Default

Service Products

Appendix 3 Sample Pre-Bid Letter of Credit

Unless noted otherwise, "days" refer to business days and times refer to prevailing Eastern Time. Capitalized terms in this document, which are not defined explicitly herein, are defined in the SMA. In accordance with the SMA, "Default Service" and "DS" are equivalent (e.g., "Default Service Load" in these Bidding Rules corresponds to "DS Load" in the SMA).

Examples in these Bidding Rules are illustrative only.

These Bidding Rules may be modified from time to time by the Independent Evaluator in order to: (i) facilitate a more competitive auction process, (ii) make any necessary corrections and/or clarifications, (iii) account for any change in auction products, (iv) conform to any change in state or federal law or rule, and (v) apply any change deemed necessary at the discretion of the Independent Evaluator. All modifications will be posted to the Information Website and carried out in consultation with the Companies.

1.1 Independent Evaluator

The Independent Evaluator is CRA International, Inc. d/b/a Charles River Associates ("CRA"). The Independent Evaluator (also referred to as the Auction Manager) can be contacted by sending an email to fepaauction@crai.com. The full contact information for the Independent Evaluator is as follows:

Independent Evaluator c/o Brad Miller, Vice President CRA International, Inc. John Hancock Tower, T-9 200 Clarendon Street, T-9 Boston, MA 02116-5092

fepaauction@crai.com

Phone:

2. THE PRODUCTS BEING PROCURED

This section summarizes the common elements of the products to be procured in the auctions. The Information Website provides details about the products to be procured in a specific auction, including the delivery periods, the number of tranches, and the nominal MW size of the tranches.

617.425.3384

2.1 Default Service Load

Default Service Load is each Company's aggregate requirement to serve its Default Service customers. For purposes of these Bidding Rules, a "Default Service Customer" is a retail customer of a Company taking Default Service.

2.2 Full Requirements Service

The auctions are designed to procure full requirements, load-following energy and energy-related services for Default Service Customers of the Companies.

Obligations of Default Service Suppliers include the following:

- Assume all responsibilities of a PJM Load Serving Entity ("LSE"), including all PJM administrative
 expenses and any other services or fees as required by PJM of an LSE.
- Provide for energy.
- Provide for capacity.
- Provide for ancillary services.
- Provide for transmission service, including Network Integration Transmission Service ("NITS").

Obligations of Default Service Suppliers <u>exclude</u> the following:

- Regional Transmission Expansion Plan charges ("RTEP");
- PJM Expansion Cost Recovery charges ("ECRC");
- Reliability Must Run / Generation Deactivation charges ("RMR") associated with generating plants for
 which specific RMR charges begin after the approval of the Companies' current Default Service Plans
 ("DSP-IV") by the Pennsylvania Public Utility Commission ("Commission"). All Suppliers will continue
 to be responsible for RMR charges associated with generating plants that began before the approval
 of DSP-III by the Commission, as those charges may change over time;
- Unaccounted for Energy;
- · Historical out of market tie line, generation and retail customer meter adjustments; or
- Any Federal Energy Regulatory Commission ("FERC")-approved reallocation of PJM Regional Transmission Expansion Plan charges related to Docket No. EL05-121-009.

Alternative Energy Portfolio Standards Act ("AEPS Act" or "AEPS") credits needed to meet the requirements of the Companies' Default Service Load

The It is the responsibilityobligations of Default Service Suppliers to provide all Alternative Energy Credits ("AECs") necessary to meet the AEPS obligations. under the SMA vary among the Companies.

- Default Service Suppliers in the Met-Ed, Penelec, and Penn Power service territories will be responsible for meeting 100 percent of the non-solar Tier I and Tier II AEPS Act requirements. Met-Ed, Penelec, and Penn Power will procure all necessary solar photovoltaic requirements on behalf of Default Service Suppliers and EGSs that serve load in their respective service areas.
- In the West Penn service territory, Default Service Suppliers will be responsible for all Tier I and
 Tier II AEPS Act requirements (including solar photovoltaic requirements) less any Tier I AECs or
 solar photovoltaic AECs ("SPAECs") that are allocated to the suppliers from existing long-term
 purchases made by West Penn.

The requirements of Default Service Suppliers are described more specifically in the SMA.

2.3 Tranches

Default Service Load will be divided into identical units called tranches, each representing a defined percentage of Default Service Load. For example, if there are 25 tranches for a given customer class, then each tranche equals one divided by twenty-five, or four percent of that class's load. This includes four percent (4%) of the actual hourly energy required for Default Service Load for the applicable delivery period as well as four percent (4%) of the PJM capacity requirement for the applicable delivery period.

The number of tranches intended to be procured in the auction for a product is referred to as the "tranche target" for that product. The Independent Evaluator may reduce the tranche targets if indications of interest in the auction are such that doing so is required to promote more competitive bidding.

3. PRICES PAID TO DEFAULT SERVICE SUPPLIERS

This section summarizes the components of the prices to be paid to Default Service Suppliers. The SMA takes precedent over the summary provided here.

3.1 Prices Paid to Winning Suppliers in the Fixed-Price Auction

In accordance with the SMA, the Default Service Suppliers from the Fixed-Price Auction for residential customer load will be paid a price comprising a fixed-price component and a variable price component while the Default Service Suppliers from the Fixed-Price Auction for commercial customer load will be paid a price comprising a fixed-price component only.—An additional line item (payment or credit) is added for the 2022/2023 Energy Year; See Appendix H, "Supplement," of the SMA.

- The <u>residential fixed--price component</u> will be equal to 95 percent (95%) of the delivered supply each hour multiplied by the price established through the Companies' competitive procurement process. The <u>residential variable price component</u> will be equal to 5 percent (5%) of the delivered supply each hour multiplied by a "spot price." The "spot price" will be equal to the sum of:
 - (a) The real time hourly total locational marginal price ("LMP") established by PJM Interconnection L.L.C. ("PJM"), the Companies' regional transmission organization, for the PJM delivery point of the applicable Company (i.e., the PJM designated METED, PENELEC, Penn Power Aggregate, or APS Zone), plus
 - (b) An adder of \$20/MWh. _This adder is designed to capture an estimate of costs of other supply components associated with meeting the full-requirements obligation, including capacity, ancillary services, NITS, AEPS compliance, and other costs.
- The <u>commercial fixed--price component</u> will be equal to 100 percent (100%) of the delivered supply each hour multiplied by the price established through the Companies' competitive procurement process.

3.2 Prices Paid to Winning Suppliers in the Hourly-Priced Auction

In accordance with the SMA, the Default Service Suppliers from the Hourly-Priced Auction will be paid a price comprising a fixed—price component and a variable price component.—An additional line item (payment or credit) is added for the 2022/2023 Energy Year; See Appendix H, "Supplement," of the SMA.

- The <u>fixed-price component</u> will be equal to 100 percent (100%) of the delivered supply each hour multiplied by the price established through the Companies' competitive procurement process.
- The <u>variable price component</u> will be equal to 100 percent (100%) of the delivered supply each hour multiplied by a "spot price." The "spot price" will be equal to the sum of:
 - (a) The real time hourly total LMP established by PJM for the PJM delivery point of the applicable Company, plus
 - (b) An adder of \$4/MWh. This adder is designed to capture an estimate of costs of other supply components associated with meeting the full-requirements obligation, including capacity, ancillary services. NITS. AEPS compliance, and other costs.

4. PRIOR TO THE START OF BIDDING

4.1 Information Provided to Bidders

The Companies will make available certain information to suppliers in advance of qualification. This information will be posted on the Information Website.

4.1.1 Data

Load and other data that are posted to the Information Website are described in a data description document on the Information Website.

4.1.2 Minimum and Maximum Starting Prices

The Independent Evaluator will announce a minimum starting price and a maximum starting price for each product in the auction. The minimum and maximum starting prices establish the range for the possible round 1 prices for the auction.

4.1.3 Tranche Size, Tranche Targets

No later than eight (8) days prior to the Part 1 Application Due Date, the Independent Evaluator will announce for each product in the auction:

- The tranche targets or the number of tranches being procured for each product.
- The size (%) and MW-measure of the tranches in the auction.

No later than four (4) days prior to the Part 2 Application Due Date, the Independent Evaluator will announce:

Any update to the MW-measure of the tranches in the auction.

4.2 Qualification Process

There are two parts to the bidder application and qualification process. In Part 1, prospective bidders apply to become Qualified Bidders. In Part 2, each Qualified Bidder provides certifications and its indicative offer and pre-bid security in order to become a Registered Bidder.

A prospective bidder is required to submit a new Part 1 Application before the first auction in a calendar year in which it would like to participate.

If a prospective bidder submits a successful Part 1 Application for an upcoming auction, in general the Qualified Bidder will not need to submit a new Part 1 Application for any subsequent auction that is held in the same calendar year as the upcoming auction. For example, if the prospective bidder submits a successful Part 1 Application and becomes a Qualified Bidder for an auction held in January, the Qualified Bidder generally would not need to submit a Part 1 Application prior to any other auctions held in the same calendar year. However, the Qualified Bidder will need to submit a new Part 1 Application if the information in the prior successful Part 1 Application has changed. Also, the Qualified Bidder is required to submit its most recent (e.g., quarterly) financial statements before each auction.

A Qualified Bidder is required to submit a new Part 2 Application before each auction it would like to participate in.

4.2.1 Part 1 Application: Certifications and Other Qualified Bidder Requirements

In the Part 1 Application process, prospective bidders will be required to:

- Submit an application from a person with the power to bind the bidder.
- Agree to comply with all rules of the auction.
- Agree that if they become winning bidders, they will execute the applicable SMA with the Companies within 3 business days following the date of the Commission's approval of the auction results.
- Show either that they are a PJM Market Participant and Load Serving Entity in PJM, or that there
 exist no impediments to them becoming a PJM Market Participant and Load Serving Entity in PJM by
 the start of the applicable delivery period.
- Agree that if they become winning bidders, they will comply with the creditworthiness requirements set forth in the SMA.
- Certify that if they qualify to participate, they will not disclose information regarding the list of Qualified Bidders or confidential information that may be obtained during the bidding process about Qualified Bidders.
- Certify that if they qualify to participate, they will not substitute another entity in their place, transfer their rights to another entity, or otherwise assign their status as Qualified Bidders to another entity.

Part 1 Applications must be submitted to the Independent Evaluator no later than 12:00 p.m. noon prevailing Eastern Time on the Part 1 Application Due Date. Prospective bidders will be notified by the Independent Evaluator no later than three (3) days after the Part 1 Application Due Date whether they succeeded in becoming Qualified Bidders.

A prospective bidder that has qualified during the Part 1 Application process becomes a Qualified Bidder. The Independent Evaluator will send a list of all Qualified Bidders to relevant parties that have undertaken to maintain the confidentiality of the list of Qualified Bidders. The relevant parties that will receive this list of Qualified Bidders are as follows:

- Each Qualified Bidder.
- Other parties as necessary to oversee the proper conduct of the auction, including representatives from the Companies and Commission Staff.

All parties receiving a list of Qualified Bidders will be subject to the confidentiality requirements as specified below and in the section, "Communications Protocols," in these Bidding Rules.

4.2.2 Part 2 Application: Certifications, Indicative Offer, and Pre-Bid Security

For each auction, a Qualified Bidder must successfully complete the Part 2 Application process in order to become a Registered Bidder that can bid in the auction. Only Qualified Bidders may submit a Part 2 Application.

Part 2 Applications must be submitted to the Independent Evaluator no later than 12:00 p.m. noon prevailing Eastern Time on the Part 2 Application Due Date. Qualified Bidders will be notified by the Independent Evaluator whether they succeeded in the Part 2 Application process no later than three (3) days after the Part 2 Application Due Date.

Certifications

In the Part 2 Application, each Qualified Bidder will make a number of certifications to ensure the confidentiality of information regarding the auction, and in regards to associations with other Qualified Bidders, to ensure that they are participating independently of other Qualified Bidders. More details on the certifications can be found in the section, "Confidential Information, Certifications, and Sanctions," later in this document.

The competitiveness of the auction and the ability of the auction to produce competitive prices may be harmed by the coordinated or collusive behavior that associations among bidders may facilitate. As the Independent Evaluator relies on a number of factors to assess and promote competitive bidding, including the number of independent competitors, providing inaccurate information or insufficient disclosure of associations in the Part 2 Application is prohibited. More details on rules and protocols for participation by associated bidders can be found in the section, "Bidder Associations," later in this document.

Indicative Offers

With its Part 2 Application, a Qualified Bidder will be required to submit indicative offers and to post prebid security sufficient for their indicative offers. A Qualified Bidder provides two indicative offers for each auction that the Qualified Bidder is applying to participate in: one indicative offer at the minimum starting prices for the products in the auction, and one indicative offer at the maximum starting prices for the products in the auction. An indicative offer specifies for each product in the auction the number of tranches that the Qualified Bidder is willing to serve for that product. Thus, the indicative offer at the minimum starting prices in the auction specifies the number of tranches that the Qualified Bidder is willing to serve for each product in the auction at the minimum starting price for the product. The indicative offer at the maximum starting prices in the auction at the maximum starting price for the product. For each product in the auction, the number of tranches specified in the indicative offer at the minimum starting price cannot exceed the number of tranches specified in the indicative offer at the maximum starting price.

Indicative offers are important in two respects. First, the Independent Evaluator may use the indicative offers to inform the setting of the starting price for each product (i.e., round 1 announced price). Second, the total number of tranches in the Qualified Bidder's indicative offer at the maximum starting prices is used to determine the Qualified Bidder's initial eligibility (i.e., the maximum total number of tranches the Qualified Bidder can bid across all products in round 1 of the auction): the Qualified Bidder's initial eligibility is set to the total number of tranches across all products in the Qualified Bidder's indicative offer at the maximum starting prices. During the auction, bidders are free to switch their tranches among products in response to changes in announced prices (subject to any bidding restrictions). However, a bidder will never be able to bid a total number of tranches across products that exceeds the bidder's initial eligibility. Thus, the number of tranches for each product in the Qualified Bidder's indicative offer at the maximum starting prices does not limit the number of tranches the Qualified Bidder can bid on a particular product, but the total number of tranches across all products in the indicative offer at the maximum starting prices must be equal to the Qualified Bidder's desired initial eligibility across all products in the auction.

Restrictions on the Indicative Offer: Load Cap

Each Qualified Bidder will be subject to a load cap that limits the number of tranches the bidder can bid on and win. Thus, the Qualified Bidder's indicative offer at the maximum starting prices across all products in the auction is not allowed to exceed the load cap. The load cap will be 4075 percent for fixed-price products and 75 percent for hourly--price products on an aggregated load basis across all products in each auction such that no bidder may bid on and win more tranches than the load cap. The load cap will be implemented by ensuring that each bidder's initial eligibility does not exceed the load cap in an auction.

Restrictions on the Indicative Offer: Credit-Based Tranche Cap

A Qualified Bidder may have a credit-based tranche cap that limits the Qualified Bidder's initial eligibility. The Qualified Bidder's indicative offer at the maximum starting prices across all products in the auction is not allowed to exceed the Qualified Bidder's credit-based tranche cap. This credit-based tranche cap is based on the credit rating of the Qualified Bidder or its Guarantor. A Qualified Bidder's credit-based tranche cap is determined as shown in Table -1.

Table 1. Credit-Based Tranche Cap

Credit Rating of	of Qualified Bidde	er or Guarantor	Cradit Paged Transha Can		
S&P Moody's Fitch		<u>Fitch</u>	Credit-Based Tranche Cap		
BB and above Ba2 and above BB and above		BB and above	Unlimited up to auction's tranche target		
BB- Ba3 BB-		BB-	8 tranches		
Below BB- Below Ba3 Below BB-		Below BB-	4 tranches		
If not rated b	by any of those rati	ing agencies	4 tranches		

Note that the parameters in the table above may vary by auction and over time, at the sole discretion of the Companies.

To be assigned a credit-based tranche cap greater than the minimum credit-based tranche cap, the Qualified Bidder or its Guarantor must:

- Be rated by at least one of the following rating agencies: Standard & Poor's Rating Services ("S&P"), Moody's Investors Service, Inc. ("Moody's"), or Fitch, Inc. ("Fitch"), and
- Have a senior unsecured debt rating (or, if unavailable, corporate or issuer rating).

If the Qualified Bidder or Guarantor is rated by only one rating agency, that rating will be used. If the Qualified Bidder or Guarantor is rated by only two rating agencies, and the ratings differ, the lowest rating will be used. If the Qualified Bidder or Guarantor is rated by the three rating agencies, and the ratings differ, the lower of the two highest ratings will be used; provided that, in the event that the two highest ratings are common, such common rating will be used.

If a Qualified Bidder is not rated by any of the rating agencies, the Qualified Bidder's credit-based tranche cap will be the minimum credit-based tranche cap as shown in Table- 1.

The credit-based tranche cap is in effect only during the bidding process. After the SMA has been executed by a winning bidder, the credit-based tranche cap no longer will be in effect and the Default Service Supplier will be required to meet the credit terms in accordance with the SMA.

Pre-Bid Security

Each Qualified Bidder must post pre-bid security sufficient for its indicative offer at the maximum starting prices. Each Qualified Bidder must post pre-bid security in an amount specified in the Part 2 Application for all products included in the bidder's indicative offer at the maximum starting prices. Either cash or a pre-bid letter of credit will be accepted as pre-bid security. Letters of Credit can be submitted as a hard copy or in electronic form. Interest will not be paid on cash posted as pre-bid security. The standard form of the pre-bid letter of credit that is acceptable to the Companies will be posted to the Information Website.

If a draft pre-bid letter of credit submitted by the prospective bidder with the Part 1 Application does not conform to the standard form, the prospective bidder shall indicate clearly any and all modifications in electronic, redlined format from the standard form. The Companies will assess, in their sole and exclusive discretion, whether such modifications are acceptable. Modifications that are accepted by the Companies will be posted on the Website. Subsequently in its Part 2 Application, a Qualified Bidder must provide the required executed pre-bid letter of credit that either is the standard form or is the version that incorporates only those modifications to the standard form accepted by the Companies upon review of the bidder's Part 1 Application.

The following is an example calculation of the pre-bid security.

Example 1. Pre-Bid Security

A Qualified Bidder submits an indicative offer of 5 tranches for the Met-Ed 24-month residential product at the minimum starting price and 10 tranches for the Met-Ed 24-month residential product at the maximum starting price, 3 tranches for the Penelec 12-month residential product at the minimum starting price and 6 tranches for the Penelec 12-month residential product at the maximum starting price, and 2 tranches for the Penn Power 3-month commercial product at the minimum starting price and 4 tranches for the Penn Power 12-month commercial product at the maximum starting price. The Qualified Bidder must submit with this indicative offer of 20 tranches at the maximum starting prices cash or a pre-bid letter of credit of \$250,000 per tranche (as specified in the Part 2 Application). The Qualified Bidder thus posts cash or a pre-bid letter of credit of \$5 million (20 tranches X \$250,000 per tranche).

For a Part 2 Application to be accepted, it must be complete and include the Qualified Bidder's indicative offers and pre-bid security (either a pre-bid letter of credit or cash). After its Part 2 Application is accepted, a Qualified Bidder becomes a Registered Bidder. The Independent Evaluator will send each Registered Bidder a summary of its indicative offers, pre-bid security amount, and the Registered Bidder's initial eligibility.

The Independent Evaluator also will send simultaneously to each Registered Bidder, and to those other parties as necessary to oversee the proper conduct of the auction, a list of Registered Bidders, and the total initial eligibility aggregated across all Registered Bidders. The list of Registered Bidders and the total initial eligibility will not be released publicly. Qualified Bidders, in their Part 2 Applications, will have undertaken to maintain the confidentiality of the list of Registered Bidders and the total initial eligibility, and to destroy documents including electronic files with this information provided by the Independent Evaluator within five (5) days following the conclusion of the auction, as explained further in the Part 2 Application.

Pre-bid security will remain in full force, at a minimum, until the fifth calendar day after the conclusion of the auction. Subsequently, a bidder's pre-bid security will be cancelled and returned:

- For non-winning bidders: Aas soon as after the Commission issues its post-auction Secretarial Letter if the bidder has won no tranches.
- For winning bidders: Aafter the bidder has signed the SMA and has complied with all creditworthiness requirements of the SMA for the tranches that it-the bidder has won.

The Companies can collect on the pre-bid security of bidders that win tranches but that fail to sign the SMA or fail to comply with the creditworthiness requirements immediately following the close of the auction.

4.2.3 Sanctions for Failing to Comply with the Part 1 and Part 2 Applications

Sanctions can be imposed on a bidder for failing to disclose information relevant to determining associations, for coordinating with another bidder, or for failing to abide by any of the certifications that it will have made in its Part 1 and Part 2 Applications. Such sanctions can include, but are not limited to, termination of the SMA, loss of all rights to provide supply for the Companies to serve any load won by such bidder, forfeiture of financial guarantees and other fees posted or paid, prosecution under applicable state and federal laws, debarment from participation in future solicitations, and other sanctions that may be appropriate. For any failure to disclose information or for any violation of the certifications, the Independent Evaluator will make a recommendation on a possible sanction.

4.3 Starting Prices (Round 1 Prices)

No later than three (3) days before bidding starts for an auction, the Independent Evaluator will inform all Registered Bidders of the starting price for each product in the auction, which is the announced price that will be in effect for round 1. For each product, the starting price will be no higher than the maximum starting price and no lower than the minimum starting price for the product. The Independent Evaluator will set the starting prices.

4.4 Extraordinary Events

The Independent Evaluator, in consultation with the Companies, may determine that, due to extraordinary events, the minimum starting prices and the maximum starting prices require revision. In this event, the schedule for the auction process also may be revised. If the indicative offers have already been received, the Independent Evaluator will request that the Registered Bidders (or the Qualified Bidders if the Part 2 Application process had not been completed) revise their indicative offers on the basis of the revised minimum starting prices and the revised maximum starting prices.

For such a revision to be necessary, an extraordinary event must occur between the time at which the minimum starting prices and the maximum starting prices are announced and the day on which bidding starts. An extraordinary event must be agreed to by the Companies and the Independent Evaluator. Such events could include, but are not limited to, the advent of war, the disruption of a major supply source for potentially extended periods, or other events that could affect significantly the cost of supply.

If an extraordinary event occurs during that time, the Independent Evaluator in consultation with the Companies will determine revised minimum starting prices and revised maximum starting prices. New indicative offers based on these prices will be required from bidders. To the extent practicable, the determination of new minimum and maximum starting prices, the submission of new indicative offers, and if necessary the announcement of new starting prices, will be carried out so as to afford bidders sufficient time. If an extraordinary event occurs during that time that causes a possible change in the schedule, the Independent Evaluator in consultation with the Companies and Commission Staff, will determine a revised schedule.

5. BIDDING FORMAT

In order to participate in the auction, bidders must have been successful in the Part 1 Application process and the Part 2 Application process. Only Registered Bidders are permitted to participate in the auction. Registered Bidders will bid in the auction by accessing the Independent Evaluator's secure Bidding Website.

5.1 Descending-Price Clock Format

The auction format is a simultaneous, multiple-round, descending-price clock format for "N" rounds. The number of rounds "N" for the auction is not pre-determined. Instead, it is determined by the closing rule for the auction (described below). All products are available to bid on simultaneously in the auction. Bids are submitted during bidding rounds. Prices are announced for the products prior to each bidding round, and during a bidding round, a bidder submits for each product the number of tranches it would supply at the product's announced price. If the total number of tranches bid on a product exceeds the product's tranche target — i.e., the product is over-subscribed — the announced price for the product will be reduced for the next round. Announced prices will tend to decline round by round until the number of tranches bid falls sufficiently so that no product is over-subscribed and the auction closes.

An important rule is that a bidder cannot reduce the number of tranches it bids on a product if the product's announced price does not fall from one round to the next; in this case, the bidder can only maintain or increase the number of tranches it bids on the product (subject to other rules).

5.1.1 Rounds

Each bidding round has a specified start time and a specified end time. These start and end times are enforced by the Bidding Website. Prior to the start of the auction, the initial schedule of rounds will be available on the Bidding Website. As the auction progresses, the Independent Evaluator will keep bidders informed of the start and end times of subsequent rounds through the Bidding Website. The Independent Evaluator retains the option of pausing a round, delaying the start or end of a round, or otherwise adjusting the round times. The Independent Evaluator will inform bidders through the Bidding Website if it exercises this discretion to change the start time or end time of a round.

Bidders submit bids only during a round. When a round ends, the bids submitted during that round are processed and results of that round are reported to all bidders as explained in the section "Reporting Round Results" below. Each bidder then prepares to submit a bid for the next round if the auction remains open.

5.1.2 The Announced Prices and a Bid

Prior to the start of each round, the Independent Evaluator announces the price that will be in effect for each product for the round. The announced prices are specified in dollars per MWh or \$/MWh. The price announced by the Independent Evaluator for a product applies to all of the product's tranches. Each bidder decides how many tranches it is willing and able to supply for each product at the product's announced price. A bid by a bidder is, for each product, the number of tranches that the bidder is willing to supply at that announced price for the product. All bids are irrevocable and binding upon the bidders.

At sufficiently high announced prices there will be excess supply for a product causing it to be oversubscribed; that is, the number of tranches bid on the product will exceed the product's tranche target. Excess supply for a product is measured as the total number of tranches bid across all bidders on the product in the round minus the product's tranche target.

5.1.3 Reservation Prices and Starting Prices

There are reservation prices for the auction. The reservation price for a product is the price above which tranches for the product will not be purchased. If, at the conclusion of the auction, the reservation price for a product has not been met, no tranches for that product will be awarded. At the conclusion of the auction, the Independent Evaluator will inform bidders through the Bidding Website if the reservation price for a product has not been met.

Starting prices for the auction are determined after reservation prices are determined. The starting price for a product will be no lower than the reservation price for the product. The starting price may be the same as or higher than the reservation price for the product. The Independent Evaluator will not announce the reservation prices to bidders in advance of an auction.

5.1.4 Restrictions on What a Bidder Can Bid

The total number of tranches a bidder bids across all products in a round cannot exceed the bidder's eligibility for that round. That is, a bidder's eligibility to bid in a round is the maximum number of tranches it is allowed to bid across all products in that round. A bidder's eligibility for a round simply is the number of tranches the bidder bid across all products in the preceding round. Thus, a bidder cannot increase its eligibility from round to round; its eligibility can only stay the same or decrease from round to round.

A bidder is not allowed to bid more tranches on a product in a round than the product's tranche target.

A bidder is not allowed to bid a number of tranches that would violate any applicable load cap.

If the announced price for a product has been reduced from one round to the next round, the bidder can reduce the number of tranches it bid on that product.

If the announced price for a product has not been reduced from one round to the next round, the bidder cannot reduce the number of tranches it bid on that product.

Subject to the rules above, in each round a bidder is free to bid its tranches of eligibility across products however it would like to. Thus, subject to the rules above, bidders are free to reduce the tranches they bid and/or to switch tranches across products from round to round in response to changes in the announced prices for the products.

As discussed above, a bidder's initial eligibility is its eligibility for round 1 of the auction and is determined by the total number of tranches across products at the maximum starting prices in the bidder's indicative offer. During the course of the auction, the bidder's eligibility will decline or remain unchanged depending on the total number of tranches bid by the bidder across all products in each round of the auction.

If a bidder's eligibility falls to zero tranches, it will not be allowed to bid in any more rounds of the auction.

5.1.5 Multiple Bids by a Bidder

Because a bidder may decide to change a bid it submitted previously within the current open round, a bidder is allowed to make multiple bid submissions in a round as long as the round remains open for bidding, with each new confirmed bid fully replacing any prior bids it submitted in the round. If a bidder submits multiple bids in a round, the only bid considered in the round for that bidder is the last confirmed bid it submitted in the round.

5.1.6 Default Bid

After the end of a round, a default bid is submitted automatically on behalf of a bidder if the bidder:

- Entered the round with positive eligibility, and
- Did not submit a confirmed bid in the round.

If the announced price for a product declined from the prior round, then zero tranches will be the default bid for that product.

If the announced priced for a product did not decline from the prior round, then the number of tranches that the bidder bid on the product in the prior round as determined by the end-of-round ("EOR") procedure following the prior round will be the default bid for the product.

Each bidder is solely responsible for ensuring it submits a confirmed bid prior to the end of the round in order to avoid a default bid of being submitted on the bidder's behalf.

5.1.7 The EOR Procedure

At the end of each round, the EOR procedure is used to process the confirmed bids submitted during the round. The EOR procedure includes the following steps.

- (a) The supply for each product is measured by summing up across the confirmed bids for all bidders the number of tranches bid for each product.
- (b) The subscription level for each product is measured by comparing the supply for the product to the tranche target for the product. A product is over-subscribed, subscribed, or under-subscribed if supply (i.e., the number of tranches bid) is greater than, equal to, or less than the product's tranche target, respectively.
- (c) If a product has become under-subscribed in a round after being over-subscribed or subscribed in the preceding round, then tranches will be rolled back to the point that the product is subscribed. That is, at least some of the tranches that were bid on the product in the preceding round but that were not bid on the product this round will be deemed to still be bid on the product. The price at which a rolledback tranche is deemed to have been bid simply is the announced price at which the bidder had bid the tranche. There is a priority for selecting tranches to roll back: tranches that otherwise would no longer be bid on any product in the auction and therefore would be reductions in bidders' eligibilities are rolled back first (referred to as "eligibility reduction tranches"), and then if needed, tranches that were switched from being bid on the product to being bid on another product are selected next for rollbacks (referred to as "switched tranches"). Eligibility reduction tranches are selected for rollback proportionally tranche by tranche, not bidder by bidder. Likewise, switched tranches are selected for rollback proportionally tranche by tranche, not bidder by bidder. More precisely, because integer tranches are needed, the actual selection mechanism uses a random number generator to select rollbacks tranche by tranche (first for eligibility reduction tranches and then for switched tranches), but on average the selection process results in proportional rollbacks (with priority given to rolling back eligibility reduction tranches first and then switched tranches second). All tranches that are rolled back maintain their eligibility for the bidder. Any bidder subjected to a rollback will be notified through the Bidding Website that a rollback has taken place and will be informed about the number of tranches deemed bid on each product and the price at which those tranches have been deemed bid.

For example, suppose a bidder bids five tranches on a product and no tranches on other products in round 8, and the price for that product is reduced for round 9 and the bidder bids only 1 tranche on the product and no tranches on other products for round 9. Absent any EOR rollbacks following round 9, the bidder's eligibility would fall from 5 tranches to 1 tranche. But during the EOR procedure, suppose two of the bidder's 4 "eligibility reduction tranches" are rolled back on the product, so after the EOR procedure the bidder is deemed to have bid 3 tranches on the product — one at the announced price of the round just ended and two at the announced price of the preceding round — and therefore the bidder is deemed to have 3 tranches of eligibility for round 10.

- (d) "Free eligibility tranches" are determined as follows. A product's "bid stack" is a list of the tranches currently deemed bid on the product and the price at which each tranche was bid for the product. Because of rollbacks, a product's bid stack could have tranches bid at two different prices: some tranches bid at the earlier, higher announced price and some tranches bid at the current, lower announced price. Any new tranche bid on such a product necessarily will be bid at the current, lower announced price. This new tranche will displace a tranche in the product's bid stack at the earlier, higher announced price. The displaced tranche becomes a "free eligibility tranche". The free eligibility tranche counts as eligibility for the bidder and the bidder can bid the tranche on any product next round, or the bidder can choose not to bid the tranche at all. But if the bidder does not bid the free eligibility tranche next round, the tranche will be withdrawn from the auction permanently and will reduce the bidder's eligibility by one tranche after the next round.
- (e) In some cases, the Independent Evaluator may reduce the tranche targets. The criteria that could lead to such a reduction will be determined prior to the auction but will not be announced to bidders. Once certain pre-specified criteria related to excess supply and related to the reservation price have been met, the discretion to reduce a product's tranche target because of insufficient supply will be eliminated. Thus, any tranche target reduction would more likely occur in the earlier rounds of the auction. If the Independent Evaluator reduces the tranche target for a product, bidders will be informed of the revised tranche target. Any bidder that otherwise would have eligibility exceeding the new tranche targets will have its eligibility reduced so as not to exceed the new tranche targets.
- (f) The closing rule determines whether the auction has concluded. The closing rules is that the auction concludes if either case (1) or case (2) holds as follows:
 - (1) If no product is over-subscribed and no bidder has free eligibility tranches, then the auction has concluded. Note that it is possible for the auction to continue with no reductions in announced prices: if no product is over-subscribed there will be no reductions in announced prices but if there are free eligibility tranches (which "expire" after one round), the auction will remain open for one more round (subject to case (2) described next), allowing bidders with free eligibility to bid those tranches.
 - (2) If this is the Nth consecutive round in which no product is over-subscribed, and the number of tranches of free eligibility across all bidders as a percentage of the sum of the tranche targets across all products is less than or equal to X percent, then the auction has concluded. The parameter values for N and X will be determined before the auction. The likelihood that this case (2) would occur in a particular auction is expected to be low.
- (g) If the auction has concluded, the winning tranches, winning bidders, and winning prices are determined as described below.
- (h) If the auction has not concluded, then each bidder's eligibility is determined for the next round and the price decrement (if any) is determined for each product for the next round.

5.1.8 Price Decrements

The announced prices will decrease round by round by a price decrement for over-subscribed products. Pre-specified price guidelines are used to determine the price decrements. Generally the price decrement for a product will be larger for the earlier rounds in the auction and when the excess supply for the product is greater. The price decrement is expected to be between 0.5 percent and 5 percent of the announced price for the most recently completed round.

The Independent Evaluator reserves the right to override the price decrement guidelines. The exercise of that right is expected to occur rarely and only if doing so is believed to facilitate timely progression of the bidding process.

5.2 Determination of Winning Tranches, Winning Bidders, and Winning Prices

At the close of the auction, the winning tranches, winning bidders, and winning prices will be determined as follows.

As a result of the EOR procedure as described above, there are two possible scenarios for a product at the close of the auction.

5.2.1 Bid Stack for a Product has All Tranches at the Same Price

In this scenario, there are no rolled-back tranches in the product's bid stack: all tranches in the bid stack were bid at the last announced price, including any tranches bid on the product in the last round of the auction as determined by the EOR procedure. That announced price is the product's clearing price, and all tranches in the product's bid stack are winning tranches if the clearing price satisfies the product's reservation price. Bidders who bid those tranches are winning bidders for those tranches, and all bidders with winning tranches on a product are paid the same price — i.e., the clearing price — for each winning tranche on the product. Note that this scenario includes the case in which a product was over-subscribed at some point in the auction and later became subscribed, as well as the case in which a product was always under-subscribed in the auction (i.e., it was never subscribed or over-subscribed in the auction).

5.2.2 Bid Stack for a Product has Tranches at Two Different Prices

In this scenario, there are rolled-back tranches in the product's bid stack: some tranches in the bid stack were bid at the last announced price (including any tranches bid on the product in the last round of the auction as determined by the EOR procedure), and some tranches in the bid stack were bid at the next most recent announced price. In this case, the product's clearing price is the next most recent announced price — which necessarily is higher than the last announced price for the product. All tranches in the product's bid stack are winning tranches if the clearing price satisfies the product's reservation price. Bidders who bid those tranches are winning bidders for those tranches, and all bidders with winning tranches on a product are paid the same price — i.e., the clearing price — for each winning tranche on the product.

5.3 Example of Round-by-Round Bidding

Appendix A provides an illustrative example of round-by-round bidding.

5.4 Reporting Round Results

During a round, a bidder can see the current status of the auction and the status of the current round including the announced price for each product as well as the bidder's own bidding status. A bidder will not see information about other bidders.

Between rounds the Bidding Website will report the results for the most recently completed round. Results for all prior rounds also will be accessible. The round results for each completed round in the auction will show:

- The announced price for each product and a range of total supply across all bidders and all products (that is, a range that includes the total number of tranches bid). The range of total supply will be defined by two different integers. Actual total supply will not be reported but will be at least as high as the lower of the two integers and no higher than the higher of the two integers. There is an exception to reporting total supply as a range of two integers: if and when total supply has declined below a pre-determined level, total supply will be reported simply as being below that level. The reporting ranges will be made available to bidders in advance of each auction.
- For each bidder, that bidder's bid for the round i.e., the number of tranches bid on each product —
 and the bidder's eligibility for the next round. (Each bidder does not see information about other
 bidders.)
- The announced price for each product for the next round if the auction will continue with the next round.

5.5 Frequency of Rounds

The early rounds of bidding may be longer in duration than later rounds. The duration of a bidding round will be at least five (5) minutes.

The time between early rounds of bidding may be longer in duration than for later rounds. The time between bidding rounds will be at least five (5) minutes.

The schedule of rounds and any changes to the schedule will be made available to bidders through the Bidding Website.

5.6 Auction Pause Declared by Independent Evaluator

At any time during the auction, the Independent Evaluator may decide to pause the auction. This is not expected to happen often if at all. If the Independent Evaluator pauses the auction or changes the round schedule in any way, bidders will be notified.

6. AFTER THE AUCTION CLOSES

6.1 Notification of Results

At the close of the auction, the Independent Evaluator will notify the Companies, the Commission, and the bidders as follows.

- The Independent Evaluator will notify the Companies and the Commission of the identities of the
 winning bidders, the number of tranches won by each winning bidder, the prices for the tranches won,
 and other aggregated information on the bidding process.
- The Independent Evaluator will notify each winning bidder of how many tranches the bidder has won and at what prices. The Independent Evaluator also will notify the unsuccessful bidders that they have not won any tranches.

The names of the winning bidders, the number of tranches won by each bidder, and the winning prices will remain confidential until released publicly by the Commission or as required by law.

The auction results are tentative subject to Commission approval.

After the conclusion of the auction and provision of the auction results to the Commission by the Independent Evaluator, the Commission is expected to make a decision within two will have one business days to approve or reject the auction results.

6.2 Execution of SMA

The winning bidders and the Companies will execute the SMA within three (3) business days following the Commission's approval of the auction results. If the supplier has already executed a SMA with the Company they have won tranches for, they will only need to execute the Transaction Confirmation. Each winning bidder must demonstrate compliance with the creditworthiness requirements set forth in the SMA.

6.3 Sanctions for Failure to Execute the SMA

A winning bidder's pre-bid security posted with its Part 2 Application may be forfeited if the winning bidder does not execute the SMA within three (3) business days following the Commission's approval of the auction result, if it fails to demonstrate compliance with the creditworthiness requirements set forth in the SMA, or if it fails to agree to any of the terms of the SMA. In addition, the winning bidder will be liable for damages incurred by the Companies, which will be determined in accordance with the terms of the SMA as though the winning bidder were a defaulting party to the SMA.

7. USE OF THE BIDDING WEBSITE

Bidders will bid in the auction by accessing the Independent Evaluator's secure Bidding Website. A bidder will access the Bidding Website using their own Web browser. The URL address for the Bidding Website, as well as usernames and passwords, will be provided to Registered Bidders prior to the start of the auction.

The Bidding Website allows a Registered Bidder to submit and confirm bids, to verify its status, to view results from prior rounds, to view the schedule of rounds, and to view messages from the Independent Evaluator.

7.1 Importance of Confirmed Bids

Submitting a bid on the Bidding Website involves three steps:

- (1) Web page for entry and submission of the bid quantities. The bidder enters its desired bid and then submits the bid in order to proceed to the next step.
- (2) Web page for validation of the bid. The bidder is asked to review the bid it submitted in the first step before proceeding to the confirmation step.
- (3) Web page showing confirmation of the bid. The bidder receives a unique confirmation ID for the bid and the time-stamp at which the bid was recorded by the Bidding Website server.

It is important to note that a bid is not accepted and recorded as an accepted bid until and unless the bidder reaches the third step in which the bid confirmation Web page displays the unique confirmation ID and time-stamp for the bid.

7.2 Requirements for Using the Bidding Website

Access to the Bidding Website requires all of the following:

- Username and password provided by the Independent Evaluator.
- Access to the Internet.
- Use of one of the more recent versions of a standard Web browser.
- Status as a Registered Bidder.

A bidder loses access to the Bidding Website after it no longer is possible for the bidder to win tranches in the auction.

7.3 Messaging

The Bidding Website displays messages from the Independent Evaluator. These messages from the Independent Evaluator are displayed for all bidders with access to the Bidding Website.

8. BACKUP BIDDING PROCEDURES

In case a bidder has technical difficulties, and as a result is not able to submit a bid via the Bidding Website in a round, backup bidding procedures will be provided as <u>described below</u>. <u>Thote that the Authorized Representative and the Delegate automatically are designated as authorized bidders</u>. Requests to designate additional authorized bidders must be sent to the Independent Evaluator in writing prior to the start of round 1 of the auction.

- (1) Option 1. The bidder should use the Backup Bidding Fax Number to submit its bid via fassimile. It is recommended that the bidder call the Independent Evaluator's Help Desk and inform the Help Desk operator that it has submitted a bid via fassimile. Reasonable efforts will be made to contact the bidder if the backup bid is not received via fassimile in the time expected. Once the backup bid is received via fassimile, a member of the Independent Evaluator team will attempt to enter the bid on the Bidding Website on behalf of the bidder. Note that prior to the auction, bidders will be provided with the Backup Bidding Fax Number and with forms to use for faxing a bid using the faxed-based backup bidding procedure.
- (1) Option 12. Upon encountering a technical difficulty, In case a bidder is unable to submit its bid via facsimile, iIit is recommended that the bidder call the Independent Evaluator's Help Desk and inform the Help Desk operator that it would like to submit a bid over the phone. The Help Desk operator will verify the identity of the caller, for example by asking for the bidder's company name, and the first and last name of the caller, along with the username and password of the bidder. Then a member of the Independent Evaluator team will attempt to enter the bid on the Bidding Website on behalf of the bidder. Please note that the Independent Evaluator can accept bids over the phone only from callers that have been identified as authorized bidders by the bidder company. The Authorized Representative and Delegate automatically are designated as authorized bidders. Requests to designate additional authorized bidders must be sent to the Independent Evaluator in writing prior to the start of round 1 of the auction.
- (2) Option 2. In case the bidder is unable to place a call to the Independent Evaluator's Help Desk, it is recommended that the bidder submit it's bid via email to the Independent Evaluator. If possible, The email should be sent using encrypted email. Once the backup bid is received via email, a member of the Independent Evaluator team will attempt to enter the bid on the Bidding Website on behalf of the bidder. Note that prior to the auction, bidders will be provided with one or more forms to use for submitting a bid using thethis email-based backup bidding procedure.
- (3) Option 34. In case the bidder is unable to place a call to the Independent Evaluator's Help Desk or to submit a bid via e-mail, tThe bidder should use the Backup Bidding Fax Number to submit its bid via facsimile. Once the backup bid is received via facsimile, a member of the Independent Evaluator team will attempt to enter the bid on the Bidding Website on behalf of the bidder. Note that prior to the auction, bidders will be provided with the Backup Bidding Fax Number and with one or more forms to use for faxing a bid using the faxed-based backup bidding procedure.

(2)

Bidders must be aware and understand that there is no guarantee or other assurance that if it submits a bid using a backup bidding procedure that its bid will be submitted and confirmed on its behalf by the Independent Evaluator team consistent with the intentions of the bidder and in time before the round ends.

If a backup bid submitted by a bidder is not accepted and confirmed by the Bidding Website because the round has ended, a default bid will be entered for the bidder as described above in the sections on default bids.

If a backup bid submitted by a bidder is not accepted and confirmed by the Bidding Website for other reasons (e.g., the number of tranches bid is greater than a bidder's eligibility or violates the bidder's credit-based tranche limit or applicable load cap), the Independent Evaluator team will use reasonable efforts to inform the bidder that a new bid must be submitted.

If a backup bid submitted by a bidder is confirmed by the Bidding Website, the Independent Evaluator team will contact the bidder and provide the confirmation of the accepted bid to the bidder.

Bidders use the backup bidding procedures at their own risk. In all cases involving backup bids, the Independent Evaluator team does not accept any responsibility, obligation, or liability for errors, omissions, timeliness, or otherwise, related to whether a backup bid is entered into and confirmed by the Bidding Website on behalf of the bidder or as intended by the bidder.

9. WHO TO CONTACT IN CASE OF PROBLEMS DURING THE AUCTION

A bidder should contact the Help Desk if it has questions or problems. The phone number for the Help Desk will be provided to bidders prior to the start of the auction.

10. CONTINGENCY PLAN

There is a contingency plan to cover two scenarios:

- At least one of the products in an auction is not fully subscribed.
- At least one of the winning suppliers defaults prior to the start of the delivery period or at any time during the delivery period.
- A Capacity Proxy Price is utilized.
- A Capacity Proxy Price is utilized.

10.1 If an Auction is Not Fully Subscribed

In the event that an auction is not fully subscribed, the Companies will re-bid the unfilled tranches from that auction provided the start of the delivery period for the tranches is more than 30 calendar days away. If the delivery period is more than 30 calendar days away:

- The unfilled tranches will be re-bid in the next scheduled auction if there is sufficient calendar time to include the unfilled tranches where supply is sought with the same delivery start date as the unfilled tranches.
- If there is no such scheduled auction, then the unfilled tranches will be re-bid in a separate solicitation no later than 30 calendar days before the original delivery start date.

For any remaining unfilled tranches, the Companies will purchase the necessary physical supply through PJM administered markets and meet any AEPS compliance requirements through purchases at market prices.

10.2 If a Winning Bidder Defaults

If a winning bidder defaults prior to the start of or during the delivery period, the Companies will offer the unfilled tranches to the other Registered Bidders who participated in the most recent solicitation. The Companies will enter into an agreement with the Registered Bidder or Bidders offering the best terms for the unfilled tranches resulting from the default, provided the prices offered by such bidder or bidders are consistent with the original prices under which the unfilled tranches were procured and changes in market conditions from the time when the original tranches were procured. If the Companies are not able to enter into such agreement and a minimum of 30 calendar days exists prior to the start of the delivery period, the Companies will seek to bid the defaulted tranches in the next scheduled solicitation for supply with the same start date as the unfilled tranches or in a separate supplemental competitive solicitation. As with other unfilled tranches described above, if insufficient time exists to conduct an additional competitive solicitation, or if the supplemental solicitation is unsuccessful, the Companies will supply the tranches using PJM-administered markets. In addition to damages to which the Companies may be entitled, costs incurred by the Companies in implementing this contingency plan for supply and AEPS requirements will be assessed against the defaulting supplier's credit security, to the extent available.

10.3 If a Capacity Proxy Price ("CPP") is Used

A Capacity Proxy Price is used for Default Service auctions to establish a capacity cost when PJM does not conduct their Base Residual Auction ("BRA") in time for Default Service Suppliers to incorporate into their bids. The CPP for each Company will be the average of the capacity prices from the last auction of the previous two capacity auctions conducted by PJM. The Companies will calculate reconciliations for those Default Service Suppliers impacted by utilizing their daily Unforced Capacity ("UCAP") obligation by class, tranches served by class, and the differential between the CPP and the final capacity price. Once the BRA results are known, the Companies will commence true ups in the next billing month.

11. COMMUNICATIONS PROTOCOLS

The communications protocols described here are intended to promote a fair, open, transparent, objective, and non-discriminatory auction. These protocols also are intended to protect proprietary information of participants and information that, should it be released, would be detrimental to the outcome of the auction process or future solicitations.

11.1 The Companies and Affiliates

11.1.1 Internal Communications

The Companies will designate individuals to work on the auction process. These individuals directly or indirectly will not have communication with, or exchange information with, any individuals of an affiliate of the Companies that may bid in the auction process where such communication or information is related directly or indirectly to this auction process.

11.1.2 Communications with Bidders

The Companies will not communicate with bidders prior to the selection of winning bids. When the Independent Evaluator informs the Companies about the prices and tranches of the winning bids and the identity of winning bidders in accordance with Section 6.1 of the Bidding Rules, representatives from the Companies then will communicate with the winning bidders in order to execute the necessary documents.

If a bidder attempts to contact the Companies regarding the auction process by phone call, email, fax, or other means, the Companies will direct the bidder to the Information Website and/or to the Independent Evaluator.

11.1.3 Part 1 Application Process

For the Part 1 Application process, the Independent Evaluator will need to provide the names of applicants to the Companies' credit department for purposes of confirming the applicants' credit requirements.

11.1.4 Part 2 Application Process

For the Part 2 Application process, the Independent Evaluator will need to provide the aggregate eligibility and other information from the Part 2 Applications to the Companies with the names of applicants redacted.

11.2 General Public and Media

While bidding is in progress, there is to be no communication with the media or the public. After the auction process is completed, results are determined, and bidders have been notified, all media inquiries will be forwarded to the Companies.

11.2.1 The Information Website

The central source of information made available publicly and to bidders is the Information Website. The Independent Evaluator will manage the information flow on the Information Website and will be designated on the Website as the contact for any questions or inquiries from parties. Any party will have access to the public sections of the Information Website.

11.2.2 Frequently Asked Questions

Among other information and resources on the Information Website, there will be an FAQ (frequently asked questions) section with posted questions and answers. As inquiries are received, they will be converted into an FAQ and posted on the Information Website without revealing the identity of the party posing the inquiry.

Inquiries to be answered by the Companies will be forwarded by the Independent Evaluator to the Companies. Inquiries to be answered by the Independent Evaluator will be forwarded to the Companies with a draft response. Any inquiry or draft response forwarded by the Independent Evaluator to the Companies will not identify the party posing the inquiry. Both the Companies and the Independent Evaluator will review any inquiry and response before the FAQ is posted to the Information Website.

11.2.3 Registered Users

If a party wishes to receive notices and updates regarding public information and new postings to the Information Website, then the party can register through the Information Website to become a Registered User.

Any information the Independent Evaluator has concerning the auction process that is relevant and that can be disclosed publicly will be made available equally to all Registered Users in a timely manner. The method of such communication likely will be via the Information Website and/or emails to Registered Users using the BCC email field so identification of Registered Users is not disclosed to other Registered Users.

11.2.4 Press Releases

The Companies and/or the Independent Evaluator may issue one or more press releases or may place news items in the trade press with the intent to disseminate information about the auction process in an efficient, fair, and timely manner.

11.2.5 Answering Inquiries from the General Public or Media

Inquiries from the general public or the media to the Independent Evaluator will be directed to the Information Website.

11.3 Bidders

11.3.1 Communications Among Bidders

Bidders are prohibited from communicating with each other in ways that would compromise the integrity and competitiveness of the auction process. Sanctions will be applied if these rules are violated.

11.3.2 Communications between the Independent Evaluator and Bidders

The central source of information made available to bidders is the Information Website. The Website facilitates making information available equally to bidders in a timely manner.

Bidders are encouraged to become Registered Users of the Information Website to receive ongoing information about the auction process. As discussed above, once registered through the Information Website, Registered Users will receive notifications from the Independent Evaluator about updates to the auction process and to the Information Website.

If the Independent Evaluator receives an inquiry from a party and prepares a response that would be relevant for other parties, the Independent Evaluator will ensure the information will be made available equally to all Registered Users in a timely manner and will post the information on the Information Website and/or will email the Registered Users without revealing the identity of parties.

In addition to posting information to the Information Website, the Independent Evaluator may contact bidders directly in order to seek or provide information about the auction process in a way that does not advantage any bidder.

Any communications from the Independent Evaluator to a bidder will not reveal the identity of other bidders.

11.3.3 Bidding Process

During the auction, the Independent Evaluator, the Commission, and Companies' personnel may monitor the bidding process.

The Independent Evaluator will ensure the bids submitted by bidders conform to the rules of the auction process.

The Bidding Rules and pre-determined bid selection criteria will be applied to determine which bids, if any, are winning bids.

11.3.4 Limitations on Disclosures by Bidders

Bidders are not allowed to disclose they are participating in the Fixed-Price Auction or the Hourly-Priced Auction, and winning bidders are not allowed to disclose that they have won any tranches in the Fixed-Price Auction or the Hourly-Priced Auction until the Commission publicly reports the results of the auction. Such limitation on public disclosure by bidders is waived if disclosure is required by law.

11.4 The Commission

11.4.1 Communications with the Independent Evaluator

During the bidding process, the identity of bidders, prices, and the number of tranches bid will be kept confidential. This information may be released to the Commission after the auction results are finalized.

11.4.2 Communications with the Companies

The Commission may communicate with the Companies regarding the auction process. However, the Companies will not disclose any proprietary information until after the final round of the auction is completed and bidders are informed of the results of the auction.

11.4.3 Communications with Bidders

The Commission will not communicate with bidders about the auction process prior to the determination of winning bids. If a bidder attempts to contact the Commission by phone call, email, fax, or other means, the Commission will direct the bidder to the Information Website and/or to the Independent Evaluator.

11.4.4 Information on Auction Participation

In order to maintain confidential and proprietary information provided by bidders as part of the auction process, the identity of all bidders that submitted Part 1 and/or Part 2 Applications in the auction and the indicative offers will be kept confidential until released publicly by the Commission. The Commission may elect to keep these data confidential at its sole discretion.

11.4.5 Round-by-Round Bids

Round-by-round bids by bidders will be kept confidential pursuant to the confidentiality provisions of the Bidding Rules and the SMA for as long as the Companies continue to procure Default Service.

12. CONFIDENTIAL INFORMATION, CERTIFICATIONS, AND SANCTIONS

12.1 Confidential Information

Confidential Information relative to bidding strategy means information relating to a bidder's bid(s) in the auction, whether transmitted in writing or verbally, which if it were to be made public likely would have an effect on any of the bids that another bidder would be willing to submit. Confidential Information relative to bidding strategy includes (but is not limited to): a bidder's strategy; a bidder's indicative offer; the quantities that a bidder wishes to supply; the bidder's estimation of the value of a tranche; the bidder's estimation of the risks associated with serving the load for the auction; and a bidder's contractual arrangements for purchasing power to serve such load were the bidder to win tranches in the auction.

Confidential Information regarding the auction means information that is not released publicly by the Commission, the Companies or the Independent Evaluator and that a bidder acquires as a result of participating in the auction, whether transmitted in writing or verbally, which if it were to be made public could impair the integrity of current or future solicitations, impair the ability of the Companies to hold future solicitations, or harm consumers, bidders or applicants. Confidential Information regarding the auction includes (but is not limited to): the list of Qualified Bidders, the list of Registered Bidders, the initial eligibility, the status of a bidder's participation, and all non-public reports of results and announcements made by the Independent Evaluator to any or all bidders in this auction.

Confidential Information may not receive continued confidential or protected treatment should: (a) a bidder publicly disclose Confidential Information relating solely to that bidder; or (b) public disclosure is required or compelled by the Commission, a court or otherwise by law. The Independent Evaluator, the Commission, and the Companies shall not be liable for such public disclosures or, so long as reasonable measures have been taken to keep such information confidential, any other public disclosure of Confidential Information. By participating in this auction process, each bidder acknowledges and agrees to the confidentiality provisions set forth herein, as well as any limitations thereto.

In addition, the bidder agrees the bidder's data and information submitted in this auction process will be disclosed if required by any federal, state or local agency (including, without limitation, the Commission) or by a court of competent jurisdiction. However, the Companies will endeavor to notify the bidder in advance of such disclosure. In any event, neither the Companies nor the Independent Evaluator, nor any of their employees or agents, will be responsible to the bidders or any other party, or liable for any disclosure of such designated materials before, during or subsequent to this auction. Notwithstanding the above, the Companies and the Independent Evaluator reserve the right to use and communicate publicly and/or to third parties any and all information/data submitted as part of this auction process in any proceedings before FERC, the Commission, and any other regulatory body and the courts, if necessary, without the prior consent/approval of, or notice to, any such bidder. The bidder expressly agrees that the Companies may provide bidder information on a confidential basis to the Commission, the Pennsylvania Office of the Consumer Advocate, and the Office of Small Business Advocate as necessary for compliance with any default service procurement reporting obligations.

12.2 Certifications and Disclosures to Be Made

A prospective bidder will be required in its Part 1 Application to disclose any bidding agreement or any other arrangement in which the prospective bidder may have entered and that is related to its participation in the auction. A prospective bidder that has entered into such an agreement or arrangement must name the entities with which the prospective bidder has entered into a bidding agreement, or a joint venture for the purpose of participating in the auction, or a bidding consortium, or any other arrangement pertaining to participating in the auction. A bidding consortium is a group of separate businesses or business people joining together to submit joint bids in the auction.

In addition, a prospective bidder will be required to make the certifications listed in the Part 1 and Part 2 Applications.

The Commission may publicly release the winning prices and the names of the winning bidders from the auction. The Commission may choose to release additional information. After the auction, a winning bidder itself may release information regarding the number of tranches it has won, and a non-winning bidder itself may release information only regarding the fact that it participated in the auction. The winning bidders and the non-winning bidders otherwise continue to be bound by their certifications as described previously. In particular, no winning bidder and no non-winning bidder itself can reveal the winning prices of the auction prior to these being publicly released by the Commission.

12.3 Actions to Be Taken if Certifications Cannot Be Made

If a bidder cannot make all the certifications above, the Independent Evaluator will decide within five (5) days following the deadline to submit the Part 2 Application on a course of action on a case-by-case basis. To decide on this course of action, the Independent Evaluator may make additional inquiries and information requests to understand the reason for the inability of the bidder to make the certification.

If Qualified Bidders do not comply with additional information requests by the Independent Evaluator regarding certifications required in the Part 2 Application, the Independent Evaluator may reject the application.

12.4 Sanctions for Failure to Comply

Sanctions may be imposed on a bidder for failing to properly disclose information relevant to determining associations, for coordinating with another bidder, for failure to abide by any of the certifications made in its Part 1 Application or Part 2 Application, for releasing Confidential Information or disclosing information during the auction (aside from only specific exceptions provided with respect to entities explicitly named in the Part 1 Application as entities that are part of a bidding agreement or other arrangement), and in general for failing to abide by any of the communications protocols in the section, "Communications Protocols," of these Bidding Rules. Such sanctions can include, but are not limited to, any one or more of the following:

- Termination of the SMA.
- The loss of all rights to provide tranches won by such bidder.
- The forfeiture of letters of credit and other fees posted or paid.
- Action (including prosecution) under applicable state and/or federal laws.
- Attorneys' fees and court costs incurred in any litigation that arises out of the bidder's improper disclosure.
- Debarment from participation in future solicitations.
- And/or other sanctions that may be appropriate.

Should such an event occur, the Independent Evaluator will make a recommendation to the Companies regarding sanctions. The imposition of such sanctions will be at the discretion of the Companies.

13. BIDDER ASSOCIATIONS

A Qualified Bidder is associated with another Qualified Bidder if the two bidders have ties that could allow them to act in concert or that could prevent them from competing actively against each other.

The competitiveness of the auction and the ability of the auction to produce competitive prices may be harmed by the coordinated or collusive behavior that associations among bidders may facilitate. As a result, the Independent Evaluator has developed standards that apply when associated parties apply to participate in FP and/or HP auctions. The following sections outline the specific protocols that will be followed when associated entities submit Part 1 and/or Part 2 Applications to participate in an auction for the Companies.

13.1 Procedure Followed by the Independent Evaluator

Potential associations among participants may come to the attention of the Independent Evaluator at different points in the bidder qualification application process. In order to improve the process efficiency and minimize the risk of disclosure of potentially confidential information, the Independent Evaluator will approach each case as described below.

13.1.1 Following the Receipt of the Part 1 Applications

Potential associations among applicants may become apparent after the Part 1 Applications are submitted but before Qualified Bidders are required to disclose such associations as part of their Part 2 Applications. The Independent Evaluator will take no action related to potential associations until each party submits their completed Part 1 Application. In cases where there is an apparent relationship among applicants, the Independent Evaluator will initiate a request for additional information regarding the relationship among the potentially associated parties, the structure of their organization, and the independence of the respective bidding teams.

In such cases, the Independent Evaluator will notify representatives of the Companies and Commission Staff that there is a potential association among applicants.

In addition, as outlined in the Part 2 Application, the Independent Evaluator reserves the right to request additional information from each party including, but not necessarily limited to:

- (a) Information on how the entity maintains its independence from the associated party including any available supporting documentation such as a Corporate Separation Agreements, Codes of Conduct, and/or organization charts.
- (b) A list of individuals within the organization who have played or will play a material role in the auction(s).
- (c) Information regarding the nature of any work done in conjunction with or on behalf of the associated party.
- (d) Information describing the organizational structure of the associate(s), identifying common management and oversight among the associated entities as well as the management involved in or responsible for bid approval.
- (e) The internal process or protocol related to determining indicative offers submitted as part of the Part 2 Application.
- (f) Disclosure of whether the entity is bidding on behalf of itself or acting as an agent for other entities.

Any responses to the above will be treated as confidential if labeled as such.

13.1.2 Following the Receipt of the Part 2 Applications

In some cases, the potential relationship among Qualified Bidders will not be known to the Independent Evaluator until the Qualified Bidders submit final certifications along with their Part 2 Applications. In such cases, the Independent Evaluator will initiate the steps outlined above, upon receipt of the completed Part 2 Applications.

After the Independent Evaluator has requested and received additional information from each associated bidder, the Independent Evaluator will work with representatives of the Companies and Commission Staff to determine:

- (a) Whether each of the associated bidders will be allowed to participate independently in the auction(s);and
- (b) Any restrictions that may be applied as a result of the participation by associated bidders.

Any restrictions will be based on the information provided by the associated bidders as part of the Part 1 Application, the Part 2 Application, and the additional information that was provided at the request of the Independent Evaluator.

13.2 Remedies and Actions Related to Participation by Associated Bidders

This section summarizes the potential restrictions that will be considered by the Independent Evaluator, the Companies, and Commission Staff in relationship to associated participation. Restrictions on participation may include, but may not be limited to, the following:

- (a) Indicative offers may be restricted such that any applicable load cap may apply across the associated bidders:
- (b) Pre-bid security or collateral requirements may be altered for the associated bidders to ensure that associated bidders do not gain a competitive advantage over other bidders; and,
- (c) In some cases, one or more associated bidders may not be allowed to participate in the auction(s).

13.3 Handling of Confidential Information

In order to execute the process of gathering information on associated entities and executing the remedies outlined above, there may be situations that require the Independent Evaluator to share, directly, certain confidential information among the associated parties, the Companies, and the Commission and its Staff.

In addition, as part of the remedies outlined in above, an associated party may gain access to or be able to ascertain certain confidential information of the other associated entities. While access to such information otherwise may be counter to certifications in the Part 2 Application, access to such information acquired through the data gathering and remedies related to associated bidders will not be considered a violation of the auction rules.

Confidential information includes but may not be limited to the initial eligibility for each associated bidder based on indicative bids submitted with the Part 2 Application. The Independent Evaluator will make reasonable efforts to minimize the disclosure of any such confidential information.

14. MISCELLANEOUS

14.1 Warranty on Information

The information provided for the auction, including but not limited to information provided on the Information Website, has been prepared to assist bidders in evaluating the auction process. It does not purport to contain all the information that may be relevant to a bidder in satisfying its due diligence efforts. Neither the Companies nor the Independent Evaluator make any representation or warranty, expressed or implied, as to the accuracy or completeness of the information, and shall not, either individually or as a corporation, be liable for any representation expressed or implied in the auction process or any omissions from the auction process, or any information provided to a bidder by any other source. A bidder should check the Information Website frequently to ensure it has the latest documentation and information. Neither the Companies, nor the Independent Evaluator, nor any of their representatives, shall be liable to a bidder or any of its representatives for any consequences relating to or arising from the bidder's use of information.

14.2 Hold Harmless

Bidder shall hold the Companies and the Independent Evaluator harmless of and from all damages and costs, including but not limited to legal costs, in connection with all claims, expenses, losses, proceedings or investigations that arise in connection with the auction process or the award of a bid pursuant to the auction process.

14.3 Bid Submissions Become the Companies' Property

All bids submitted by bidders participating in the auction will become the exclusive property of the Companies upon conclusion of the auction process.

14.4 Bidder's Acceptance

Through its participation in the auction process, a bidder acknowledges and accepts all the terms, conditions and requirements of the auction process and the SMA.

14.5 Permits, Licenses, Compliance with the Law and Regulatory Approvals

Bidders shall obtain all licenses, permits and status that may be required by any governmental body, agency or organization necessary to conduct business or to perform hereunder. Bidders' subcontractors, employees, agents and representatives of each in performance hereunder shall comply with all applicable governmental laws, ordinances, rules, regulations, orders and all other governmental requirements.

14.6 Auction Intellectual Property

All title, interests and other intellectual property rights in and to the auction design, the auction format and methodology, the auction software, the source code (including all modifications, enhancements, customization, adaptations and derivative works made by the Independent Evaluator) and associated documentation, including but not limited to these Bidding Rules, and the screen formats and forms designed by the Independent Evaluator (the "Auction Software"), are proprietary to the Independent Evaluator and all rights, title, and interest to the Auction Software remain with the Independent Evaluator. The Independent Evaluator grants Qualified Bidders a non-exclusive, non-transferable, limited license to use the Auction Software, solely for use in connection with the auction, subject to the terms and conditions set forth herein, and not for copying, relicensing, sublicensing, distribution or marketing by the Qualified Bidder. No other interest is conveyed to the Qualified Bidder other than the license expressly granted herein. The foregoing use license shall immediately terminate upon disqualification of the Qualified Bidder or upon termination or completion of the auction process. If at any time it is determined in the Independent Evaluator's sole discretion that the Qualified Bidder is in breach of this Section 13.6, the Independent Evaluator shall be entitled to terminate the Qualified Bidder's access rights to the Auction Software.

Notwithstanding anything herein to the contrary, and without limiting the Qualified Bidder's other obligations herein, the Qualified Bidder shall not, nor shall it permit any third party to: (i) modify, translate or otherwise create derivative works of the Auction Software; (ii) reverse engineer, decompile, decode, disassemble or translate any Auction Software, or output thereof, or otherwise attempt to reduce to human readable form or derive the source code, protocols or architecture of any Auction Software; (iii) use or study any Auction Software, or output thereof, for the purpose of developing any software that is intended to replace, or that has functions, structure or architecture similar to, such Auction Software, or any part thereof; (iv) publish, or otherwise make available to any third party, any benchmark or other testing information or results concerning the Auction Software; (v) permit any other person who is not authorized to access or use all or any part of the Auction Software or (vi) copy the Auction Software, distribute the Auction Software, remove or obscure any proprietary labeling on or in the Auction Software, create any derivative works based on the Auction Software, or modify the Auction Software, in each case, except to the extent expressly permitted by the Independent Evaluator in writing.

In using the Auction Software, a Qualified Bidder shall take steps to prevent any virus, worm, built-in or use-driven destruction mechanism, algorithm, or any other similar disabling code, mechanism, software, equipment, or component designated to disable, destroy or adversely affect the Auction Software from being introduced into the systems.

APPENDIX A — EXAMPLE OF ROUND-BY-ROUND BIDDING

The illustrative example below shows for two bidders (BidderA and BidderB) and two products (Product-1 and Product-2) the confirmed bids (pre-EOR) and the post-EOR results for each round. In the example, the auction closes after round 4.

Round 1

For round 1, the announced prices are \$75.00 and \$82.00 for Product-1 and Product-2, respectively. At those announced prices, BidderA bids 55 tranches and 85 tranches on Product-1 and Product-2, respectively. BidderB bids 80 tranches and 27 tranches on Product-1 and Product-2, respectively.

When the round closes the EOR procedure is executed. Each product is over-subscribed: 135 tranches were bid on Product-1 which has a tranche target of 100, and 112 tranches were bid on Product-2 which has a tranche target of 100.

The announced price for Product-1 will be reduced from \$75.00 to \$72.50 for round 2. The announced price for Product-2 will be reduced from \$82.00 to \$78.60 for round 2.

BidderA will have eligibility of 55+85 = 140 tranches for round 2, and BidderB will have eligibility of 80+27 = 107 tranches for round 2.

Round 2

At the announced prices for round 2, BidderA bids 40 tranches and 85 tranches on Product-1 and Product-2, respectively. Thus, BidderA reduced its tranches bid on Product-1 from 55 to 40 tranches. BidderB bids 50 tranches and 57 tranches on Product-1 and Product-2, respectively. Thus, BidderB switched 30 tranches from Product-1 to Product-2.

When the round closes the EOR procedure is executed. Product-1 is under-subscribed by 10 tranches: only 90 tranches bid against the tranche target of 100 tranches: BidderA's bid represents a reduction in its eligibility by 15 tranches, while BidderB's bid maintained its eligibility. Thus, 10 of the 15 eligibility reduction tranches of BidderA are rolled back on Product-1. Those 10 tranches are priced at the announced price for Product-1 at which they were bid in round 1: \$75.00. The announced price for Product-1 will remain at \$72.50 for round 3.

Product-2 is over-subscribed by 42 tranches. The announced price for Product-2 will be reduced from \$78.60 to \$76.10 for round 3.

BidderA will have eligibility of 50+85 = 135 tranches for round 3 (including the 10 tranches rolled back on Product-1), and BidderB will have eligibility of 50+57 = 107 tranches for round 3.

Round 3

At the announced prices for round 3, BidderA bids 99 tranches and 36 tranches on Product-1 and Product-2, respectively. Thus, BidderA is switching 49 of the tranches bid from Product-2 to Product-1. BidderB bids 50 tranches and 35 tranches on Product-1 and Product-2, respectively. Thus, BidderB is reducing its tranches bid on Product-2 from 57 to 35 tranches.

When the round closes the EOR procedure is executed. Product-1 is over-subscribed by 49 tranches. Product-2 is under-subscribed by 29 tranches: only 71 tranches bid against the tranche target of 100 tranches: BidderA's bid maintained its eligibility while BidderB's bid represents a reduction in its eligibility by 22 tranches. Thus, all 22 of the eligibility reduction tranches of BidderB are rolled back on Product-2. Those 22 tranches are priced at the announced price for Product-2 at which they were bid in round 2: \$78.60. Even after rolling back those 22 eligibility reduction tranches of BidderB, Product-2 still is undersubscribed — by 7 tranches. So 7 tranches that BidderA had switched from Product-2 to Product-1 are rolled back to Product-2. Those 7 tranches are priced at the announced price for Product-2 at which they were bid in round 2: \$78.60.

After rolling back 7 tranches from Product-1 to Product-2 for BidderA, BidderA still has increased the number of tranches it is bidding on Product-1: from 50 tranches bid in round 2 (10 tranches at \$75.00 and 40 tranches at \$72.50) to 92 tranches bid in round 3 (10 tranches at \$75.00 and 82 tranches at \$72.50). Product-1 is over-subscribed as a result, so higher-priced tranches in Product-1's bid stack can be removed. All 10 of BidderA's higher-priced tranches are removed from Product-1's bid stack, and these 10 tranches become BidderA's free eligibility for round 4. In round 4, BidderA can bid any of the 10 tranches on any product, but to the extent those 10 tranches are not bid on a product in round 4, those free eligibility tranches and their associated eligibility for BidderA will be permanently removed from the auction after round 4.

Because Product-1 is over-subscribed, the announced price for Product-1 will be reduced from \$72.50 to \$70.15 for round 4. Because Product-2 is not over-subscribed, the announced price for Product-2 will remain at \$76.10 for round 4.

BidderA will have eligibility of 82+43+10 = 135 tranches for round 4, and BidderB will have eligibility of 50+57 = 107 tranches for round 4 (including the 22 tranches rolled back on Product-2).

Round 4

At the announced prices for round 4, BidderA bids 46 tranches and 43 tranches on Product-1 and Product-2, respectively. Thus, BidderA reduced its tranches bid on Product-1 from 82 to 46 tranches. BidderB bids 32 tranches and 57 tranches on Product-1 and Product-2, respectively. Thus, BidderB reduced its tranches bid on Product-1 from 50 to 32 tranches.

When the round closes the EOR procedure is executed. Product-1 is under-subscribed by 22 tranches: only 78 tranches bid against the tranche target of 100 tranches: BidderA's bid represents a reduction in its eligibility by 36 tranches, while BidderB's bid represents a reduction in its eligibility by 18 tranches. Of the 54 fewer tranches bid on Product-1, 36 were eligibility reductions from BidderA and 18 were eligibility reductions from BidderB. Of those 54 fewer tranches bid, 100-78 = 22 tranches need to be rolled back on Product-1. The selection of which tranches are rolled back is done by assigning random numbers tranche by tranche (not bidder by bidder) to each of the 54 fewer tranches bid on Product-1. On average, the selection of the rolled back tranches will be proportional based on the number of tranches by which each bidder reduced its bid on the product. Thus, if the assignment of random numbers and selection of rolled back tranches were repeated many times, the number of rolled back tranches for BidderA on Product-1 would be expected to be 15 on average or (82-46)/(132-78)*(100-78) = 36/54*22, rounded, and the number of rolled back tranches for BidderB on Product-1 would be expected to be 7 on average: (50-32)/(132-78)*(100-78) = 18/54*22, rounded.

Auction Close

After the rollback is done for Product-1, it is determined that no product is over-subscribed and no bidder has free eligibility tranches. Thus, the criteria are met for closing the auction.

Product-1's bid stack has tranches bid at \$72.50 and tranches bid at \$70.15. So Product-1's clearing price is the higher of the two, or \$72.50. BidderA wins 61 tranches and BidderB wins 39 tranches for Product-1. All 100 tranches procured for Product-1 are paid the price of \$72.50.

Product-2's bid stack has tranches bid at \$78.60 and tranches bid at \$76.10. So Product-2's clearing price is the higher of the two, or \$78.60. BidderA wins 43 tranches and BidderB wins 57 tranches for Product-2. All 100 tranches procured for Product-2 are paid the price of \$78.60.

Example 2. Round-by-Round Bidding with Pre-EOR and Post-EOR Results

			Product-1					Product-2				Round ibility
Round	Announced Price	Tranche Target	Tranches Bid	@ Price	Excess Supply	Announced Price	Tranche Target	Tranches Bid	@ Price	Excess Supply	Free	Total
1	\$75.00					\$82.00						
Pre-EOR		100	135		35		100	112		12		
BidderA			55	@ \$75.00				85	@ \$82.00			140
BidderB			80	@ \$75.00				27	@ \$82.00			107
Post-EOR		100	135		35		100	112		12		
BidderA			55	@ \$75.00				85	@ \$82.00		_	140
BidderB			80	@ \$75.00				27	@ \$82.00		_	107
		-	_		_		_	_	-	_		
2	\$72.50					\$78.60						
Pre-EOR		100	90		(10)		100	142		42		
BidderA			40	@ \$72.50				85	@ \$78.60		_	125
BidderB			50	@ \$72.50				57	@ \$78.60		_	107
Post-EOR		100	100		0		100	142		42		
BidderA			50	10 @ \$75.00 40 @ \$72.50				85	@ \$78.60		_	135
BidderB			50	@ \$72.50				57	@ \$78.60			107

			Product-1					Product-2				Round ibility
Round	Announced Price	Tranche Target	Tranches Bid	@ Price	Excess Supply	Announced Price	Tranche Target	Tranches Bid	@ Price	Excess Supply	Free	Total
3	\$72.50					\$76.10						
Pre-EOR		100	149		49		100	71		(29)		
BidderA			99	10 @ \$75.00 89 @ \$72.50				36	@ \$76.10		_	135
BidderB			50	50 @ \$72.50				35	@ \$76.10			85
Post-EOR		100	132		32		100	100		0		
BidderA			82	@ \$72.50				43	7 @ \$78.60 36 @ \$76.10		10	135
BidderB			50	@ \$72.50				57	22 @ \$78.60 35 @ \$76.10		_	107
4	\$70.15					\$76.10						
Pre-EOR		100	78		(22)		100	100		0		
BidderA			46	@ \$70.15				43	7 @ \$78.60 36 @ \$76.10		_	89
BidderB			32	@ \$70.15				57	22 @ \$78.60 35 @ \$76.10		_	89
Post-EOR		100	100		0		100	100		0		
BidderA			61	15 @ \$72.50 46 @ \$70.15				43	7 @ \$78.60 36 @ \$76.10		_	104
BidderB			39	7 @ \$72.50 32 @ \$70.15				57	22 @ \$78.60 35 @ \$76.10		_	96

	Product-1		Product-2			
	Clearing Price	Tranche Target	Tranches Won	Clearing Price	Tranche Target	Tranches Won
Results	\$72.50	100	100	\$78.60	100	100
BidderA			61			43
BidderB			39			57

Part 1 Application

For Fixed-Price and Hourly-Priced Auctions

To Procure Default Service Products

Under Default Service Program DSP-VI for

Metropolitan Edison Company ("Met-Ed")

Pennsylvania Electric Company ("Penelec")

Pennsylvania Power Company ("Penn Power")

West Penn Power Company ("West Penn")

Appendix 1 to Bidding Rules

PART 1 APPLICATION

AUCTIONS TO PROCURE DEFAULT SERVICE PRODUCTS FOR MET-ED / PENELEC / PENN POWER / WEST PENN

INSTRUCTIONS

There are two parts to the application process.

- Part 1 Application: Applicants submit the Part 1 Application and all documents required therein to become Qualified Bidders for the fixed-price auction ("FP Auction") and/or the hourly-priced auction ("HP Auction") used to procure default service products for Met-Ed, Penelec, Penn Power, and West Penn ("Companies"). A Qualified Bidder for an auction need not submit a new Part 1 Application for subsequent auctions in the same calendar year unless the information in the Qualified Bidder's Part 1 Application has changed. In any case, a Qualified Bidder must submit its most recent financial statements during the Part 1 Application process before each auction.
- Part 2 Application: Qualified Bidders for the FP Auction and/or the HP Auction submit the Part 2 Application in which they will: (a) agree to comply with the Bidding Rules, (b) agree to accept the terms of the Supplier Master Agreement ("SMA") should they become a winning supplier, (c) make certifications regarding associations and the handling of Confidential Information, (d) submit Indicative Offers, and (e) post Pre-Bid Security to become Registered Bidders.

This document is the Part 1 Application.

For further information, consult the Information Website.

Unless otherwise defined, capitalized terms in this document have the definitions provided in the SMA. "Communications Protocols" refers to the section "Communications Protocols" and related sections in the Bidding Rules.

PART 1 APPLICATION SUBMISSION

To become a Qualified Bidder for the FP Auction and/or the HP Auction, Applicants must submit the following to the Independent Evaluator electronically through the Secure Online Application Process or in hardcopy format to the address below by the Part 1 Application Due Date:

- **Electronic Application Form:** Completed Part 1 Application submitted online;
- Hardcopy Application Form: One (1) printed Part 1 Application document with original signatures, notarized signatures where applicable, and the name of the Applicant on every page of the Application;
- PDF Copy Application Form: A copy of the Part –1 Application document with signatures, notarized signatures where applicable, and the name of the Applicant on every page of the Application;
- Supporting Documentation: One (1)A copy of required financial statements and other requested documents supporting the Application as specified in Appendix A; and
- Changes to Pre-Bid Letter of Credit (Optional): Any suggested modifications to the template for the Pre-Bid Letter of Credit must be provided to the Independent Evaluator in an electronic, red-lined version.

Proposed modifications to the Pre-Bid Security Letter of Credit and any other inquiries may be directed to the Independent Evaluator by email at fepaauction@crai.com. Inquiries can also be made through the Information Website.

Photocopies and facsimiles of completed documents will not be accepted under any circumstances.

It is in your interest to seek independent legal and financial advice before deciding to participate in the FP Auction and/or the HP Auction.

The completed Part 1 Application and any proposed modifications to the Pre-Bid Security Letter of Credit MUST be received by the Independent Evaluator no later than 12:00 p.m. noon prevailing Eastern Time on the Part 1 Application Due Date as posted in the timeline on the Information Website.

Any hardcopies must be addressed to:

Independent Evaluator c/o Brad Miller, Vice President CRA International, Inc. 200 Clarendon Street, T-9 Boston, MA 02116-5092

617.425.3384

Phone:

CONFIDENTIALITY OF PART 1 APPLICATION SUBMISSIONS

Confidentiality requirements specific to the Part 1 Application are provided below.

CONFIDENTIALITY OF CREDIT INFORMATION

Any information and materials that you submit in this Part 1 Application may be provided on a confidential basis to the Independent Evaluator Team and the Pennsylvania Public Utility Commission ("Commission") and their representatives. Information that you provide in this Part 1 Application, except for information regarding bidding agreements provided in Section 1.11, may be provided on a confidential basis to representatives of the Companies for a creditworthiness assessment.

CONFIDENTIALITY OF QUALIFIED BIDDERS

Upon completion of the Part 1 Application process, the names of Qualified Bidders will be provided to other Qualified Bidders on a confidential basis. As part of this Part 1 Application, you are required to certify that you agree to release your name to other Qualified Bidders and that you will keep confidential the list of Qualified Bidders that is provided to you.

PART 1 APPLICATION Fixed-Price Auction and Hourly-Priced Auction to Procure Default Service Products

This Part 1 Application is the application form to become a Qualified Bidder in the FP Auction and/or the HP Auction.

Background Information

Before completing this application, please review the Bidding Rules document, the SMA, and other documents posted on the Information Website so that you understand the conditions under which the FP Auction and HP Auction will be conducted.

Confirmation of Receipt

When your Part 1 Application is submitted online through the Secure Online Application Process, an email will be sent to the Authorized Representative and the Delegate of the Applicant to confirm receipt. You will not be required to submit a hardcopy of the Part 1 Application.

<u>Delivery by Post or Hand Delivery</u>: If your Part 1 Application is received by post or hand delivery, an email will be sent to the Authorized Representative and Delegate to confirm receipt.

Incomplete Applications

If your Part 1 Application is incomplete or requires clarification, the Independent Evaluator will send a deficiency notice to your Authorized Representative by email. You will have until 12:00 p.m. noon prevailing Eastern Time on the Part 1 Application Due Date, or until 5:00 p.m. prevailing Eastern Time on the Business Day following the Business Day during which a deficiency notice is sent to you, whichever comes later, to respond. If you do not correct or adequately explain the deficiency within the time allowed, your Part 1 Application may be rejected and you may be unable to participate in the FP Auction or the HP Auction. All corrections to remedy deficiencies within an Applicant's Part 1 Application must be submitted online. The Authorized Representative needs to sign and date next to the correction(s) to the Part 1 Application and send a copy as an email attachment to the Independent Evaluator at fepaauction@crai.com or through the Secure Online Application Process.

Late Applications

Part 1 Applications received after the Part 1 Application Due Date will NOT be accepted under any circumstances.

Name of Applicant		

Notification to Qualified Bidders

If you become a Qualified Bidder for the FP Auction and/or the HP Auction, the Independent Evaluator will send a Notification of Qualification to your Authorized Representative by email after the Part 1 Application Due Date.

	,	
Name of Applicant		
PART 1 APPLICATION FOR	MS	
1.1. Applicant Basic Info	rmation	
Name of Applicant (Company Name)	
Legal Name of Applicant (if different	from above)	
Place of Incorporation, if applicable	Federal Tax ID	D&B DUNS #
Please state whether the Applicant is a corporation, partnership, etc.	Years in Business	URL for Applicant's Website
Has the Applicant participated in a prior Met-Ed, Penelec, Penn Power, or West Penn Power Default Service solicitation?		

1.2. Authorized Representative

The Authorized Representative is authorized to represent the Applicant in the FP Auction and/or the HP Auction. The Authorized Representative will receive all documentation related to the relevant auction(s) if and when the Applicant becomes a Qualified Bidder and subsequently a Registered Bidder, including any auction procedures and Confidential Information required for the submission of bids in any trial auction(s) and in the actual auction(s). The Authorized Representative must ensure that only authorized persons act on behalf of the Applicant in the FP Auction and/or the HP Auction. The Authorized Representative is the only person authorized to distribute auction procedures and Confidential Information and should do so in accordance with the Communications Protocols. The integrity of the FP Auction and the HP Auction depends upon each Authorized Representative safeguarding Confidential Information and passwords used in the auctions.

The person designated below is the Applicant's Authorized Representative.

Last Name	Give	en Name(s)	Mr/Mrs/Ms/Dr/(other)
Title			
Street Address 1			
_			
Street Address 2			
_			_
City		State	_ Zip Code
Telephone No.	Cell Phone No.	Fax No.	Email Address

Name of Applicant		_

Communications with the Authorized Representative for purposes of the Part 1 Application are typically done via email-and courier.

The Applicant hereby acknowledges that any notification or other communication given by the Independent Evaluator to the Applicant with respect to the Part 1 Application shall be delivered by courier to the address provided above or emailed to the email address above, and shall be deemed received by the Applicant at the time of delivery, provided that where delivery occurs after 5:00 p.m. prevailing Eastern Time on a Business Day or on a day which is not a Business Day, receipt shall be deemed to occur at 8:00 a.m. prevailing Eastern Time on the following Business Day.

This certification must be signed by the Authorized Representative and the signature must be notarized.

I hereby certify that I am authorized by the Applicant to serve as Authorized Representative, to represent the Applicant both (i) in the FP Auction and/or the HP Auction, and (ii) for purposes of this Part 1 Application. I further certify that I will be responsible for all Confidential Information regarding the FP Auction and/or the HP Auction and I will distribute Confidential Information only to other individuals who are authorized to act on behalf of the Applicant according to the Communications Protocols.

Date	
zato	
<u>_</u>	
Date	
	Date Date

Name of Applicant		
The person designated in Delegate serves as a secondependent Evaluator.		icant is the Delegate. The communications with the
Last Name	Given Name(s)	Mr/Mrs/Ms/Dr/(other)
Company Name		Title
Street Address 1		
Street Address 2		
City	State	Zip Code
Telephone No. Cell P	hone No. Fax No.	Email Address

Part 1 Application: FEPA Fixed-Price and Hou	urly-Priced Auctions to Procure Default Service Products
Name of Applicant	
• • • • • • • • • • • • • • • • • • • •	s Authorized Representative and the P Auction
should either be notarized or atteste	by an officer or director of the Applicant and did with the corporate seal. The person making e Authorized Representative or the Delegate.
contracts and bind the Applicant. I	ctor of the Applicant, empowered to undertake have read and accept the Bidding Rules, the the provisions of the Communications Protocols and/or the HP Auction.
knowledge. If there are material change Part 1 Application, I agree to notify the I act as the Authorized Representative of	application is true and correct to the best of my ges to the Applicant's information provided in this independent Evaluator. I designate to of the Applicant in the FP Auction and/or the HP ne Delegate for the Authorized Representative. I ed Representative or Delegate.
Signature of Officer or Director o	f the Applicant Date
Printed Name	
Title	

Date

Signature and Seal from Notary Public

	Met-Ed/Petielec/Petiti Power/West Petiti Extilbit JHC-3
Part 1 Application:	FEPA Fixed-Price and Hourly-Priced Auctions to Procure Default Service Products
Name of Applican	t

1.4. Applicant's Legal Representative in Pennsylvania

Please check here \square if the Applicant's Authorized Representative is also the Applicant's Legal Representative.

The Applicant's Legal Representative in Pennsylvania must:

- be a legal counsel or a representative agent;
- have an address in Pennsylvania; and
- be authorized and agree to accept service of process on the Applicant's behalf.

The person designated below is the Applicant's Legal Representative or Representative Agent.

Last Name		Given Na	ame(s)		-	Mr/Mrs/Ms/Dr/(other)
					L	
Company Name				Title		
Street Address 1			-			
Street Address 2						
City			State			Zip Code
Telephone No.	Cell Phone No.		Fax No.		Email Ad	ddress

Part 1 Application: FEPA Fixed-Price and Hourly-Price	d Auctions to Procure Default Service Produ
Name of Applicant	<u> </u>
This certification must be signed by the Lamust be notarized.	egal Representative and the signa
I agree to serve as Legal Representative of the to receive service of process on the Applicant	• •
Signature of Legal Representative	Date
Signature and Seal from Notary Public	Date

Name of Applicant		

1.5. Applicant's Credit Representative

The Applicant's Credit Representative is the Applicant's in-house Credit Representative who can answer questions or provide information about the Applicant's credit with respect to the requirements for the FP Auction and/or the HP Auction.

The person designated below is the Applicant's Credit Representative.

Last Name	Give	en Name(s)	Mr	Mr/Mrs/Ms/Dr/(other)	
Title					
Street Address 1					
Street Address 2					
City		State		Zip Code	
Telephone No.	Cell Phone No.	Fax No.	Email Addre	200	
receptione 146.	Och Phone 140.	TUX NO.	Lindinada	<u> </u>	

nas executed SMA, please of the PJM
nents for the e start of the
ovide Default ion from PJM
nents for the ovide Default or the supply
Serving Entity om PJM that
nents for the ving Entity in

Name of Applicant				
4. Further, please certify that:				
 (a) The Applicant and its corporate officers have no indictments or pending criminal litigation in any federal, state or local jurisdiction relating to the Applicant; 				
(b) The Applicant and its corporate officers have no criminal convictions;				
(c) The Applicant has no civil penalties, judgments, sanctions or consent decrees arising out of the violation of any law, rule, regulation or ordinance in connection with its business activities;				
(d) The Applicant has not had any permit or authority to do business in any jurisdiction revoked or suspended; and				
(e) The Applicant has never been barred from public bidding or sanctioned for unauthorized disclosure of Confidential Information.				
Signature of Authorized Representative Date				
If you are unable to make these certifications in Section 1.6, subsections (1) to (4), please state which certifications you are unable to make and explain all reasons in the space given below.				

Name of Applicant		

1.7. Financial and Credit Information for the Applicant

Please provide the following information for the Applicant:

- (a) If the Applicant is not an SEC registrant, provide the most recent Annual Report;
- (b) If the Applicant is an SEC registrant, provide the Form 10-Q or Form 10-K, whichever was filed most recently with the SEC. If unavailable, please provide the most recent audited quarterly or annual financial information (including a balance sheet, income statement, and cash flow statement);
- (c) If the Applicant is an SEC registrant and if both the Form 10-K and Form 10-Q most recently filed with the SEC are not available, please provide the most recent annual or quarterly financial data accompanied by an attestation by the Applicant's Chief Financial Officer that the information submitted is true, correct and a fair representation of the Applicant's financial condition;
- (d) The following financial information along with page references to the relevant financial filings submitted:

	Amount (\$)	Financial Document Page Number	Financial Document Source	Date of Financial Document Source
Goodwill				
Shareholders' Equity				
Net Intangible Assets				

Name of Applicant

(e) Applicant's senior unsecured debt ratings from the following three rating agencies if available, and the date of the rating, along with documentation showing the name of the rating agency, the type of rating, and the rating of the Applicant:

	Rating	Date of the Rating
Moody's		
Standard & Poor's		
Fitch		

If senior unsecured debt ratings are unavailable, but corporate issuer ratings are available, please provide the corporate issuer ratings, and the date of the rating, along with documentation showing the name of the rating agency, the type of rating, and the rating of the Applicant:

	Rating	Date of the Rating
Moody's		
Standard & Poor's		
Fitch		

- (f) If the Applicant has not been incorporated or otherwise formed under the laws of the United States, the Applicant is asked to provide in addition to (a)-(f) above:
 - i. A legal opinion acceptable to the Companies of counsel qualified to practice in the foreign jurisdiction in which the Applicant is incorporated or otherwise formed that the SMA will become the binding obligation of the Applicant in the jurisdiction in which it has been incorporated or otherwise formed.
 - ii. Any additional information that the Applicant wishes to include that could provide comparable credit assurances to those that are provided by other Applicants that have been incorporated or otherwise formed under the laws of the United States.

An Applicant that has not been incorporated or otherwise formed under the laws of the United States and that does not provide this information or any information that could provide comparable assurances of creditworthiness will be required to post the maximum Per-Bid-Ssecurity-with-its-Part 2 Application_if they-were to-become a winning bidder.

Further, if such Applicants become Default Service Suppliers, they will be required to submit additional documents as detailed in Article 6 of the SMA, including:

- A legal opinion of counsel qualified to practice in the foreign jurisdiction in which the Default Service Supplier is incorporated or otherwise formed that this Agreement is, or upon the completion of execution formalities will become, the binding obligation of the Default Service Supplier in the jurisdiction in which it has been incorporated or otherwise formed;
- The sworn certificate of the corporate secretary (or similar officer) of such Default Service Supplier that the person executing the Agreement on behalf of the Default Service Supplier has the authority to execute the Agreement and that the governing board of such Default Service Supplier has approved the execution of the Agreement; and
- The sworn certificate of the corporate secretary (or similar officer) of such Default Service Supplier that the Default Service Supplier has been authorized by its governing board to enter into agreements of the same type as the SMA.

Is the Applicant and/or its parent:

	<u>Appli</u> Yes	i <u>cant</u> No	<u>Par</u> Yes	<u>ent</u> No
Operating under federal bankruptcy laws or bankruptcy laws in any jurisdiction?				
Subject to pending litigation or regulatory proceedings (in state court, or in federal court, or from regulatory agencies, or in any other jurisdiction) which could materially impact the Applicant's and/or parent's financial condition?				
Subject to collection lawsuits or outstanding judgments that could impact solvency?				

Part 1 Application: FEPA Fixed-Price and Hourly-Priced Auctions to Procure Default Service Products
Name of Applicant
Please provide a statement disclosing any existing, pending or past adverse rulings, judgments, litigation, contingent liabilities, revocations of authority, administrative, regulatory (state, FERC, SEC or DOJ) investigations and any other matters relating to financial or operational status for the past three years that arise from the sale of electricity or natural gas, or that materially affect current financial or operational status.

Part 1 Application: FEPA Fixed-Price and Hour Products	rly-Priced Auctions to Procure	Default Service
Name of Applicant		
1.8. Guarantor Information		
The Guarantor information is required or act as a Guarantor should the Applicant		
Please check here \square and proceed to apply to you because you will not have		
Basic Information for the Guarantor		
Name of Guarantor		
Legal Name of Guarantor (if different from above)		
(**************************************		
Place of Incorporation, if applicable	Federal Tax ID	D&B DUNS #
Please state whether the Guarantor is a corporation, partnership, etc.	Years in Business	

Name of Applicant				
Guarantor's Contac	ct Information			
Last Name	Give	en Name(s)		Mr/Mrs/Ms/Dr/(other)
Title				
Street Address 1	_			
Street Address 2				
City		State		Zip Code
Telephone No.	Cell Phone No.	Fax No.	Fax N	0.

Name of Applicant		

The Guarantor's Credit Representative

The Guarantor's in-house Credit Representative is the individual who can answer questions or provide information about the Guarantor's credit with respect to the requirements for the FP Auction and/or the HP Auction.

The person designated below is the Guarantor's Credit Representative.

Last Name	Given	Name(s)	Mr/Mrs/Ms/Dr/(other)
Title			
Street Address 1	<u> </u>		
Street Address 2			
City		State	Zip Code
Telephone No.	Cell Phone No.	Fax No.	Email Address

Name of Applicant		

Please provide the following information for the Guarantor:

- (a) If the Guarantor is not an SEC registrant, provide the most recent Annual Report;
- (b) If the Guarantor is an SEC registrant, provide the Form 10-Q or Form 10-K, whichever was filed most recently with the SEC. If unavailable, please provide the most recent audited quarterly or annual financial information (including a balance sheet, income statement, and cash flow statement);
- (c) If the Guarantor is an SEC registrant and if both the Form 10-K and Form 10-Q most recently filed with the SEC are not available, please provide the most recent annual or quarterly financial data accompanied by an attestation by the Guarantor's Chief Financial Officer that the information submitted is true, correct and a fair representation of the Applicant's financial condition;
- (d) The following financial information along with page references to the relevant financial filings submitted:

	Amount (\$)	Financial Document Page Number	Financial Document Source	Date of Financial Document Source
Goodwill				
Shareholders' Equity				
Net Intangible Assets				

(e) Guarantor's senior unsecured debt ratings from the following three rating agencies if available, and the date of the rating, along with documentation showing the name of the rating agency, the type of rating, and the rating of the Guarantor:

	Rating	Date of the Rating
Moody's		
Standard & Poor's		
Fitch		

If senior unsecured debt ratings are unavailable, but corporate issuer ratings are available, please provide the corporate issuer ratings, and the date of the rating, along with documentation showing the name of the rating agency, the type of rating, and the rating of the Guarantor:

	Rating	Date of the Rating
Moody's		
Standard & Poor's		
Fitch		

- (f) If the Guarantor has not been incorporated or otherwise formed under the laws of the United States, the Guarantor is asked to provide in addition to a)-f) above:
 - i. A legal opinion acceptable to the Companies of counsel qualified to practice in the foreign jurisdiction in which the Guarantor is incorporated or otherwise formed that the Guaranty will become the binding obligation of the Guarantor in the jurisdiction in which it has been incorporated or otherwise formed.
 - ii. Any additional information that the Guarantor wishes to include that could provide comparable credit assurances to those that are provided by other Guarantors that have been incorporated or otherwise formed under the laws of the United States.

An Applicant whose Guarantor has not been incorporated or otherwise formed under the laws of the United States and that does not provide this information or any information that could provide comparable assurances of creditworthiness will be required to post the maximum Pre-Bid Ss ecurity if they-were to become a winning bidder. with its Part 2 Application.

Further, if an Applicant with such a Guarantor becomes a Default Service Supplier, the Guarantor will be required to submit additional documents as detailed in Article 6 of the SMA, including:

 A legal opinion of counsel qualified to practice in the foreign jurisdiction in which the Guarantor is incorporated or otherwise formed that this Guaranty is, or upon the completion of execution formalities will become, the binding obligation of the Guarantor in the jurisdiction in which it has been incorporated or otherwise formed;

Name of Applicant

- The sworn certificate of the corporate secretary (or similar officer) of such Guarantor that the person executing the Guaranty on behalf of the Guarantor has the authority to execute the Guaranty and that the governing board of such Guarantor has approved the execution of the Guaranty; and
- The sworn certificate of the corporate secretary (or similar officer) of such Guarantor that the Guarantor has been authorized by its governing board to enter into agreements of the same type as the Guaranty.

Is the Guarantor and/or its parent (if applicable):

	Guarantor Yes No	Pare Yes	ent No
Operating under federal bankruptcy laws or bankruptcy laws in any jurisdiction?			
Subject to pending litigation or regulatory proceedings (in state court, or in federal court, or from regulatory agencies, or in any other jurisdiction) which could materially impact the Guarantor's and/or parent's financial condition?			
Subject to collection lawsuits or outstanding judgments that could impact solvency?			

Name of Applicant	
Please provide a statement disclosing any existing, pending judgments, litigation, contingent liabilities, revocations of regulatory (State, FERC, SEC or DOJ) investigations and any financial or operational status for the past three years that electricity or natural gas, or that materially affect current financial the Guarantor.	authority, administrative, other matters relating to t arise from the sale of

	Page 29 of 41
Part 1 Application: FEPA Fixed-Price and Hourly-Pric	ed Auctions to Procure Default Service Products
Name of Applicant	
1.9. Additional Certifications	
The Bidding Rules, the SMA, and the Informati that an Applicant should understand prior to pHP Auction.	•
(a) Please certify that you have read the E you intend to participate (the FP Auction comply with these rules.	Bidding Rules for the Auction(s) in which and/or the HP Auction) and that you will
Signature of Authorized Representative	<u>Date</u>
	MA and that you accept its terms. Please g bidder, you will execute the SMA within date of the Commission's approval of the
Signature of Authorized Representative	re Date

Page 30 of 41 Part 1 Application: FEPA Fixed-Price and Hourly-Priced Auctions to Procure Default Service Products Name of Applicant (c) Please certify that if you qualify to participate in the FP Auction and/or the HP Auction, you will not disclose at any time information regarding the list of Qualified Bidders in the FP Auction and/or the HP Auction, including but not limited to the number of Qualified Bidders, the identity of any one of the Qualified Bidders (including yourself), or the fact that an entity has not qualified for participation in the FP Auction and/or the HP Auction. Further, please certify that you will destroy any document distributed by the Independent Evaluator that lists the Qualified Bidders within five (5) days of the close of the bidding, or earlier if so instructed by the Independent Evaluator. Signature of Authorized Representative Date (d) No Qualified Bidder in the FP Auction and/or the HP Auction shall substitute another party, transfer its rights to another party, or otherwise assign its status as a Qualified Bidder to another party. Any such substitutions, transfers, or assignments shall be null and void and will result in the exclusion of the Qualified Bidder from the FP Auction and/or the HP Auction. Please certify that you agree to the limitation set forth in this paragraph. Signature of Authorized Representative Date The Bidding Rules and Communications Protocols include restrictions on the disclosure of Confidential Information. For purposes of the following certifications, the definition of Confidential Information relative to bidding strategy is defined according to Section 12.2 of the Bidding Rules. (e) Please certify that you agree not to disclose any Confidential Information relative

Signature of Authorized Representative

would be willing to submit.

to bidding strategy to any party that may have an effect on the participation of another bidder, prospective bidder, or on any of the bids that another bidder

Date

Name	of Applicant		
(f)	Please certify that, to the extent Confide strategy is disclosed within your organization that sufficient precautions are taken to ensuis not made public or made available to anot but are not limited to confidentiality agree firewalls, and other contractual or structural confidential nature of a bidder's bidding strategies.	on or to a third party, you ire that such Confidential her bidder. Such precaution ements, non-disclosure a I protections that would n	will ensure Information ons include, greements,
	Signature of Authorized Representative	Date	
need	ble to make the certifications requested abo to disclose Confidential Information without Confidential Information is not made public o	sufficient precautions to	ensure that

Part 1 A	pplication: FEPA Fixed-Price and Hourly-Priced Auctions to Procure Default Service Products
Name of	Applicant
1.10. A	alternate Guaranty Form
becomir to the S Compar they are	pective Default Service Supplier that wishes to rely on a Guarantor uponing a Default Service Supplier can use the standard form of guaranty (Appendix G SMA) and be assured that the standard form of guaranty is acceptable to the nies. Alternatively, the Companies will consider alternate forms of guaranty if submitted with this Part 1 Application. Also, you may submit an alternate form anty that was previously approved by the Companies in a prior solicitation.
	ernate Guaranty Form must be a financial guaranty for unlimited liability. al requirements are specified in Appendix B of this Part 1 Application.
apply to	check here \square and proceed to the next section if this section does not you because you are not submitting an alternate form of guaranty. ise please read Appendix B and complete this section.
the requ	chorized Representative acknowledges by signing below that he/she has read direments of Appendix B and that he/she believes that the proposed Alternate by Form complies with these requirements:
-;	Signature of Authorized Representative Date
Please	check below to show that you are including all required documents.
	The proposed form of alternate guaranty;
	Certification that the alternate guaranty has been in general use by the Applicant in its ordinary course of business over the past twelve months;
	An enforceability opinion with respect to the alternate form of guaranty from counsel; and

☐ Previously approved alternate form of guaranty.

Part 1 Application: FEPA Fixed-Price and Hourly-Priced Auctions to Procure Default Service Products
Name of Applicant
1.11. Bidding Agreements
Please note that the Companies will not
review information provided in this section.
Please check here \square and proceed to the next section if you will be bidding independently and not as a party to any bidding agreement with another party or through any other arrangement involving joint or coordinated bidding with any other party.
Otherwise, please indicate below whether you are a party to or a part of a bidding agreement, a joint venture, a bidding consortium, or other arrangements for purposes of participating in the FP Auction and/or the HP Auction or pertaining to bidding in the FP Auction and/or the HP Auction. On the next page, please also provide the names of the other parties to the bidding agreement or other arrangement.
Other parties to the arrangement:
☐ Bidding Agreement ☐ Bidding Consortium
☐ Joint Venture ☐ Other (define)
If you are part of a bidding agreement, bidding consortium or joint venture, you must nominate a single party to the bidding agreement, bidding consortium or joint venture to fulfill the creditworthiness requirements. This party may have a Guarantor. Please indicate below which party from the bidding agreement, bidding consortium, or joint venture will be fulfilling the creditworthiness requirements:
Name of the single party fulfilling the creditworthiness requirements:

Part 1 Application: FEPA Fixed-Price and Hourly-Priced Auctions to Procure Default Service Products
Name of Applicant
The Authorized Representative of the party named above must sign here to acknowledge the fact that this party has agreed to fulfill the creditworthiness requirements:
Signature of Authorized Representative Date
1.12. Justification of Omissions
If you are unable to provide all documents or all information requested in this Part 1 Application, please justify fully any omissions in the space provided below.

Name of Applicant		

Appendix A – Enclosures to the Part 1 Application

This is a checklist of documents to be enclosed with this Part 1 Application. Please submit only one copy of required supporting documents to the application unless noted otherwise. A copy of the completed Part 1 Application with original signatures and original notarized signatures of Sections 1.2, 1.3 and 1.4 [Instructions Part 1] For the Applicant: A copy of the signature page of the applicable PJM Agreements as that term is defined in the SMA [Section 1.6] If the Applicant is not an SEC registrant, provide the most recent Annual Report [Section 1.7] If the Applicant is an SEC registrant, provide the Form 10-Q or Form 10-K, whichever was filed most recently with the SEC. If unavailable, please provide the most recent audited quarterly or annual financial information (including a balance sheet, income statement, and cash flow statement) [Section 1.7] If the Applicant is an SEC registrant and if both the Form 10-K and Form 10-Q most recently filed with the SEC are not available, please provide the most recent annual or quarterly financial data accompanied by an attestation by the Applicant's Chief Financial Officer that the information submitted is true, correct and a fair representation of the Applicant's financial condition [Section 1.7] Senior unsecured debt ratings or, if unavailable, corporate issuer ratings [Section 1.7] If the Applicant has not been incorporated or otherwise formed under the laws of the United States, (i) a legal opinion acceptable to Companies of counsel qualified to practice in the foreign jurisdiction in which the Applicant is incorporated or otherwise formed that the SMA will become the binding obligation of the Applicant in the jurisdiction in which it has been incorporated or otherwise formed, and (ii) any additional information that the Applicant wishes to give that could provide comparable credit assurances to those that are provided by other Applicants that have at least two credit ratings from accepted credit ratings agencies. [Section 1.7]

Name o	f Applicant
For the	Guarantor:
	If the Guarantor is not an SEC registrant, provide the most recent Annual Report [Section 1.8]
	If the Guarantor is an SEC registrant, provide the Form 10-Q or Form 10-K, whichever was filed most recently with the SEC. If unavailable, please provide most recent audited quarterly or annual financial information (including a balance sheet, income statement, and cash flow statement) [Section 1.8]
	If the Guarantor is an SEC registrant and if both the Form 10-K and Form 10-Q most recently filed with the SEC are not available, please provide most recent annual or quarterly financial data accompanied by an attestation by the Guarantor's Chief Financial Officer that the information submitted is true, correct and a fair representation of the Applicant's financial condition [Section 1.8]
	Senior unsecured debt ratings or, if unavailable, corporate issuer ratings [Section 1.8]
	If the Guarantor has not been incorporated or otherwise formed under the laws of the United States, (i) a legal opinion acceptable to the Companies of counsel qualified to practice in the foreign jurisdiction in which the Guarantor is incorporated or otherwise formed that the Guaranty will become the binding obligation of the Guarantor in the jurisdiction in which it has been incorporated or otherwise formed, and (ii) any additional information that the Guarantor wishes to give about the Guarantor's financial standing that could provide comparable credit assurances to those that are provided by other Guarantors that have at least two credit ratings from accepted credit rating agencies. [Section 1.8]
If the Ap	oplicant is proposing an Alternate Guaranty Form:
	Proposed form of alternate guaranty [Section 1.10]
	Certification that the alternate guaranty has been in general use by the Applicant in its ordinary course of business over the past twelve months [Section 1.10]
	An enforceability opinion with respect to the alternate form of guaranty from counsel [Section 1.10]
	Proposed form of alternate guaranty [Section 1.10]

Appendix B – Alternate Guaranty Form (Optional)

The criteria used to review the alternate form of guaranty are as follows:

- 1. The alternate guaranty must be a financial guaranty; performance guarantees are not acceptable.
- 2. The Companies will consider alternate forms of guaranty only if the guaranty is for unlimited liability.
- The alternate guaranty must be an unconditional guaranty of payment of all amounts due by the Default Service Supplier to the Companies under the SMA. The SMA must be expressly identified and the satisfaction of obligations through performance may not be authorized.
- 4. The alternate guaranty may be terminated upon not less than thirty (30) days advance written notice to the Companies and termination shall not discharge liabilities and obligations of the Guarantor that have been incurred before the effective date of the termination.
- 5. The alternate guaranty must not be subject to any monetary limit.
- 6. The alternate guaranty must be accompanied by a certification that this form of guaranty, subject to changes needed to conform to the specific requirements of the Companies, has been in general use by the submitting party in its ordinary course of business over the past twelve months.
- 7. The alternate guaranty must be a guaranty of payment and not of collection.
- 8. Assignment of the alternate guaranty shall not be permitted except with the prior written consent of the Companies.
- 9. The Applicant must provide an enforceability opinion with respect to the alternate form of guaranty from its counsel. The accompanying enforceability opinion must be from a law firm of national (i.e., United States) standing, must not be weaker than would be industry norm and must contain only those qualifications that would be typical. The opinion shall name the Companies and explicitly state that the Companies are entitled to rely on the opinion.

The alternate forms of guaranty will be reviewed in accordance with the following process:

 Upon receipt of the Part 1 Application, the Independent Evaluator will redact the proposed alternate form of guaranty to remove any information identifying the Applicant. The Independent Evaluator will then forward the redacted version to a credit and legal representative of the Companies.

- The credit and legal representative will determine whether the alternate form of guaranty provides sufficient assurances of payment, taking into account the following considerations:
 - (i) whether the alternate form of guaranty conforms with the specific requirements identified by the Companies (listed above);
 - (ii) whether the alternate form of guaranty provides substantially similar credit protections to the credit protections provided to Companies by the standard form of guaranty; and
 - (iii) whether the alternate form of guaranty includes defenses in favor of the Guarantor not found in the standard form of guaranty. The Companies representative may also identify specific changes that would permit the alternate form of guaranty to be acceptable, if such changes are of a limited nature.
- The credit and legal representative shall inform the Independent Evaluator of its decision no later than seven (7) Business Days following the Part 1 Application Due Date.
- Upon receipt of the Companies' decision, the Independent Evaluator will notify the Applicant of the Companies' decision. The Companies' decision will state one of the following:
 - (i) The proposed alternate guaranty is acceptable to the Companies in the form in which it was submitted.
 - (ii) The proposed alternate guaranty is not acceptable to the Companies in the form in which it was submitted, but would be acceptable subject to specific changes of a minor nature. The correspondence from the Independent Evaluator will set forth the required changes.
 - (iii) The proposed alternate guaranty is not acceptable to the Companies.
- If specific changes are required to the proposed alternate guaranty, the Applicant will be required to resubmit the alternate guaranty form with changes identified by the Companies on the Business Day following the Business Day during which the Independent Evaluator notified the Applicant of the Companies' decision. No later than three (3) Business Days after the Applicant's resubmission, the Independent Evaluator will notify the Applicant of the Companies' final decision.

A potential bidder that had secured approval for an alternate form of guaranty from any previous Default Service procurement auction held by one or more of the Companies and wishes to use the same alternate form of guaranty can renew this by submitting the following:

- 1. The alternate form of guaranty from any previous Default Service procurement auction by the Companies;
- 2. The enforceability opinion from any previous Default Service procurement auction by the Companies;
- 3. A certification that the text of the alternate form of guaranty is exactly the same as the alternate form of guaranty that had been previously approved from any previous Default Service procurement auction by the Companies;
- 4. A certification that the text of the enforceability opinion is exactly the same as the enforceability opinion that had been previously approved from any previous Default Service procurement auction by the Companies.

If a potential bidder submits the materials as specified above, the alternate form of guaranty will be approved for the FP Auction and/or the HP Auction without further re-evaluation. If a potential bidder had secured approval for an alternate form of guaranty from any previous Default Service procurement auction by the Companies but is unable to provide the materials as specified above, the potential bidder must resubmit the alternate form of guaranty and all supporting documentation as specified in the Alternate Form of Guaranty section above and these materials will be re-evaluated according to the criteria set forth in this document.

All proposing parties that become Qualified Bidders under the Part 1 Application process, but whose alternate guaranty is rejected by the Companies, are required to submit with their Part 2 Application a supplemental certification that the Applicant unconditionally accepts all terms and conditions of the SMA.

Appendix C – Proposing Changes to the Pre-Bid Security Letter of Credit (Optional)

The standard form of the Pre-Bid Security Letter of Credit that is acceptable to the Companies will be posted to the Information Website. However, an Applicant has the option to propose changes to the Pre-Bid Security Letter of Credit during the Part 1 Application process by clearly identifying the proposed changes in an electronic, redlined version. This version may be submitted by email to fepaauction@crai.com or as an attachment through the Secure Online Application.

The Companies will assess, in their sole and exclusive discretion, whether such modifications are acceptable. The Qualified Bidder, in its Part 2 Application, must provide the required executed Pre-Bid Security Letter of Credit that either uses the standard form or incorporates only those modifications to the standard form accepted by the Companies upon review of the Part 1 Application. The draft Pre-Bid Security Letter of Credit will be reviewed in accordance with the following process:

- Upon receipt of the Part 1 Application, the Independent Evaluator will redact the draft Pre-Bid Security Letter of Credit to remove any information identifying the Applicant. The Independent Evaluator will then forward the redacted version to a credit and legal representative of the Companies.
- The credit and legal representative will determine whether such modifications are acceptable. The credit and legal representative shall inform the Independent Evaluator of its decision no later than seven (7) Business Days following the Part 1 Application Due Date.
- Upon receipt of the Companies' decision, the Independent Evaluator will notify the Applicant of the Companies' decision. The Companies' decision will either state:
 - (i) The proposed changes to the Pre-Bid Security Letter of Credit are acceptable to the Companies in the form in which they were submitted.
 - (ii) The proposed changes to the Pre-Bid Security Letter of Credit are not acceptable to the Companies in the form in which they were submitted, but would be acceptable subject to specific changes of a minor nature. The correspondence from the Independent Evaluator will set forth the required changes.
 - (iii) The proposed changes to the Pre-Bid Security Letter of Credit are not acceptable to the Companies.
- If specific changes are required pursuant to (ii) above, the Applicant will be required to resubmit the draft Pre-Bid Security Letter of Credit with changes identified by the Companies on the Business Day following the Business Day during which the

Name of Applicant

Independent Evaluator notified the Applicant of the Companies' decision. No later than three (3) Business Days after the Applicant's resubmission, the Independent Evaluator will notify the Applicant of the final decision.

End of Part 1 Application

Part 2 Application

For Fixed-Price and Hourly-Priced Auctions

To Procure Default Service Products

Under Default Service Program DSP-VI for

Metropolitan Edison Company ("Met-Ed")

Pennsylvania Electric Company ("Penelec")

Pennsylvania Power Company ("Penn Power")

West Penn Power Company ("West Penn")

Appendix 2 to Bidding Rules

PART 2 APPLICATION

AUCTIONS TO PROCURE DEFAULT SERVICE PRODUCTS FOR MET-ED / PENELEC / PENN POWER / WEST PENN

INSTRUCTIONS

There are two parts to the application process.

- Part 1 Application: Applicants submit the Part 1 Application and all documents required therein to become Qualified Bidders for the fixed-price auction ("FP Auction") and/or the hourly-priced auction ("HP Auction") used to procure default service products for Met-Ed, Penelec, Penn Power, and West Penn ("Companies"). A Qualified Bidder for an auction need not submit a new Part 1 Application for subsequent auctions in the same calendar year unless the information in the Qualified Bidder's Part 1 Application has changed. In any case, a Qualified Bidder must submit its most recent financial statements during the Part 1 Application process before each auction.
- Part 2 Application: Qualified Bidders for the FP Auction and/or the HP Auction submit the Part 2 Application in which they will: (a) agree to comply with the Bidding Rules, (b) agree to accept the terms of the Supplier Master Agreement ("SMA") should they become a winning supplier, (c) make certifications regarding associations and the handling of Confidential Information, (d) submit Indicative Offers, and (e) post Pre-Bid Security to become Registered Bidders.

This document is the Part 2 Application.

For further information, consult the Information Website.

Unless otherwise defined, capitalized terms in this document have the definitions provided in the SMA. "Communications Protocols" refers to the section "Communications Protocols" and related sections in the Bidding Rules.

PART 2 APPLICATION SUBMISSION

To become a Registered Bidder for the FP Auction and/or the HP Auction, Applicants must submit the following to the Independent Evaluator electronically through the Secure Online Application Process or in hardcopy format to the address below by the Part 2 Application Due Date:

- Electronic Application Form: Completed Part 2 Application submitted online;
- Hardcopy Application Form: One (1) printed Part 2 Application document with original signatures, notarized signatures where applicable, and the name of the Applicant on every page of the Application;
- PDF Copy Application Form: A copy of the Part- 2 Application document with signatures and the name of the Applicant on every page of the Application;

In addition to the completed Part 2 Application Forms, each Qualified Bidder must:

- Submit an Indicative Offer for each auction either the FP Auction, the HP Auction, or both auctions;
- Submit a Pre-Bid Security Letter of Credit and/or cash to support the Indicative Offers. The Letter of Credit can be submitted either as a hard—copy or electronically; and
- Make required certifications on Applicant Associations and Confidential Information and, if unable to do so, make required information disclosures.

Please note that interest will not be paid by the Companies for cash posted as Pre-Bid Security.

It is in your interest to seek independent legal and financial advice before deciding to participate in the FP Auction and/or the HP Auction.

Part 2 Application:	FFPA Fixed-Price	and Hourly-Priced	L Auctions to	Procure Default	Service Products
Part z Abblication:	FFPA FIXEO-Price	and Houriv-Priced	LAUCTIONS TO	Procure Delault	Service Products

Name of Applicant

The completed Part 2 Application and Pre-Bid Security MUST be received by the Independent Evaluator no later than 12:00 p.m. noon prevailing Eastern Time on the Part 2 Application Due Date as posted in the timeline on the Information Website.

Any hardcopies must be addressed to:

Independent Evaluator c/o Brad Miller, Vice President CRA International, Inc. 200 Clarendon Street, T-9

Boston, MA 02116-5092 Phone: 617.425.3384

Name of Applicant

CONFIDENTIALITY OF PART 2 APPLICATION SUBMISSIONS

Confidentiality requirements specific to the Part 2 Application are reiterated provided below.

CONFIDENTIALITY OF CREDIT INFORMATION

Any information and materials that you submit in this Part 2 Application may be provided on a confidential basis to the Independent Evaluator #team and the Pennsylvania Public Utility Commission (the "Commission") and their representatives. Representatives from the Companies will decide whether the form of Pre-Bid Security submitted is acceptable; Pre-Bid Security documents will be redacted prior to the closing of the bidding process so as not to reveal an Applicant's identity or the amount of the Applicant's Indicative Offer.

CONFIDENTIALITY OF REGISTERED BIDDERS AND INITIAL ELIGIBILITY

Upon completion of the Part 2 Application process, the names of Registered Bidders will be provided to other Registered Bidders on a confidential basis for each auction independently, as well as the total Initial Eligibility aggregated across all Registered Bidders for each auction. As part of this Part 2 Application, you are required to certify that you agree to release your name to other Registered Bidders and that you will keep confidential the list of Registered Bidders and total Initial Eligibility that is provided to you.

Name of Applicant

PART 2 APPLICATION Fixed-Price Auction and Hourly-Priced Auction Tto Procure Default Service Products

This Part 2 Application is the application form to become a Registered Bidder in the FP Auction and/or the HP Auction.

Background Information

Before completing this application, please review the Bidding Rules document, the SMA, and other documents posted on the Information Website so that you understand the conditions under which the FP Auction and HP Auction will be conducted.

Confirmation of Receipt

Online Delivery: IfWhen your Part 2 Application is submitted online through the Secure Online Application Process, an email will be sent to the Authorized Representative and the Delegate of the Applicant to confirm receipt. You will not be required to submit a hardcopy of the Part 2 Application.

<u>Delivery by Post or Hand Delivery</u>: If your Part 2 Application is received by post or hand delivery, an email will be sent to the Authorized Representative and Delegate to confirm receipt.

Incomplete Applications

If your Part 2 Application is incomplete or requires clarification, the Independent Evaluator will send a deficiency notice to your Authorized Representative by email. You will have until 12:00 p.m. noon prevailing Eastern Time on the Part 2 Application Due Date, or until 5:00 p.m. prevailing Eastern Time on the Business Day following the Business Day during which a deficiency notice is sent to you, whichever comes later, to respond. If you do not correct or adequately explain the deficiency within the time allowed, your Part 2 Application may be rejected and you may be unable to participate in the FP Auction or the HP Auction. All corrections to remedy deficiencies within an Applicant's Part 2 Application must be submitted online. The Authorized Representative needs to sign and date next to the correction(s) to the Part 2 Application and send a copy as an email attachment to the Independent Evaluator at fepaauction@crai.com or through the Secure Online Application Process.

Late Applications

Part 2 Applications received after the Part 2 Application Due Date will NOT be accepted under any circumstances.

Name of Applicant

Changes to Part 1 Application

If changes to the Part 1 Application are warranted in order to fulfill the requirements of the Part 2 Application, those changes to the Part 1 Application must be received by the Independent Evaluator no later than 12:00 p.m. noon prevailing Eastern Time seven (7) Business Days prior to the Part 2 Application Due Date. All changes to an Applicant's Part 1 Application must be signed and dated by the Authorized Representative and sent as an email attachment to the Independent Evaluator at fepaauction@crai.com or through the Secure Online Application Process.

Deficient Pre-Bid Security

If your Pre-Bid Security Letter of Credit is not in a form acceptable to the Companies, your Authorized Representative will be emailed a deficiency notice. You will have until 12:00 p.m. noon prevailing Eastern Time on the Part 2 Application Due Date or 5:00 p.m. prevailing Eastern Time of the second Business Day following the Business Day during which you are notified, whichever comes later, to submit a revised Pre-Bid Security Letter of Credit. If you fail to meet this deadline, your Part 2 Application will be rejected.

If your Pre-Bid Security amount is insufficient for your Indicative Offer, your Authorized Representative will be emailed a deficiency notice. You will have until 12:00 p.m. noon prevailing Eastern Time on the Part 2 Application Due Date or 5:00 p.m. prevailing Eastern Time of the second Business Day following the Business Day during which you are notified, whichever comes later, to submit acceptable Pre-Bid Security. If you cannot correct the deficiency, your Part 2 Application may be rejected or your Initial Eligibility may be reduced by the Independent Evaluator so that your Pre-Bid Security is sufficient to cover your Indicative Offer.

Certifications Regarding Associations

You may be required to provide additional information to the Independent Evaluator and to the Commission and its representatives if you are unable to make the certifications in this Part 2 Application.

Notification to Registered Bidders

If you become a Registered Bidder for the FP Auction and/or the HP Auction, the Independent Evaluator will send your Authorized Representative a Notice of Registration by email after the Part 2 Application Due Date. The Notice of Registration also will be sent to your Authorized Representative by courier. If there are material changes to the Applicant's information provided in this Part 2 Application, you are obligated to notify the Independent Evaluator.

Name of Applicant

Prior to the auction date, Registered Bidders will receive information on how to participate in the auction(s) using the Independent Evaluator's secure Bidding Website.

Part 2 Application: FEPA Fixed-Price and Hourly-Pr	riced Auctions to Procure Defau	It Service Products			
Name of Applicant					
Please select one of the following. This application is for:					
The Fixed-Price Auction	Ц				
The Hourly-Priced Auction					
Both Auctions					

Name of Applicant				
	TION FORMS			
PART 2 APPLICA	TION FORMS			
Applicant Informa	ation_			
Name of Applicar	nt (Company N	lame)		
Authorized Repre	esentative's Co	ontact Information		
Last Name		Given Name(s)		Mr/Mrs/Ms/Dr/(other)
Title				
Street Address 1				
Street Address 2				
City		State		Zip Code
Telephone No.	Cell Phone No	. Fax No.	Email	Address

Name of Applicant				
Delegate's Contact	t Information			
Last Name		Given Name(s)		Mr/Mrs/Ms/Dr/(other)
Company Name			Title	
Street Address 1				
Street Address 2				
City		State		_Zip Code
Telephone No.	Cell Phone No.	Fax No.	Email /	Address

NOTE: The contact information for the Authorized Representative and the Delegate in the Part 2 Application should be the same contact information that was provided in the Part 1 Application. Please email fepaauction@crai.com if there are any changes to this information prior to the deadline for making changes as outlined in the section above, "Changes to Part 1 Application."

Name of Applicant

Indicative Offers and Pre-Bid Security

Provide your Indicative Offers in Table 1 and Table 2 below. For each auction that you are applying for, you will provide an Indicative Offer at the Minimum Starting Prices and you will provide an Indicative Offer at the Maximum Starting Prices for the products in the auction. For each auction, your Indicative Offer should be the maximum number of tranches that you would be willing to supply at the applicable starting prices subject to the limitations of any applicable load cap for the auction. In each auction itself, you are not required to bid the number of tranches in your Indicative Offer. However, your Initial Eligibility to bid in each auction will be determined by the total number of tranches across the products in your Indicative Offer at the Maximum Starting Prices for that auction.

For the FP Auction, you are required to submit Pre-Bid Security in the form of cash or a Pre-Bid Security Letter of Credit for an amount equal to \$250,000500,000 multiplied by the total number of tranches in your Indicative Offer at the Maximum Starting Prices for the FP Auction.

For the HP Auction, you are required to submit Pre-Bid Security in the form of cash or a Pre-Bid Security Letter of Credit for an amount equal to \$250,000500,000 multiplied by the total number of tranches in your Indicative Offer at the Maximum Starting Prices for the HP Auction.

If using a Pre-Bid Security Letter of Credit for your Pre-Bid Security, it should be in the form provided on the Information Website or as approved in modified form during the Part 1 Application process.

After completing Tables 1 and 2, complete Table 3 to include the amount of the cash deposit or Pre-Bid Security Letter of Credit that you are providing in support of this Part 2 Application.

FP Auction	M	let-Ed	P	enelec	Per	n Power	We	st Penn
Product	Min Starting Price	Possible Interest (# tranches)	Min Starting Price	Possible Interest (# tranches)	Min Starting Price	Possible Interest (# tranches)	Min Starting Price	Possible Interest (# tranches
Residential X-months								
Commercial X-months Enter Your Indicative Offer	< Does	not need to be th	ne sum of the	e tranches above		num Starting Price	es. This can	be less than
Commercial X-months	< Does the sum o		ne sum of the t the Minimu	e tranches above	s across the p			be less than st Penn
Commercial X-months Enter Your Indicative Offer	< Does the sum o	not need to be the of the tranches a	ne sum of the t the Minimu	e tranches above m Starting Prices	s across the p	products.		

lame of Applicant								
able 2. Indicative Offer	at <u>Maximum</u>	Starting Price	s (prices ir	n \$/MWh)				
FP Auction	N	let-Ed	P	enelec	Pen	n Power	We	st Penn
Product	Max Starting Price	Possible Interest (# tranches)	Max Starting Price	Possible Interest (# tranches)	Max Starting Price	Possible Interest (# tranches)	Max Starting Price	Possible Interest (# tranches
Residential X-months								
Commercial X-months								
Oommooda A months								
	ative Offer for	the FP Auction a	t the Maximu	um Starting Price	es:			
In Box [A] Enter Your Indic	[A] < Do		e the sum of	f the tranches ab	ove at the M	aximum Starting s the products.	Prices. This	can be less
	[A] < Do than the	oes not need to b	pe the sum of nes at the Ma	f the tranches ab	ove at the M Prices acros	s the products.		
In Box [A] Enter Your Indic	[A] < Do than the	oes not need to be sum of the tranch	pe the sum of nes at the Ma	f the tranches ab aximum Starting	ove at the M Prices acros			st Penn Possible Interest (# tranches
In Box [A] Enter Your Indic	[A] < Do than the s	nes not need to be sum of the tranch flet-Ed Possible Interest	pe the sum of the sat the Manager Performance Max Starting	f the tranches ab aximum Starting enelec Possible Interest	Pen Max Starting	n Power Possible Interest	We Max Starting	st Penn Possible Interest
In Box [A] Enter Your Indic HP Auction Product	[A] < Do than the s	Possible Interest (# tranches)	Page the sum of the sat the Max Starting Price	enelec Possible Interest (# tranches)	Pen Max Starting Price	n Power Possible Interest	We Max Starting	st Penn Possible Interest

Part 2 Application: FEPA Fixe	ed-Price and Hourly-Priced Auctions to Procure Default Service Products
Name of Applicant	
as your Pre-Bid Security.	cate the amount of cash deposit or the amount of the Pre-Bid Security Letter of Credit that you are using This amount must be equal to \$250,000500,000 multiplied by your Indicative Offer in box [A], plus ed by your Indicative Offer in box [B] in Table 2 above.
Table 3. Pre-Bid Security A	Amount
\$	Cash
	Pre-Bid Security Letter of

\$

Credit

Part 2 Application: FEPA Fixed-Price and Hourly-Priced Auctions to Procure Default Service Products Name of Applicant If you are submitting a Pre-Bid Security Letter of Credit, in the space below please provide instructions for returning the Pre-Bid Security Letter of Credit once it can be cancelled. If you are submitting a cash deposit, you must attach a copy of your W9 (for tax ID) and a copy of your banking information on your company's letterhead, signed and dated. Furthermore, in the space below, please provide wiring instructions for returning your cash deposit.

Part 2 Application: FEPA Fixed-Price and Hourly-Pric	Page 17 of 24 ed Auctions to Procure Default Service Products
Name of Applicant	

Certifications by Authorized Representative

Please consult the list of Qualified Bidders for the FP Auction and/or the list of Qualified Bidders for the HP Auction provided to you upon qualification. The following certifications are those contained in the "Association and Confidential Information Rules" of the Bidding Rules. Please consult the criteria for associations and the definition of Confidential Information in the Bidding Rules.

Please make the following certifications. All Qualified Bidders, including each party to a Bidding Consortium, Bidding Agreement or Joint Venture for the purpose of bidding in the FP Auction and/or the HP Auction, must make these certifications. The following certifications (1) to (8) will apply from the time of qualification until the results of the Default Service Auctions, are finalized. Completion of the following certifications also signifies your acknowledgement that you do not know of or cannot reasonably anticipate, at the time of this Part 2 Application, any events that might cause these certifications to become untrue during the period to which each certification applies. If you cannot make one or more of these certifications, please disclose the necessary information to explain why you cannot make these certifications.

(1)	to the criteria as defined in the Bidding Rules	_
	Signature of Authorized Representative	Date
Biddeı	able to make certification (1) requested about (s) in the FP Auction and/or the HP Auction, when association.	

Name	of Applicant
(2)	Please certify that, other than parties explicitly named in Section 1.11 of your Part 1 Application as parties with whom you have entered into a Bidding Agreement, Joint Venture, Bidding Consortium, or other arrangement pertaining to bidding in the FP Auction and/or the HP Auction, you have not entered into any agreement with another Qualified Bidder, directly or indirectly, regarding bids in the FP Auction and/or the HP Auction, including, but not limited to, the amount to bid at certain prices, and when or at what prices bids are to be withdrawn.
	Signature of Authorized Representative Date
(3)	Please certify that any person who will be advising or assisting you with bidding strategy in the FP Auction and/or the HP Auction, with estimation of the value of tranches, or with the estimation of the risks associated with serving Default Service Load (an advisor), will either (i) not provide any similar advice or assistance to any other Qualified Bidder; or (ii) if such person will provide similar advice or assistance to another Qualified Bidder, or if such person will be privy to Confidential Information relative to any other Qualified Bidder's bidding strategy, that appropriate protections have been put into place to ensure that the advisor does not serve as a conduit of information among, or as a coordinator of the bidding strategies of, multiple bidders, and please describe such appropriate protections in the space below.
	Signature of Authorized Representative Date
	ble to make certification (3) requested above, please name the advisor(s) and the ied Bidder(s) concerned.

Name of Applicant

(4)	Please certify that you are not a party to any contract that might be used as a source of supply for Defaul require the disclosure of any Confidential Information relative to the bidding strategy or Confidential Information and/or the HP Auction) to the counterparty (ii) that would require the disclosure of any Confident Information relative to the bidding strategy or Confident Information relative to the bidding strategy or Confident Information and/or the HP Auction) to any other provide instructions, direct financial incentives, or Bidder to act in a way determined by the counterpart concert with any other Bidder in the FP Auction Notwithstanding the above, you may, during negotial and/or the HP Auction for contractual arrangements Service Load were you to be a winner at the FP Auction Service Load were you to be a winner at the FP Auction products to be purchased, the volume, and the price buy these products, so long as such arrangements definition or (iii) above.	t Service, and that (i) would on (Confidential Information ormation regarding the FP v under such a contract; or tial Information (Confidential ential Information regarding her party; or (iii) that would other inducements for the y in the agreement and/or in and/or the HP Auction. It is for power to serve Default of the nature of the standard of at which you are willing to
	Signature of Authorized Representative	Date
hat po applica	ole to make certification (4) requested above please di revent you from making the certification. Please iden able, the party to whom information disclosure must l ntract.	ntify the counterparty and if
(5)	Please certify that you do not have any knowledge that is relevant to the bidding strategy of any other C	
	Signature of Authorized Representative	Date

Part 2	2 Application: FEPA Fixed-Price and Hourly-Priced Auctions to Procure Default Service Products
Name	e of Applicant
	able to make certification (5) requested above please name the other Qualified or(s) and the nature of the Confidential Information
(6)	Please certify that you will not disclose Confidential Information relative to your bidding strategy except to bidders that were explicitly named in your Part 1 Application as parties with whom you have entered into a Bidding Agreement, Joint Venture, or Bidding Consortium, or other arrangement pertaining to bidding in the FP Auction and/or the HP Auction, Bidders with which you are associated as disclosed through certification (1), to your advisors, and to your financial institution.
	Signature of Authorized Representative Date
If una	ble to make certification (6) requested above, please explain.
(7)	Please certify that, other than entities with which you are affiliated and other than bidders with which you have entered a Bidding Agreement, or Joint Venture, or Bidding Consortium, or other arrangement pertaining to the FP Auction and/or the HP Auction, no party has agreed to defray any of the costs of participating in the FP Auction and/or the HP Auction, including the cost of preparing the bid, the cost of any financial guarantees, the cost to be paid upon winning a tranche, and any other participation cost.
	Signature of Authorized Representative Date

Part 2	Application: FEPA Fixed-Price and Hourly-Priced Auctions to Procure Default Service Products			
Name	e of Applicant			
If una	ble to make certification (7) requested above, please explain.			
(8)	Please certify your agreement that the submission of any bid in the FP Auction and/or the HP Auction creates a binding and irrevocable offer to provide service under the terms set forth in the SMA and that a binding and enforceable contract to provide service with respect to the number of tranches for which you were a winner in the FP Auction and/or the HP Auction shall arise under the SMA. Please note that failure to execute the SMA within three (3) Business Days following the date of the Commission's approval of the auction results may result in the forfeiture of the Pre-Bid Security Letter of Credit.			
	Signature of Authorized Representative Date			
If una	ble to make certification (8) requested above, please explain.			
The following certifications (9), (10) and (11) will apply from the date on which you make the certifications.				
(9)	Please certify that if you are registered to participate in the FP Auction and/or the HP Auction, you will not disclose at any time information regarding the Initi Eligibility in the FP Auction and/or the HP Auction or the list of Registered Bidders, including the number of Registered Bidders, the identity of any one all entities that have been registered, or the fact that an entity has not bee registered for participation in the FP Auction and/or the HP Auction.			
	Signature of Authorized Representative Date			

Part 2 Application: FEPA Fixed-Price and Hourly-Priced Auctions to Production	Page 22 of 24 cure Default Service Products
Name of Applicant	
(10) Please certify that you will not disclose any Confident the FP Auction and/or the HP Auction to any party e Bidders with which you are associated as disclosed in	except your advisors and
Signature of Authorized Representative Da	ate
If unable to make certification (10) requested above, please ex	xplain.
(11) Please certify that you will continue to abide by certifications. You will not disclose any Confidential I FP Auction and/or the HP Auction to any party except to with which you are associated. Please certify that you written or electronic, provided by the Independent Confidential Information regarding the FP Auction and five (5) days of the close of the bidding, or earlier Independent Evaluator	nformation regarding the your advisor and Bidders will destroy all documents, Evaluator that contain for the HP Auction within
Signature of Authorized Representative Da	ate
If unable to make certification (11) requested above, please ex	xplain.

Name of Applicant		

Ongoing Obligations

Please note that all obligations, terms and conditions set forth in the Bidding Rules and SMA remain in effect and apply to the certifications made herein, including but not limited to the following:

Section 4.2.3 of the Bidding Rules - Sanctions may be imposed on a Bidder for failing to abide by any of the certifications that it will have made in its Part 1 and Part 2 Applications. Such sanctions can include, but are not limited to, termination of the SMA, loss of all rights to provide supply for the Companies to serve any load won by such bidder, forfeiture of financial guarantees and other fees posted or paid, prosecution under applicable state and federal laws, debarment from participation in future solicitations, and other sanctions that may be appropriate.

Justification of Omissions
If you are unable to provide all documents or all information requested in this Part 2 Application, please justify fully any omissions in the space provided below.

Page 24 of 24
Part 2 Application: FEPA Fixed-Price and Hourly-Priced Auctions to Procure Default Service Products

Name of Applicant

Appendix A – Enclosures to the Part 2 Application

This is a checklist of documents to be enclosed with this Part 2 Application.

One copy of completed Part 2 Application forms (with original signatures)

One copy of W9 Form (for Tax ID) and one copy of banking information on your company's letterhead (signed and dated) (if submitting cash deposit as Pre-Bid Security) [Section 2.2]

Pre-Bid Security Letter of Credit (if applicable) [Section 2.2]

End of Part 2 Application

AEPS Requirements by Reporting Year

Reporting					
Year		Time Period	Base Tier I*	Solar PV*	Tier II*
	1	2/28/07 - 5/31/07	1.50%	0.00%	4.20%
	2	6/1/07 - 5/31/08	1.50%	0.00%	4.20%
	3	6/1/08 - 5/31/09	2.00%	0.01%	4.20%
	4	6/1/09 - 5/31/10	2.50%	0.01%	4.20%
	5	6/1/10 - 5/31/11	3.00%	0.02%	6.20%
	6	6/1/11 - 5/31/12	3.50%	0.03%	6.20%
	7	6/1/12 - 5/31/13	4.00%	0.05%	6.20%
	8	6/1/13 - 5/31/14	4.50%	0.08%	6.20%
	9	6/1/14 - 5/31/15	5.00%	0.14%	6.20%
	10	6/1/15 - 5/31/16	5.50%	0.25%	8.20%
	11	6/1/16 - 5/31/17	6.00%	0.29%	8.20%
	12	6/1/17 - 5/31/18	6.50%	0.34%	8.20%
	13	6/1/18 - 5/31/19	7.00%	0.39%	8.20%
	14	6/1/19 - 5/31/20	7.50%	0.44%	8.20%
	15	6/1/20 - 5/31/21	8.00%	0.50%	10.00%
	16	6/1/21 - 5/31/22	8.00%	0.50%	10.00%
	17	6/1/22 - 5/31/23	8.00%	0.50%	10.00%
	18	6/1/23 - 5/31/24	8.00%	0.50%	10.00%
	19	6/1/24 - 5/31/25	8.00%	0.50%	10.00%
	20	6/1/25 - 5/31/26	8.00%	0.50%	10.00%
	21	6/1/26 - 5/31/27	8.00%	0.50%	10.00%

Notes:

^{*} Percent of Total Electric Sales Base Tier 1 includes Solar PV

METROPOLITAN EDISON COMPANY, PENNSYLVANIA ELECTRIC COMPANY PENNSYLVANIA POWER COMPANY, AND WEST PENN POWER COMPANY

SOLAR POWER PURCHASE AGREEMENT

REQUEST FOR PROPOSALS

Issued MONTH DAY, YEAR

Bids Due:

MONTH DAY, YEAR 12:00 p.m. Eastern Prevailing Time

Web Address: TBD

TABLE OF CONTENTS

			Page
I.	Introd	luction	2
II.		se, Desired Product, and General Pricing Guidelines	
11.	II.1	Purpose	
	II.2	Desired Product	
	II.3	General Pricing Guidelines	
III.	Inforn	nation, Schedule, and Guidelines for Submitting the Pre-Qualification cation and Proposal	
	III.1	Information Provided to Potential Respondents	
	III.2	Information on the RFP Website	
	III.3	General Guidelines for Submitting the Pre-Qualification Application and Proposal	6
	III.4	Clarification of Proposals	7
	III.5	Schedule	7
	III.6	Questions	8
IV.	RFP (General Requirements	8
	IV.1	Pre-Qualification	8
	IV.2	Facility Parameters	9
	IV.3	Proposal Quantities	9
	IV.4	Valid Proposal Duration	9
V.	Propo	sal Content Requirements	9
	V.1	Standard RFP Response Form	10
	V.2	Executive Summary	10
	V.3	Name and Location	10
	V.4	Net Capability of Generating Facility	10
	V.5	PPA Initial Delivery Date	10
	V.6	Generation Technology	11
	V.7	PJM Capacity	11
	V.8	Anticipated Facility Output	11

	V.9	Counterparty Financial Information	11
	V.10	Other Contractual Commitments	11
	V.11	Project Development Plan	11
	V.12	Power Purchase Agreement	13
	V.13	Asset Performance	14
	V.14	Permits	14
	V.15	PPA Pricing	14
	V.16	Land Use and Other Environmental Considerations	15
	V.17	Community and Other Considerations	15
VI.	Minim	um Bid Eligibility Requirements	15
VII.	Bid Ev	aluation and Post-Evaluation Process	16
	VII.1	Initial Proposal Review	16
	VII.2	Proposal Evaluation Criteria and Evaluation Process	16
	VII.3	Selection of Winning Bidders and PA PUC Approval	17
	VII.4	Execution of PPA	18
VIII.	Credit	Qualification and Collateral	18
IX.	Reserv	ation of Rights	19
Χ.	Confid	entiality of Information	20
XI.	Regula	tory Approvals	21
XII.	Additio	onal Information	21
		Appendices	
Form	n of Pow	ver Purchase Agreement	Appendix 1
Pre-0	Qualifica	ation Application	Appendix 2
Stan	dard RF	P Response Form – Operating Data	Appendix 3

DEFINITIONS

EPC contract The engineering, procurement, and construction contract for

the Facility under development.

Evaluation Period The period of time between the Proposal due date [to be

specified] and the selection of the Winning Proposal(s).

Facility A new or in-development Tier I solar Alternative Energy

Systems under Pennsylvania's Alternative Energy Portfolio Standards Act, 73 P.S. §§ 1648.1 et seq. ("AEPS" or "AEPS Act"). A proposed Facility will be considered to be a new Facility if it has not come online and its construction has not been completed as of the Proposal due date as specified in

Section III.5 of this RFP.

Independent Evaluator ("IE") The Brattle Group.

PA PUC Pennsylvania Public Utility Commission (also

"Commission").

PPA A Power Purchase Agreement for the purchase of the

> solar energy output and the associated solar photovoltaic alternative energy credits that comply with Pennsylvania's

Alternative Energy Portfolio Standards Act.

Proposal A response to this RFP, associated with a qualifying

Utility-Scale Solar Facility located in the Commonwealth of Pennsylvania, containing a bid price and all other required information as specified in Section V of this solicitation

document.

Respondent A party submitting a Proposal.

RFP Request for Proposal process, consisting of a single round

of sealed bids.

Total Notional

Value

The value of the PPA, as specified in Exhibit G of the Form

Utility-Scale Solar

Facility

of Power Purchase Agreement (Appendix 1).

A solar facility that is connected to the PJM grid (i.e., not behind the meter) and that has ICAP capacity of at least 5 MW. Aggregations of smaller solar facilities do not satisfy

this definition.

Winning Proposal A Proposal that has been selected by the Companies and

the IE, and that has resulted in the successful execution

of a PPA.

I. INTRODUCTION

- I.1 With this Request for Proposals ("RFP"), Metropolitan Edison Company ("Met-Ed'), Pennsylvania Electric Company ("Penelec"), Pennsylvania Power Company ("Penn Power"), and West Penn Power Company ("West Penn") (individually referred to as "Company" and in any combination as the "Companies") are soliciting proposals for long-term renewable energy and associated solar photovoltaic alternative energy credits ("SPAECs") from new and in-development Tier I solar Alternative Energy Systems under Pennsylvania's Alternative Energy Portfolio Standards Act, 73 P.S. §§ 1648.1 et seq. ("AEPS" or "AEPS Act") (each, a "Facility").1 The Companies intend to use the procured energy and SPAECs to satisfy their obligations under the Electricity Generation Customer Choice and Competition Act2 and AEPS Act and seek to enter into fixed-price agreements with successful bidders. This document describes the process by which bidders may qualify and participate in the RFP.
- **I.2** The general schedule for the RFP process is shown below (see also Subsection III.5):

•	Issue RFP	xxxxxx
•	Bidder Information Session	xxxxxx
•	Pre-Qualification Application Deadline	xxxxxx
•	Notification of Pre-Qualification	xxxxx

Proposal Due Date

1.3 The Companies are electric distribution companies ("EDCs") under Pennsylvania law and provide electric delivery service to over two million retail customers across the Commonwealth of Pennsylvania. The Companies' electric delivery service territories fall entirely within the area served by PJM Interconnection, LLC ("PJM").

XXXXXX

 $^{^{\}scriptscriptstyle 1}$ All capitalized terms not expressly defined herein are defined in the fForm Power Purchase Agreement attached as Appendix A.

² 66 Pa. C.S. § 2801 et seq.

- I.4 The Pennsylvania Public Utility Commission ("PA PUC") has approved the procedures described in this RFP and the terms of the Power Purchase Agreement ("PPA") by order dated ______, 2022 at PA PUC Docket Nos. P-2021-_____ et seq ("PUC Order"). Potential bidders are strongly urged to review both the RFP and the PPA (Appendix 1) and to consult with counsel with respect to requirements and obligations under this RFP and the PPA.
- You are invited to submit a written proposal in accordance with the requirements described in this RFP. The Companies have retained The Brattle Group ("Brattle") to manage the RFP process on their behalf for the purpose of soliciting bids to enter into a PPA with each of the Companies. All proposals must meet the general requirements set forth in Section IV ("RFP General Requirements"). All Bidders with in development Facilities that will meet the qualification requirements are invited to submit a bid or bids pursuant to the RFP process.
- **I.6** Brattle will serve as an Independent Evaluator to monitor and oversee the evaluation of all bids. Brattle will administer this process through its website (see Subsection III.2) on the Companies' behalf in accordance with this RFP. Responses to this RFP will be accepted via email at firstenergysolar-RFP@brattle.com.

II. PURPOSE, DESIRED PRODUCT, AND GENERAL PRICING GUIDELINES

II.1 Purpose

The purpose of this RFP is to solicit offers from developmental solar generating facilities located within Pennsylvania. The Companies have a strong preference for resources that will be in service on or before May 31, 2024 (the day before the 2024/25 PJM planning year begins) but will consider bids from Facilities with later planned in-service dates as described in Section II.2.

Each Company intends to enter into a PPA with the winning Respondent(s) in this RFP with a term of more than 4, but not more than 10, years.

The Companies anticipate contracting for between 7 and 20 MW of total capacity across all PPA proposals designated as winners of this RFP. To qualify, the physical Facility must be located in the Commonwealth of Pennsylvania and qualify as a PJM capacity resource.

II.2 Desired Product

The Companies will consider Proposals to enter into a 4- to 10-year PPA contract with physical solar facilities that are not yet in service as of the date of the release of this RFP ([Month] [Day], [Year]). The Companies have a strong preference for facilities that will achieve commercial operation within PJM's 2024/2025 Planning Year or earlier. The Companies will consider bids from facilities with planned in-service dates later than the 2024/2025 Planning Year, but no projects with planned in-service dates after 2025/2026 Planning Year will be considered.

The Companies are seeking to enter into PPAs for between 7 and 20 MW (AC ICAP). To reach this target, each Company may enter into more than one PPA with multiple counterparties.

All bid proposals (each, a "Proposal") must be consistent with the general and content requirements specified in Sections IV and V. The Companies have a preference for resources located within one of the Companies' service territories. A map with the approximate boundaries of the Companies' service territories is provided at the end of this primary solicitation document.

However, the Companies will consider Proposals supported by Facilities not located in any of the Companies' service territories as long as the physical location of those Facilities is in the Commonwealth of Pennsylvania. Any Proposal supported by a Facility not located within Pennsylvania will be disqualified from consideration.

Projects must be Utility-Scale Solar Facilities that can offer energy into the PJM market and accrue AEPS-compliant SPAECs. All Proposals must be supported by a new physical Facility. The Companies will not accept "virtual" bids.

While the Companies may designate multiple Proposals and projects as winners of this RFP, each individual proposal submitted must be supported by a single, new, physical

resource that meets the location requirements of this RFP. The Companies will accept Proposals for a share of larger Facilities. Any Proposal supported by a Facility not meeting the basic qualification requirements may be disqualified from consideration.

Through the PPA, the Companies will purchase the specified portion of the Facility's SPAECs and renewable energy output (MWh). In reviewing Proposals, the Companies will not assign value to any attributes other than SPAECs and energy. The inclusion of other attributes may detract from the Proposal's score during evaluation.

Project developers or owners will retain rights to all other Facility output, including capacity and ancillary services. Developers will be free to market such output or consume such output for their own internal needs. The Companies expect and anticipate that Proposal pricing will reflect the ability of the developer to market such attributes outside of any PPA.

II.3 General Pricing Guidelines

Proposal pricing should be based on a specified combined price for each MWh of energy and the associated AEPS-compliant SPAEC. The specified price may change from year to year or stay fixed over the duration of the contract. No index- or formula-based pricing Proposals will be accepted.

At this time, the Companies will not consider solar tolling arrangements or pricing structures other than those that specify \$/MWh for the energy and the associated solar AECs. Any Proposal not denominated in this fashion may be disqualified from consideration, or Brattle may request an update to the Proposal pricing structure.

III. INFORMATION, SCHEDULE, AND GUIDELINES FOR SUBMITTING THE PRE-QUALIFICATION APPLICATION AND PROPOSAL

III.1 Information Provided to Potential Respondents

This RFP and all of its appendices and forms, are posted on Brattle's website (xxxxxxxx). Interested parties can download the RFP with its required forms and complete the forms in Microsoft Word, Adobe Acrobat, and/or Excel format.

III.2 Information on the RFP Website

The information on the RFP website maintained by Brattle will contain the following:

- (a) This RFP
- (b) Pre-Qualification Document(s)
- (c) Form of PPA
- (d) Standard RFP Response Form
- (e) Frequently Asked Questions ("FAQ") about this RFP
- (f) Updates on this RFP process and other relevant information

III.3 General Guidelines for Submitting the Pre-Qualification Application and Proposal

By the specified deadline, a Respondent shall submit properly completed forms by email to the RFP Submission Email Address (<u>firstenergysolar-RFP@brattle.com</u>).

Respondents with Proposals over 30 MB in size should contact Brattle for instructions on how to submit a Proposal via Brattle's secure FTP platform. Proposals that are nonconforming, incomplete, or that are mailed or hand delivered may be deemed ineligible and may not be considered for further evaluation.

Parties that are interested in bidding shall submit pre-qualification applications by the pre-qualification deadline. Any Proposals received from a Respondent who has not been pre-qualified will be deemed ineligible and not considered for further evaluation.

Please note that the Independent Evaluator (i.e., Brattle) will always confirm receipt of a Proposal. Bidders that do not receive a bid confirmation should notify the Independent Evaluator.

Brattle anticipates sending an electronic mail notice to parties that it considers likely participants in this RFP. The preparation of a Proposal may be initiated at any time

provided that such preparations are completed in accordance with the instructions found in this RFP.

By submitting a Proposal in response to this RFP, a Respondent certifies that it has not divulged, discussed, or compared any commercial terms of its Proposal with any other actual or prospective Respondent and has not colluded whatsoever with any other party believed to be an actual or prospective Respondent.

III.4 Clarification of Proposals

While evaluating Proposals, Brattle may request additional information about any item in the Proposal. All requests will be made in writing, and the Respondent will be required to respond to the request within five (5) business days of receipt of such request or Brattle may choose to stop evaluating the Respondent's Proposal.

III.5 Schedule

The following schedule and deadlines apply to this RFP. The Companies reserve the right to extend or otherwise modify any portion of this schedule at any time or terminate the RFP process at its sole discretion.

EPT or Eastern Prevailing Time means Eastern Standard Time or Eastern Daylight Savings Time, whichever is in effect in Reading, Pennsylvania on any date specified.

All Proposals are due by 12:00 p.m. EPT on the proposal due date (below). Proposals received after the specified date and time may be disqualified from further evaluation.

TABLE 1: PROVISIONAL SCHEDULE

Event	Date
Respondent Pre- Qualification Application Deadline	12:00 p.m. EPT, xxxxxx
Respondents Notified of Results of Pre- Qualification Application Review	12:00 p.m. EPT, xxxxxx
Proposal Due Date	12:00 p.m. EPT, xxxxxx
Regulatory Approval of RFP Results and PPA Execution (expected)	XXXXXX

III.6 Questions

All questions regarding this RFP should be submitted to <u>firstenergysolar-RFP@brattle.com</u> (the "RFP Submission Email Address"). All relevant questions and answers will be posted to the RFP website and made available to all registered process participants. Other than questions and answers submitted through the RFP Submission Email Address and posted on the RFP website, no other individual or bidder-specific explanations or interpretations of this RFP will be given. Written questions will be accepted by Brattle until five (5) days before the date on which Proposals are due. The Respondent should check the website periodically for updates and postings.

In the event that a given Respondent has a question or seeks clarification or explanation of any data or information provided in this RFP, such Respondent is responsible for obtaining the desired information by submitting a written question to Brattle through the RFP Email Address by no later than five (5) days before the date on which Proposals are due.

Any and all communications regarding this RFP will be submitted through the RFP Submission Email Address, posted on the RFP website, or communicated through a public bidder information session. **Under no circumstance should Respondents attempt to contact employees of the Companies directly with any matters related to this RFP**.

IV. RFP GENERAL REQUIREMENTS

Proposals that do not meet the following criteria may be deemed ineligible and not considered for further evaluation.

IV.1 Pre-Qualification

To be eligible to submit a Proposal in response to this RFP, Respondents must be prequalified.

To pre-qualify, Respondents must:

- (a) Submit a completed Pre- Qualification Application (Appendix 2) to the RFP Submission Email Address (<u>firstenergysolar-RFP@brattle.com</u>); and
- (b) Receive confirmation from Brattle that Respondent is pre-qualified to submit a Proposal.

Any Proposals received from a Respondent who has not been pre-qualified will be deemed ineligible and not considered for further evaluation.

IV.2 Facility Parameters

All Proposals must be supported by a new physical Facility. Each Facility supporting a PPA with the Companies under a Proposal must:

- (a) be located within the Commonwealth of Pennsylvania;
- (b) be a solar-powered resource;
- (c) be Utility Scale and grid-connected; and
- (d) qualify for SPAECs under the AEPS Act and be able to sell its power into the PJM energy market.

IV.3 Proposal Quantities

Through this RFP, the Companies seek between 7 and 20 MW of AC ICAP solar capacity. The Companies will accept partial shares of larger Facilities.

IV.4 Valid Proposal Duration

Proposal pricing must remain valid for six (6) months following the Proposal due date, upon which time Proposals shall expire unless the Respondent has been notified that its Proposal has been selected.

V. PROPOSAL CONTENT REQUIREMENTS

This section describes the Companies' expectations and requirements for the content of Proposals. Proposals that do not meet the following criteria will be deemed ineligible and

not considered for further evaluation. The Companies expect Respondents to provide any information that could impact the Respondent's ability to enter into a PPA with each of the Companies. If it appears that certain information is inadvertently omitted from a Proposal, Brattle may contact the Respondent to obtain the information.

All Proposals must include a table of contents and provide concise and complete information on all of the following topics:

V.1 Standard RFP Response Form

Respondents shall provide a completed Appendix 3 (RFP Response Form). Please note that Appendix 3 does not capture all of the information required to be provided in response to this RFP.

V.2 Executive Summary

Proposals must include an executive summary of the Proposal's characteristics, including any unique aspects and benefits.

V.3 Name and Location

Respondents shall state the name of the Facility, the county and EDC service territory where the generating facility is located, the owner of the Facility, the PJM commercial pricing node associated with the Facility, and the expected commercial in-service date for the facility. The location must be in the Commonwealth of Pennsylvania and serviced by PJM.

V.4 Net Capability of Generating Facility

Respondents shall state the net capability of the Facility that would be applicable for each month of a calendar year as well as the nameplate capacity of the Facility.

V.5 PPA Initial Delivery Date

In preparing their Proposals, Respondents shall assume that the deliveries under the PPA would commence on or about June 1, 2024. However, Brattle will accept

alternative timelines to the extent that such timelines may allow for more competitive pricing.

V.6 Generation Technology

Respondents shall describe the generation technology of the Facility, including the make of the key equipment.

V.7 PJM Capacity

Respondent shall provide the projected ICAP (or nameplate) and the projected UCAP for the next three (3) years.

V.8 Anticipated Facility Output

The estimated monthly output in MWh for each of the next five (5) years. Respondents shall also provide expected (p50 and p90) capacity factors, including hourly shapes (based on weather data).

V.9 Counterparty Financial Information

Respondents shall submit audited or unaudited financial statements, including balance sheets, income statements, and cash flow statements for the proposed PPA counterparty. Respondents should provide this information for the past three years.

V.10 Other Contractual Commitments

Respondents shall state whether there are other contractual commitments limiting or affecting the operation of the Facility. Respondents shall state whether there are any other agreements in place for or claims on output from the Facility. Such information should include any obligations that may restrict or compromise the Companies' rights to Facility output.

V.11 Project Development Plan

All Proposals must have a well-defined and credible development plan for Respondent to complete the development, construction, and commissioning of the Facility on their

proposed development timeline. Respondents should review the "Development Risk" evaluation metric and be sure to discuss key development milestones in their Proposal.

If available, Respondents shall submit a copy of:

- (1) An executed pro-forma PJM Service Agreement and Interconnection Construction Services Agreement;
- (2) A completed PJM Facilities Study; and
- (3) A completed PJM System Impact Study.

If Respondent cannot provide this information, Respondent must indicate why it cannot be provided and must provide a timeline showing its ability to complete key development milestone requirements prior to June 1, 2024, including the above-referenced items for the PJM generator interconnection queue.

Respondent shall also detail its PJM generator interconnection queue position, if any, and the types and amounts of transmission service requested. Respondents submitting Proposals should also submit a copy of a fully executed engineering, procurement, and construction ("EPC") contract if available.

Respondents should also provide the following:

- The roles and responsibilities of the companies involved in the design, development, procurement, and construction of the Facility. Information about key contributors shall extend to the status of the contractual relationship with each key contributor; key contractual assurances; guarantees; warranties, or commitments supporting the Proposal, including an executed EPC contract; and any past experience of Respondent working with each key contributor;
- A description of the status of major equipment procurement, as well as processes for engineering, procurement, and construction bids and awards;
- 3. A description of the Facility site and Respondent's rights (i.e., whether owned, leased, or under option) to such site. Please indicate whether additional land

rights are necessary for the development, construction, and/or operation of the Facility;

- 4. A discussion of the development schedule and associated risks and risk-mitigation plans for that schedule, including whether there are contract commitments from contractors supporting the proposed schedule. The Respondent should be prepared to document and commit to a proposed development schedule, which should include a commercial operation date;
- A discussion of the financing arrangements secured by the Respondent, including an overview of the sources of funds, and level of commitment from debt, equity, or other investors;
- 6. A discussion of permitting, including a list of all required permits, permitting status of each, and key risks to securing necessary future permit approvals;
- 7. A description of Respondent's status in PJM's queue process and presentation of documents described above; and
- 8. Financial information regarding guarantors and sources of equity funding along with either the Respondent's or guarantors' senior unsecured debt and/or corporate issuer ratings documentation from Moody's and Standard & Poor's ("S&P") showing the name of the rating agency, the type of rating, and the rating of the Respondent or guarantor.

The Companies will not assume any responsibility for the successful development, construction, interconnection, and/or completion of a proposed Facility. Accordingly, development schedule, budget, permits, and approval risk will be the sole responsibility of the Respondent.

V.12 Power Purchase Agreement

Successful bidders must be able to meet all requirements of the PPA provided in Appendix 1 of this RFP. Respondents will be required to demonstrate in their Proposals that they can meet all specified terms of the PPA and that they take no exception to the

PPA terms. Failure to do so will result in exclusion of the Respondent's Proposal(s) from further consideration.

V.13 Asset Performance

For all contractual structures, bidders should specify the "guarantees" associated with their Proposal. For example, mechanical availability, anticipated production under given conditions, etc.

Respondents shall clearly articulate expected performance metrics which may include performance guarantees and metrics, among others.

V.14 Permits

Facilities must have all relevant environmental and other permits necessary for their operation and maintenance. Respondents shall provide a description of all permits required for the operation and maintenance of the Facility. Respondents should also indicate the status of each permit, including, but not limited to, whether the permit has been obtained, when it will be obtained if it has not yet, and the eventual need to renew such permits, as well as the likelihood of renewal.

Respondents shall also provide a description of any identified environmental liabilities (e.g., potential site remediation requirements, pending future regulatory requirements, etc.) for the Facility.

V.15 PPA Pricing

Respondents shall submit a PPA price associated with their bid. The Companies will accept a fixed pricing structure (or one with specified annual changes) denominated in \$/MWh for energy and associated AEPS-compliant SPAECs. The evaluation of the bids will be based on the anticipated cost and inherent uncertainty associated with the proposed PPA pricing structure.

V.16 Land Use and Other Environmental Considerations

Respondents should highlight any environmental or sustainability attributes associated with their project, including any third-party sustainability certifications.

The Companies are particularly interested in receiving information about the land use of the Facility prior to development, (i.e., brownfield redevelopment of industrial land, conversion of farmland, conversion of forest land).

V.17 Community and Other Considerations

Respondents are encouraged to highlight their impact on the community and, in particular, communities served by the Companies.

- Respondents may identify if their project is located within one of Pennsylvania's HUBZones, which the Small Business Administration defines as historically underutilized business zones where at least 35% of employees reside within the Hubzone.³
- To the extent that a bidder qualifies as a minority business enterprise ("MBE"), a
 veteran-owned business ("VET"), a business owned by a service-disabled veteran
 ("SDV"), a small business that meets the small size standards matched in the
 North American Industry Classification System ("NAICS") codes, or women owned
 business("WBE"), such qualification may be highlighted in the proposal.

VI. MINIMUM BID ELIGIBILITY REQUIREMENTS

This section outlines the minimum requirements that all Proposals must meet to be eligible to participate in this RFP. Proposals unable to meet the following criteria will be deemed ineligible and will not be considered for further evaluation.

 Respondents must meet the general requirements in accordance with Section IV of this RFP.

³ See https://www.sba.gov/federal-contracting/contracting-assistance-programs/hubzone-program for details.

Proposals must include all content requirements described in Section V of this
 RFP, including all requested information and completed forms.

VII. BID EVALUATION AND POST-EVALUATION PROCESS

VII.1 Initial Proposal Review

After the Proposal due date, Brattle will review all responses for completeness, responsiveness, and compliance with the minimum bid eligibility requirements specified in Section VI of this RFP. Brattle will not accept updated pricing from Respondents during the Evaluation Period unless such information is requested by Brattle.

Preliminary due diligence will also be conducted at this stage to identify any flaws associated with the Proposal that would make it unacceptable. As a result of this screening, Brattle may either eliminate Proposal(s) from further consideration or contact Respondent(s) to clarify their Proposal or request additional information. Brattle will make such requests in writing via email, and Respondents will be required to respond to the request within five (5) business days of receipt of such request, or Brattle may choose to stop evaluating a Respondent's Proposal (see Section III).

VII.2 Proposal Evaluation Criteria and Evaluation Process

Proposals that meet the requirements in Section VI of this RFP will be evaluated consistent with the evaluation criteria set forth in this RFP. Points will be awarded and deducted based on:

- 1. The Cost of Energy and SPAECs;
- 2. Development Status;
- 3. Development Risk, Nodal Risk, and Other Risk Factors;
- Facility Location;
- 5. Contract Duration; and
- 6. Other Asset or Proposal Specific Benefits and Risk Factors.

Prior to the evaluation of results, the Companies, with input from Brattle, may set a confidential reservation price in order to protect against the risk of getting locked into a high-priced, long-term contract. That reservation price will be based on Brattle's analysis of expected prices in the relevant energy and SPAEC markets.

The Companies anticipate contracting with the asset or assets that, in total, best meet the Companies' needs and those of its customers. Bids will be ranked based on the stated evaluation criteria, and assets will be selected based on the Companies' needs. Consistent with that objective, each Company may need to contract with multiple generating assets. In order to secure the overall portfolio of assets that best meets the Companies' needs, there is no assurance that the individual, highest-scoring qualified proposal(s) will be selected due to the fixed MW associated with each individual bid.

During the evaluation process, the Companies and/or Brattle may choose to initiate discussions with one or more Respondents. In that event, Brattle will be the sole conduit of information between Respondent and the Companies. Discussions with a Respondent shall in no way be construed as the commencement of contract negotiations.

VII.3 Selection of Winning Bidders and PA PUC Approval

Upon completion of the evaluation of Proposals, Brattle shall prepare a report of the RFP results in consultation with the Companies, summarizing Respondent's qualification process and the Proposals and identifying the successful and unsuccessful Respondents and Proposals. The report shall then be submitted to the PA PUC for approval. The PA PUC will have ten (10) calendar days to review the Brattle report and approve the report and bid prices submitted by successful bidders. Bids from at least three bidders, who are not affiliated with each other, must be received in response to the RFP as a condition for PA PUC approval of any successful bids. If the results are approved, the Companies shall notify all Respondents of the PA PUC's decision and the results of the RFP. If the results are not approved, the Companies will not sign any PPAs with winning bidders.

VII.4 Execution of PPA

Upon approval of the results by the PA PUC and subject to all provisions of this RFP (including Section IX), each Company shall prepare two copies of a PPA with information from the successful bidder's proposal inserted and transmit those copies to the applicable Respondent within five (5) business days of notification by the Companies. Respondent shall execute and return each PPA to the appropriate Company with any collateral as required under the PPA within ten (10) business days.

VIII. CREDIT QUALIFICATION AND COLLATERAL

Bidders submitting Winning Proposals may be required to post collateral at the time of execution of a PPA. The Companies and Brattle will evaluate the credit quality and related collateral posting requirements for each Respondent submitting a Proposal(s) in accordance with a uniform and consistent application of the Companies' risk management practices and standards. This evaluation will occur as part of Brattle's evaluation of a Respondent's pre-qualification application.

Credit Requirements are as follows:

Respondent counterparties that have a minimum investment grade credit rating shall be deemed to have met the creditworthiness standard and shall not be required to post Performance Assurance. Performance Assurance may be in the form of cash, a letter of credit, or other security in a form acceptable to the Companies. A minimum investment grade credit rating is defined as the most recently published unsecured senior long-term debt rating (or corporate issuer rating if unsecured long-term debt rating is not available) of **BBB-** from Standard & Poor's (S&P), **BBB-** from Fitch Ratings (Fitch), or **Baa3** from Moody's Investor Service (Moody's), respectively. If the Respondent is rated by more than one agency and the ratings differ, the lowest rating will be used.

• If a Respondent counterparty is either not rated by the aforementioned public rating agencies or has ratings below investment grade (as defined above), the creditworthiness standard may be met with cash, a Letter of Credit, or by issuing a corporate guaranty from an acceptable credit support provider that satisfies the above minimum investment grade standard.

 The Companies' acceptance of a corporate guaranty shall be subject to a satisfactory review of the credit support provider that is issuing the guaranty.
 In addition, the guaranty shall be in a form acceptable to the Companies.

Any Respondent that does not meet the above creditworthiness requirements or provide an acceptable guaranty shall have the corresponding obligation to provide Performance Assurance. Performance Assurance will be equal to 15% of the Total Notional Value of the PPA, as specified in Exhibit G of the PPA (Appendix 1). The amount of required Performance Assurance will decline annually during commercial operation.

Any Letter of Credit must be issued by a U.S. commercial bank or a foreign bank with a U.S. branch, with such bank having a credit rating of at least A- from S&P, or the equivalent credit rating from Moody's or Fitch, and a minimum of \$10 billion in assets. The Letter of Credit must be in a form acceptable to the applicable Company, in whose favor the Letter of Credit is issued.

IX. RESERVATION OF RIGHTS

The Companies reserve the right, without qualification, to reject any or all Proposals and to waive any irregularity in submitted information. There is no assurance, expressed or implied, that any agreement will be executed pursuant to this RFP. The Companies may terminate negotiations with any Respondent at any time without liability.

Respondents are advised that any PPA executed by the Companies and any selected Respondent may not be an exclusive contract. In submitting a Proposal, Respondents will be deemed to have acknowledged that the Companies may contract with others for the same or similar deliverables or may otherwise obtain the same or similar deliverables by other means and on different terms.

The Companies also reserve the right to evaluate all Proposals received in any manner they elect to employ, to solicit additional Proposals if deemed necessary to do so, and to submit additional information requests to Respondents during the Proposal evaluation process.

This RFP shall not, by itself, give any right to any party for any claim against the Companies. Furthermore, by submitting a Proposal, the Respondent shall be deemed to have acknowledged that the Companies assume no liability in any fashion with respect to this RFP or any matters related thereto. By submission of a Proposal, the Respondent, for itself as well as for its successors and assignees (if any), agrees that, as between Respondent and the Companies, Respondent is solely responsible for all claims; demands; accounts; damages; costs; losses; and expenses in law or equity, known or unknown, foreseen or unforeseeable; arising from or out of this RFP.

The Companies shall not reimburse Respondent and Respondent is responsible for any cost(s) incurred in the preparation or submission of a Proposal, in negotiations for an agreement, and/or any other activity contemplated by the Proposal submitted in connection with this RFP.

X. CONFIDENTIALITY OF INFORMATION

All Proposals submitted in response to this RFP become the property of the Companies upon submittal. The Companies will take reasonable precautions and use reasonable efforts to protect any proprietary or confidential information contained in a Proposal, provided that the Respondent has clearly identified such information as proprietary and/or confidential on the page on which it appears. However, Respondent acknowledges that the Companies may be required to make such proprietary and/or confidential information available to Brattle, the PA PUC, court or other governmental agencies having jurisdiction over the services and products related to this RFP. In making such disclosure, the Companies will use reasonable efforts by, among other things, limiting disclosure to generic information (number of responsive Proposals and range of prices, contract lengths, and energy and SPAEC quantities) and refraining from disclosing the identity of any Respondent or providing any Respondent-specific information so long as such information otherwise continues to be confidential. The Companies will not be required to appeal or challenge any determination by the PA PUC, a court, or other governmental entity on the confidentiality or proprietary status of any information provided pursuant to this RFP.

XI. REGULATORY APPROVALS

Respondent agrees to cooperate, to the fullest extent necessary, to obtain any and all state, federal, or other regulatory approvals the Companies deem to be required for the effectiveness of the PPA.

XII. ADDITIONAL INFORMATION

The map below indicates the approximate boundaries of the Companies' respective footprints.

Erie Susquehanna Warren Mckean Bradford Tioga Potter Wayne Crawford Forest Elk Sullivan Venango Mercer Clinton Luzerne Clarion **受** Columbia Monroe Clearfield Met-Ed Carbon Penn Power Armstrong Snyder Schuylkill Beaver Penelec Indiana Lehigh uniata West Penn Power Allegheny Blair Dauphin Perry \ Lebanon Bucks Westmoreland Huntingdon Washington mberland Lancaster Chester Bedford Somerset York Fayette Franklin Greene Adams

Figure 1: FirstEnergy Pennsylvania Utilities Service Territories

Appendix 1

Form of Power Purchase Agreement

POWER PURCHASE AGREEMENT

for

[Metropolitan Edison Company]

[Pennsylvania Electric Company]

[Pennsylvania Power Company]

[West Penn Power Company]

TABLE OF CONTENTS

		Page
ARTICLE	E 1 - DEFINITIONS AND INTERPRETATION	2
1.1	1 Definitions	2
1.2	2 Interpretation	10
ARTICLE	E 2 - TERM OF AGREEMENT	
2.1	1 Term	10
2.2	2 Early Termination	11
2.3	3 Impact of Termination on Accrued Obligations	11
ARTICLE	E 3 - CONDITIONS PRECEDENT	11
3.1	1 Initial Delivery Date	11
ARTICLE	E 4 - PURCHASE AND SALE OF PRODUCTS	12
4.1	Purchase and Sale Obligation	12
4.2	2 Quantity	12
4.3	3 Limitations on Seller's Obligation to Sell	13
4.4	Limitations on Buyer's Obligation to Buy	13
4.5	5 Origination of SPAECs	13
ARTICLE	E 5 - SCHEDULING AND DELIVERY OF PRODUCTS	13
5.1	1 Delivery of Energy	13
5.2	2 Delivery of SPAECs	13
5.3	Risk of Loss, Title and Ownership	14
5.4	4 PJM E-Accounts	14
ARTICLE	E 6 - SELLER COVENANTS	14
6.1	Construction, Progress Reports, and Facility Commercial Operation	14
6.2	Compliance with Law and Utility Requirements	15
6.3	3 Permits	15
6.4	4 Maintenance of Facility	15
6.5	5 Interconnection Agreement	15
6.6	6 Planned Outages	15
6.7	7 PJM Membership	15
6.8	8 Forecasts	15

	6.9	Solar Photovoltaic Alternative Energy Source	16
	6.10	Compliance Reporting	16
	6.11	Initial Delivery Date	16
	6.12	Facility Guarantees	16
	6.13	Facility Design and Costs	16
	6.14	No Interference with Buyer's Products	16
	6.15	Insurance	16
	6.16	Facility Site Visits; Publicity	17
ARTI	CLE 7 -	METERING	17
	7.1	Metering	17
	7.2	Measurements	18
	7.3	Testing and Calibration	18
	7.4	Audit of Facility Meter	18
	7.5	Notice of Malfunction	18
	7.6	Telemetry	18
ARTI	CLE 8 -	BILLING AND PAYMENT	18
	8.1	Price for Energy and SPAECs	18
	8.2	Billing	18
	8.3	Payment	19
	8.4	Interest	19
	8.5	Set-Off	19
	8.6	Billing Disputes	19
	8.7	PJM Accounting Procedures	19
ARTI	CLE 9 -	TAXES AND FEES	19
	9.1	Taxes, Fees, and Expenses	19
ARTI	CLE 10	- CREDIT AND SECURITY	20
	10.1	Credit Support	20
	10.2	Grant of Security Interest	20
	10.3	Remedies	20
	10.4	Forms of Performance Assurance	21
	10.5	Calling on Security	21
	10.6	Release of Security	22
	10.7	No Limit of Liability	22

ARTIC	CLE 11	- REPRESENTATIONS AND WARRANTIES	. 22
	11.1	Representations and Warranties of Both Parties	. 22
	11.2	Forward Contract	. 23
	11.3	Disclaimer of Implied Warranties	. 23
ARTIC	CLE 12	- ASSIGNMENT	. 23
	12.1	Assignment; Change in Control	. 23
ARTIC	CLE 13	- FORCE MAJEURE	. 24
	13.1	Force Majeure	. 24
	13.2	Notice	. 24
	13.3	No Extension of Term	. 24
ARTIC	CLE 14	- EVENTS OF DEFAULT; REMEDIES	. 24
	14.1	Events of Default	. 24
	14.2	Additional Seller Events of Default	. 25
	14.3	General Remedies	. 26
	14.4	Delay Damages	. 26
	14.5	Damages on Termination	. 26
	14.6	Right of First Offer	. 27
	14.7	Facility Lender's Right to Cure	. 28
	14.8	Exclusion of Consequential Damages	. 28
	14.9	Liquidated Damages	. 28
ARTIC	CLE 15	- INDEMNIFICATION	. 28
	15.1	Indemnification Obligation	. 28
	15.2	Scope of Indemnification	. 29
	15.3	Notice	. 29
ARTIC	CLE 16	- CONFIDENTIALITY	. 29
	16.1	Confidentiality	. 29
	16.2	Required Disclosure	. 29
	16.3	Tax Treatment Exception	. 29
	16.4	Survival	. 29

ARTICLE 17	- DISPUTE RESOLUTION
17.1	Informal Dispute Resolution
17.2	Formal Dispute Resolution
ARTICLE 18	- MISCELLANEOUS
18.1	Entire Agreement 30
18.2	Severability
18.3	Waiver
18.4	Notices
18.5	Governing Law
18.6	Jurisdiction and Venue
18.7	Netting and Set-Off
18.8	Compliance with Laws
18.9	Remedies Cumulative
18.10	Binding Effect; Limitation of Benefits
18.11	No Partnership or Joint Venture
18.12	Audit
18.13	Records
18.14	Survival
18.15	Counterparts
EXHIBITS:	
Exhibit A	Facility Description
Exhibit B	
Exhibit C	
Exhibit D	
Exhibit E	Form of Guaranty Agreement
Exhibit F	Letter of Credit Documentation
Exhibit G	Performance Assurance Amount
Exhibit H	Notice Information

POWER PURCHASE AGREEMENT

THIS POWER PURCHASE AGREEMENT ("Agreement"), made and entered into as
of ("Effective Date"), by and between ("Buyer"), a Pennsylvania
public utility company organized and existing under the laws of the Commonwealth of
Pennsylvania, and, a corporation ("Seller"). Buyer and Seller
hereinafter are also sometimes referred to collectively as the "Parties", or individually as a "Party".
WITNESSETH:
WIII(ESSEIII.
WHEREAS , under the Electricity Generation Customer Choice and Competition Act, 66 Pa.C.S. § 2801 et seq. (the " <u>Competition Act</u> " as amended from time to time), and under the Alternative Energy Portfolio Standards Act, 73 P.S. §§ 1648.1 et seq. (the " <u>AEPS Act</u> " as amended from time to time), Buyer is an electric distribution company engaged, <i>inter alia</i> , in providing retail electric service within its service territory located within the Commonwealth of Pennsylvania; and
WHEREAS , Buyer has conducted and completed a successful competitive bidding process for the procurement of Energy and Solar Photovoltaic Alternative Energy Credits (" <u>SPAECs</u> ") in which Seller was a successful bidder; and
WHEREAS, Seller plans to own and operate a solar energy generating Facility with an aggregate total nameplate capacity rating of [] MW (the "Facility Nameplate Rating") located in [], Pennsylvania; and
WHEREAS , Seller desires to sell and deliver to Buyer, and Buyer desires to purchase and receive, Energy and SPAECs generated by the Facility (collectively, the " <u>Products</u> ") in order to satisfy Buyer's obligations under the Competition Act and AEPS Act, subject to the terms and conditions set forth herein.

NOW, THEREFORE, in consideration of the mutual covenants and promises set forth

below, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereto, intending to be legally bound, hereby covenant, promise

and agree as follows:

ARTICLE 1 DEFINITIONS AND INTERPRETATION

1.1 <u>Definitions.</u> As used in this Agreement, the following terms have the respective meanings set forth below. Other capitalized terms not set forth in this section are defined elsewhere in this Agreement or have the meaning ascribed to them by the Act.

AEPS Act or **Alternative Energy Portfolio Standards Act** has the meaning set forth in the Recitals, and, among other things, requires Buyer to obtain alternative energy credits corresponding to electricity generated from Solar Photovoltaic Alternative Energy Sources equal to a stipulated percentage of the total electric energy sold by Buyer, as measured by Alternative Energy Credits.

Affiliate means, with respect to any Person, any other Person that, directly or indirectly, through one or more intermediaries, controls, or is controlled by, or is under common control with, such Person. For this purpose, "control" means the direct or indirect ownership of fifty percent (50%) or more of the outstanding capital stock or other equity interests having ordinary voting power.

Affiliate Agreement means an agreement substantially in the form of this Agreement between Seller and any affiliate of the Company for the purchase and sale of Energy and SPAECs.

Agreement means all of the provisions, the exhibits incorporated as part of this Agreement, and any other documents incorporated by reference.

Alternative Energy Credit or "AEC" has the meaning ascribed to such term in the AEPS Act.

Alternative Energy Portfolio Standards or "AEPS" means those standards established by the Act requiring that a certain amount of electric energy sold from alternative energy sources is to be included as part of the sources of electric generation by electric utilities within the Commonwealth of Pennsylvania in accordance with the AEPS Act as it may be amended from time to time.

Alternative Energy Source has the meaning ascribed to such term in the AEPS Act, and includes sources for the production of solar photovoltaic or other solar electric energy.

Annual Notional Value has the meaning set forth in Exhibit G.

Bankruptcy Code means those laws of the United States of America related to bankruptcy, codified and enacted as Title 11 of the United States Code, entitled "Bankruptcy" and found at 11 U.S.C. § 1101 et seq.

Business Day means a day on which Federal Reserve member banks in New York City are open for business. For purposes of this Agreement, a Business Day shall open or begin at 8:00 a.m. and shall close or end at 5:00 p.m. Eastern Prevailing Time ("<u>EPT</u>").

Buyer means Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company or West Penn Power Company as designated in the preamble hereto.

Buyer's Percenta	age means [_] percent [())] of the F	Facility N	Nameplate 1	Rating,	which
shall not be less than [] MW.						

Change in Control means any circumstance in which Ultimate Parent ceases to own, directly or indirectly through one or more intermediate entities, at least fifty percent (50%) of the outstanding equity or voting interests in Seller. Notwithstanding the foregoing, the following shall not constitute a Change in Control: (a) any time in which the Seller retains a Qualified Operator to operate the Facility, (b) any transaction after which the Seller's Ultimate Parent, or their Affiliate, is a Qualified Operator, (c) the sale of any equity interest, directly or indirectly, in the Ultimate Parent, or the sale of any equity interest in any entity that owns, directly or indirectly, legally or beneficially an equity interest in Ultimate Parent, or (d) the sale of any indirect equity interest in Seller in connection with a tax equity or cash equity financing of the Facility; *provided*, that Seller or its Affiliate maintains day-to-day operational management rights to the Facility.

Change in Law means (i) the enactment, adoption, promulgation, modification or repeal after the Effective Date of any applicable Law; (ii) the imposition of any material conditions on the issuance or renewal of any applicable Permit after the Effective Date (notwithstanding the general requirements contained in any applicable permit at the time of application or issue to comply with future laws, ordinances, codes, rules, regulations or similar legislation), (iii) a change in any utility rate schedule or tariff approved by any Governmental Authority, or (iv) revocation of any tax credit, which establishes requirements or revokes beneficial laws or rules affecting owning, supplying, constructing, installing, operating, or maintaining the Facility, or other performance of Seller's obligations hereunder or which has a material adverse effect on the cost to Seller of maintaining such obligations.

Commission means the Pennsylvania Public Utility Commission.

Commodities Exchange Act means the Commodities Exchange Act as amended and codified at 7 U.S.C. § 1 et seq.

Competition Act has the meaning set forth in the Recitals, and, among other things, requires Buyer to obtain, through competitive procurement processes, a prudent mix of default service generation supply contracts designed to ensure adequate and reliable service at the least cost to customers over time.

Confidential Information means all oral and written information exchanged between the Parties which is not otherwise available to the public with respect to the subject matter of this Agreement except (a) information that is or becomes available to the public other than as a result of a disclosure by either Party on a non-confidential basis prior to this Agreement; (b) information that was already known by either Party on a non-confidential basis prior to this Agreement; and (c) information that becomes available to either Party on a non-confidential basis from a source

other than the other Party if such source was not subject to any prohibition against disclosing the information to such Party.

Contract Price means the price per MWh of Energy delivered to the Delivery Point for Buyer's account and SPAECs delivered to Buyer, as set forth on Exhibit D.

Contract Term has the meaning set forth in Section 2.1.

Contract Year shall mean the twelve (12) month period commencing on the Initial Delivery Date and each anniversary thereafter during the Services Term.

COVID-19 means the global pandemic associated with the outbreak of the disease designated as COVID-19 as declared by the World Health Organization on March 11, 2020, and any mutations thereof, and the actions of any Governmental Authority directly related thereto.

Credit Rating means, with respect to any Person, the rating then assigned to such Person's senior unsecured long-term debt obligations (not supported by third-party credit enhancements) by a Rating Agency or, if such Person does not have a rating for its senior unsecured long-term debt, then the "Issuer Credit Rating" for such Person established by S&P.

Delay Damages has the meaning set forth in Section 14.4.

Delivery Point means the PJM hub identified in Exhibit A.

Effective Date has the meaning set forth in the preamble hereto.

Electrical Interconnection Facilities means the equipment and facilities required to safely and reliably interconnect the Facility to the PJM Transmission System or the transmission system of another Transmitting Utility in whose territory the Facility is located, as applicable, including transformers and all switching, metering, communications, control and safety equipment, including the facilities described in Exhibit A.

Emergency means: (a) an abnormal system condition requiring manual or automatic action to maintain system frequency or voltage or to prevent loss of firm load, equipment damage or tripping of system elements that could adversely affect the reliability of an electric system or the safety of persons or property; (b) system recovery from an abnormal condition that resulted in loss of firm load or equipment damage; or (c) a condition that requires implementation of "emergency procedures" (as defined by PJM or any Transmitting Utility).

Energy means three-phase, 60-cycle alternating current electric energy.

Event of Default has the meaning set forth in Sections 14.1 and 14.2.

Facility means the solar-energy generating facility, including the Electrical Interconnection Facilities and any other ancillary facilities and equipment, as more particularly described in Exhibit A.

Facility Commercial Operation means the condition of the Facility once it has achieved the following:

- (a) ninety percent (90%) of the Facility Nameplate Rating shall have been fully commissioned and shall be operational;
- (b) all performance testing of the Electrical Interconnection Facilities shall have been successfully completed in accordance with the PJM Agreements;
- (c) the Facility shall be operating and able to produce and deliver Energy to the Interconnection Point: (i) pursuant to the terms of this Agreement, the Interconnection Agreement, and all applicable Laws; and (ii) in accordance with Good Utility Practice; and
- (d) the SCADA system for the Facility shall have been installed and tested and shall be fully operational.

Facility Commercial Operation Date means the first date as of which: (a) Facility Commercial Operation has occurred; and (b) Seller shall have delivered to Buyer written certification of an authorized officer of Seller certifying that the Facility has achieved Facility Commercial Operation, which shall incorporate a certification of Facility Commercial Operation by a third party independent engineer experienced with such certifications for projects similar to the Facility and made as of the Facility Commercial Operation Date.

Facility Lender means any Person(s), other than Affiliates of Seller, that provide construction, working capital, or term debt financing for the Facility (including any agent(s) thereof).

Facility Meter means the revenue quality electricity generation meter, to be located at the metering point shown on Exhibit A, which shall register all Energy produced by the Facility and delivered to the Interconnection Point.

Facility Nameplate Rating has the meaning set forth in the Recitals hereto.

Facility Site means the property on which the Facility is located, as more particularly described in Exhibit A.

Fitch means Fitch Investor Service, Inc.

FERC means the Federal Energy Regulatory Commission.

Financing Assignment shall mean the consent to collateral assignment between Buyer, Seller, and Facility Lender, in a form reasonably satisfactory to Buyer, Seller, and Facility Lender.

Force Majeure means an event not anticipated as of the Effective Date, which is not within the reasonable control of the Party affected thereby or attributable to such Party's fault or negligence, and which by the exercise of due diligence the affected Party is unable to overcome or obtain or cause to be obtained a commercially reasonable substitute therefore. Force Majeure

includes, but is not limited to: acts of God, civil disturbance, sabotage, epidemic or pandemic (including COVID-19, but only as to future impacts that were not foreseeable as of the Effective Date), action or restraint by court order or public or government authority, so long as the affected Party has not applied for, or assisted in, the application for, and has opposed, where and to the extent reasonable, such government action. Notwithstanding the foregoing, under no circumstance shall a Force Majeure Event be based on: (i) a Change in Law that alters either Party's costs in connection with this Agreement, operation of the Facility, or the value of the Products delivered under this Agreement or affects in any other material way the purpose or economics of this Agreement; (ii) Seller's ability to sell a Product at a price greater than that received under the terms of this Agreement; (iii) Buyer's ability to purchase a Product at a price lower than paid under the terms of this Agreement; (iv) delays or nonperformance by suppliers, vendors or other third parties with whom a Party has contracted, unless such delay or nonperformance is itself caused by a Force Majeure Event; and (v) any other economic hardship or changes in market conditions affecting the economics of one of the Parties but not the other.

Forward Contract has the meaning ascribed to such term in Section 101(25) of the Bankruptcy Code.

Forward Contract Merchant has the meaning ascribed to such term in Section 101(26) of the Bankruptcy Code.

GATS Operating Rules means the operating rules for the GATS (including successor versions), as published by PJM Environmental Information Services, Inc.

Generator Attribute Tracking System or **GATS** means the system (or its successor) operated by PJM Environmental Information Services, Inc. in accordance with the GATS Operating Rules to provide environmental and emissions attributes reporting and tracking services to its subscribers.

Good Utility Practice means the practices, methods, and acts engaged in or approved by a significant portion of the electric utility industry (in the case of Buyer) or the solar industry (in the case of Seller) during the relevant time period, and any of the practices, methods, and acts which, in the exercise of reasonable judgment in light of the facts known at the time the decision is made, could have been expected to accomplish the desired result at a reasonable cost consistent with good business practices, reliability, safety, and expedition. Good Utility Practice is not intended to be limited to the optimum practice, method, or act to the exclusion of all others, but rather is intended to include acceptable practices, methods, and acts generally accepted in the region.

Governmental Authority means the federal government, any state or local government or other political subdivision thereof (whether federal, state, or local), any court and any administrative agency or other regulatory body, instrumentality, authority, or entity exercising executive, legislative, judicial, regulatory, or administrative functions of or pertaining to government.

Guaranteed Initial Delivery Date means [_____]; *provided*, *however*, that the Guaranteed Initial Delivery Date shall be extended on a day-for-day basis for up to six (6) months to the extent that the Initial Delivery Date is delayed as a result of a Force Majeure Event.

Guaranteed Availability Percentage has the meaning set forth in Exhibit C.

Guarantor means any Person that: (a) guarantees Seller's financial obligations under this Agreement pursuant to a Guaranty; (b) is an Affiliate of Seller; (c) has a Credit Rating from at least two (2) of the Rating Agencies; (d) has no Credit Rating from any Rating Agency less than the Minimum Acceptable Credit Rating; and (e) is incorporated or organized in a jurisdiction of the United States and is in good standing in such jurisdiction.

Guaranty means a Guaranty Agreement in favor of Buyer, delivered by a Guarantor to Buyer, in the form of Exhibit E.

Initial Delivery Date means the date on which the conditions set forth in Section 3.1 have been satisfied or waived in writing by Buyer.

Interconnection Agreement means an agreement between Seller and the Transmitting Utility (which may be Buyer or an Affiliate of Buyer) in whose territory the Facility is located regarding interconnection of the Facility to the transmission system of the Transmitting Utility.

Interconnection Point means the physical point of interconnection between the Electrical Interconnection Facilities and the electrical transmission system of the Transmitting Utility.

Instructed Operation means a mandatory direction by a Transmitting Utility to meet an Emergency or a transmission system reliability need, including voltage support.

Interest Rate means a per annum rate of interest equal to two (2%) percent over the prime lending rate as published from time to time in the Wall Street Journal under "Money Rates" on the date on which any payment or delivery obligation is due (or if not published on such day on the most recent preceding day on which it is published), but in no event to exceed the maximum lawful rate.

Internal Bilateral Transfer has the meaning given to such term in the PJM Agreements.

Investment Grade shall mean at least two of the following three Credit Ratings: "BBB-" or better from S&P, "BBB-" or better from Fitch, or "Baa3" or better from Moody's.

kW means kilowatt.

Law means any statute, law, treaty, convention, rule, regulation, ordinance, code, Permit, enactment, injunction, order, writ, decision, authorization, judgment, decree, or other legal or regulatory determination or restriction issued, adopted, administered, or implemented by a court or Governmental Authority, including any of the foregoing that are enacted, amended, or issued after the Effective Date, and any binding interpretations of any of the foregoing.

Letter of Credit means an irrevocable standby letter of credit in favor of Buyer issued by a Qualified Institution, in the form of Exhibit F or such other form as may reasonably be agreed by the Parties.

Lien means any encumbrance of any nature, including (but not limited to) any mortgage, deed of trust, lien, pledge, charge, claim, security interest, easement, covenant, right-of-way, restriction, equity interest, and conditional sales agreement.

Market Participant has the meaning set forth in the PJM Operating Agreement.

Market Price means the market price determined based on the average of prices quoted by three (3) reputable, independent third-party leading market dealers, which are regularly engaged in the buying and selling of AECs and SPAECs.

Milestone Schedule has the meaning set forth in Section 6.1.

Minimum Acceptable Credit Rating means a Credit Rating equal to or better than (a) "BBB-" by S&P; (b) "BBB-" by Moody's; and (c) "Baa3" by Fitch

Moody's means Moody's Investor Services, Inc.

MW means megawatt.

MWh means megawatt-hour.

NERC means the North American Electric Reliability Council, or any other Person designated by FERC to perform its functions.

Performance Assurance means collateral in the form of cash, Letter(s) of Credit, or other security acceptable to Buyer, in each case in accordance with Article 10 unless otherwise approved by Buyer.

Performance Assurance Amount has the meaning set forth in Exhibit G.

Permit means any permit, authorization, license, order, consent, waiver, exception, exemption, variance, or other approval by or from, and any filing, report, certification, declaration, notice, or submission to or with, any Governmental Authority required to authorize action, including any of the foregoing relating to the ownership, siting, construction, operation, use, or maintenance of the Facility under any applicable Law.

Person means an individual, partnership, joint venture, corporation, limited liability company, trust, association, unincorporated organization, or Governmental Authority.

PJM means PJM Interconnection, L.L.C., a regional transmission organization that coordinates and directs the operation and ensures reliability of the high-voltage electric power system service for all or parts of the territory consisting of the states of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia, and the District of Columbia.

PJM Agreements means the PJM Tariff, the PJM Operating Agreement, and any other applicable PJM bylaws, procedures, manuals or documents.

PJM Member means any entity satisfying the requirements of PJM to conduct business with PJM.

PJM Operating Agreement means the Operating Agreement of PJM.

PJM Tariff means the Open Access Transmission Tariff of PJM.

PJM Transmission System means the system of transmission lines and associated facilities that have been placed under PJM's operational control.

Products has the meaning set forth in the Recitals hereto; provided, however, that the Products do not include: Project Benefits or any item that would otherwise be an environmental benefit or attribute under this definition that is not required for use of the SPAEC for compliance with the AEPS Act.

Project Benefits means production tax credits, investment tax credits, or other direct, third-party federal, state, or local subsidies, incentives, grants, credits, rebates, or funding for the purchase, ownership, construction, or operation of a Facility, or the generation of electricity or production of Alternative Energy Credits by a Facility.

Qualified Institution means a U.S. commercial bank (or a foreign bank with a U.S. branch) having total assets of at least \$10 billion dollars (\$10,000,000,000.00) and a Credit Rating equal to or better than "A-" by S&P and an equivalent Credit Rating by Moody's or Fitch.

Qualified Operator means an entity that, together with its Affiliates, owns or operates renewable electricity generating assets that have a nameplate capacity of not less than 500 MW in the aggregate in the United States (excluding the Facility).

Rating Agency or **Rating Agencies** shall mean, individually or collectively, S&P, Moody's, and Fitch.

Regional Reliability Entity means the organization designated by NERC responsible for establishing and implementing reliability criteria and protocols for the Facility.

S&P means Standard & Poor's Ratings Group, a division of McGraw Hill, Inc.

Services Term means the period commencing on the Initial Delivery Date and ending [___(__)] years thereafter.

Solar Photovoltaic Alternative Energy Credit or "SPAEC" means an Alternative Energy Credit corresponding to the production of solar photovoltaic electricity as set forth in the AEPS Act.

Solar Photovoltaic Alternative Energy Source means a source for the production of solar photovoltaic electricity as set forth in the AEPS Act.

Taxes means, but is not limited to, any or all ad valorem, property, occupation, severance, first use, conservation, gross receipts, privilege, sales, use, consumption, excise, lease, transaction, and other taxes, governmental charges, licenses, fees, permits, and assessments, or increases therein, other than taxes based on net income or net worth. A tax is not a penalty or a fine.

Total Notional Value has the meaning set forth in Exhibit G.

Transmitting Utility means any utility (including its control area operator) that transmits Energy from the Interconnection Point to the Delivery Point.

Ultimate Parent means	or its	successor
Citilitate I al clit illeans	 1 01 165	Baccesse

1.2 <u>Interpretation</u>. Unless otherwise indicated (a) defined terms include the plural as well as the singular; (b) any agreement defined or referred to herein includes each amendment, modification and supplement thereto and waiver, approval and consent in respect thereof as may become effective from time to time and includes references to all appendices, exhibits, schedules and other attachments thereto and instruments, agreements, or other documents incorporated therein; (c) any term defined by reference to any instrument, agreement, or other document has such meaning set forth in such document as of the date hereof and such meaning shall remain in effect whether or not such document is subsequently amended, modified, or terminated; (d) a reference to any law or regulations includes any amendment, modification, or successor thereto; (e) a reference to any Person includes its permitted successors and assigns; (f) all references to appendices, sections, schedules, and exhibits shall mean and refer to the respective appendices, sections, schedules, and exhibits in or attached to the agreement or document in which such reference appears; (g) the words "include," "includes" and "including" are not limiting and shall be deemed to be followed by the words "without limitation" whether or not in fact followed by such words or words of like import; (h) the terms "hereof," "herein," "hereunder" and comparable terms refer to this entire Agreement with respect to which such terms are used and not to any particular article, Section, or subdivision hereof; and (i) references to "termination of this Agreement," "this Agreement is terminated," "this Agreement may be terminated," and similar expressions used in this Agreement refer to the termination of deliveries under this Agreement and related on-going rights and obligations, and does not imply or mean a termination of rights, remedies, obligations and provisions, which by their nature, or as provided elsewhere in this Agreement, survive termination.

ARTICLE 2 TERM OF AGREEMENT

- **2.1** Term. The term of this Agreement ("Contract Term") will commence upon the Effective Date and, unless earlier terminated pursuant to the express provisions of this Agreement, will continue until the end of the Services Term; provided, however, that all provisions of this Agreement which must, in order to give full force and effect to the rights and obligations of the Parties, survive termination or expiration of this Agreement, shall so survive, including Articles 14, 15, 16 and 17.
- **2.2** Early Termination. This Agreement may be terminated prior to the end of the Services Term as follows:

- (a) At any time by the mutual consent of the Parties;
- (b) As provided in, and which such notice as required by, Article 14, by the Non-Defaulting Party if an Event of Default occurs;
- (c) By either Party if any delay or failure of performance caused by a Force Majeure Event continues for an uninterrupted period of one hundred eighty (180) days or longer and upon not less than thirty (30) days' advance written notice from the non-claiming Party.
- **2.3** <u>Impact of Termination on Accrued Obligations</u>. Termination of this Agreement for any reason shall not relieve the Parties of any obligation accrued or accruing prior to such termination.

ARTICLE 3 CONDITIONS PRECEDENT

- **3.1** <u>Initial Delivery Date</u>. The Initial Delivery Date shall occur upon the satisfaction or waiver in writing by Buyer of the following conditions precedent:
 - (a) the Facility Commercial Operation Date shall have occurred or will occur simultaneously with the Initial Delivery Date;
 - (b) Seller shall have obtained (and demonstrated possession of) all Permits required to commence delivery of Energy from the Facility and satisfy the conditions of Facility Commercial Operation, other than those that would not have a material adverse effect on Seller's ability to perform its obligations under this Agreement;
 - (c) no Seller default or Event of Default shall be occurring;
 - (d) Seller shall be a PJM Member and shall have entered into all required PJM Agreements required for the performance of Seller's obligations in connection with the Facility and this Agreement, which agreements shall be in full force and effect or Seller shall have entered into an agreement with a Market Participant that will perform all of Seller's PJM-related obligations in connection with the Facility and this Agreement;
 - (e) the Facility shall have been qualified and certified by the Commission as a Solar Photovoltaic Alternative Energy Source;
 - (f) Seller shall have made all filings and applications required for accreditation of the Facility in GATS and for the registration, origination, and transfer of SPAECs from the Facility that are eligible for origination, registration, and transfer under GATS;
 - (g) Seller shall have entered into all agreements and made all filings and other arrangements necessary for the transmission and delivery of the Energy

- associated with Buyer's Percentage of the Facility from the Facility to the Delivery Point;
- (h) Seller shall have obtained all necessary authorizations from FERC to sell Energy at market-based rates as contemplated by this Agreement and shall be in compliance with such authorization;
- (i) Seller shall have delivered a Guaranty or other required Performance Assurance, as required pursuant to Article 10;
- (j) Seller shall have obtained all rights to the Facility Site necessary for performance of its obligations under the Agreement for the Services Term;
- (k) Seller shall have provided Buyer with written evidence that all of the preceding conditions have been satisfied.

ARTICLE 4 PURCHASE AND SALE OF PRODUCTS

- **4.1** Purchase and Sale Obligation. Subject to Seller's rights pursuant to Section 4.3, during the Services Term Seller shall: (a) deliver and sell Buyer's Percentage of all Products produced by, or associated with, the Facility to Buyer; and (b) not offer, deliver, sell, or make available to any Person other than Buyer, Buyer's Percentage of all Products produced by, or associated with, the Facility. Subject to the rights of the Parties pursuant to Sections 4.3 and 4.4, during the Services Term Buyer shall: (i) have the exclusive right to purchase and receive Buyer's Percentage of all Products produced by, or associated with, the Facility; and (ii) accept and purchase Buyer's Percentage of all Products produced by, or associated with, the Facility and delivered to Buyer in accordance with the terms and conditions of this Agreement.
- 4.2 Quantity. The quantity of Energy required to be delivered by Seller to Buyer shall be equal to Buyer's Percentage of the Energy produced by the Facility, as recognized by PJM at the Interconnection Point. The quantity of SPAECs required to be delivered by Seller to Buyer shall be equal to Buyer's Percentage of the Energy produced by the Facility. For the avoidance of doubt, Energy that may be stored by Seller in any device capable of storing Energy will not be part of the Products until the Energy is delivered to Buyer at the Delivery Point.
- 4.3 <u>Limitations on Seller's Obligation to Sell</u>. Notwithstanding anything to the contrary set forth herein, Seller may sell any or all Energy produced by the Facility to Persons other than Buyer to the extent it is unable to deliver Buyer's Percentage of such Energy to the Delivery Point due to a Force Majeure Event or an Instructed Operation; provided, however, that during any such period, Seller shall remain obligated to deliver and sell Buyer's Percentage of SPAECs produced by or associated with the Facility to Buyer. For purposes of this provision, Buyer shall purchase the SPAECs at a price determined by taking the average of two price quotes for comparable SPAECs with the same vintage generated by a similar solar energy generating facility in Pennsylvania, with each such price quote to be obtained from a nationally recognized broker (with one broker selected by Seller and the other broker selected by Buyer).

- 4.4 <u>Limitations on Buyer's Obligation to Buy</u>. Notwithstanding anything to the contrary set forth in this Agreement: (a) Buyer shall not be obligated to accept delivery of any Energy from Seller under this Agreement to the extent it is unable to do so due to a Force Majeure Event or an Instructed Operation; (b) Buyer shall have no obligation to purchase any Energy or SPAECs generated by the Facility prior to the Initial Delivery Date; (c) Buyer is purchasing only Energy and SPAECs from the Facility, and is not purchasing capacity, ancillary services, or any other product of the Facility, which shall remain the property of Seller; and (d) Buyer's obligation to make purchases of Energy pursuant to this Agreement is expressly conditioned on the delivery and sale by Seller, in accordance with the terms of this Agreement, of SPAECs in an amount corresponding to the Energy from the Facility delivered by Seller.
- **4.5** <u>Origination of SPAECs</u>. SPAECs provided by Seller to Buyer hereunder shall be required to originate from Energy produced by the Facility.

ARTICLE 5 SCHEDULING AND DELIVERY OF PRODUCTS

- with PJM and other Transmitting Utilities, and delivering Energy from the Facility to be delivered hereunder to the Delivery Point. As between the Parties, Seller shall be solely responsible for any and all costs and charges (including penalties) incurred in connection therewith, whether imposed pursuant to standards or provisions established by FERC, any other Governmental Authority or any Transmitting Utility, including transmission costs, scheduling costs, imbalance costs, congestion costs, operating reserve charges (day-ahead and balancing), any losses between the Interconnection Point and the Delivery Point, and the cost of firm transmission rights. Buyer shall arrange, schedule with PJM and be responsible for transmission of Energy from the Delivery Point and shall, as between the Parties, be solely responsible for any and all costs and charges (including penalties) incurred in connection therewith, whether imposed pursuant to standards or provisions established by FERC, any other Governmental Authority or PJM, including transmission costs, scheduling costs, imbalance costs, congestion costs, and the cost of firm transmission rights.
- **5.2** <u>Delivery of SPAECs</u>. Seller shall: (a) take all actions necessary to register, certify, and transfer SPAECs from Seller to Buyer in accordance with GATS and applicable Law; and (b) bear all costs associated therewith, including program fees and registration fees. Seller shall comply with the AEPS Act in connection with Seller's transfer of SPAECs to Buyer hereunder.

5.3 Risk of Loss, Title and Ownership.

5.3.1 Title to, and risk of loss (including risks and costs associated with any transmission outages or curtailment up to and at the Delivery Point) related to Energy sold by Seller to Buyer pursuant to this Agreement shall pass and transfer from Seller to Buyer upon delivery thereof for Buyer's account at the Delivery Point. Seller covenants that it shall have good and marketable title to all Energy delivered to Buyer at the Delivery Point and that it has

- the right to, and will, sell and deliver such Energy to Buyer free and clear of all Liens.
- 5.3.2 Title to, and risk of loss related to, SPAECs sold by Seller to Buyer pursuant to this Agreement shall pass and transfer from Seller to Buyer upon the completion of the recordation of transfer and physical or electronic delivery of such SPAECs to Buyer in definitive form in accordance with GATS Operating Rules or other applicable Law. Seller shall transfer certificates into Buyer's GATS account(s) as necessary to transfer SPAECs to Buyer under GATS. Seller covenants that it shall have good and marketable title to all SPAECs delivered to Buyer and that it has the right to, and will, sell and deliver such SPAECs to Buyer free and clear of all Liens. Buyer shall have sole, exclusive and perpetual ownership of all SPAECs delivered to Buyer by Seller under this Agreement, including all rights to sell, assign, transfer, apply, or retire any SPAEC delivered to Buyer by Seller.
- **5.4 PJM E-Accounts**. Each of Buyer and Seller shall establish and maintain for the duration of the Services Term, separate PJM E-Accounts for Seller to provide and Buyer to receive Products. PJM's Internal Bilateral Transfer mechanism, or successor, will settle the physical delivery of energy between the Seller and Buyer.

ARTICLE 6 SELLER COVENANTS

- shall construct the Facility in accordance with the specifications set forth in Exhibit A. The non-binding milestone schedule for development, construction, and completion of the Facility anticipated as of the Effective Date is set forth in Exhibit B (the "Milestone Schedule"). Seller shall prepare and submit to Buyer written progress reports, in a form reasonably satisfactory to Buyer, describing the status of development and construction of the Facility and all milestones, including the status of each of the conditions precedent to the Initial Delivery Date set forth in Section 3.1. Such progress reports shall be submitted: (a) on a monthly basis commencing no later than two (2) years prior to Seller's anticipated Initial Delivery Date; and (b) on a weekly basis commencing forty-five (45) days prior to Seller's anticipated Initial Delivery Date. In addition to such progress reports, Seller shall promptly provide to Buyer any written reports regarding the status of development of the Facility that are delivered to Facility Lenders or their representatives.
- 6.2 Compliance with Law and Utility Requirements. Seller shall comply with, and cause the Facility to comply with: (a) Good Utility Practice; (b) all applicable requirements of Law; and (c) all applicable rules, procedures, operating policies, criteria, guidelines, and requirements imposed by the Commission, any other Governmental Authority, any Transmitting Utility, NERC and/or any Regional Reliability Entity, including, in each case, all practices, requirements, rules, procedures, and standards related to Seller's construction, ownership, operation, and maintenance of the Facility and its performance of its obligations under this Agreement (including obligations related to the generation, scheduling, and transmission of Energy), whether such requirements were imposed prior to or after the Effective Date. Seller

shall be solely responsible for registering as the "Generator Operator" of the Facility with NERC and any applicable Regional Reliability Entity.

- **6.3** Permits. Seller shall maintain in full force and effect all Permits necessary for it to perform its obligations under this Agreement, including all Permits necessary to operate and maintain the Facility.
- **6.4** <u>Maintenance of Facility</u>. To the extent required to achieve the Initial Delivery Date, and at all times during the Services Term, Seller shall maintain the Facility in accordance with Good Utility Practice.
- **6.5** <u>Interconnection Agreement</u>. Seller shall comply with the terms and conditions of the Interconnection Agreement.
- Any portion thereof between June 15 and September 15 during any Contract Year. No later than thirty (30) days prior to Seller's anticipated Initial Delivery Date, Seller shall deliver to Buyer a schedule of planned maintenance for the Facility for the following twelve (12) month period, which schedule shall: (a) be updated by Seller by each March 31 and September 30 to cover the twelve (12) month period following such update; (b) be consistent with the requirements of Good Utility Practice and the Interconnection Agreement; (c) indicate the planned commencement and completion dates for each planned maintenance during the period covered thereby, as well as the affected portion(s) of the Facility; and (d) be in form and substance reasonably acceptable to Buyer. To the extent Seller is required by any Transmitting Utility to provide information regarding maintenance, outages, or availability of the Facility, Seller shall, simultaneous with the submission thereof to such Transmitting Utility, deliver a copy thereof to Buyer.
- **6.7 PJM Membership**. Seller shall, at all times during the Services Term, either: (a) be a member in good standing of PJM and be qualified as a PJM "Market Seller" pursuant to the PJM Agreements; or (b) have entered into an agreement with a Market Participant that will perform all of Seller's PJM-related obligations in connection with the Facility and this Agreement.
- **6.8** Forecasts. Commencing thirty (30) days prior to the anticipated Initial Delivery Date, and throughout the Services Term, Seller shall prepare and deliver to Buyer on a monthly basis and in a form reasonably acceptable to Buyer, twelve (12) month rolling forecasts of Energy production by the Facility, which forecasts shall be prepared in good faith and in accordance with Good Utility Practice based on historical performance, maintenance schedules, Seller's generation projections, and other relevant data and considerations.
- **6.9** Solar Photovoltaic Alternative Energy Source. Seller shall be solely responsible for certifying the Facility as a Solar Photovoltaic Alternative Energy Source under the AEPS Act and maintaining such certification during the Services Term.
- **6.10** <u>Compliance Reporting</u>. To the extent Buyer is subject to any certification or compliance reporting requirement with respect to the Products produced by Seller and delivered to Buyer hereunder, Seller shall use commercially reasonable efforts to provide any information

in its possession (or, if not in Seller's possession, available to it and not reasonably available to Buyer) reasonably necessary to permit Buyer to comply with any such reporting requirement.

- **6.11** <u>Initial Delivery Date</u>. Subject to Section 14.4, Seller shall achieve the Initial Delivery Date no later than the Guaranteed Initial Delivery Date. Seller shall provide Buyer with notice of (i) the expected occurrence of the Initial Delivery Date no later than thirty (30) days prior thereto; and (ii) the actual Initial Delivery Date no later than five (5) Business Days prior thereto.
- **6.12** <u>Facility Guarantees</u>. Seller guarantees that the Facility shall maintain the Availability Percentage required under Exhibit C, and shall pay Availability Damages, if any are due pursuant to Exhibit C.
- 6.13 <u>Facility Design and Costs</u>. As between Buyer and Seller, Seller (including its contractors and subcontractors) is solely responsible for all Facility design and all costs of installing, developing, financing, operating, maintaining and, to the extent applicable, removing the Facility from the Facility Site. Nothing in this Agreement or the Buyer's review of Seller's reports, nor its monitoring of the development and construction of the Facility, shall be construed as endorsement by Buyer of the design, engineering, construction, or testing of the Facility nor as any express or implied warranty as to the performance, safety, durability, or reliability of the Facility.
- **6.14** No Interference with Buyer's Products. Unless Buyer has agreed in writing, Seller shall not monetize or otherwise secure the benefits of the Energy and SPAECs of the Facility on behalf of any other Person if such action interferes with the qualification, scheduling, or transfer of the Products to Buyer as provided in this Agreement.
- **Insurance**. Seller shall maintain at its sole expense, commencing with the Effective Date and continuing through the Contract Term, insurance for the Facility (including commercial general liability insurance) customarily maintained for facilities of similar type and size in Pennsylvania, but no less than a commercially reasonable business would obtain for a facility of similar value and operation. Seller shall provide certificates of insurance or other reasonable evidence of such insurance coverage acceptable to Buyer upon request. Failure to obtain and maintain the required insurance shall constitute a breach of the Agreement and Seller will be liable for any and all costs, liabilities, damages, and penalties (including attorneys' fees, court, and settlement expenses) resulting to Buyer from such breach, unless a written waiver of the specific insurance requirement is provided to Seller by Buyer and such failure may constitute an Event of Default in accordance with Section 14.2. Failure of Seller to provide insurance as herein required or failure of Buyer to require evidence of insurance or to notify Seller of any breach by Seller of the requirements of this Section shall not be deemed to be a waiver by Buyer of any of the terms and conditions of this Agreement, nor shall they be deemed to be a waiver of the obligation of Seller to defend, indemnify, and hold harmless Buyer as required herein. The obligation to procure and maintain any insurance required is a separate responsibility of Seller and independent of the duty to furnish a copy or certificate of such insurance policies. Notwithstanding any provision of this Agreement, none of the requirements contained herein as to insurance coverage to be maintained by Seller are intended to and shall not in any manner

limit, qualify, or quantify the liabilities and obligations assumed by Seller under this Agreement, any other agreement with Buyer or its Affiliates, or otherwise provided by Law.

permission from Seller to visit the Facility site during normal business hours to monitor the construction, start-up, testing, and operation of the Facility at the Site and to verify compliance with this Agreement. Seller shall accommodate Buyer's reasonable requests for such visits, provided that Buyer shall comply with Seller's safety policies and instructions during any such visit to the Facility. Upon request by Buyer, Seller shall use reasonable efforts to permit Buyer to take photographs of the Facility, which photographs, if approved by Seller, may be used by Buyer for publicity purposes and internal communications. No Party shall issue any press release or make any public announcement relating to the subject matter of this Agreement without the prior written approval of the other Party, which approval shall not be unreasonably withheld. The preceding sentence shall not apply to communications or other filings with Governmental Authorities by Buyer, including any filings with the Commission or FERC.

ARTICLE 7 METERING

- **Metering**. All electric metering associated with the Facility, including the Facility 7.1 Meter and any other real-time meters, billing meters and back-up meters, shall be installed, operated, maintained, and tested in accordance with Good Utility Practice and any applicable requirements and standards issued by NERC, the Transmitting Utility in whose territory the Interconnection Point is located, and any applicable Regional Reliability Entity. The Facility Meter shall be used for the registration, recording, and transmission of information regarding the Energy output of the Facility. As between the Parties, Seller, shall be responsible for the operation, maintenance, and calibration of the Facility Meter and any other real-time meters, billing meters, and back-up meters at the Facility in accordance with the Interconnection Agreement, Good Utility Practice, and any applicable requirements and standards issued by NERC, the Transmitting Utility in whose territory the Interconnection Point is located and any applicable Regional Reliability Entity. Seller shall provide Buyer with a copy of all metering, testing and calibration information and documents regarding the Facility Meter and any other real-time meters, billing meters, and back-up meters at the Facility promptly following receipt thereof by Seller.
- Measurements. Readings of the Facility Meter and any other real-time meters, billing meters, and back-up meters at the Facility by the Transmitting Utility in whose territory the Facility is located (or an independent Person mutually acceptable to the Parties) shall be conclusive as to the amount of Energy generated by the Facility; provided, however, that Seller, at the direction of Buyer and at Buyer's expense, shall cause the Facility Meter to be tested by the Transmitting Utility in whose territory the Facility is located, and if the Facility Meter is out of service or is determined to be registering inaccurately by more than two percent (2%): (a) measurement of Energy produced by the Facility shall be adjusted in accordance with the filed tariff of such Transmitting Utility; and (b) Seller shall reimburse Buyer for the cost of such test of the Facility Meter.

- **7.3** <u>Testing and Calibration</u>. Buyer shall have the right to have a representative(s) present during any testing or calibration of the Facility Meter and any other real-time meters, billing meters, and back-up meters at the Facility.
- **7.4** Audit of Facility Meter. Buyer shall have access to the Facility Meter and any other real-time meters, billing meters, and back-up meters at the Facility and the right to audit all information and test data related to such meters.
- **7.5** Notice of Malfunction. Seller shall provide Buyer with prompt notice upon becoming aware of any material malfunction or other failure of the Facility Meter or other telemetry equipment necessary to accurately report the quantity of Energy being produced by the Facility.
- **7.6** Telemetry. The Facility Meter shall be capable of sending meter telemetry into the PJM Power Meter system and Seller shall provide Buyer with access to such Power Meter data. Seller shall transmit to Buyer, via virtual private network, all telemetry data measured by the Facility Meter, including MW, MVAR, MWh, MVARh, isolation breaker open/closed status, interconnection bus voltage and amp flow. Without limiting the foregoing, all such telemetry equipment shall comply with PJM requirements for PJM transmission owners.

ARTICLE 8 BILLING AND PAYMENT

- **8.1** Price for Energy and SPAECs. Buyer shall pay the Contract Price for all Energy delivered to the Delivery Point for Buyer's account and SPAECS delivered to Buyer in accordance with Sections 5.1 and 5.2. Buyer shall not be obligated to make any other payments to Seller for any Energy or SPAECs delivered or required to be delivered by Seller to Buyer pursuant to this Agreement.
- **Billing**. Unless otherwise agreed to by the Parties, on or before the fifteenth 8.2 (15th) day of each month (or the first Business Day thereafter), Seller shall deliver to Buyer, via electronic transmission or other means agreed to by the Parties, an invoice ("Invoice") that sets forth: (a) the net amount due from one Party to the other for all Products delivered by Seller to Buyer pursuant to the terms of this Agreement as of the end of the immediately preceding calendar month; and (b) any other credits, charges, and liabilities due pursuant to the terms of this Agreement, including any adjustments and outstanding amounts due pursuant to prior Invoices. All Invoices to Buyer shall include the supporting documentation reasonably necessary to demonstrate how the Invoice amounts were calculated, including information from PJM to substantiate all calculations of the Energy delivered by Seller to the Delivery Point and GATS documentation of SPAEC transfers to Buyer, and any additional information reasonably requested by Buyer. All Invoices will be accumulated by Buyer over a sixty (60) day period (the "Accumulation Period"). Buyer shall pay to Seller or Seller shall pay to Buyer, as the case may be, the total amount due on the first(1st) Business Day of the month following the end of the Accumulation Period (such day, the "Settlement Date").
- **8.3 Payment**. All payments shall be made by "Electronic Funds Transfer" (EFT) via "Automated Clearing House" (ACH), to a bank designated in writing by the Party to which

payment is owed, by 11:59:59 pm EPT on the Settlement Date. Payment of an Invoice shall not be deemed an admission or waiver with respect to any matter related to such Invoice or the charges reflected therein.

- **8.4** <u>Interest</u>. Interest on delinquent amounts (including amounts determined to be owed as a result of the resolution of a billing dispute) shall be calculated at the Interest Rate (a) from the original due date (or, for amounts not properly invoiced, the date that would have been the due date if such amounts were properly invoiced) to the date of payment; or (b) in the case of reimbursement obligations, from the date an overpayment was received until the date of reimbursement.
- **8.5** Set-Off. Each of Buyer and Seller shall have the right to set-off any undisputed amounts owed by the other Party pursuant to this Agreement against any undisputed amounts that it owes to such Party pursuant to this Agreement.
- 8.6 <u>Billing Disputes</u>. Either Party may, in good faith, dispute any amount charged or paid pursuant to an Invoice within twelve (12) months of the date of such Invoice by providing a written statement setting forth the basis of such dispute. Each Party shall remain obligated to pay any undisputed amounts pending resolution of a billing dispute. Failure by a Party to deliver notice of a billing dispute within the time period set forth herein shall be deemed a waiver of such Party's right to dispute such Invoice. The Parties shall continue to perform under this Agreement during the period of any billing dispute but shall not be precluded from exercising any other remedy available under this Agreement. A billing dispute shall be subject to the provisions of Article 17. Any amount determined to be owed as a result of the resolution of a billing dispute shall be paid within fifteen (15) days of such resolution, along with accrued interest in accordance with Section 8.4.
- **8.7 PJM Accounting Procedures**. Each of Buyer and Seller shall comply with all applicable PJM accounting procedures in connection with invoicing and settlement for amounts due under this Agreement.

ARTICLE 9 TAXES AND FEES

9.1 Taxes, Fees, and Expenses.

- 9.1.1 Seller shall pay any and all Taxes, costs, fees, and expenses, including any and all Taxes and transaction costs, fees, and expenses attributable to or arising from the sale of the Products under this Agreement, including ad valorem taxes, taxes related to the operation or maintenance of the Facility, and other taxes attributable to the Facility or interests in land associated with the Facility.
- 9.1.2 Buyer shall pay any and all Taxes, costs, fees, and expenses on or with respect to the Products being delivered to Buyer hereunder after delivery thereof in accordance with this Agreement (other than ad valorem,

- franchise, or income taxes related to the sale of the Products, which shall be the responsibility of Seller).
- 9.1.3 If Buyer is required by law or regulation to remit or pay Taxes, which are Seller's responsibility hereunder, Buyer may deduct the amount of any such Taxes from the sums due to Seller under this Agreement.
- 9.1.4 Nothing herein shall obligate or cause a Party to pay or be liable to pay any Taxes for which it is exempt under the law and for which it timely asserts and diligently pursues such exemption, until final determination thereof.

ARTICLE 10 CREDIT AND SECURITY

- **10.1** <u>Credit Support</u>. If Seller (or Seller's Guarantor, if any) is rated at or above Investment Grade and provides a Guaranty, Seller shall have no requirement to provide Performance Assurance. If during the Contract Term, Seller (or Seller's Guarantor, if any) is no longer rated at or above Investment Grade, Seller must post, within five (5) Business Days, Performance Assurance equal to the Performance Assurance Amount.
- 10.2 Grant of Security Interest. To secure its obligations under this Agreement, Seller hereby grants to Buyer a present and continuing security interest in, and lien on (and right of set-off against), and assignment of, all cash collateral and cash-equivalent collateral and any and all proceeds resulting therefrom or the liquidation thereof, whether now or hereafter held by, on behalf of, or for the benefit of, Buyer; provided, however, that such interest may be junior to an interest granted by Seller in such collateral or proceeds for purposes of financing the development, construction, or operation of the Facility. Seller agrees to take such action as reasonably required to perfect in favor of Buyer such security interest in, and lien on (and right of set-off against), such collateral and any and all proceeds resulting therefrom or from the liquidation thereof.
- 10.3 Remedies. Upon or any time after the occurrence of an Event of Default caused by Seller, Buyer may do any one or more of the following: (i) exercise any of the rights and remedies of Buyer with respect to all collateral, including any such rights and remedies under Law then in effect; (ii) exercise its rights of set-off against any and all property of Seller in the possession of Buyer, whether held in connection with this Agreement or any other agreement(s) between Buyer and Seller for the provision of Energy or SPAECs; (iii) draw on any outstanding Performance Assurance or Guaranty issued for Buyer's benefit; and (iv) liquidate all collateral security held by or for the benefit of Buyer free from any claim or right of any nature whatsoever of Seller, including any equity or right of purchase or redemption by Seller. Buyer shall apply the proceeds of the collateral security realized upon the exercise of such rights or remedies to reduce Seller's obligation under this Agreement or any other agreement(s) between Buyer and Seller for the provision of Energy or SPAECs (Seller remaining liable for any amounts owing to Buyer after such application), subject to Buyer's obligation to return any surplus proceeds remaining after such obligations are satisfied in full.

- **10.4 Forms of Performance Assurance**. At Seller's choice, the following are deemed to be acceptable methods for posting Performance Assurance, if required:
 - (a) <u>Cash</u>. Buyer shall not be entitled to hold Performance Assurance in the form of cash; rather, Performance Assurance in the form of cash shall be held in any Qualified Institution. Buyer will pay to Seller on the first Business Day of each calendar quarter the amount of interest it receives based upon the applicable overnight repurchase interest rate from the Qualified Institution on any Performance Assurance in the form of cash posted by Seller.
 - Letter of Credit. A Letter of Credit shall state that it shall renew (b) automatically for successive one-year periods unless Buyer receives written notice from the issuing financial institution at least ninety (90) days prior to the expiration date stated in the Letter of Credit that the issuing financial institution elects not to extend the Letter of Credit. If Buyer receives notice from the issuing financial institution that the Letter of Credit will not be extended, Seller will be required to provide a substitute Letter of Credit from an alternative bank or financial institution. The receipt of the substitute Letter of Credit must be effective on or before the expiration date of the expiring Letter of Credit and delivered to Buyer at least ten (10) Business Days before the expiration date of the original Letter of Credit. If Seller fails to supply a substitute Letter of Credit as required herein, then Buyer will have the right to draw on the expiring Letter of Credit and to hold the amount as collateral. Seller shall have the right to amend its Letter of Credit to reflect any reduction of Performance Assurance under this Agreement.
- Assurance posted by Seller if Seller fails to pay amounts due to Buyer pursuant to this Agreement, including any damages that may be due hereunder, or any other agreement(s) between Buyer and Seller for the provision of Energy and SPAECs after written notice of default is provided to Seller and any applicable cure period set forth in this Agreement ends. Within thirty (30) days of the Facility Commercial Operation Date, Seller shall replenish the Performance Assurance to the extent reduced by the amount of any draws prior to the Facility Commercial Operation Date and thereafter shall have no obligation to replenish the Performance Assurance.
- **10.6** <u>Release of Security</u>. Promptly following the end of the Contract Term or the earlier termination of this Agreement and the satisfaction of all of Seller's obligations hereunder, Buyer shall promptly release any Performance Assurance held by it to Seller.
- **10.7 No Limit of Liability**. Except to the extent expressly stated in this Agreement, the required amounts of any cash or Letters of Credit shall not be deemed to be a limitation of Seller's liability.

ARTICLE 11 REPRESENTATIONS AND WARRANTIES

- **11.1** Representations and Warranties of Both Parties. As of the Effective Date, each Party hereby represents and warrants to the other Party that:
 - (a) it is duly organized or formed, validly existing, and in good standing under the Laws of the jurisdiction of its organization or formation, and is qualified to conduct its business in all jurisdictions necessary to perform its obligations hereunder;
 - (b) the execution, delivery, and performance of this Agreement are within its powers, have been duly authorized by all necessary action, and do not violate any of the terms or conditions in its governing documents, any agreement to which it is a party or by which it or any of its property is bound, or provisions of law applicable to it;
 - (c) the execution, delivery and performance of this Agreement will not result in the creation or imposition of any Lien upon its properties (except as expressly contemplated in favor of Buyer pursuant to this Agreement), the creation or imposition of which could reasonably be expected to have a material adverse effect on its ability to perform its obligations under this Agreement;
 - (d) except as set forth in and as required by this Agreement, no consent, approval, order or authorization of, or registration, declaration, or filing with, any Governmental Authority is required by such Party in connection with the execution, delivery or performance of this Agreement;
 - (e) this Agreement constitutes its legal, valid, and binding obligation, enforceable against it in accordance with its terms, subject to bankruptcy, insolvency, reorganization, and other Laws affecting creditors' rights generally, and with regard to equitable remedies, to the discretion of the court before which proceedings to obtain same may be pending;
 - (f) no Event of Default has occurred and there are no bankruptcy, insolvency, reorganization, receivership or other arrangement proceedings pending or being contemplated by it, or to its knowledge threatened against it;
 - (g) to such Party's knowledge, there are no actions, proceedings, judgments, rulings or orders, issued by or pending before any Governmental Authority, that would materially adversely affect its ability to perform its obligations under this Agreement; and
 - (h) it is acting for its own account, has made its own independent decision to enter into this Agreement and as to whether this Agreement is appropriate

- or proper for it based upon its own judgment, is not relying upon the advice or recommendations of the other Party in so doing, and is capable of assessing the merits of and understanding, and understands and accepts, the terms, conditions, and risks of this Agreement.
- (i) it has all Permits necessary for it to legally perform its obligations under this Agreement, or with respect to Seller, such Permits will be obtained by Seller in the ordinary course of its development and construction of the Facility; and
- (j) it is, and will continue to be for the Term, a Forward Contract Merchant both generally and with respect to the Product delivered and purchased under this Agreement.
- Contract and the Parties are Forward Contract Merchants, both generally and with respect to the deliveries of the Product pursuant to this Agreement, that each party is an "eligible contract participant" as set forth in the Commodities Exchange Act; and, accordingly, the Parties are entitled to the protections of the provisions of the Bankruptcy Code with respect to the rights or remedies afforded to non-bankrupt Forward Contract Merchants under Forward Contracts with bankrupt counter-parties. The Parties therefore agree that this Agreement may be terminated and the remedies hereunder exercised by either Party in accordance with Article 2 and Article 14 hereof upon the commencement of a proceeding by the other Party under any chapter of the Bankruptcy Code, and that the automatic stay of Section 362(a) of the Bankruptcy Code shall not apply to such termination.
- 11.3 <u>Disclaimer</u> of <u>Implied Warranties</u>. EXCEPT FOR THE EXPRESS WARRANTIES SET FORTH IN THIS AGREEMENT, THERE ARE NO WARRANTIES OF ANY KIND, INCLUDING WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. ANY AND ALL IMPLIED WARRANTIES ARE DISCLAIMED:

ARTICLE 12 ASSIGNMENT

12.1 Assignment; Change in Control. Neither Party shall assign this Agreement or delegate its rights or obligations hereunder without the prior written consent of the other Party, which consent shall not be unreasonably withheld, conditioned, or delayed; otherwise any such assignment or delegation shall be voidable at the option of the other Party. Notwithstanding the foregoing, either Party may, without the prior consent of the other Party, (i) transfer, sell, pledge, encumber, or assign this Agreement or the accounts, revenues or proceeds hereof in connection with any financing or other financial arrangements (and without relieving itself from liability hereunder), (ii) transfer or assign this Agreement to an Affiliate of such Party which Affiliate's creditworthiness is equal to or higher than that of such Party, or (iii) transfer or assign this Agreement to any person or entity succeeding to all or substantially all of the assets of such Party; provided, however, that in each such case, any such assignee shall agree in writing to be bound by the terms and conditions hereof, including the requirements for creditworthiness and security under Article 10 hereof, and that the transferring Party delivers such tax and enforceability assurance as

the non-transferring Party may reasonably request. A Change in Control of Seller will be subject to the prior written consent of Buyer, such consent not to be unreasonably withheld.

ARTICLE 13 FORCE MAJEURE

- 13.1 <u>Force Majeure</u>. If either Party is rendered unable by a Force Majeure event to carry out, in whole or in part, its obligations under this Agreement, then, during the pendency of such event of Force Majeure, but for no longer period, the obligations of the affected Party (other than the obligation to make payments hereunder when due) shall be suspended, subject to Section 2.2(c) hereof to the extent required.
- 13.2 <u>Notice</u>. The affected Party shall (i) give the other Party written notice within 48 hours of the commencement of the Force Majeure event, with details to be supplied within three (3) Business Days after the commencement of the Force Majeure event further describing the particulars of the occurrence of the Force Majeure event, and (ii) take all reasonable steps to remedy the cause of the Force Majeure event with all reasonable dispatch.
- 13.3 <u>No Extension of Term</u>. Whenever either Party is required to commence or complete any action within a specified period, such period shall be extended by an amount equal to the duration of any event of Force Majeure occurring or continuing during such period; provided, however, that, subject to Section 2.2(c) hereof, in no event will any Force Majeure event extend this Agreement beyond the Services Term.

ARTICLE 14 EVENTS OF DEFAULT; REMEDIES

- **14.1** Events of Default. An "Event of Default" by a Party (the "Defaulting Party") shall mean the occurrence of any of the following:
 - (a) the failure to make, when due, any undisputed payment required to be made pursuant to this Agreement if such failure is not remedied within three (3) Business Days after written notice thereof is received;
 - (b) any representation, warranty, or covenant made by such Party herein shall be false or misleading in any material respect and shall remain uncured for a period of thirty (30) days after written notice thereof is received;
 - (c) such Party's unexcused failure to perform any material covenant or obligation set forth in this Agreement (except to the extent constituting a separate Event of Default) if such failure is not remedied within thirty (30) days after written notice thereof is received;
 - (d) such Party transfers or assigns or otherwise conveys any of its rights or obligations under this Agreement to another entity without the other Party's prior written consent, to the extent such consent is required under this Agreement, or if at the time of such transfer, assignment, or conveyance, the resulting, surviving or transferee entity fails to assume all

- the obligations of such Party under this Agreement by operation of law or pursuant to an agreement reasonably satisfactory to the other Party;
- (e) such Party is the subject of a voluntary bankruptcy, insolvency, or similar proceeding;
- (f) such Party applies for, seeks consent to, or acquiesces in the appointment of a receiver, custodian, trustee, liquidator, or similar official to manage all or a substantial portion of its assets; and
- (g) any Permit or government approval necessary for a Party to be able to perform as contemplated by this Agreement is not received, expires or is revoked, or suspended and is not renewed or reinstated within a reasonable period following the expiration, revocation, or suspension thereof, by reason of the action or inaction of such Party and such expiration, revocation, or suspension creates a material adverse impact to the other Party.

14.2 Additional Seller Events of Default. Any of the following events shall constitute an Event of Default of Seller.

- (a) The failure by Seller to achieve the Initial Delivery Date no later than one hundred eighty (180) days after the Guaranteed Initial Delivery Date, including any extensions for Force Majeure Events;
- (b) The failure by Seller to deliver to Buyer in accordance with this Agreement any Products required to be delivered hereunder or delivery or sale of any such Products to any Person other than Buyer if not expressly permitted under this Agreement and such failure is not remedied within five (5) Business Days after written notice thereof is received;
- (c) PJM shall have declared Seller to be in default of any provision of the PJM Agreements (after the applicable cure periods therein) if such default is not remedied within thirty (30) days after the declaration is made;
- (d) The failure by Seller to provide a Guaranty or other Performance Assurance as Required by Article 10;
- (e) The failure by Seller to comply with Section 6.7 if such failure is not remedied as soon as practicable (and no more than thirty (30) days) after Seller becomes aware of such failure;
- (f) The failure by Seller to obtain and maintain insurance as required under Section 6.16 if such failure is not remedied within ten (10) Business Days after written notice thereof is received; and
- (g) The failure by Seller to maintain the Availability Requirement, as required under Section 6.12.

- **14.3** General Remedies. If an Event of Default has occurred and is continuing with respect to a Defaulting Party, the other Party (the "Non-Defaulting Party") shall have the right to (a) suspend performance under this Agreement, and/or (b) exercise any remedies available at law or in equity, including termination of this Agreement. Without limiting the generality of the foregoing, upon an Event of Default, the Non-Defaulting Party shall have the right to exercise its remedies under any Performance Assurance.
- **Delay Damages**. In the event the Initial Delivery Date does not occur on or prior 14.4 to the Guaranteed Initial Delivery Date, for each day beginning with the day after the Guaranteed Initial Delivery Date through and including the date on which the Initial Delivery Date occurs, Seller shall pay liquidated damages in the amount of \$0.20 per kW of Buyer's Percentage of the Facility Nameplate Rating per day ("Delay Damages"). Delay Damages shall be paid by Seller within thirty (30) days after the end of the month in which the Delay Damages accrue. The Parties acknowledge and agree that (a) calculation of actual damages that Buyer would suffer as a result of a delay in the Initial Delivery Date would be difficult or impossible to ascertain; (b) obtaining an adequate remedy may be difficult; and (c) the amount of Delay Damages constitutes a fair and reasonable approximation of the damages Buyer will incur as a result of delay in the Initial Delivery Date and is not intended as, nor shall it be deemed, a penalty. Subject to Section 10.5 and excluding Buyer's right to terminate as a result of a Seller Event of Default under Section 14.2.1, the rights set forth pursuant to this Section 14.4 shall be Buyer's exclusive remedy for Seller's delay in achieving the Guaranteed Initial Delivery Date. Buyer acknowledges and agrees that Seller's liability for Delay Damages and any damages upon termination prior to the Initial Delivery Date shall in no event exceed, in the agreement, the applicable Performance Assurance Amount.

14.5 <u>Damages on Termination</u>.

- 14.5.1 Upon a termination of this Agreement by Buyer based on a Seller Event of Default other than an Event of Default under Section 14.2(a), Buyer shall be entitled to recover the net present value of (a) the replacement cost of Energy and SPAECs supplied from a solar energy generating resource less (b) the cost of Energy and SPAECs that Buyer would have incurred at the Contract Price, with all Energy delivered to the Delivery Point, during all hours of the Services Term (or the remainder thereof).
- 14.5.2 Upon a termination of this Agreement by Seller based on a Buyer Event of Default, Seller shall be entitled to recover the net present value of (a) the price of Energy and SPAECs at the Contract Price less (b) the market price of Energy at the Delivery Point and SPAECs supplied from a solar energy generating resource during all hours of the Services Term (or the remainder thereof) under a long-term contract for the Services Term (or the remainder thereof).
- 14.5.3 All calculations under this Section 14.5 shall be determined in a commercially reasonable manner, and may include reference to one or more third parties, which shall exclude Affiliates of the Non-Defaulting Party, including quotations (either firm or indicative) of relevant rates,

prices, yields, yield curves, volatilities, spreads, or other relevant market data in the relevant markets, comparable transactions, forward price curves based on economic analysis of the relevant markets, settlement prices for comparable transactions at liquid trading hubs, all of which should be calculated for the remaining Services Term and include the value of SPAECs. For the avoidance of doubt, the Non-Defaulting Party shall not be required to enter into a replacement transaction in order to establish the amounts owed under this Agreement.

- 14.5.4 The Parties acknowledge and agree that: (i) the inherent value of Energy supplied from a solar energy generating resource is a primary reason Buyer is entering into this Agreement; (ii) in the event of termination of this Agreement based on a Seller Event of Default, Buyer will likely be required to replace the Energy that would have been provided hereunder with Energy supplied from another solar energy generating resource; and (iii) in the event of termination of this Agreement by Seller based on a Buyer Event of Default, Seller will likely sell the Energy that would have been sold hereunder to a Party seeking Energy supplied from a solar energy generating resource.
- **14.6** Right of First Offer. If Seller or any Seller Affiliate seeks to enter into an agreement to sell any of the Products generated by a solar energy generating project on the approximate location of the Facility at any time after the Agreement has been terminated by Buyer due to a Seller Event of Default, or pursuant to Section 2.2(c), but prior to one hundred eighty (180) days after such termination, Buyer shall have a right of first offer for any proposed sale of the Products by Seller or Seller Affiliate. Buyer shall have thirty (30) days to submit a purchase offer after its receipt of written notice from Seller of the intention of Seller (or an Affiliate of Seller) to seek to enter into an agreement for the Products and Seller and its Affiliates shall negotiate a purchase agreement with Buyer in good faith. If no agreement is executed within forty-five (45) days following Buyer's delivery to Seller of such purchase offer, Seller and its Affiliates may negotiate with third parties for the sale of the Products; provided, however, such agreement may not be on terms more favorable to the new buyer than the terms set forth in Buyer's proposed purchase offer.
- 14.7 <u>Facility Lender's Right to Cure</u>. In connection with any financing or refinancing of the Facility by Seller, Buyer shall use good faith efforts to work with Seller and the Facility Lender to (1) agree upon a Financing Assignment of this Agreement, including with respect to: (i) Buyer's notice of any Seller Event of Default to such Facility Lender; and (ii) Buyer's acceptance of a cure of any Seller Event of Default by the Facility Lender, so long as the cure is accomplished within the applicable cure periods set forth in this Agreement or the Financing Assignment; and (2) execute and deliver any estoppels or other documents that may be reasonably required for Seller to finance or refinance the Facility. Seller shall promptly reimburse Buyer for its reasonable fees, including attorneys' fees, to review and prepare documents in connection with Seller's financing or refinancing of the Facility.
- **14.8** Exclusion of Consequential Damages. NEITHER PARTY SHALL BE LIABLE TO THE OTHER PARTY FOR CONSEQUENTIAL, INCIDENTAL, PUNITIVE,

EXEMPLARY, OR INDIRECT DAMAGES; LOST PROFITS; OR OTHER BUSINESS INTERRUPTION DAMAGES, BY STATUTE, IN TORT, CONTRACT, OR OTHERWISE; PROVIDED THAT THE FOREGOING EXCLUSION SHALL NOT PRECLUDE RECOVERY BY A PARTY OF ANY LIQUIDATED DAMAGES EXPRESSLY PROVIDED HEREIN, NOR SHALL IT BE CONSTRUED TO LIMIT RECOVERY BY AN INDEMNIFIED PERSON UNDER ANY INDEMNITY PROVISION IN RESPECT OF A THIRD-PARTY CLAIM OR WITH RESPECT TO THE GROSS NEGLIGENCE, FRAUD, OR WILLFUL MISCONDUCT OF A PARTY.

14.9 <u>Liquidated Damages</u>. The Parties acknowledge and agree that: (a) Buyer shall be damaged by Seller's failure to meet its obligations as specified in Sections 6.12 and 14.4; (b) it would be impracticable or extremely difficult to fix the actual damages resulting therefrom; (c) any sums that would be creditable or payable under those sections are in the nature of liquidated damages, and not a penalty, and are fair and reasonable; and (d) each payment represents a reasonable estimate of fair compensation for the losses that may reasonably be anticipated from each such failure.

ARTICLE 15 INDEMNIFICATION

- **15.1** <u>Indemnification Obligation</u>. Each Party, to the extent permitted by law, shall indemnify, defend, and hold harmless the other Party, its affiliated companies, and all of their directors, officers, employees, agents, and representatives from and against all claims, liabilities, damages, losses, or expenses to the extent arising out of any negligence, willful misconduct, breach of contract, or violation of law of, or by, the indemnifying Party, its employees, agents, subcontractors, or assigns in the performance of this Agreement. In the event the Parties are jointly at fault, each Party shall indemnify the other in proportion to its relative fault.
- 15.2 <u>Scope of Indemnification</u>. The claims, liabilities, damages, losses, or expenses covered for which indemnification may be sought under this Article 15 include, but are not limited to, settlements, judgments, court costs, attorneys' fees and other litigation expenses, fines, and penalties arising out of actual or alleged (a) injury to or death of any person, including employees of Buyer or Seller; (b) loss of or damage to property, including property of Buyer or Seller; (c) breach of contract; or (d) damage to the environment.
- **15.3** Notice. A Party seeking indemnification under this Article 15, shall give written notice to the indemnifying Party as soon as reasonably practicable after becoming aware of the facts and circumstances which may give rise to any claims, liabilities, damages, losses, or expenses for which indemnification may be sought under this Article 15.

ARTICLE 16 CONFIDENTIALITY

16.1 Confidentiality. Except as provided in this Article 16, neither Party shall publish, disclose, or otherwise divulge Confidential Information to any person at any time during or after the Term of this Agreement, without the other Party's prior express written consent. Each Party shall permit knowledge of and access to Confidential Information only to those of its Affiliates

and to persons investing in, providing funding to, or acquiring it or its affiliates, and to its and the foregoing persons' respective attorneys, accountants, representatives, agents, and employees who have a need to know such Confidential Information related to this Agreement.

- **Required Disclosure**. If required by any law, statute, ordinance, decision, order, or regulation passed, adopted, issued, or promulgated by a Governmental Authority having jurisdiction over a Party, that Party may release Confidential Information, or a portion thereof, to the Governmental Authority, as required by the applicable law, statute, ordinance, decision, order or regulation, and a Party may disclose Confidential Information to accountants in connection with audits; provided that such Party has notified the other Party of the required disclosure, such that the other Party may attempt (if such Party so chooses) to cause that Governmental Authority or accountant to treat such information in a confidential manner and to prevent such information from being disclosed or otherwise becoming part of the public domain.
- 16.3 <u>Tax Treatment Exception</u>. Notwithstanding any provision of this Agreement to the contrary, the legal obligations of confidentiality hereunder do not extend to the U.S. federal or state tax structure or the U.S. federal or state tax treatment of any transaction hereunder. If any U.S. federal or state tax analyses or materials are provided to a Party, such Party is free to disclose any such analyses or materials without limitation.
- **16.4** Survival. The Parties obligations under this Article 16 shall survive for a period of one (1) year following the expiration or termination of this Agreement.

ARTICLE 17 DISPUTE RESOLUTION

- 17.1 <u>Informal Dispute Resolution.</u> Before initiating legal action pursuant to Section 17.2, a Party aggrieved by a dispute hereunder shall provide written notice to the other Party setting forth the nature of the dispute, the amount involved, if any, and the remedies sought. The Parties shall use good faith and reasonable commercial efforts to informally resolve such dispute. Such efforts shall last for a period of at least thirty (30) days from the date that the notice of the dispute is first delivered from one Party to the other Party. Any amounts determined to be owed as a result of informal dispute resolution pursuant to this Section 17.1 shall be paid within fifteen (15) days of such resolution.
- **17.2 Formal Dispute Resolution.** After the requirements of Section 17.1 have been satisfied, either Party may initiate legal action in accordance with Sections 18.5 and 18.6.

ARTICLE 18 MISCELLANEOUS

- **18.1** Entire Agreement. This Agreement, together with any attachments or exhibits specifically referenced herein, constitutes the entire agreement and understanding of the Parties with respect to the subject matter hereof, supersedes all prior oral or written representations and contracts, and may be modified only by a written amendment signed by the Parties.
- **18.2** Severability. In the event that any provision of the Agreement shall be found to be void or unenforceable, such findings shall not be construed to render any other provision of the

Agreement either void or unenforceable, and all other provisions shall remain in full force and effect unless the provisions which are void or unenforceable shall substantially affect the rights or obligations granted to or undertaken by either Party.

- 18.3 <u>Waiver</u>. No delay or omission by a Party in the exercise of any right under this Agreement shall be taken, construed or considered as a waiver or relinquishment thereof, and any such right may be exercised from time to time and as often as may be deemed expedient. If any of the terms and conditions hereof is breached and thereafter waived by a Party, such waiver shall be limited to the particular breach so waived and is not deemed to waive any other breach hereunder.
- 18.4 Notices. All notices, payments, and other formal communications which either Party may give to the other under or in connection with this Agreement shall be in writing and shall be sent by any of the following methods: hand delivery; reputable overnight courier; certified mail, return receipt requested; or, with respect to communications other than payments, by facsimile transmission, if the original communication is delivered by reputable overnight courier. Communications to the Buyer and Seller shall be sent using the contact information set forth in Exhibit H or to such other person at such other address as a Party may designate by like notice to the other Party. Communication shall be effective when received. Notice received after the close of the Business Day shall be deemed received on the next Business Day.
- **18.5** Governing Law. This Agreement shall be construed, enforced, and performed in accordance with the laws of the Commonwealth of Pennsylvania, without recourse to principles governing conflicts of law.
- **18.6** <u>Jurisdiction and Venue</u>. Except for matters subject to the exclusive or primary jurisdiction of FERC, the Commission, or the appellate courts having jurisdiction over the Commission or FERC matters, all disputes hereunder shall be resolved in the federal or state courts of the Commonwealth of Pennsylvania. Each Party hereby irrevocably submits to the *in personam* jurisdiction of such courts for such purpose. Each Party hereby waives its respective rights to any jury trial with respect to any litigation arising under or in connection with this Agreement.
- 18.7 Netting and Set-Off. If Buyer or Seller are required to pay any amount under this Agreement on the same day or in the same month, then such amounts with respect to each Party may be aggregated and the Parties may discharge their obligations to pay through netting, in which case the Party, if any, owing the greater aggregate amount shall pay to the Party owed the difference between the amounts owed. Each Party reserves to itself all rights, set-offs, counterclaims, combination of accounts, Liens, and other remedies and defenses which such Party has or may be entitled to (whether by operation of law or otherwise). The obligations to make payments under this Agreement and/or any other contract between the Buyer and Seller, if any, may be offset against each other, set-off, or recouped therefrom. Any set-off shall not be subject to the automatic stay by virtue of Section 362(b) (6) of the Bankruptcy Code.
- **18.8** <u>Compliance</u> <u>with Laws</u>. Except as otherwise expressly provided in this Agreement, each Party shall comply, at its own expense, with the provisions of all laws and any applicable order and/or regulations, or any amendments or supplements thereto, which have been, or may at any time be, issued by a Governmental Authority relating to this Agreement and the transactions hereunder.

- **18.9** Remedies Cumulative. No right or remedy herein conferred upon or reserved to either Party is intended to be exclusive of any other right or remedy, and each and every right and remedy shall be cumulative and in addition to any other right or remedy under this Agreement, or under applicable law, whether now or hereafter existing.
- 18.10 <u>Binding Effect; Limitation of Benefits</u>. This Agreement shall be binding upon and shall inure to the benefit of the Parties hereto and, subject to the provisions of Article 12 hereof, their successors and permitted assigns. Nothing in this Agreement is intended to confer benefits, rights, or remedies unto any Person other than the Parties and their permitted successors and assigns, and no third party shall have the right to enforce the provisions of this Agreement. Buyer does not, nor should it be construed to, extend its credit or financial support for the benefit of any third parties lending money to or having other transactions with Seller.
- **18.11** No Partnership or Joint Venture. This Agreement is not intended to create nor shall it be construed to create any partnership or joint venture relationship between Buyer and Seller, and neither Party hereto shall have the power to bind or obligate the other Party. Neither Party hereto shall be liable for the payment or performance of any debts, obligations, or liabilities of the other Party, unless expressly assumed in writing herein or otherwise.
- **18.12** Audit. Each Party shall have the right, upon at least three (3) Business Days' prior written notice, at its sole expense and during normal working hours, to examine the records of the other Party to the extent reasonably necessary to verify the accuracy of any statement, charge, or computation made pursuant to this Agreement, including records necessary to verify that Buyer has received and is receiving Buyer's Percentage of Products produced by the Facility. If any such examination reveals any inaccuracy in any Invoice, the necessary adjustments in such Invoice and the payments thereof will be made in accordance with Sections 8.1 and 8.6.
- **18.13** Records. Each Party shall keep and maintain all books and records as may be necessary or useful in performing or verifying any calculations made pursuant to this Agreement or in verifying such Party's performance hereunder, including operating logs, Facility output data, meter readings and financial records, all in accordance with Good Utility Practice. Each Party shall provide such books and records to the other Party within fifteen (15) Business Days of a written request for such information. All records shall be retained by each Party for at least three (3) years following the year in which such records were created.
- **18.14** <u>Survival</u>. Except as otherwise expressly provided in this Agreement, obligations, limitations, exclusions, and duties which by their nature extend beyond the expiration or termination of this Agreement, as well as any other provisions necessary to interpret the respective rights and obligations of the Parties hereunder, shall survive the expiration or earlier termination of this Agreement.
- **18.15** <u>Counterparts</u>. This Agreement may be executed in any number of counterparts, each of which will be deemed an original, but all of which taken together shall constitute one single agreement between the Parties.

[Signature Page Follows]

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed by their duly authorized representatives as of the date indicated below.

ATTEST:	Buyer
By: Name: [Insert Name] Title: [Insert Title] Date:	By: Name: [Insert Name] Title: [Insert Title] Date:
ATTEST:	Seller
By: Name: [Insert Name] Title: [Insert Title] Date:	By: Name: [Insert Name] Title: [Insert Title] Date:

EXHIBIT A

FACILITY DESCRIPTION

Facility Name:
Facility Address:
Type of AEPS Alternative Energy Source: [solar photovoltaic]
Energy Delivery Point:
Description of Facility Generating Units and related facilities (including number, manufacturer and model of Facility Generating Units, and layout):
Description of Interconnection Facilities:
Nameplate Capacity Rating (MW):
Estimated Capacity Factor (%):
The attached site map indicates the location and layout of the Facility equipment and other site details.
The attached diagram shows the Energy Delivery Point, metering devices, and other equipment installed at the Facility.

EXHIBIT B

MILESTONE SCHEDULE

Major Permits Milestone date:

Major Permits [list here]: 1.

2.

3.

Financing Milestone date:

Notice to Proceed Date to Major Generation Equipment Supplier(s):

Notice to Proceed Date to Balance of Plant Contractor:

Construction Milestone Dates:

Facility Commercial Operation Date Milestone:

EXHIBIT C

AVAILABILITY CALCULATIONS

- 1. Availability Damages. For any Period in which Seller does not maintain the Guaranteed Availability Percentage, Seller shall pay to Buyer liquidated damages ("Availability Damages") in an amount equal to (a) the Contract Price multiplied by (b) the resulting difference of the Guaranteed Availability Percentage minus the Availability Percentage for such Period, then multiplied by (c) 15% times Available Hours as defined below; *provided however*, that the first determination of the Availability Percentage of the Facility shall be calculated twenty-four (24) months after the Initial Delivery Date (the "First Availability Calculation Date"). Commencing on the First Availability Calculation Date (or the first Business Day thereafter) and continuing on or before the fifteenth (15th) day of each Period (or the first Business Day thereafter) thereafter during the Services Term, Seller shall provide Buyer with the Availability Percentage calculated for the preceding Period along with any supporting documentation reasonably required for Buyer to independently confirm Seller's Availability Percentage calculation.
- 2. <u>Availability Requirement</u>. Seller shall maintain an Availability Percentage equal to or greater than 90% each Period (as defined below) (the "Availability Requirement").
- 3. <u>Definitions</u>. Capitalized terms not defined herein shall have the meaning ascribed to them in the Agreement. For purposes of this Exhibit C, the following capitalized terms shall be defined as follows.

The Availability Percentage of the Facility shall be calculated as follows:

$$AP = 100 * \sum (of all Units) [(AH - TOH) / AH]$$

Where:

AH = Available Hours

AP = Availability Percentage

TOH = Total Outage Hours

"Availability Damages" shall have the meaning set forth in Section 1 of this Exhibit C.

"<u>Available Hours</u>" means the result of the Total Period Hours less the Force Majeure Event Hours.

"Equivalent Forced Outage Hours" means the total number of equivalent hours in a Period that (a) represents an immediate reduction in output or capacity or removal from service, in whole or in part, of a Unit by reason of an emergency or threatened emergency, unanticipated failure, or other cause beyond the control of Seller, (b) Instructed Operation, or (c) a reduction in output of the Facility caused by the action or inaction of Buyer; *provided*, *however*, that any Force Majeure Event Hours shall not be counted as Equivalent Forced Outage Hours. A reduction in output or removal from service of a Unit or the Facility in response to changes in market conditions shall not constitute Equivalent Forced Outage Hours.

"Equivalent Maintenance Outage Hours" means the total number of equivalent hours during daylight periods in a Period that represents the scheduled removal from service, in whole or in part, of a Unit in order to perform necessary repairs on specific components of the Unit, except to the extent such hour is an Equivalent Forced Outage Hour or a Force Majeure Event Hour.

"Equivalent Planned Outage Hours" means the total number of equivalent hours during daylight periods in a Period that represents the scheduled removal from service, in whole or in part, of a Unit for inspection, maintenance or repair, except to the extent such hour is an Equivalent Forced Outage Hour or a Force Majeure Event Hour.

"<u>First Availability Calculation Date</u>" shall have the meaning set forth above in Section 1 of this Exhibit C.

"Force Majeure Event Hours" means the total number of hours in a Period during which either Seller or Buyer has declared a Force Majeure Event for one or more Units.

"Guaranteed Availability Percentage" shall mean ninety percent (90%).

"Period" means, beginning at the end of the third Contract Year, the immediately preceding period of two (2) Contract Year non-rolling block periods for which the Availability Percentage is being calculated.

"<u>Total Outage Hours</u>" means the sum of Equivalent Forced Outage Hours, Equivalent Maintenance Outage Hours and Equivalent Planned Outage Hours for a Period.

"Total Period Hours" means the total number of hours in a Period.

"<u>Unit</u>" means each solar generation unit forming a part of the Facility, as described in Exhibit A.

EXHIBIT D

CONTRACT TERMS

Buyer's Percentage (MW):
Estimated Annual Total Facility Energy Production (MWh/Contract Year):
Type of AEC: AEPS Tier I solar photovoltaic
Contract Price (\$/MWh as bid by Seller):

EXHIBIT E

FORM OF GUARANTY AGREEMENT

GUARANTY (this "Guaranty"), dated as of [Insert Date], made by ______ (the "Guarantor"), a corporation organized and existing under the laws of [Insert Law References] in favor of [Insert Company Name] (the "Guaranteed Party"), a corporation organized and existing under the laws of the Commonwealth of Pennsylvania.

Terms not defined herein take on the meaning given to them in the POWER PURCHASE AGREEMENT. Guarantor enters into this Guaranty in consideration of, and as an inducement for Guaranteed Party having entered into or entering into the "Agreement(s)" with [Insert Name] (Name), a [Insert State] (State) corporation (the "Seller"), which may involve the extension of credit by the Guaranteed Party. Guarantor, subject to the terms and conditions hereof, hereby unconditionally and absolutely guarantees to the Guaranteed Party the full and prompt payment when due, subject to an applicable grace period and upon demand in writing from the Guaranteed Party to the Guarantor's attention at the address for Guarantor set forth in Section 11 hereof of any and all amounts payable by the Seller to the Guaranteed Party arising out of the Agreement(s), and.

- 1. The Guarantor, as primary obligor and not merely as surety, hereby irrevocably and unconditionally guarantees the full and prompt payment when due (whether by acceleration or otherwise) of the principal and interest on any sums due and payable by the Seller as a result of an Event of Default under the Agreement(s) (including, without limitation, indemnities, damages, fees and interest thereon, pursuant to the terms of the Agreement(s)). Notwithstanding anything to the contrary herein, the maximum aggregate liability of the Guarantor under this Guaranty shall Option 1 (in no event exceed [Insert Limit Amount].) Option 2 (in no event exceed the lesser of [Insert Limit Amount] or the sum of the Credit Exposures Amounts under the Agreement(s).) All such principal, interest, obligations, and liabilities, collectively, are the "Guaranteed Obligations". This Guaranty is a guarantee of payment and not of collection.
- 2. The Guarantor hereby waives diligence, acceleration, notice of acceptance of this Guaranty and notice of any liability to which it may apply, and waives presentment and all demands whatsoever except as noted herein, notice of protest, notice of dishonor or nonpayment of any such liability, suit or taking of other action by any Guaranteed Party against, and any other notice to, any party liable thereon (including the Guarantor or any other guarantor), filing of claims with a court in the event of the insolvency or bankruptcy of the Seller, and any right to require a proceeding first against the Seller.
- 3. The Guaranteed Party may, at any time and from time to time, without notice to or consent of the Guarantor, without incurring responsibility to the Guarantor and without impairing or releasing the obligations of the Guarantor hereunder, upon or without any terms or conditions: (i) take or refrain from taking any and all actions with respect to the Guaranteed Obligations, any Document or any person (including the Seller) that the Guaranteed Party determines in its sole discretion to be necessary or appropriate; (ii) take or refrain from

taking any action of any kind in respect of any security for any Guaranteed Obligation(s) or liability of the Seller to the Guaranteed Party; or (iii) compromise or subordinate any Guaranteed Obligation(s) or liability of the Seller to the Guaranteed Party including any security therefore.

- Subject to the terms and conditions hereof, the obligations of the Guarantor under this 4. Guaranty are absolute and unconditional and, without limiting the generality of the foregoing, shall not be released, discharged or otherwise affected by: (i) any extension, renewal, settlement, compromise, waiver, consent, discharge, or release by the Seller concerning any provision of the Agreement(s) in respect of any Guaranteed Obligations of the Seller; (ii) the rendering of any judgment against the Seller or any action to enforce the same; (iii) the existence, or extent of, any release, exchange, surrender, non-perfection, or invalidity of any direct or indirect security for any of the Guaranteed Obligations; (iv) any modification, amendment, waiver, extension of, or supplement to any of the Agreement(s) or the Guaranteed Obligations agreed to from time to time by the Seller and the Guaranteed Party; (v) any change in the corporate existence (including its constitution, laws, rules, regulations, or powers), structure or ownership of the Seller or the Guarantor, or any insolvency, bankruptcy, reorganization, or other similar proceedings affecting the Seller or its assets, the Guarantor or any other guarantor of any of the Guaranteed Obligations; (vi) the existence of any claim, set-off, or other rights which the Guarantor may have at any time against the Seller, the Guaranteed Party or any other corporation or person, whether in connection herewith or in connection with any unrelated transaction; provided that nothing herein shall prevent the assertion of any such claim by separate suit or compulsory counterclaim; (vii) the invalidity, irregularity, or unenforceability in whole or in part of the Agreement(s) or any Guaranteed Obligations or any instrument evidencing any Guaranteed Obligations or the absence of any action to enforce the same, or any provision of applicable law or regulation purporting to prohibit payment by the Seller of amounts to be paid by it under the Agreement(s) or any of the Guaranteed Obligations; and (viii) except for a failure to comply with any applicable statute of limitations, any other act or omission to act or delay of any kind of the Seller, any other guarantor, the Guaranteed Party or any other corporation or person or any other event, occurrence, or circumstance whatsoever which might, but for the provisions of this paragraph, constitute a legal or equitable discharge of the Guarantor's obligations hereunder.
- 5. The Guarantor hereby irrevocably waives (a) any right of reimbursement or contribution, and (b) any right of salvage against the Seller or any collateral security or guaranty or right of offset held by the Guaranteed Party therefore.
- 6. The Guarantor will not exercise any rights, which it may acquire by way of subrogation until all Guaranteed Obligations to the Guaranteed Party pursuant to the Agreement(s) have been paid in full.
- 7. Subject to the terms and conditions hereof, this Guaranty is a continuing one, and all liabilities to which it applies or may apply under the terms here of shall be conclusively presumed to have been created in reliance hereon. Except for a failure to comply with any applicable statute of limitations, no failure or delay on the part of the Guaranteed Party in

exercising any right, power, or privilege hereunder, and no course of dealing between the Guarantor and the Guaranteed Party, shall operate as a waiver thereof; nor shall any single or partial exercise of any right, power, or privilege hereunder preclude any other or further exercise thereof or the exercise of any other right, power, or privilege. The rights, powers, and remedies herein expressly provided are cumulative and not exclusive of any rights, powers or remedies, which the Guaranteed Party would otherwise have. No notice to or demand on the Guarantor in any case shall entitle the Guarantor to any other or further notice of demand in similar or other circumstances or constitute a waiver of the rights of the Guaranteed Party to any other or further action in any circumstances without notice or demand.

- 8. This Guaranty shall be binding upon the Guarantor and upon its successors and assigns and shall inure to the benefit of and be enforceable by the Guaranteed Party and its successors and assigns; provided, however, that the Guarantor may not assign or transfer any of its rights or obligations hereunder without the prior written consent of the Guaranteed Party. The assignment rights of the Guaranteed Party will be in accordance with the terms of the underlying Agreement(s).
- 9. Neither this Guaranty nor any provision hereof may be changed, waived, discharged, or terminated except upon written agreement of the Guaranteed Party and the Guarantor.
- 10. The Guarantor agrees that its liability as guarantor shall continue and remain in full force and effect in the event that all or any part of any payment made hereunder or any obligation or liability guaranteed hereunder is recovered (as a fraudulent conveyance, preference, or otherwise) rescinded or must otherwise be reinstated or returned due to bankruptcy or insolvency laws or otherwise.
- 11. All notices and other communications hereunder shall be made at the addresses by hand delivery, by the next day delivery service effective upon receipt, or by certified mail return receipt requested (effective upon scheduled weekday delivery day) or telefacsimile (effective upon receipt of evidence, including telefacsimile evidence, that telefacsimile was received)

If to the Guarantor: [Insert Guarantor]

If to the Guaranteed Party:

[Insert Company Name] c/o FirstEnergy Corp. Attn: Credit Risk Management & Risk Control 341 White Pond Drive

Akron, OH 44320

Telephone: (330) 315-6894 Facsimile: (330) 436-1901

- 12. If claim is ever made upon the Guaranteed Party for repayment or recovery of any amount or amounts received in payment or on account of any of the Guaranteed Obligations and the Guaranteed Party repays all or part of such amount by reason of (a) any judgment, decree or order of any court or administrative body having jurisdiction over such payee or any of its property, or (b) any settlement or compromise of any such claim effected by such payee with any such claimant (including the Guarantor), then and in such event the Guarantor agrees that any such judgment, decree, order, settlement, or compromise shall be binding upon it, notwithstanding any revocation hereof or the cancellation of the Agreement(s) or other instrument evidencing any liability of the Guarantor, and the Guarantor shall be and remain liable to the Guaranteed Party hereunder for the amount so repaid or recovered to the same extent as if such amount had never originally been received by any such payee.
- 13. The Guarantor hereby certifies that it satisfies the Minimum Rating as defined in the Agreement(s).
- 14. This Guaranty shall remain in full force and effect until all Guaranteed Obligations have been fully and finally performed, at which point it will expire. The Guarantor may terminate this Guaranty upon thirty (30) days prior written notice to the Guaranteed Party which termination shall be effective only upon receipt by the Guaranteed Party of alternative means of security or credit support, as specified in the Agreement(s) and in a form reasonably acceptable to the Guaranteed Party. Upon the effectiveness of any such expiration or termination, the Guarantor shall have no further liability under this Guaranty, except with respect to the Guaranteed Obligations entered into prior to the time the expiration or termination is effective, which Guaranteed Obligations shall remain guaranteed pursuant to the terms of this Guaranty until finally and fully performed.
- 15. The Guarantor represents and warrants that: (i) it is duly organized and validly existing under the laws of the jurisdiction in which it was organized and has the power and authority to execute, deliver, and perform this Guaranty; (ii) no authorization, approval, consent, or order of, or registration or filing with, any court or other governmental body having jurisdiction over the Guarantor is required on the part of the Guarantor for the execution, delivery and performance of this Guaranty except for those already made or obtained; (iii) this Guaranty constitutes a valid and legally binding agreement of the Guarantor, and is enforceable against the Guarantor, except as the enforceability of this Guaranty may be limited by the effect of any applicable bankruptcy, insolvency, reorganization, moratorium, or similar laws affecting creditor's rights generally and by general principles of equity; and (iv) the execution, delivery, and performance of this Guaranty by the Guarantor have been and remain duly authorized by all necessary corporate or comparable action and do not contravene any provision of its [insert appropriate corporate organizational document, such as Declaration of Trust, Limited Liability Agreement, Articles of Incorporation or by-laws or any law, regulation, or contractual restriction binding on it or its assets.
- 16. This Guaranty and the rights and obligations of the Seller and the Guarantor hereunder shall be construed in accordance with and governed by the laws of the Commonwealth of

Pennsylvania. The Guarantor and Guaranteed Party jointly and severally agree to the exclusive jurisdiction of State and federal courts located in the Commonwealth of Pennsylvania over any disputes arising or relating to this Guaranty and waive any objections to venue or inconvenient forum. The Guarantor and Guaranteed Party each hereby irrevocably waive any and all rights to trial by jury with respect to any legal proceeding arising out of or relating to this Guaranty.

- 17. This writing is the complete and exclusive statement of the terms of this Guaranty and supersedes all prior oral or written representations, understandings, and agreements between the Guaranteed Party and the Guarantor with respect to subject matter hereof. The Guaranteed Party and the Guarantor agree that there are no conditions to the full effectiveness of this Guaranty.
- 18. Every provision of this Guaranty is intended to be severable. If any term or provision hereof is declared to be illegal or invalid for any reason whatsoever by a court of competent jurisdiction, such illegality or invalidity shall not affect the balance of the terms and provisions hereof, which terms and provisions shall remain binding and enforceable. This Guaranty may be executed in any number of counterparts, each of which shall be an original, but all of which together shall constitute one instrument.
- 19. No Trustee or shareholder of Guarantor shall be held to any liability whatsoever for any obligation under this Guaranty, and such Guaranty shall not be enforceable against any such Trustee in their or his or her individual capacities or capacity. This Guaranty shall be enforceable against the Trustees of Guarantor only as such, and every person, firm, association, trust, or corporation having any claim or demand arising under this Guaranty and relating to Guarantor, its shareholders or Trustee shall look solely to the trust estate of Guarantor for the payment or satisfaction thereof.

IN WITNESS WHEREOF, the Guarantor has caused this Guaranty to be executed and delivered as of the date first above written to be effective as of the earliest effective date of any of the Agreement(s).

(GUARANTOR)
[Insert Guarantor]

Accepted and Agreed to: [Insert Name]

Met-Ed/Penelec/Penn Power/West Penn Exhibit JHC-6 – Appendix 1

By: [Insert Company Name]

Name: [Insert Name]
Title: [Insert Title]
Name: [Insert Name]
Title: [Insert Title]

EXHIBIT F

LETTER OF CREDIT DOCUMENTATION

Sample Letter of Credit

[Insert Date]
Letter of Credit No. [Insert Credit No]

To: Beneficiary Name ("Beneficiary")

- 1. We hereby establish in your favor this irrevocable transferable Letter of Credit (this "Letter of Credit") for the account of [Insert Applicant Name] (the "Applicant"), in the aggregate amount of \$[Insert Amount], effective immediately and available to you at sight upon demand at our counters at [Insert Location] and expiring 364 days from date of issuance, unless terminated earlier or automatically extended, in accordance with the provisions hereof.
- 2. This Letter of Credit is issued at the request of the Applicant, and we hereby irrevocably authorize you to draw on us, in accordance with the terms and conditions hereof, up to the maximum amount of this Letter of Credit, subject to reduction as provided in paragraph 10 hereof. This Letter of Credit may be drawn upon an Event of Default under the Agreement(s) between the Applicant and you, dated [Insert Date]

.

- 3. A partial or full drawing hereunder may be made by you on any Business Day on or prior to the expiration of this Letter of Credit by delivering, by no later than 11:00 A.M. (New York, NY time¹) on such Business Day to [Insert Bank], [Insert Address] (i) a notice executed by you in the form of Annex 1 hereto, appropriately completed and duly signed by an Authorized Officer of the Beneficiary and (ii) your draft in the form of Annex 2 hereto, appropriately completed and duly signed by an Authorized Officer of the Beneficiary. Authorized Officer shall mean President, Treasurer, any Vice President, or any Assistant Treasurer.
- We hereby agree to honor a drawing hereunder made in compliance with the terms and provisions of this Letter of Credit by transferring in immediately available funds the amount specified in the draft delivered to us in connection with such drawing to such account at such bank in the United States as you may specify in your draft delivered to us pursuant to Paragraph 3 hereof, by 3:00 P.M. (New York, NY time) on the date of such drawing, if delivery of this requisite document is made prior to 11:00 AM (New York, NY time) on a Business Day pursuant to Paragraph 3 herein above, but at the opening of business on the first Business Day next succeeding the date of such drawing if delivery of the requisite document is made on or after 11:00 AM (New York, NY time) on any Business Day pursuant to Paragraph 3 herein above.

¹ If the issuer of the Letter of Credit is located in an area that is not in the Eastern time zone, this time and all other times in this Letter of Credit, and the definition of a business day should be adjusted accordingly

- 5. If a demand for payment made by you hereunder does not, in any instance, conform to the terms and conditions of this Letter of Credit, we shall give you prompt notice (not exceeding three (3) Business Days following the date of receipt of the documents) that the demand for payment was not effected in accordance with the terms and conditions of this Letter of Credit, stating the reasons therefore and that we will upon your instructions hold any documents at your disposal or return the same to you. Upon being notified that the demand for payment was not effected in conformity with this Letter of Credit, you may attempt to correct any such non-conforming demand for payment to the extent that you are entitled to do so, provided, however, in such event a conforming demand for payment must be timely made in accordance with the terms of this Letter of Credit.
- 6. This Letter of Credit will automatically terminate and be delivered to us for cancellation on the earliest of (i) the making by you of the drawings in an amount equal to the maximum amount available to be made hereunder, (ii) the date we receive from you a Certificate of Expiration in the form of Annex 3 hereto, or (iii) will be automatically extended without written amendment for successive additional one (1) year periods from the current or any future extended expiry date, unless at least ninety (90) days prior to such date of expiration, we give written notice to the Beneficiary by registered or certified mail, return receipt requested, or by overnight courier, at the address set forth above, or at such other address of which prior written notice has been provided to us, that we elect not to renew this irrevocable standby Letter of Credit for such additional one (1) year period.

7. As used herein:

"Business Day" shall mean any day on which commercial banks are not authorized or required to close in New York, New York and any day on which payments can be effected on the Fed wire system.

8. This Letter of Credit is assignable and transferable, in accordance with Annex 4, to an entity who you certify to us in the form of Annex 4, and we hereby consent to such assignment or transfer, provided that this Letter of Credit may not otherwise be amended or modified without consent from us, you and the Applicant, and except as otherwise expressly stated herein, is subject to the Uniform Customs and Practice for Documentary Credits – 2007 Revision, ICC Publication No. 600, or any successor publication thereto (the "UCP"). Any and all transfer fees, expenses, and costs shall be borne by the Applicant. This Letter of Credit shall, as to matters not governed by the UCP, be governed and construed in accordance with New York law, without regard to principles of conflicts of law. Transfers fees shall be borne by the Applicant.

This Letter of Credit sets forth in full our undertaking, and such undertaking shall not in any way be modified, amended, changed, amplified, or limited by reference to any document, instrument, or agreement referred to herein, except for Annexes 1 through 4 hereto and the notices referred to herein; and any such reference shall not be deemed to

incorporate herein by reference any document, instrument, or agreement except as set forth above.

- 9. We certify that as of [Insert Date] we [Insert Bank] satisfy the senior unsecured debt rating of "A" from Standard & Poor's Rating Service or "A2" from Moody's Investor Service Inc.
- 10. The amount which may be drawn by you under this Letter of Credit shall be automatically reduced by the amount of any drawings paid through us referencing this Letter of Credit No. [Insert Credit No]. Partial drawings are permitted hereunder.
- 11. Faxed document(s) are acceptable. Presentation by fax must be made to fax number [Insert Fax] confirmed by telephone to [Insert Phone].
- 12. In the event of act of God, riot, civil commotion, insurrection, war, terrorism or by any strikes or lock outs, or any cause beyond our control, that interrupts our business, and causes the place for presentation of this Letter of Credit to be closed for business on the last day of presentation, the expiration date of this Letter of Credit shall be automatically extended without amendment to a date thirty (30) calendar days after the place for presentation reopens for business.
- 134. This original Letter of Credit has been sent to the Company located at [Insert Address] above (as per Applicant's instructions). The aggregate amount paid to the Company during the validity of this Letter of Credit will not exceed the amount of this Letter of Credit. Any demands or communications in the form of the attached Annexes or other communications directed to us under this Letter of Credit must be signed by an Authorized Officer of the Company. Acceptance or rejection of any amendments to this Letter of Credit must be signed by an Authorized Officer of the Company.

Very truly yours

		v Ci y ti	uly yours,
(Bank)			
By:		By:	
Name:	[Insert Name]	Name:	[Insert Name]
Title:	[Insert Title]	Title:	[Insert Title]
Date:	[Insert Date]	Date:	[Insert Date]

Annex 1 to Letter of Credit

DRAWING UNDER LETTER OF CREDIT NO. [Insert Credit No.]

[Insert Date]

To: [Insert Bank]

[Insert Address]

Attention: Standby Letter of Credit Unit

Ladies and Gentlemen:

The undersigned is making a drawing under the above-referenced Letter of Credit in the amount specified below and hereby certifies to you as follows:

- 1. Capitalized terms used herein that are defined herein shall have the meanings ascribed thereto in the Letter of Credit.
- 2. "Pursuant to Paragraph 2 of the Letter of Credit No. [Insert Credit No.], dated [Insert Date], the undersigned is entitled to make a drawing under the Letter of Credit in the aggregate amount of \$[Insert Dollars], inasmuch as there is an Event of Default under any Agreement between the Applicant and us.
- 3. We acknowledge that, upon your honoring the drawing herein requested, the amount of the Letter of Credit available for drawing shall be automatically decreased by an amount equal to this drawing.

Very truly yours,

			-
[Insert	Beneficiary Name]		
D			
By:			
Name:	[Insert Name]		
Title:	[Insert Title]		
Date:	[Insert Date]		

Annex 2 to Letter of Credit
DRAWING UNDER LETTER OF CREDIT NO. [Insert Credit No.]
[Insert Date]
ON [Business Day immediately succeeding date of presentation]
PAY TO: [Insert Beneficiary Name]
\$ [Insert Dollars]
FOR VALUE RECEIVED AND CHARGE TO ACCOUNT OF LETTER OF CREDIT NO [Insert Credit No.]
OF
[Insert Bank] [Insert Address]
The [Insert Company]
By:
Name: [Insert Name]
Title: [Insert Title] Date: [Insert Date]
Date. [moet Date]

Annex 3 to Letter of Credit

CERTIFICATE OF EXPIRATION
OF LETTER OF CREDIT NO. [Insert Credit No.]
[Insert Date]

To: [Insert Bank]

[Insert Address]

Attention: Standby Letter of Credit Unit

Ladies and Gentlemen:

The undersigned hereby certifies to you that the above referenced Letter of Credit may be cancelled without payment. Attached hereto is said Letter of Credit, marked cancelled.

[Insert Beneficiary Name]

By: _____

Name: [Insert Name]
Title: [Insert Title]
Date: [Insert Date]

cc: [Insert Applicant Name]

Annex 4 to Letter of Credit

NOTICE OF TRANSFER

OF LETTER OF CREDIT NO. [Insert Credit No.]

[Insert Date]

To: [Insert Bank]

[Insert Address]

To Whom it may concern:
Re: Credit [Insert Credit No.]

Issued by: [Insert Name]

Advice No.: [Insert Advise No.]

For the value received, the undersigned Beneficiary hereby irrevocably transfers to:

[Insert Transferee Name]

(Name of Transferee)

[Insert Address]

(Address)

all rights of the undersigned Beneficiary to draw under the above Letter of Credit in its entirety.

By this transfer, all rights of the undersigned Beneficiary in such Letter of Credit are transferred to the transferee and the transferee shall have the sole rights as Beneficiary thereof, including sole rights relating to any amendments whether increases or extensions or other amendments and whether now existing or hereafter made. All amendments are to be directed solely to the transferee without necessity of any consent of or notice to the undersigned Beneficiary.

The advice of such Letter of Credit is returned herewith, and we ask you to endorse the transfer on the reverse thereof, and forward it directly to the transferee with your customary notice of transfer.

Enclosed is a certified check in the amount of \$ [Insert Amount] in payment of your transfer commission and in addition we agree to pay to you on demand any expenses that may be incurred by you in conjunction with this transfer.

Very truly yours,

[Insert Signature of Company]

(Signature of the Company)

The above signature with title as stated conforms to that on file with us and is authorized for the execution of said instruments.

(Name of authenticating party)

[Insert Signature of Authenticating Party]
(Authorized signature of authenticating party)
Name: [Insert Name]
Title:[Insert Title]

EXHIBIT G

PERFORMANCE ASSURANCE AMOUNT

The Performance Assurance Amount will be based on 15% of the Total Notional Value of the Agreement. If, however, the Total Notional Value of the Agreement is below \$500,000, no Performance Assurance will be required even if the Seller is not rated at or above Investment Grade. Additional details on the Performance Assurance Amounts are provided below.

The Annual Notional Value means the dollar amount resulting by calculating the product of (a) the Contract Price, (b) the Buyer's Percentage, (c) the Facility Nameplate Rating, (d) 8,760, and (e) 15% (an approximate expected capacity factor). The Total Notional Value is the sum of the Annual Notional Value over the remaining Contract Years. As an example, assume that the Contract Price is fixed at \$30/MWh for a 10-year contract term, the Facility Nameplate Rating is 10 MW, and the Buyer's Percentage is 100%. Then, the Annual Notional Value is

\$30.00/MWh x 100% x 10 MW x 8,760 hours x 15% = \$394,200

and, as of the beginning of the first Contract Year, the Total Notional Value is 10 x \$394,200 = \$3,942,000. The amount of required Performance Assurance will decline annually during commercial operation.

In this example, the amount of Performance Assurance during the Contract Term shall be equal to the dollar amount specified in the following table.

	Performance A	Assurance Amount	Example	
	Standard & Poor's	Fitch Ratings	Moody's Investor Service	Performance Assurance Amount
Minimum Credit Rating (1)	BBB- or above	BBB- or above	Baa3 or above	\$0
Minimum Credit Rating ⁽¹⁾	Below BBB-	Below BBB-	Below Baa3	15% of total notional value
	Value	Performance Assurance Amount		
Total Notional Value	>\$500,000	\$0	•	
Total Notional Value	< \$500,000	15% of total notional value		
Example:	Annual Notional Value	Remaining Agreement Term	Total Value	Performance Assurance Amount
	\$394,200	10 years	\$3,942,000	\$591,300

⁽¹⁾ Credit rating is defined as the most recently published unsecured senior long term debt rating (or corporate issuer rating if unsecured long term debt rating is not available)

EXHIBIT H

NOTICE INFORMATION

Any notices required under this Agreement shall be made as follows (as updated by the Parties from time to time):

If to Seller:

Insert Company Name]
[Insert Name]
[Insert Address]
Telephone: [Insert Phon

Telephone: [Insert Phone]
Facsimile: [Insert Fax]
Email: [Insert Email]

If to Buyer:

FirstEnergy Corp.
Dean Stathis – Director Regulated Commodity Sourcing P.O. Box 16001
Reading, PA 19612-6001
Telephone: (610) 921-6766

Facsimile: (610) 939-8542

Email: dstathis@firstenergycorp.com

Copy to:

FirstEnergy Corp.
Tori L. Giesler
P.O. Box 16001
Reading, PA 19612-6001

Telephone: (610) 921-6658 Facsimile: (610) 939-8655

Email: tgiesler@firstenergycorp.com

Appendix 2

Pre-Qualification Application

METROPOLITAN EDISON COMPANY, PENNSYLVANIA ELECTRIC COMPANY, PENNSYLVANIA POWER COMPANY, AND WEST PENN POWER COMPANY SOLAR POWER PURCHASE AGREEMENT REQUEST FOR PROPOSALS (RFP)

Appendix 2: Pre-Qualification Application - Respondent's Credit-Related Information

Please provide the following data in order to enable the Companies and The Brattle Group to assess the financial viability of the Respondent as well as the entity providing the credit support on behalf of the Respondent (if applicable). Include any additional sheets and materials with this Appendix as necessary. To the degree that it is necessary, please specify whether the information provided is for the Respondent, its parent, or the entity providing the credit support on behalf of the Respondent. We also request that Respondents provide basic information about the potential proposed facility (or facilities).

E-mail completed forms to <u>firstenergysolar-RFP@brattle.com</u> by 12:00 p.m. EPT on [day of week], [Month Day], 202X.

Contact Information:

Contact Name:	 		
Contact Title:			
Address:			
City:	 		
State:	 		
Zip:	 	 	
Phone Number:	 	 	
Fax Number:			
Email address:			

Legal and Financial Information:

Full Legal Name of the Respondent:
Dun & Bradstreet No. of Respondent:
Type of Organization: (Corporation, Partnership, etc.)
Description of Corporate Structure (use separate sheet if necessary):
State (Location) of Organization:
Respondent's Percent Ownership in Proposed Project: ¹
Full Legal Name(s) of Parent Company(ies):
Entity Providing Credit Support on Behalf of Respondent (if applicable):
Dun & Bradstreet No. of Entity Providing Credit Support:
Address for each entity referenced (provide additional sheets, if necessary):
Type of Relationship:
Current Senior Unsecured Debt Rating from each of S&P, Fitch, and Moody's Rating Agencies for Respondent and each Entity Providing Credit Support (specify the entity these ratings are for)
OR, <u>if Respondent does not have a current Senior Unsecured Debt Rating</u> , then in addition to proposing an Entity to Provide Credit Support, please provide the Respondent's Tangible Net Worth (total assets minus intangible assets (e.g., goodwill) minus total liabilities):
Bank References & Name of Institution:

¹ If less than 100% ownership, detail the ownership interest of other owners and explain how 100% ownership will be achieved by Respondent before the transaction closes

Bank Contact: Name, Title, Address and Phone Number:
Pending Legal Disputes involving any of the facilities that Respondent may propose in response to
the Companies' request for proposals, if any (describe):

Financial Statements (Income Statement, Balance Sheet, and Statement of Cash Flows including all accompanying notes):

Please provide copies of the two most recent quarterly reports containing unaudited consolidated financial statements, signed and verified by an authorized officer of Respondent attesting to their accuracy.

Please provide copies of Respondent's two most recent Annual Reports containing audited consolidated financial statements. (If available electronically, please provide link.)

If Respondent does not have any of the above information for itself and Respondent has a parent company that will guaranty the obligations of Respondent, the Respondent shall provide the specified information for its parent company.

Proposed Facility Information

Please provide the following information for each proposed facility:

I. Facility #1		
Facility Name:		
Facility Description:		
Facility Location:		
Planned Capability (MW):		
II. Facility #2		
Facility Name:		
Facility Description:		
Facility Location:		
Planned Capability (MW):		

Facility Name: Facility Description: Facility Location: Planned Capability (MW): IV. Facility #4 Facility Name:	- Appendix 2 FirstEnergy Trattle Group
Facility Description: Facility Location: Planned Capability (MW): IV. Facility #4	
Facility Location: Planned Capability (MW): IV. Facility #4	
Planned Capability (MW): IV. Facility #4	
Planned Capability (MW): IV. Facility #4	
IV. Facility #4	
Facility Name:	
Facility Description:	
Facility Location:	

Appendix 3

Standard RFP Response Form – Operating Data

Met-Ed/Penelec/Penn Power/West Penn Exhibit JHC-6 - Appendix 3 Solar Power Purchase Agreement Request for Proposals

Appendix 3: RFP Response Form

Is this project in the state of Pennsylvania? What county is the project located in? Is this project within the Companies' Territory? Is this project located within a HUBZone? If project is located within a HUBZone, please provide additional information. Poject Qualifications* Does the proposal qualify for AEPS solar credits under Pennsylvania's Alternative Energy Portfolio Standard's Act? Does your enterprise qualify as an Minority Business Enterprise? Does your enterprise qualify as an veteran owned business? Does your enterprise qualify as a Women's Business Enterprise? Does your enterprise qualify as a Service Disabled Veteran owned business? Does your enterprise qualify as a Service Disabled Veteran owned business? Does your enterprise qualify as a small business (meeting the small size categories defined in NAICS codes)? Please provide information on any environmental or sustainability attributes associated with their project, including any third-party sustainability certifications. The Companies are particularly interested in receiving information about the land use of the facility prior to development, (i.e., brownfield redevelopment of industrial land, conversion of forest land).	eneral	
Share of the Facility Offered ocation Is this project in the state of Pennsylvania? What county is the project located in? Is this project within the Companies' Territory? Is this project located within a HUBZone? If project is located within a HUBZone, please provide additional information. Project Qualifications* Does the proposal qualify for AEPS solar credits under Pennsylvania's Alternative Energy Portfolio Standard's Act? Does your enterprise qualify as an Minority Business Enterprise? Does your enterprise qualify as an veteran owned business? Does your enterprise qualify as a Women's Business Enterprise? Does your enterprise qualify as a Service Disabled Veteran owned business? Does your enterprise qualify as a small business (meeting the small size categories defined in NAICS codes)? Please provide information on any environmental or sustainability attributes associated with their project, including any third-party sustainability certifications. The Companies are particularly interested in receiving information about the land use of the facility prior to development, (i.e., brownfield redevelopment of industrial land, conversion of farmland, conversion of forest land). Other* Are there other applicable factors that need to be	Project Name	[Open Response]
Is this project in the state of Pennsylvania? What county is the project located in? Is this project within the Companies' Territory? Is this project located within a HUBZone? If project is located within a HUBZone, please provide additional information. Project Qualifications* Does the proposal qualify for AEPS solar credits under Pennsylvania's Alternative Energy Portfolio Standard's Act? Does your enterprise qualify as an Minority Business Enterprise? Does your enterprise qualify as an veteran owned business? Does your enterprise qualify as a Women's Business Enterprise? Does your enterprise qualify as a Service Disabled Veteran owned business? Does your enterprise qualify as a Service Disabled Veteran owned business? Does your enterprise qualify as a small business (meeting the small size categories defined in NAICS codes)? Please provide information on any environmental or sustainability attributes associated with their project, including any third-party sustainability certifications. The Companies are particularly interested in receiving information about the land use of the facility prior to development, (i.e., brownfield redevelopment of industrial land, conversion of farmland, conversion of forest land). Dither* Are there other applicable factors that need to be	Nameplate Capacity	0.00
Is this project in the state of Pennsylvania? What county is the project located in? Is this project within the Companies' Territory? Is this project located within a HUBZone? If project is located within a HUBZone, please provide additional information. Project Qualifications* Does the proposal qualify for AEPS solar credits under Pennsylvania's Alternative Energy Portfolio Standard's Act? Does your enterprise qualify as an Minority Business Enterprise? Does your enterprise qualify as an veteran owned business? Does your enterprise qualify as a Women's Business Enterprise? Does your enterprise qualify as a Service Disabled Veteran owned business? Does your enterprise qualify as a Sarvice Disabled Veteran owned business? Does your enterprise qualify as a small business (meeting the small size categories defined in NAICS codes)? Please provide information on any environmental or sustainability attributes associated with their project, including any third-party sustainability certifications. The Companies are particularly interested in receiving information about the land use of the facility prior to development, (i.e., brownfield redevelopment of industrial land, conversion of forest land). Other* Are there other applicable factors that need to be	Share of the Facility Offered	0.00
What county is the project located in? Is this project within the Companies' Territory? Is this project located within a HUBZone? If project is located within a HUBZone, please provide additional information. Project Qualifications* Does the proposal qualify for AEPS solar credits under Pennsylvania's Alternative Energy Portfolio Standard's Act? Does your enterprise qualify as an Minority Business Enterprise? Does your enterprise qualify as an veteran owned business? Does your enterprise qualify as a Women's Business Enterprise? Does your enterprise qualify as a Service Disabled Veteran owned business? Does your enterprise qualify as a samall business (meeting the small size categories defined in NAICS codes)? Please provide information on any environmental or sustainability attributes associated with their project, including any third-party sustainability certifications. The Companies are particularly interested in receiving information about the land use of the facility prior to development, (i.e., brownfield redevelopment of industrial land, conversion of forest land). Other* Are there other applicable factors that need to be [Open Response]	Location	
Is this project within the Companies' Territory? Is this project located within a HUBZone? If project is located within a HUBZone, please provide additional information. Project Qualifications* Does the proposal qualify for AEPS solar credits under Pennsylvania's Alternative Energy Portfolio Standard's Act? Does your enterprise qualify as an Minority Business Enterprise? Does your enterprise qualify as an veteran owned business? Does your enterprise qualify as a Women's Business Enterprise? Does your enterprise qualify as a Service Disabled Veteran owned business? Does your enterprise qualify as a Service Disabled Veteran owned business? Does your enterprise qualify as a small business (meeting the small size categories defined in NAICS codes)? Please provide information on any environmental or sustainability attributes associated with their project, including any third-party sustainability certifications. The Companies are particularly interested in receiving information about the land use of the facility prior to development, (i.e., brownfield redevelopment of industrial land, conversion of forest land). Other* Are there other applicable factors that need to be	Is this project in the state of Pennsylvania?	[Yes / No]
Is this project located within a HUBZone? If project is located within a HUBZone, please provide additional information. Project Qualifications* Does the proposal qualify for AEPS solar credits under Pennsylvania's Alternative Energy Portfolio Standard's Act? Does your enterprise qualify as an Minority Business Enterprise? Does your enterprise qualify as an veteran owned business? Does your enterprise qualify as a Women's Business Enterprise? Does your enterprise qualify as a Service Disabled Veteran owned business? Does your enterprise qualify as a Service Disabled Veteran owned business? Does your enterprise qualify as a small business (meeting the small size categories defined in NAICS codes)? Please provide information on any environmental or sustainability attributes associated with their project, including any third-party sustainability certifications. The Companies are particularly interested in receiving information about the land use of the facility prior to development, (i.e., brownfield redevelopment of industrial land, conversion of forest land). Other* Are there other applicable factors that need to be	What county is the project located in?	[Open Response]
If project is located within a HUBZone, please provide additional information. Project Qualifications* Does the proposal qualify for AEPS solar credits under Pennsylvania's Alternative Energy Portfolio Standard's Act? Does your enterprise qualify as an Minority Business Enterprise? Does your enterprise qualify as an veteran owned business? Does your enterprise qualify as a Women's Business Enterprise? Does your enterprise qualify as a Service Disabled Veteran owned business? Does your enterprise qualify as a Service Disabled Veteran owned business? Does your enterprise qualify as a small business (meeting the small size categories defined in NAICS codes)? Please provide information on any environmental or sustainability attributes associated with their project, including any third-party sustainability certifications. The Companies are particularly interested in receiving information about the land use of the facility prior to development, (i.e., brownfield redevelopment of industrial land, conversion of forest land). Other* Are there other applicable factors that need to be	Is this project within the Companies' Territory?	[Select from Drop-down Menu]
Project Qualifications* Does the proposal qualify for AEPS solar credits under Pennsylvania's Alternative Energy Portfolio Standard's Act? Does your enterprise qualify as an Minority Business Enterprise? Does your enterprise qualify as an veteran owned business? Does your enterprise qualify as a Women's Business Enterprise? Does your enterprise qualify as a Service Disabled Veteran owned business? Does your enterprise qualify as a small business (meeting the small size categories defined in NAICS codes)? Please provide information on any environmental or sustainability attributes associated with their project, including any third-party sustainability certifications. The Companies are particularly interested in receiving information about the land use of the facility prior to development, (i.e., brownfield redevelopment of industrial land, conversion of forest land). Other* Are there other applicable factors that need to be	Is this project located within a HUBZone?	[Yes / No]
Does the proposal qualify for AEPS solar credits under Pennsylvania's Alternative Energy Portfolio Standard's Act? Does your enterprise qualify as an Minority Business Enterprise? Does your enterprise qualify as an veteran owned business? Does your enterprise qualify as a Women's Business Enterprise? Does your enterprise qualify as a Service Disabled Veteran owned business? Does your enterprise qualify as a Service Disabled Veteran owned business? Does your enterprise qualify as a small business (meeting the small size categories defined in NAICS codes)? Please provide information on any environmental or sustainability attributes associated with their project, including any third-party sustainability certifications. The Companies are particularly interested in receiving information about the land use of the facility prior to development, (i.e., brownfield redevelopment of industrial land, conversion of forest land). Other* Are there other applicable factors that need to be		[Open Response]
Pennsylvania's Alternative Energy Portfolio Standard's Act? Does your enterprise qualify as an Minority Business Enterprise? Does your enterprise qualify as an veteran owned business? Does your enterprise qualify as a Women's Business Enterprise? Does your enterprise qualify as a Service Disabled Veteran owned business? Does your enterprise qualify as a Service Disabled Veteran owned business? Does your enterprise qualify as a small business (meeting the small size categories defined in NAICS codes)? Please provide information on any environmental or sustainability attributes associated with their project, including any third-party sustainability certifications. The Companies are particularly interested in receiving information about the land use of the facility prior to development, (i.e., brownfield redevelopment of industrial land, conversion of forest land). Other* Are there other applicable factors that need to be	Project Qualifications*	
Enterprise? Does your enterprise qualify as an veteran owned business? Does your enterprise qualify as a Women's Business Enterprise? Does your enterprise qualify as a Service Disabled Veteran owned business? Does your enterprise qualify as a small business (meeting the small size categories defined in NAICS codes)? Please provide information on any environmental or sustainability attributes associated with their project, including any third-party sustainability certifications. The Companies are particularly interested in receiving information about the land use of the facility prior to development, (i.e., brownfield redevelopment of industrial land, conversion of forest land). Other* Are there other applicable factors that need to be	Pennsylvania's Alternative Energy Portfolio Standard's	[Yes / No]
business? Does your enterprise qualify as a Women's Business Enterprise? Does your enterprise qualify as a Service Disabled Veteran owned business? Does your enterprise qualify as a small business (meeting the small size categories defined in NAICS codes)? Please provide information on any environmental or sustainability attributes associated with their project, including any third-party sustainability certifications. The Companies are particularly interested in receiving information about the land use of the facility prior to development, (i.e., brownfield redevelopment of industrial land, conversion of farmland, conversion of forest land). Other* Are there other applicable factors that need to be		[Yes / No]
Enterprise? Does your enterprise qualify as a Service Disabled Veteran owned business? Does your enterprise qualify as a small business (meeting the small size categories defined in NAICS codes)? Please provide information on any environmental or sustainability attributes associated with their project, including any third-party sustainability certifications. The Companies are particularly interested in receiving information about the land use of the facility prior to development, (i.e., brownfield redevelopment of industrial land, conversion of farmland, conversion of forest land). Other* Are there other applicable factors that need to be		[Yes / No]
Veteran owned business? Does your enterprise qualify as a small business (meeting the small size categories defined in NAICS codes)? Please provide information on any environmental or sustainability attributes associated with their project, including any third-party sustainability certifications. The Companies are particularly interested in receiving information about the land use of the facility prior to development, (i.e., brownfield redevelopment of industrial land, conversion of farmland, conversion of forest land). Other* Are there other applicable factors that need to be		[Yes / No]
Please provide information on any environmental or sustainability attributes associated with their project, including any third-party sustainability certifications. The Companies are particularly interested in receiving information about the land use of the facility prior to development, (i.e., brownfield redevelopment of industrial land, conversion of farmland, conversion of forest land). Other* Are there other applicable factors that need to be		[Yes / No]
sustainability attributes associated with their project, including any third-party sustainability certifications. The Companies are particularly interested in receiving information about the land use of the facility prior to development, (i.e., brownfield redevelopment of industrial land, conversion of farmland, conversion of forest land). Other* Are there other applicable factors that need to be		[Yes / No]
Are there other applicable factors that need to be	sustainability attributes associated with their project, including any third-party sustainability certifications. The Companies are particularly interested in receiving information about the land use of the facility prior to development, (i.e., brownfield redevelopment of industrial land, conversion of farmland, conversion of	[Open Response]
I Open Response I	Other*	
	· ·	[Open Response]

^{*} Please provide any supporting documentation regarding the required questions under "Project Qualifications" or "Other", as attachments to your submission, in .pdf format.

Met-Ed/Penelec/Penn Power/West Penn Exhibit JHC-6 - Appendix 3

General											
PJM Commercial Pricing Node	[Open Response]										
Planned Commercial In-Service Date	[MM/DD/YYYY]										
Briefly describe the current state of construction. List the milestones to be achieved between now and proposed PPA start date. If additional space is needed, please supplement your response with additional description or documentation in .pdf format.	[Open Response]										
		2024 / 25	2025 / 26	2026 / 27	2027 / 28	2028 / 29	2029 / 30	2030 / 31	2031 / 32	2032 / 33	2033 / 34
Capacity and Anticipated Facility Output*	2023 / 24 Planning Year (if applicable)	Planning Year									
Projected ICAP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Projected UCAP	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Projected p50 Capacity Factor (annualized)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Projected p90 Capacity Factor (annualized)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Pricing Option 1											
Offer Price for 2023 / 24 Planning Year (or the 2024 / 25 Planning Year if the planned commercial in-service date specified above falls after May 31, 2024)	\$0.00	\$/MWh									
Offer Price Annual Escalation Rate	0.0%	%/Year	Escalation to take	effect on June 1 of e	ach year unless othe	erwise specified.					
Pricing Option 2	2023 / 24 Planning Year (if applicable)	2024 / 25 Planning Year	2025 / 26 Planning Year	2026 / 27 Planning Year	2027 / 28 Planning Year	2028 / 29 Planning Year	2029 / 30 Planning Year	2030 / 31 Planning Year	2031 / 32 Planning Year	2032 / 33 Planning Year	2033 / 34 Planning Year
Offer Price by Contract Year	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00	\$0.00

^{*} Please provide any supporting documentation regarding the projected capacity and capacity factor, including average hourly shape information based on weather data, in .pdf, .xlsx., or other electronic format.

Schedule for ICRT - DSP VI [illustrative purposes only]

- * ICRT is a financial security requirement which requires suppliers to provide collateral based on the number of tranches they win
- * ICRT required for both Residential and Commercial tranches (not required for Industrial)
- * ICRT **not** required for 6-month tranches
- * ICRT netted with prior ICRT requirements

Month	24-Month Product (\$/tranche)	12-Month Product (\$/tranche)
Month 1	1,500,000	1,500,000
Month 2	1,500,000	1,500,000
Month 3	1,500,000	1,200,000
Month 4	1,500,000	1,200,000
Month 5	1,500,000	1,000,000
Month 6	1,500,000	1,000,000
Month 7	1,200,000	800,000
Month 8	1,200,000	800,000
Month 9	1,200,000	600,000
Month 10	1,200,000	600,000
Month11	1,000,000	400,000
Month 12	1,000,000	400,000
Month 13	1,000,000	
Month 14	1,000,000	
Month 15	800,000	
Month 16	800,000	
Month 17	800,000	
Month 18	800,000	
Month 19	600,000	

600,000

600,000

400,000

400,000

Month 20 Month 21

Month 22

Month 23

Month 24

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

METROPOLITAN EDISON COMPANY
DOCKET NO. P-2021-_____

PENNSYLVANIA ELECTRIC COMPANY
DOCKET NO. P-2021-____

PENNSYLVANIA POWER COMPANY
DOCKET NO. P-2021-____

WEST PENN POWER COMPANY
DOCKET NO. P-2021_____

DEFAULT SERVICE PROGRAMS

Of
Wanyun Zhong

June 1, 2023 – May 31, 2027

List of Topics Addressed

Default Service Supplier Master Agreement Contingency Plans

TABLE OF CONTENTS

		Page
I.	INTRODUCTION AND PURPOSE	1
II.	DEFAULT SERVICE SMA	3
III.	CONTINGENCY PLANS	9
IV.	CONCLUSION	12

DIRECT TESTIMONY OF WANYUN ZHONG

4 I. <u>INTRODUCTION AND PURPOSE</u>

1

2

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

A.

- 5 Q. Please state your name and business address.
- A. My name is Wanyun Zhong. My business address is 341 White Pond Drive, Akron, Ohio
 44320.

8 Q. By whom are you employed and in what capacity?

I am employed by FirstEnergy Service Company as a Business Analyst for the Regulated Commodity Sourcing Department ("RCS"). RCS is primarily responsible for procuring power and power-related products for all of FirstEnergy Corp.'s ("FirstEnergy's") regulated utilities. RCS's activities include, but are not limited to, supporting the procurement plans of the FirstEnergy utilities in regulatory proceedings; developing both solicitation and contract materials; interacting with independent evaluators; executing contracts; and handling many of the operational aspects of default service supply that require interfacing with PJM Interconnection, L.L.C. ("PJM"). I am primarily responsible for the procurement and management of the regulated energy supply and renewable-energy portfolio that FirstEnergy's electric distribution utilities are required to maintain as load serving entities ("LSEs") to serve their Pennsylvania retail electric customers who receive default service. I have participated in eight competitive power procurements utilizing auction formats and one solar photovoltaic alternative energy credit ("SPAECs") procurement in Pennsylvania utilizing a request for proposal ("RFP") format. As a result, I am very familiar with the attributes of these procurement processes, which are tailored for the specific markets in which the solicitations are conducted.

1 Q. Please describe your educational background and professional experience.

A. I received a Bachelor of Engineering degree from Harbin Institute of Technology, a Master of Science degree from the University of Toledo, and a Ph.D. in Systems and Control Engineering from Case Western Reserve University. I also received the PJM Markets Certification in 2020. I have over ten years of experience in the electric energy field in both academia and industry. My experience is related to power plant design and engineering, energy storage, smart grids, and electricity markets.

8 Q. On whose behalf are you testifying in this proceeding?

A. I am testifying on behalf of Metropolitan Edison Company ("Met-Ed), Pennsylvania

Electric Company ("Penelec"), Pennsylvania Power Company ("Penn Power"), and West

Penn Power Company ("West Penn") (each of which may be referred to as a "Company"

and, in any combination, as the "Companies").

Q. Please describe the purpose of your testimony.

13

14

15

16

17

18

19

20

A. The purpose of my testimony is to describe: (i) the proposed Supplier Master Agreement ("SMA") for execution between each Company and each winning default service supplier; and (ii) the Companies' contingency plans in the event of wholesale supplier default, unfilled solicitations for full requirement or long-term solar RFP due to a lack of supplier bids or the Commission's rejection of bids, or PJM's failure to timely conduct a base residual auction ("BRA").

Q. Have you prepared any exhibits to accompany your testimony?

A. Yes. Met-Ed/Penelec/Penn Power/West Penn Exhibit WZ-1, the Default Service Supplier

Master Agreement, was prepared by me or under my supervision.

This exhibit is described in detail in my testimony and also discussed in the direct testimony of James H. Catanach (Met-Ed/Penelec/Penn Power/West Penn Statement No. 2). The exhibit includes a redline version of the SMA which shows all changes proposed to the document utilized currently in DSP V.

II. <u>DEFAULT SERVICE SMA</u>

Q. What is the SMA?

A.

A. The SMA is the agreement executed by each Company and each successful bidder that governs specific duties, rights, and obligations in connection with the sale and purchase of default service supply to serve the Companies' retail electric customers receiving default service.

Q. How was the Companies' proposed form SMA developed?

In its Order entered on February 15, 2013 in *Investigation of Pennsylvania's Retail Electricity Market: End State of Default Service* at Docket No. I-2011-2237952, the Pennsylvania Public Utility Commission ("Commission") directed its Office of Competitive Market Oversight ("OCMO") to create a procurement collaboration working group, which was tasked with formulating, among other things, a uniform SMA. The Companies participated actively in the working group's development of a uniform SMA, which was to be used on a statewide basis. The resulting SMA, with minor modifications, was adopted by the Companies and is currently in use under the Companies' current default service programs ("DSPs"). The Companies are proposing a similar form SMA for use under the proposed DSPs, subject to minor modifications as discussed below. The proposed form SMA is attached hereto as Met-Ed/Penelec/Penn Power/West Penn Exhibit WZ-1.

Q. Does each Company propose to have a unique SMA?

A.

A. No. All the Companies will use the uniform SMA template. However, they will adjust the SMA Appendices to their individual needs based on the product mix, pricing, and other terms specific to each Company and each customer class. The SMA is an umbrella document; a supplier can execute only one during the course of a DSP.

Q. How are suppliers to be paid under the proposed form SMA?

It depends largely upon the class being served. For residential customer products, default service suppliers will be paid a 95% fixed and 5% variable price. The fixed price, in dollars per megawatt hour ("MWh"), will be for 95% of the delivered supply each hour and will be established through the Companies' competitive procurement process. This fixed price will be included in Exhibit 1 of the SMAs once known. The fixed price will be a supplier's compensation for all cost components associated with meeting the full-requirements default service supply, including capacity, ancillary services, Alternative Energy Portfolio Standards ("AEPS") Act compliance, and all PJM administrative expenses and any other services or fees as required by PJM of an LSE, with some limited exceptions. The variable price, in dollars per MWh, will be for 5% of the delivery supply each hour and will be the real-time hourly total LMP for the delivery point, plus a fixed adder of \$20.00/MWh, which is the same fixed adder as used in DSP V. The applicable delivery point will be provided to bidders and included in Exhibit 1 of the executed SMAs.

¹ Specifically, winning bidders will not be responsible for the following charges: Regional Transmission Expansion Plan charges ("RTEP"); Expansion Cost Recovery Charges; Reliability Must Run/generation deactivation charges associated with generating plants for which specific RMR charges that began after July 24, 2014; historical out-of-market tie line, generation, and retail customer meter adjustments; unaccounted for energy; and any FERC-approved reallocation of PJM RTEP charges related to Docket No. EL05-121-009 (collectively referred to as "non-market based charges," or "NMB charges").

For commercial customer products, default service suppliers will be paid a fixed price. The fixed price, in dollars per MWh, will be for 100% of the delivered supply each hour, which will be established through the Companies' competitive procurement process and included in Exhibit 1 of the SMAs once known. The fixed price will be a supplier's compensation for all cost components associated with meeting the full-requirements default service supply, including capacity, ancillary services, AEPS compliance, and all PJM administrative expenses and any other services or fees as required by PJM of an LSE; however, it will exclude the NMB as previously discussed.

As with the Companies' prior and current DSPs, for industrial customer products, default service suppliers will be paid a variable price for each hour during the applicable period. The price paid is equal to the delivered supply multiplied by the sum of the real-time hourly LMP for the applicable PJM delivery point, plus the winning price for the winning default service suppliers in the hourly-priced auction. This price also includes an additional \$4/MWh to capture an estimate of costs of other supply components associated with meeting this full-requirements obligation, including capacity, ancillary services, AEPS compliance, and all PJM administrative expenses and any other services or fees as required by PJM of an LSE, but excluding the NMB charges.

Q. Please explain how the credit requirements work in the uniform SMA.

A. An unsecured credit matrix was developed by the Companies to allow each Pennsylvania utility to have a tailored unsecured credit table based on its own credit policy. A supplier's credit exposure ("Total Exposure Amount") is based upon a fixed amount corresponding to the total default service load the supplier is obligated to serve. The maximum unsecured credit will be based on Appendix A of the uniform SMA. The credit matrix will define the

maximum amounts to be used for these metrics based on the default service supplier's average credit ratings by Standard & Poor's Rating Service, Moody's Investor Service, Inc., Fitch Investor Service, Inc., or any combination thereof.

If a default service supplier's Total Exposure Amount exceeds the default service supplier's maximum unsecured credit limit, the default service supplier will have to furnish either cash or an acceptable letter of credit equal to the excess amount. The standard form for the letter of credit is provided in Appendix F of the uniform SMA.

Q. Are the Companies proposing any modifications to the SMA?

A.

A. Yes. The Companies are proposing to make substantive modifications to reflect changes in the areas of AEPS Act obligations, protections against default service supplier default, and contingency planning. The first two topics are discussed in detail in the direct testimony of James H. Catanach (Met-Ed/Penelec/Penn Power/West Penn Statement No. 2); my testimony addresses the adoption of a standard supplier assignment agreement and contingency planning.

Q. Please describe the proposed changes to the SMA.

Regarding AEPS Act obligations, the proposed SMA provides that default service suppliers will be responsible for satisfying all AEPS Act requirements associated with their supply (solar Tier I, non-solar Tier I, and Tier II), less any SPAEC allocations from the Companies. Met-Ed, Penelec, and Penn Power's default service suppliers will be allocated SPAECs from the existing long-term contracts in the first year of DSP VI. In addition, all the Companies' residential default service suppliers will be allocated SPAECs from the

proposed long-term solar power purchase agreements ("PPAs"), which are described by

Mr. Catanach.

Finally, the proposed SMA includes a number of changes related to protection against supplier default, including a modified Credit Exposure Methodology, the addition of an Independent Credit Requirement per Tranche ("ICRT"), and the adoption of a standard supplier assignment agreement.

The Companies are also proposing the following changes to the appendices of the SMA:

In Appendix A, Maximum Unsecured Credit, the existing table was updated to reflect a new proposed Credit Limit Cap. The Credit Rating Determination Methodology reflects the Companies' proposal to use the lower of the credit agencies' ratings and to provide an aggregate, rather than per-Company, credit amount. In addition, an ICRT schedule has been added.

In Appendix C, DS Supply Specifications, the DS Customer Groups were updated to reflect the applicable rate schedules for residential West Penn customers and commercial Penn Power customers.

In Appendix E, DS Supplier's Obligations for AEPS Compliance, the default service suppliers will be responsible for all AEPS requirements (less any SPAEC allocations), including any revisions to those requirements due to changes in Federal or state laws or regulations, or both.

Appendix H was added to introduce the Capacity Proxy Price ("CPP") into the contingency plan. A Capacity proxy price will be used for default service auctions to establish a

- capacity cost when PJM does not conduct their BRA in time for default service suppliers to incorporate the auction results into their bids.
- The proposed Appendix I is a standard supplier assignment agreement.

A.

Q. Why are the Companies proposing to adopt a supplier assignment agreement in DSP VI?

Although none of the Companies have experienced a default service supplier default to date, a default service supplier recently sought to assign all of its tranches to another entity in the wake of increasing energy prices. Because the Companies' current SMA lacks a standard supplier-assignment agreement, the parties had to dedicate significant time and effort toward developing a mutually-agreeable contract. To prevent similar inefficiencies with future default service supplier assignments, the Companies propose to augment their contingency plan with a standard default service supplier assignment agreement (i.e., Appendix I to the SMA).

Q. Does the current SMA allow for supplier assignments?

A. Yes. The express provisions of Section 16.3 authorize suppliers and the counter-signing company to assign their respective rights, duties, and obligations under the SMA to another party. However, as stated previously, the Companies currently lack the requisite standardized agreement for facilitating assignments—hence, this proposed supplier assignment agreement.

Q. Will bidders be permitted to propose additional modifications to the SMA once approved?

A. No. The Companies intend to treat all bidders uniformly, which requires that each bidder have the same rights and obligations under the SMA. Moreover, a standardized contract permits bidders to be selected on the sole criterion of price. The uniform SMA proposed by the Companies contains provisions that were developed as part of the working group process and are already well-understood by bidders. Additionally, the OCMO working group that developed the uniform SMA provided ample opportunity for input from the wholesale supplier community during the development process. The Companies have, over time, identified various updates based on practical experience with historical auctions or through input from parties to past DSP proceedings, and those updates are already reflected in the SMAs. As a result, the Companies do not believe any additional modifications to the SMAs, other than those I have described, are appropriate.

III. CONTINGENCY PLANS

- Q. What default service supply contingencies do the Companies propose to address in their DSPs?
- 17 A. While not every contingency can be anticipated, the Companies have identified the following possible scenarios for which contingency plans have been developed:
 - (1) The Companies' competitive solicitations for full requirements, load-following tranche products are not fully subscribed due to a lack of bids or the rejection of bids by the Commission, or in the case of the long-term solar procurement, a lack of bids or the rejection of bids by the Commission;
 - (2) A default by any of the winning suppliers prior to the start of the delivery period or at any time during the delivery period; or
 - (3) PJM does not conduct its BRA in time for default service suppliers to incorporate the capacity price into their bids.

Q. What is the contingency plan if the Companies' competitive solicitation for full requirements, load-following products is not fully subscribed due to a lack of bids or rejection of bids by the Commission?

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

- In the event that a scheduled solicitation is not fully subscribed following the initial A. proposed procurement due to a lack of bids or due to rejection of bids by the Commission, the Companies will rebid the unfilled tranches from that solicitation in the next scheduled procurement for which there is sufficient calendar time to include the tranches. For any unfilled tranches still remaining, the Companies, acting as the LSE, will purchase the necessary physical supply through PJM-administered markets. The Companies' procurements will be made at real-time zonal variable market prices, plus other supply costs, including capacity, ancillary services, and AEPS Act compliance. The Companies will not enter into hedging transactions to attempt to mitigate the associated price or volume risks to serve these tranches. The Companies will also propose to satisfy AEPS compliance requirements for unfilled tranches at market prices. At the next semi-annual rate adjustment, the Companies will include an estimate of these costs in the weighted cost of the default service supply calculation and utilize the reconciliation process to recover from default service customers the difference between the estimated and actual costs that the Companies incur as a result of purchasing the necessary supply and AEPS requirements.
 - Q. What is the contingency plan if the Companies' long-term solar PPA is not successful?
 - A. In the event that there are no bidders for the long-term solar procurement or the bids are rejected by the Commission, the Companies will develop an RFP to procure a five-year block of SPAECs to satisfy up to an estimated 32% of residential default service suppliers'

projected SPAEC requirements. If the RFP is undersubscribed, the Companies will go to the spot market to procure the SPAEC shortfall.

Q. When would the RFP for the five-year block of SPAECs be conducted?

4 A. The RFP would be conducted within six months after an unsuccessful long-term PPA solicitation.

6 Q. How will the RFP for the five-year block of SPAECs be conducted?

15

16

17

18

19

20

21

22

A.

- A. The Brattle Group, our independent evaluator, will manage the RFP process. They will produce the necessary documents for the RFP, conduct a bidder information session for the potential bidders, and produce the final results for the Commission approval. The documents used for this process will be based on the prior SPAEC RFP documents approved by the Commission.
- Q. What is the contingency plan if a winning bidder of a full service load-following tranche product were to default prior to the start of or during the Companies' delivery periods?
 - If a winning bidder defaults prior to the start of or during the delivery period, the Companies will offer the unfilled tranches to the other registered bidders who participated in the most recent solicitation, subject to applicable load caps. The Companies may enter into an agreement with the registered bidder or bidders offering the best terms for the unfilled tranches resulting from the default, provided the prices offered by such bidder or bidders are consistent with the original prices under which the unfilled tranches were procured adjusted for changes in market conditions from the time when the original tranches were procured. If the Companies are not able to enter into such an agreement and

more than thirty calendar days exists prior to the start of the delivery period, the Companies will seek to bid the defaulted tranches in the next available or a separate supplemental competitive solicitation. As with other unfilled tranches described above, if insufficient time exists to conduct an additional competitive solicitation, or if the supplemental solicitation is unsuccessful, the Companies will supply the tranches using PJM-administered markets with recovery and reconciliation of estimated and actual costs as described previously.

Q. What is the contingency plan if PJM does not conduct its BRA in time for default service suppliers to incorporate capacity costs into their bids?

A capacity proxy price will be used for default service auctions to establish a capacity cost when PJM does not conduct their BRA in time for default service suppliers to incorporate the auction results into their bids. The CPP for each Company will be the average of the capacity prices from the previous two known delivery year capacity market auctions conducted by PJM. The Companies will calculate reconciliations for those default service suppliers impacted by utilizing their daily Unforced Capacity ("UCAP") obligation by class, tranches served by class, and the differential between the CPP and the final capacity price. Once the BRA is known, the Companies will commence true-ups in the next billing month, which initially may include a "catch up" reconciliation for any months where the BRA was not known.

20 IV. <u>CONCLUSION</u>

- 21 Q. Does this conclude your direct testimony?
- A. Yes, it does.

A.

METROPOLITAN EDISON COMPANY PENNSYLVANIA ELECTRIC COMPANY, PENNSYLVANIA POWER COMPANY, AND WEST PENN POWER COMPANY

DEFAULT SERVICE SUPPLIER MASTER AGREEMENT

TABLE OF CONTENTS

PENNSYLVA	NIA DEFAULT SERVICE SUPPLIER MASTER AGREEMEN	VT 1
ARTICLE 1:	DEFINITIONS	2
ARTICLE 2:	GENERAL TERMS AND CONDITIONS	12
2.1	Capacity In Which Company Is Entering Into This Agreeme	nt 12
2.2	Parties' Obligations	12
2.3	Congestion and Congestion Management	15
2.4	PJM Services	15
2.5	PJM Agreement Modifications	16
2.6	PJM Member Default Cost Allocation	
2.7	Other Fines and Penalties	17
2.8	Communications and Data Exchange	17
2.9	Record Retention	
2.10	Verification	18
2.11	Forward Contract Merchant	18
ARTICLE 3:	REPRESENTATIONS AND WARRANTIES	19
3.1	DS Supplier's Representations and Warranties	19
3.2	Company's Representations and Warranties	
3.3	Survival of Obligations	23
ARTICLE 4:	COMMENCEMENT AND TERMINATION OF AGREEM	ENT
		24
4.1	Commencement and Termination	24
4.2	Termination of Right to Supply	24
4.3	Survival of Obligations	24
4.4	Mutual Termination	24
ARTICLE 5:	BREACH AND DEFAULT	26
5.1	Events of Default	26
5.2	Rights upon Default	29
5.3	Damages Resulting From an Event of Default	30
5.4	Declaration of an Early Termination Date and Calculation of	
	Settlement Amount and Termination Payment	33
5.5	Step-up Provision	36
5.6	Setoff of Payment Obligations of the Non-Defaulting Party	37
5.7	Preservation of Rights of Non-Defaulting Party	37
ARTICLE 6:	CREDITWORTHINESS	38
6.1	Applicability	38
6.2	Creditworthiness Determination	38
6.3	Credit Exposure Methodology	39
6.4	Credit Limit	
6.5	Posting Margin and Return of Surplus Margin	
6.6	Grant of Security Interest/Remedies	
6.7	Security Instruments	
6.8	Maintenance of Creditworthiness	
6. 9	Calling on Security	
6.10	Interest on Cash Held by Company	

6.11	No Endorsement of DS Supplier	49
6.12	Multiple DS Supply Agreements	49
6.13	Independent Credit Requirement per Tranche	50
ARTICLE 7:	Procedures For Energy Scheduling, Capacity Resource	
	Submission And Transmission Procurement	50
7.1	Load Obligations	50
7.2	Data Transmission	50
7.3	Energy Scheduling	
ARTICLE 8:	THE ENERGY SETTLEMENT/RECONCILIATION PROCES	S
		51
8.1	Energy Settlement By PJM	51
8.2	Energy Settlement by the Company	51
ARTICLE 9:	BILLING AND PAYMENT	51
9.1	The Company Payment of Obligations to the DS Supplier	51
9.2	Billing for DS Supplier's Obligations to Other Parties	54
9.3	The DS Supplier Payment of Obligations to the Company	54
ARTICLE 10:	SYSTEM OPERATION	
10.1	Disconnection and Curtailment By the Company	
10.2	Inadvertent Loss of Service to DS Customers	
10.3	Good Faith Efforts	56
10.4	PJM Requirements	
10.5	Compliance with Governmental Directives	
ARTICLE 11:	DISPUTE RESOLUTION	
11.1	Informal Resolution of Disputes	
11.2	Recourse to Agencies or Courts of Competent Jurisdiction	58
ARTICLE 12:	REGULATORY AUTHORIZATIONS AND JURISDICTION	
12.1	Compliance with Applicable Legal Authorities	59
12.2	FERC Jurisdictional Matters	
12.3	Energy Efficiency, Conservation, and Retail Market Programs	
ARTICLE 13:	LIMITATION OF REMEDIES, LIABILITY AND DAMAGES	
13.1	Limitations on Liability	
13.2	Risk of Loss	
ARTICLE 14:	INDEMNIFICATION	
14.1	Indemnification	62
14.2	Survives Agreement	
ARTICLE 15:	FORCE MAJEURE	
15.1	Force Majeure	
15.2	Notification	
ARTICLE 16:	MISCELLANEOUS PROVISIONS	
16.1	Notices	65
16.2	No Prejudice of Rights	
16.3	Assignment	
16.4	Governing Law and Venue	
16.5	Regulatory Approvals	
16.6	Headings	
16.7	Third Party Beneficiaries	

16.8	General Miscellaneous Provisions	68
16.9	Taxes	69
16.10	Audit	70
16.11	Rules of Interpretation	70
16.12	Confidentiality	
16.13	Federal Acquisition Regulation	
16.14	Binding Terms	
16.15	Amendment	
16.16	Counterparts	74
16.17	Successors	
APPE	NDIX A- Maximum Unsecured Credit	
	NDIX B – MtM Exposure Amount Calculation Information	
	NDIX C - DS Supply SpecificaTIONS	
	ndix D – Responsibilities for PJM Billing Line Items As Defined in A	
	PJM Agreement or Manual	-
Apper	ndix E – DS Supplier's Obligations for AEPS Compliance	
	NDIX F - LETTER OF CREDIT DOCUMENTATION	
	NDIX G - GUARANTY	
	NDIX H – CAPACITY PROXY PRICE	
	NDIX I – ASSIGNMENT AGREEMENT	

PENNSYLVANIA DEFAULT SERVICE SUPPLIER MASTER AGREEMENT

THIS DEFAULT SERVICE SUPPLIER MASTER AGREEMENT, made and entered into this _____ day of _____ ("Effective Date"), by and between [Applicable EDC listed here - Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company or West Penn Power Company] (the "Company" and "Buyer"), a corporation and a public utility organized and existing under the laws of the Commonwealth of Pennsylvania [INSERT NAME OF SUPPLIER] ("DS Supplier"), the Company and the DS Supplier hereinafter sometimes referred to collectively as the "Parties", or individually as a "Party",

WITNESSETH:

WHEREAS, the Company is an electric public utility engaged, <u>inter alia</u>, in providing retail electric service within its service territory located in the Commonwealth of Pennsylvania; and

WHEREAS, the Pennsylvania Public Utility Commission ("PaPUC" or "Commission") Orders issued pursuant to the Electricity Generation Customer Choice and Competition Act, 66 Pa.C.S. §§ 2801-2812, direct Buyer to supply electric service to Default Service Load within Buyer's Pennsylvania franchise service territory; and

WHEREAS, the PaPUC has found that, for periods further identified in Appendix C it would serve the public interest for the Company to secure Default Service Supply ("DS Supply") through a competitive procurement process ("DS Solicitation") and the PaPUC has approved such a process; and

WHEREAS, the Company has conducted and completed a successful DS

Solicitation for the provision of DS Supply, and the DS Supplier was one of the winning bidders in the DS Solicitation; and

WHEREAS, pursuant to the competitive bidding procedures of the DS Solicitation, the Company and the DS Supplier desire to enter into this Agreement setting forth their respective rights and obligations concerning the provision of DS Supply.

NOW, THEREFORE, in consideration of the mutual covenants and promises set forth below, and for other good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the Parties hereto, intending to be legally bound, hereby covenant, promise and agree as follows:

ARTICLE 1: DEFINITIONS

Any capitalized or abbreviated term not elsewhere defined in this Agreement shall have the definition set forth in this Article.

AEPS Act – The Pennsylvania Alternative Energy Portfolio Standards Act, 73 P.S. §§ 1648.1-1648.8.

Affiliate - means, with respect to any entity, any other entity that, directly or indirectly, through one or more intermediaries, controls, or is controlled by, or is under common control with, such entity. For this purpose, "control" means the direct or indirect ownership of fifty percent (50%) or more of the outstanding capital stock or other equity interests having ordinary voting power.

Allocated AECs – Shall mean the types and amounts of AECs specified on Appendix E. if any.

Alternative Energy Credit or "AEC" – Shall have the meaning ascribed thereto in the AEPS Act.

Alternative Energy Portfolio Standards or "AEPS" – Standards requiring that a certain amount of electric energy sold to retail electric customers in the Commonwealth of Pennsylvania be comprised of electricity generated from alternative energy sources, as measured by AECs, in accordance with the requirements of the AEPS Act and provisions of the Electricity Generation Customer Choice and Competition Act, 66 Pa.C.S. §§ 2812-

14, in effect on the Effective Date including, without limitation, any subsequent increases in Tier I requirements under 66 Pa.C.S. § 2814.

Ancillary Services – Shall have the meaning ascribed thereto in the PJM Agreements.

Applicable Legal Authorities – Those **F**ederal and Pennsylvania statutes and administrative rules and regulations that govern the electric utility industry in Pennsylvania, as they may be amended from time to time.

Auction Revenue Rights or "ARR" – The current or any successor congestion management mechanisms as may be employed by PJM (whether set forth in the PJM Agreements or elsewhere) for the purpose of allocating financial congestion hedges or financial transmission auction revenue rights. As currently defined by PJM, ARRs are entitlements allocated annually by PJM which entitle the holder to receive an allocation of the revenues from the annual auction of financial transmission rights conducted by PJM pursuant to the PJM Agreements.

Bankruptcy Code – Those laws of the United States of America related to bankruptcy, codified and enacted as Title 11 of the United States Code, entitled "Bankruptcy" and found at 11 U.S.C. § 101 <u>et seq.</u>, as such laws may be amended, modified, replaced or superseded from time to time.

Billing Line Item Transfers - "Billing Line Item Transfers" shall have the meaning ascribed to it in Section 2.4 (PJM Services).

Billing Month – Each calendar month during the term of this Agreement.

Business Day – Any day on which the Company's and PJM's corporate offices are open for business and commercial banks are not authorized or required to close in New York, New York.

Capacity – "Unforced Capacity" as set forth in the PJM Agreements, or any successor, measurement of the capacity obligation of a Load Serving Entity as may be employed in PJM (whether set forth in the PJM Agreements or elsewhere).

<u>Capacity Market Auction</u> – The auctions conducted by PJM in the accordance with PJM's Reliability Pricing Model ("RPM").

<u>Capacity Proxy Price or "CPP" - The capacity price DS Suppliers account for in their bid if the PJM capacity price is not known for a given year.</u>

Charge – Any fee, charge or other amount that is billable by the Company to the DS Supplier under this Agreement.

Commercial Class – Group of Rate Schedules that comprise the Commercial Class for DS Supply and itemized in Appendix C.

Costs – With respect to the Non-Defaulting Party, brokerage fees, commissions and other similar transaction costs and expenses reasonably incurred by such Party either in terminating any arrangement pursuant to which it has hedged its obligations or entering into new arrangements which replace this Agreement; and all reasonable attorneys' fees and expenses incurred by the Non-Defaulting Party in connection with the termination of this Agreement.

Customer – Any person or entity who enters a contractual agreement with the Company to receive retail electric service including, without limitation, all persons or entities taking service under a retail tariff, eligible to receive competitive electricity supply from an EGS or DS, respectively, in accordance with the Applicable Legal Authorities.

Damages – Financial compensation from the Defaulting Party to the Non-Defaulting Party associated with the occurrence of an Event of Default or an Early Termination of this Agreement. This compensation shall be assessed pursuant to Article 5 of this Agreement.

Default Allocation Assessment – shall have the meaning ascribed to it under the PJM Agreements.

Defaulting Party – A Party to this Agreement that has caused or precipitated an Event of Default or an Early Termination of this Agreement.

Default Service or "DS" – Electric generation service that is provided at retail pursuant to the Applicable Legal Authorities under the Company's retail electric tariffs and under any other agreements or arrangements between the Company and Customers, to any Customer that is not being served by an EGS.

Default Service Supply or "DS Supply" – All necessary Energy, Capacity, AECs for AEPS Act compliance, Ancillary Services, and transmission services, all transmission and distribution losses and congestion and imbalance costs associated with the provision of such services, and such other services or products that the DS Supplier may be required, by PJM or any governmental body having jurisdiction, to provide in order to meet the DS Supplier Responsibility Share for serving DS Load under this Agreement and as detailed in Appendix C. For the avoidance of doubt, any reference in this Agreement to any other agreement for DS Supply shall include any agreement between the Parties for the provision of Energy to serve DS Load, even if such other agreement does not require delivery of additional products (e.g., Capacity).

Delivery Period – The delivery period specified in Appendix C.

Delivery Point – Means the applicable zone of the Company as designated by PJM.

DS Customer(s) – Retail customers who are provided Default Service pursuant to the terms of this Agreement, the Applicable Legal Authorities and the Company's retail tariffs.

DS Fixed Percentage – The percentage of DS Supply provided at a fixed price, as set forth in Exhibit 1.

DS Fixed Price – The price in dollars per MWh, as set forth in Exhibit 1 hereto, as determined pursuant to the DS Solicitation.

DS Load – The aggregate load of DS Customers being provided DS Supply.

DS Solicitation – The competitive bidding processes, procedures and rules employed by the Company to competitively procure DS Supply for purposes of this Agreement.

DS Supplier – An entity that (i) has been selected through the DS Solicitation and has accepted the obligations and associated rights to provide DS Supply to the Company for retail customers in accordance with the Applicable Legal Authorities, (ii) has entered into this Agreement with the Company as a Party, and (iii) is a PJM Member and registered with PJM as a LSE.

DS Supplier Representative – Any officer, director, employee, consultant, contractor, or other agent or representative of the DS Supplier in connection with the DS Supplier's activity under this Agreement. To the extent the DS Supplier is a division or group of a company, the term DS Supplier Representative does not include any person in that company who is not part of the DS Supplier division or group.

DS Supplier Responsibility Share – The fixed percentage share of the Company's DS Load for which the DS Supplier is responsible as set forth in Appendix C.

DS Tariff – The Company's existing schedules of rates and services provided to retail customers as currently on file with the Commission and on the Company's website at https://www.firstenergycorp.com/content/customer/customer_choice/pennsylvania/penns ylvania_tariffs.html, as they may be amended from time to time.

DS Variable Percentage – The percentage of DS Supply provided at a variable price, as set forth in Exhibit 1 hereto.

DS Variable Price – The price in dollars per MWh, as set forth in Exhibit 1 hereto.

Early Termination – Termination of this Agreement prior to the end of the term due to the occurrence of an Event of Default as specified in Article 5.2 of this Agreement and the declaration of Early Termination.

Early Termination Date – The date upon which an Early Termination becomes effective as specified in Article 5.2 of this Agreement.

Electric Distribution Company or "EDC" – A public utility providing facilities for the transmission and distribution of electricity to retail customers in Pennsylvania.

Electric Generation Supplier or "EGS" – A person or entity that is duly certified by the Commission to offer and provide competitive electric supply to retail customers located in the Commonwealth of Pennsylvania.

Emergency – (i) an abnormal system condition requiring manual or automatic action to maintain system frequency, or to prevent loss of firm load, equipment damage, or tripping of system elements that could adversely affect the reliability of an electric system or the safety of persons or property; or (ii) a condition that requires implementation of Emergency Operations Procedures as defined in the PJM Agreements or PJM manuals; or (iv) any other condition or situation that the Company or PJM deems imminently likely to endanger life or property or to affect or impair the Company's electrical system or the electrical system(s) of other(s) to which the Company's electrical system is directly or indirectly connected (a "Connected Entity"). Such a condition or situation may include, but shall not be limited to, potential overloading of the Company's transmission and/or distribution circuits, PJM minimum generation ("light load") conditions, or unusual operating conditions on either the Company's or a Connected Entity's electrical system, or conditions such that the Company is unable to accept Energy from the DS Supplier without jeopardizing the Company's electrical system or a Connected Entity's electrical system. Other additional emergencies can only be declared by PJM, FERC, or the PaPUC.

Energy – Three-phase, 60-cycle alternating current electric energy, expressed in units of kilowatt-hours or megawatt-hours.

Event of Default – A Party's breach of obligations under this Agreement as set forth in Article 5 of this Agreement.

FERC – The Federal Energy Regulatory Commission.

Final Monthly Energy Allocation or "FMEA" – A quantity of Energy which, for any Billing Month, is the PMEA adjusted for any billing or metering data received subsequent to the calculation of PMEA of which PJM is notified within 60 days.

Force Majeure - Means an event or circumstance which prevents one Party from performing its obligations under one or more transactions, such as riots or revolutions, demands or embargoes of the United States Government, fire, flood, drought, insurrection, acts of God which are not within the reasonable control of, or the results of the negligence of the affected Party and which, by the exercise of due diligence, the Party is unable to mitigate or avoid or cause to be avoided. Notwithstanding the foregoing, under no circumstance shall an event of Force Majeure be based on: (i) the loss or failure of DS Supplier's supply; (ii) DS Supplier's ability to sell the DS Supply at a price greater than that received under any Transaction; (iii) curtailment by a utility transmitting DS Supply; (iv) the Company's ability to purchase the DS Supply at a price lower than paid under any Transaction; (v) any change in requirements of any governmental authority; or (vi) labor stoppage or lockout.

Forward Market Price – The price for On-peak Energy Forward Price and Off-peak Energy Forward Price as determined by averaging concurrent broker quotes obtained by the Company for the Market Price Hub as available.

Gains – With respect to any Party, an amount equal to the present value of the economic benefit to it, if any (exclusive of Costs), resulting from an Early Termination of this Agreement, determined in a commercially reasonable manner.

Generator Attribute Tracking System or "GATS" - the system owned and operated by PJM Environmental Services, Inc. to provide reporting and tracking services to its subscribers in support of the AEPS Act, or any successor credit registry selected by the PaPUC. (As specified in Appendix E)

Guarantor – Any party having the authority and agreeing to guarantee the DS Supplier's financial obligations under this Agreement, recognizing that such party shall be obligated to meet the Company's creditworthiness requirements specified in this Agreement for such DS Supplier.

Guaranty – A guaranty, suretyship, hypothecation agreement, margins or security agreement or any other document in the form attached to this DS Supplier Master Agreement or other form approved by the Company.

<u>Independent Credit Requirement per Tranche or "ICRT" -</u> A financial security requirement that requires suppliers to provide collateral based on the number of tranches a supplier won.

Industrial Class - Group of Rate Schedules that comprise the Industrial Class for the DS Supply and itemized in Appendix C.

Interest Index – The average Federal Funds Effective Rate for the period of time the funds are on deposit. The Federal Funds Effective Rate is published daily on the Federal Reserve website (http://www.federalreserve.gov/releases/h15/update/).

Kilowatt or "kW" – Unit of measurement of useful power equivalent to 1000 watts.

Kilowatt-hour or "kWh" – One kilowatt of electric power used over a period of one hour.

Load Serving Entity or "LSE" – An entity that has been granted the authority or has an obligation pursuant to state or local law, regulation or franchise to sell electricity to retail customers located within the PJM Control Area as that term is defined in the PJM Agreements or in successor, superseding or amended versions of the PJM Agreements that may take effect from time to time over the term of this Agreement.

Losses – With respect to any Party, an amount equal to the present value of the economic loss to it, if any (exclusive of Costs), resulting from an Early Termination of this Agreement, determined in a commercially reasonable manner.

Margin – The amount by which the Total Exposure Amount exceeds the DS Supplier's, or Guarantor's, credit limit as defined in Section 6.4.

Mark-to-Market ("MtM") Exposure Amount – An amount calculated daily for each DS Supplier reflecting the total MtM credit exposure to the Company due to fluctuations in market prices for Energy minus amounts due pursuant to this Agreement to such DS Supplier for the delivery of DS Supply. The methodology for calculation of the MtM credit exposure is illustrated in Appendix B.

Market Price Hub - A liquid pricing point located within PJM's geographic footprint, as specified in Appendix B.

Maximum Credit Limit – The lesser of the applicable percentage of TNW or the applicable credit limit cap as specified in Section 6.4 of this Agreement.

Megawatt or MW – One thousand kilowatts.

Megawatt-hour or MWh – One megawatt of electric power used over a period of one hour.

Merger Event – When a DS Supplier consolidates or amalgamates with, or merges into or with, or transfers all or substantially all of its assets to another entity and either (i) the resulting entity fails to assume all of the obligations of such DS Supplier hereunder in the sole discretion of the Company or (ii) the benefits of any credit support provided pursuant to Article 6 of this Agreement fail to extend to the performance by such resulting, surviving or transferee entity of the DS Supplier's obligations hereunder, and the resulting entity or its guarantor fails to meet the creditworthiness requirements of this Agreement in the sole discretion of the Company.

Minimum Rating – A minimum senior unsecured debt rating as defined in Appendix A of this Agreement.

Minimum Transfer Amount - \$100,000.

NERC – The North American Electric Reliability Council or its successor.

Network Integration Transmission Service or "NITS" – "Network Integration Transmission Service" under the PJM Agreements in effect as of the date of this Agreement, or its successor, superseding or amended versions of the PJM Agreements that may take effect from time to time over the term of this Agreement. In the event the PJM Agreements are modified such that "Network Integration Transmission Service" is no longer offered, Network Integration Transmission Service shall mean the type of transmission service offered under the PJM Agreements that is accorded the highest level of priority for scheduling and curtailment purposes.

Non-Defaulting Party - A Party to this Agreement who, at the time an Event of Default occurs, is not itself in default of this Agreement and has not otherwise caused or precipitated an Event of Default or Early Termination of this Agreement.

Off-Peak Energy Forward Price - Means the price for Off-Peak Hours for each billing month of the delivery period stated in terms of \$/MWh as based on the most recent publicly available information and/or quotes from reference market makers on forward energy transactions occurring at the Market Price Hub. In the event that the Market Price Hub is no longer available or no longer representative of a transparent trading hub, the Parties will negotiate in good faith to agree upon an alternate liquid price.

On-Peak Energy Forward Price – Means the price for On-Peak Hours for each billing month of the delivery period stated in terms of \$/MWh as based on the most recent publicly available information and/or quotes from reference market makers on forward energy transactions occurring at the Market Price Hub. In the event that the Market Price Hub is no longer representative of a transparent trading hub, the Parties will negotiate in good faith to agree upon an alternate liquid price.

PaPUC or Commission – The Pennsylvania Public Utility Commission or its successor.

PJM – PJM Interconnection L.L.C. or its successor.

PJM Agreements – The PJM OATT, PJM RAA, PJM OA and all other PJM agreements, procedures, manuals and documents applicable to the Transactions covered by or relating to this Agreement.

PJM Control Area – That certain Control Area encompassing electric systems in parts of Delaware, Illinois, Indiana, Kentucky, Maryland, Michigan, New Jersey, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia, and the District of Columbia, as may be modified from time to time, and which is recognized by the North American Electric Reliability Council as the "PJM Control Area".

PJM Member – A member in good standing of PJM that satisfies the requirements to conduct business with PJM.

PJM OA – The PJM Operating Agreement or the successor, superseding or amended version of the PJM Operating Agreement that may take effect from time to time.

PJM OATT – The PJM Open Access Transmission Tariff or the successor, superseding or amended version of the PJM Open Access Transmission Tariff that may take effect from time to time.

PJM OI – The PJM Office of Interconnection, the system operator for the PJM Control Area.

PJM RAA – The PJM Reliability Assurance Agreement or the successor, superseding or amended version of the PJM Reliability Assurance Agreement that may take effect from time to time.

PMEA/FMEA Adjustment Amount – For any Billing Month, the monetary amount due to the DS Supplier or the Company, as the case may be, in order to reconcile any difference between the PMEA used for the purpose of calculating estimated payments made to DS Supplier for a given month and the FMEA used for calculating the final payments due to the DS Supplier for such month as more fully described in Article 9 hereof.

Preliminary Monthly Energy Allocation or "PMEA" – A quantity of Energy which, for any Billing Month, is the preliminary calculation of the DS Supplier's DS Supplier Responsibility Share.

Rate Schedule(s) – Shall mean the specified existing, and modified or successor customer rate schedule(s) in the electric service tariff of the Company filed with the Commission.

Reliability First Corporation or "RFC" – The approved regional NERC entity with responsibility for the Commonwealth of Pennsylvania.

Residential Class – Group of Rate Schedules that comprise the Residential Class for the DS Supply and itemized in Appendix C

Rounding Amount - \$100,000

Settlement Amount – With respect to a Non-Defaulting Party, the net amount of the Losses or Gains, and Costs, expressed in U.S. Dollars, which such Party incurs as a result of Early Termination, as set forth in Section 5.4(a) of this Agreement. For the purposes of calculating the Termination Payment, the Settlement Amount shall be considered an amount due to the Non-Defaulting Party under this Agreement if the total of the Losses and Costs exceeds the Gains and shall be considered an amount due to the Defaulting Party under this Agreement if the Gains exceed the total of the Losses and Costs.

Statement – A monthly report prepared by the Company for the DS Supplier indicating the amount due to the DS Supplier by the Company as compensation for DS Supply supplied to DS Customers by the DS Supplier during the current Billing Month, in accordance with DS Supplier's obligations under this Agreement.

Supply Day – Any calendar day during the term of this Agreement on which the DS Supplier is providing, or is obligated by this Agreement to provide, DS Supply to the Company's DS Customers.

Tangible Net Worth or "TNW" – Total assets less intangible assets and total liabilities. Intangible assets include benefits such as goodwill, patents, copyrights and trademarks.

Termination Payment – An amount paid by the Defaulting Party due to Early Termination.

Tier I AEC – Shall mean an AEC generated by a non-solar photovoltaic energy source that will satisfy the non-solar Tier I requirements of the AEPS Act applicable to the Company. (As specified in Appendix E)

Tier I (Solar) AEC – Shall mean an AEC generated by a solar photovoltaic energy source that will satisfy the Tier I solar photovoltaic requirements of the AEPS Act applicable to the Company. (As specified in Appendix E)

Tier II AEC - Shall mean an AEC generated by a non-solar photovoltaic energy source that will satisfy the non-solar Tier II requirements of the AEPS Act applicable to the Company. (As specified in Appendix E)

Total Exposure Amount – An amount calculated daily for the DS Supplier reflecting the total credit exposure to the Company and consisting of the sum of (i) the Mark-to-Market Exposure Amount arising under this Agreement; (ii) any amount(s) designated as the "Mark-to-Market Exposure Amount" arising under any other DS Supply agreements providing for "DS Supply" or similar default service; and (iii) the amount designated as the "credit exposure" under any other DS Supply agreements providing for DS Supply or similar default service; provided that in the event the amount calculated for any day is a negative number, it shall be deemed to be zero for such day.

Tranche – A fixed percentage share of the Company's DS Load, as specified in Appendix C.

Transaction – Means a particulate agreement by which the Company purchases and the DS Supplier sells DS Supply pursuant to this Agreement, the details of which are more fully set forth in Exhibit 1 – Transaction Confirmation.

Transaction Confirmation – Shall have the meaning ascribed to it in Appendix C and Exhibit 1 of this Agreement.

ARTICLE 2: GENERAL TERMS AND CONDITIONS

2.1 Capacity In Which Company Is Entering Into This Agreement

The DS Supplier agrees and acknowledges that the Company is contracting for the provision of DS Supply from such DS Supplier for Customers receiving Default Service on the Company's electric system pursuant to the authorizations provided to the Company. The DS Supplier further agrees and acknowledges that the Company will administer and monitor the DS Supplier's performance in providing DS Supply under this Agreement and that the Company shall be entitled to enforce the DS Supplier's obligations related to the provision of DS Supply. The DS Supplier hereby permanently, expressly and irrevocably waives any claim that Company is not entitled to seek enforcement of this Agreement on behalf of Customers. It is the specific intention of the Parties hereto that Customers and Customer groups are not third party beneficiaries of this Agreement and that no Customer or Customer group shall seek enforcement of this Agreement against the DS Supplier on their own behalf, either independently or by joining in any legal proceeding brought by the Company.

The Parties acknowledge that the Agreement is a forward contract and, accordingly, the Parties hereto are entitled to the protections of Section 556 of the Bankruptcy Code. The Parties therefore agree that the Agreement may be terminated by either Party upon the commencement of a proceeding by the other Party under any chapter of the Bankruptcy Code in accordance with Article 5.2 of this Agreement.

2.2 Parties' Obligations

(a) Obligations of DS Supplier

The DS Supplier hereby agrees as follows:

- (i) DS Supplier shall provide service on a firm and continuous basis such that the supply delivered for the term of the Agreement meets the terms and conditions set forth in Appendix C;
- (ii) To provide sufficient quantities of DS Supply on an instantaneous basis at all times and supplied to the Delivery Point to meet the DS Supplier Responsibility Share;
- (iii) To procure those services provided by the PJM OI and to perform such functions as may be required by the PJM OI that are necessary for the delivery of DS Supply required hereunder;
- (iv) To cooperate with the Company in any regulatory compliance efforts that may be required to maintain the ongoing legitimacy and enforceability of the terms of this Agreement and to fulfill any regulatory reporting requirement associated with the provision of DS Supply, before the PaPUC, FERC or any other regulatory body asserting jurisdiction;
- (v) To become the Load Serving Entity ("LSE") with respect to the provision of DS Supply for the DS Supplier Responsibility Share and to comply with all requirements of a LSE with respect to such DS Supplier Responsibility Share;
- (vi) To pay to the Company the PMEA/FMEA Adjustment Amount for any Billing Month in which the PMEA exceeds the FMEA, as more fully described in Article 9 of this Agreement;
- (vii) To accept assignment of and to fulfill all obligations of a LSE that are assigned to it by this Agreement;

- (viii) To comply in a timely manner with all obligations under this Agreement imposed upon the DS Supplier; and
- (ix) To comply with the AEPS requirements of the Company's Default Service

 Plan, as detailed in Appendix E.

(b) Obligations of the Company

The Company hereby agrees as follows:

- (i) To pay to each DS Supplier every month an amount due, resulting from the calculations, as detailed in Article 9 of this Agreement, subject to the adjustments as expressed therein;
- (ii) Pay to the DS Supplier the PMEA/FMEA Adjustment Amount for any Billing Month in which the FMEA exceeds the PMEA, as more fully described in Article 9 of this Agreement;
- (iii) To provide to the DS Supplier its estimated aggregate load obligation (capacity MW value) for each Supply Day no less than five (5) calendar days prior to the day of delivery. Further, this information will be posted in the DS Supplier's specific PJM eMTR account, or successor system or process;
- (iv) To comply in a timely manner with all obligations under this Agreement imposed upon the Company;
- (v) Accept the delivery of DS Supply necessary to meet the DS Load; and
- (vi) Be responsible (as between the Company and the DS Supplier) for the provision of the Allocated AECs, if any, to satisfy a portion of AEPS requirements.

2.3 Congestion and Congestion Management

The DS Supplier is responsible for any congestion costs incurred to meet the DS Supplier Responsibility Share. The Company shall transfer or assign to the DS Supplier the Company's rights to Auction Revenue Rights (ARRs) to which the Company is entitled as an LSE pursuant to the PJM Agreements, including the rights to ARRs, provided that such rights are related to the service being provided to meet the DS Supplier Responsibility Share and such rights are for the Delivery Period. All rights, liabilities and obligations associated with such ARRs will accrue and be assumed by the DS Supplier through the transfer or assignment from the Company to the DS Supplier including the responsibility and ability of the DS Supplier to request or nominate such ARRs when applicable and feasible. Should the conditions above not be met, the entity recognized by PJM as having the right to make the nominations will nominate such ARRs for the upcoming PJM planning period and such ARRs will be allocated to the DS Supplier in accordance with the PJM Agreements based upon its DS Supplier Responsibility Share.

2.4 PJM Services

The DS Supplier shall make all necessary arrangements for the delivery of DS Supply through the PJM OI. The Company will advise the PJM OI of the magnitude and location of each DS Supplier's actual DS Supplier Responsibility Share, as required by the PJM OI, for the purpose of calculating such DS Supplier's appropriate DS Supply requirements related to the provision of service under this Agreement by DS Supplier arising under the PJM Agreements. The DS Supplier shall remain responsible to PJM for the performance of its LSE obligations associated with the provision of DS Supply under this Agreement until the effective date of the transfer of such LSE obligations.

The Company shall generate and provide to DS Supplier PJM shortname(s) associated with supplier's unique contract type(s), as necessary. Unique shortname(s) may be generated for each differing contract type. DS Supplier shall complete all required forms and processing to PJM to create shortname(s) within the PJM system.

For the period of time that this Agreement is in effect, both Buyer and DS Supplier agree that PJM Settlement, Inc, shall transfer the applicable billing line item charges and/or credits as designated between the Buyer and DS Supplier in EXHIBIT D. Buyer will be responsible for initiating and/or maintaining Billing Line Item Transfers utilizing the PJM Billing Line Item Tool. DS Supplier agrees to confirm/approve Billing Line Item Transfers by the last business day of the month prior to the Delivery Period of the first Transaction under the Agreement.

2.5 PJM Agreement Modifications

- (a) If the PJM Agreements are amended or modified so that any schedule or section references herein to such agreements is changed, such schedule or section references herein shall be deemed to automatically (and without any further action by the Parties) refer to the new or successive schedule or section in the PJM Agreements which replaces that originally referred to in this Agreement.
- (b) If the applicable provisions of the PJM Agreements referenced herein, or any other PJM rules relating to the implementation of this Agreement, are changed materially from those in effect on the Effective Date, both Parties shall cooperate to make conforming changes to this Agreement to fulfill the purposes of this Agreement, including the DS Supplier's responsibility for changes in PJM products and pricing during the Term.

2.6 PJM Member Default Cost Allocation

In the event PJM imposes a Default Allocation Assessment upon the Company relating to a default during the Term, the Company shall invoice DS Supplier and DS Supplier shall pay an amount equal to the product of (i) DS Supplier Responsibility Share, and (ii) the Default Allocation Assessment, less the amounts of any types of charges allocated to the Company under this Agreement that are used by PJM in calculating such Default Allocation Assessment.

2.7 Other Fines and Penalties

If fees, fines, penalties, or costs are claimed or assessed against the Company by any Applicable Legal Authority or PJM due to noncompliance by the DS Supplier with this Agreement, any other requirements of law, or the PJM Agreements, the DS Supplier shall indemnify and hold the Company harmless against any and all losses, liabilities, damages, and claims suffered or incurred by the Company, including claims for indemnity or contribution made by third parties against the Company, except to the extent the Company recovers any such losses, liabilities or damages through other provisions of this Agreement.

2.8 Communications and Data Exchange

The DS Supplier and the Company shall supply to each other in a thorough and timely manner all data, materials or other information that is specified in this Agreement, or that may otherwise reasonably be required by DS Supplier or by the Company in connection with the provision of DS Supply by the DS Supplier to DS Customers, if required.

The DS Supplier shall be equipped with the communications capabilities necessary

to comply with the communications and data exchange standards that are set by and as may, from time to time, be modified by PJM, and shall exclusively bear the costs of installing, maintaining, testing, and operating all required information technology systems that will enable it to send to and receive data from the Company and PJM and to satisfy its obligations under this Agreement, the PJM Agreements and all other relevant agreements.

2.9 Record Retention

The Company shall retain necessary records for the longer of two years or as required under applicable PaPUC requirements so as to permit DS Supplier to confirm the validity of payments due to DS Supplier hereunder; provided that if a DS Supplier has provided notice pursuant to this Agreement that it disputes the validity of any payments, the Company agrees that it shall retain all records related to such dispute until the dispute is finally resolved.

2.10 Verification

In the event of a good faith dispute regarding any invoice issued or payment due under this Agreement, and provided that a mutually acceptable confidentiality agreement is executed by the Parties, each Party will have the right to verify, at its sole expense, the accuracy of the invoice or the calculation of the payment due by obtaining copies of relevant portions of the books and records of the other Party.

2.11 Forward Contract Merchant

The Parties agree that the Agreement is a "forward contract merchant" within the meaning of the United States Bankruptcy Code, all setoffs, netting and liquidations contemplated hereunder constitute "settlement payments" as set forth in Sections 101 and

741 of the United States Bankruptcy Code and each payment or transfer of Performance Assurance is a "margin payment", "settlement payment" or transfer within the meaning of Section 101 of the United States Bankruptcy Code for the purposes of and as used in such Code.

ARTICLE 3: REPRESENTATIONS AND WARRANTIES

3.1 DS Supplier's Representations and Warranties

The DS Supplier hereby represents, warrants and covenants to the Company on the Effective Date and throughout the term of this Agreement as follows:

- a) It is a corporation, partnership, limited liability company or other legal entity, duly organized, validly existing and in good standing under the laws of the Commonwealth of Pennsylvania or, if another jurisdiction, under the laws of such jurisdiction and, in such case, is duly registered and authorized to do business in such other jurisdiction;
- b) It has all requisite power and authority to execute and deliver this Agreement and to carry on the business to be conducted by it under this Agreement and to enter into and perform its obligations hereunder, including satisfaction of all applicable FERC requirements;
- DS Supplier's obligations hereunder have been duly authorized by all necessary action on the part of the DS Supplier and do not and will not conflict with, or constitute a breach of or default under, any of the terms, conditions, or provisions of the DS Supplier's certificate of incorporation or bylaws or other constituent instruments or any indenture, mortgage, other evidence of indebtedness, or other agreement or instrument or any statute or rule,

regulation, order, judgment, or decree of any judicial or administrative body to which the DS Supplier is a party or by which the DS Supplier or any of its properties is bound or subject;

- d) All necessary and appropriate action that is required on the DS Supplier's part to execute this Agreement has been completed;
- e) This Agreement is the legal, valid and binding obligation of the DS Supplier, enforceable in accordance with its terms, except as such enforceability may be limited by applicable bankruptcy, insolvency or similar laws from time to time in effect that affect creditors' rights in general or by general principles of equity;
- f) There are no actions at law, suits in equity, proceedings or claims pending or, to the DS Supplier's knowledge, threatened against the DS Supplier before any federal, state, foreign or local court, tribunal or governmental agency or authority that might materially delay, prevent or hinder the DS Supplier's performance of its obligations hereunder;
- g) It has entered into this Agreement with a full understanding of the material terms and risks of the same, and it is capable of assuming those risks;
- h) It is in good standing as an LSE in PJM, is a signatory to all applicable PJM Agreements, and is in compliance with, and will continue to comply with, all obligations, rules and regulations, as established and interpreted by the PJM OI, that are applicable to LSEs as defined by the PJM Agreements; provided that the DS Supplier shall not be obligated to become an LSE in PJM until the date it begins providing DS Supply;
- i) It has made its trading and investment decisions (including regarding the suitability thereof) based upon its own judgment and any advice from such advisors as it

has deemed necessary and not in reliance upon any view expressed by the Company;

- j) It will comply with any and all information and data transfer protocols that may be adopted by the Company or that are set by, and from time to time modified by, the PaPUC; provided that DS Supplier shall be entitled to exercise its reserved right to challenge any such protocols in the appropriate forum.
- k) It is not Bankrupt or insolvent and there are no proceedings pending or being contemplated by it or, to its knowledge, threatened against it which would result in it being or becoming Bankrupt or insolvent;
- l) There are no pending, or to its knowledge threatened, actions, suits or proceedings against it or any of its Affiliates, or any legal proceedings before any Governmental Authority, that could materially adversely affect its ability to perform its obligations under this Agreement;
- m) No Event of Default with respect to it has occurred and is continuing and no such event or circumstance would occur as a result of its entering into or performing its obligations under this Agreement;
- n) It is not relying upon the advice or recommendations of the other Party in entering into this Agreement, it is capable of understanding, understands and accepts the terms, conditions and risks of this Agreement, and the other Party is not acting as a fiduciary for or advisor to it in respect of this Agreement;
- o) It has entered into this Agreement in connection with the conduct of its business and it has the capacity or ability to provide or take delivery of DS Supply as required by this Agreement; and it is an "eligible contract participant" as defined in Section 1a(12) of the Commodity Exchange Act.

3.2 Company's Representations and Warranties

The Company hereby represents, warrants and covenants to the DS Supplier as follows:

- a) The Company is an electric utility corporation duly organized, validly existing and in good standing under the laws of the Commonwealth of Pennsylvania;
- b) The Company has all requisite power and authority to carry on the business to be conducted by it under this Agreement and to enter into and perform its obligations hereunder;
- Company's obligations hereunder have been duly authorized by all necessary action on the part of the Company and do not and will not conflict with, constitute a breach of or default under, any of the terms, conditions, or provisions of the Company's certificate of incorporation or bylaws or any indenture, mortgage, other evidence of indebtedness, or other agreement or instrument or any statute or rule, regulation, order, judgment, or decree of any judicial or administrative body to which the Company is a party or by which the Company or any of its properties is bound or subject;
- d) All necessary and appropriate action that is required on the Company's part to execute this Agreement has been completed;
- e) This Agreement is the legal, valid and binding obligation of the Company, enforceable in accordance with its terms, except as such enforceability may be limited by applicable bankruptcy, insolvency or similar laws from time to time in effect that affect creditors' rights in general or by general principles of equity and the Commission's power under section 508 of the Public Utility Code, 66 Pa.C.S. § 508, to amend or modify the

contracts of public utilities;

- f) The ability of the Company to pay any and all amounts due and payable under this Agreement, or upon any potential breach thereof, is not conditioned upon any governmental or administrative appropriation by the Commission, the Commonwealth of Pennsylvania or any other governmental authority;
- g) There are no actions at law, suits in equity, proceedings or claims pending or, to the Company's knowledge, threatened against the Company before any frederal, state, foreign or local court, tribunal or governmental agency or authority that might materially delay, prevent or hinder the Company's performance of its obligations under this Agreement;
- h) It has entered into this Agreement with a full understanding of the material terms and risks of the same, and it is capable of assuming those risks;
- i) The Company's performance under this Agreement is not contingent upon the performance of Customers or the ability of Customers to pay rates;
- j) The Company shall have sole responsibility for metering and billing with respect to Customers; and
- k) The Company shall be responsible for electric distribution services and the
 DS Supplier shall not be responsible for distribution charges.

3.3 Survival of Obligations

All representations and warranties contained in this Article are of a continuing nature and shall be maintained during the term of this Agreement or until all amounts due hereunder, including all obligations, have been paid or performed in full. If a Party learns that any of the representations, warranties or covenants in this Agreement are no longer

true during the term of this Agreement, the Party shall immediately notify the other Party via facsimile, with a hard copy of the notice delivered by overnight mail.

ARTICLE 4: COMMENCEMENT AND TERMINATION OF AGREEMENT

4.1 Commencement and Termination

The term of this Agreement shall commence upon the Effective Date. Unless otherwise agreed upon by the Company and the DS Supplier, this Agreement shall continue in full force and effect from the Effective Date until the end of all Transaction(s) executed under this Agreement, unless the Agreement is terminated prematurely pursuant to the provisions of this Agreement.

4.2 Termination of Right to Supply

The DS Supplier agrees that termination of this Agreement for reason of an Event of Default shall terminate any right of the DS Supplier to provide DS Supply to the DS Customers and nullify any of the entitlements to which the DS Supplier became entitled as a result of being selected as a winning bidder in the DS Solicitation.

4.3 Survival of Obligations

Termination of this Agreement for any reason shall not relieve the Company or the DS Supplier of any obligation accrued or accruing prior to such termination. Applicable provisions of this Agreement shall continue in effect after termination to the extent necessary to provide for final billings.

4.4 Mutual Termination

The Company and the DS Supplier may agree at any time during the term of this Agreement to terminate their respective rights and obligations hereunder on such terms and

under such conditions that they mutually deem to be appropriate as set forth in a mutual termination agreement acceptable in form and substance to the Company and the DS Supplier ("Mutual Termination Agreement"); provided that Company agrees that it shall enter into such a Mutual Termination Agreement, which will discharge the terminating DS Supplier (the "Terminating DS Supplier") with respect to liabilities arising after the effective date of the Mutual Termination Agreement if the following conditions precedent are met: (i) the Terminating DS Supplier identifies a replacement DS Supplier willing to assume all obligations of the Terminating DS Supplier hereunder for the remaining term of this Agreement (the "Replacement DS Supplier"); (ii) the Replacement DS Supplier demonstrates its compliance with Article 6 of this Agreement, "Creditworthiness", as of the effective date of the Mutual Termination Agreement, that determination to be made in the sole discretion of Company; (iii) the Replacement DS Supplier executes a counterpart signature page to this Agreement and thereby becomes a Party under this Agreement, effective immediately following the effective date of the Mutual Termination Agreement; and (iv) the Terminating DS Supplier is not, to the belief or knowledge of the Company, subject to an Event of Default as of the effective date of the Mutual Termination Agreement or, if the Company believes that the Terminating DS Supplier may be subject to an Event of Default, either (a) the Company has determined that, as of the effective date of the Mutual Termination Agreement, it has not incurred any Damages as a result of the Event of Default or (b) if the Company has determined, as of the effective date of the Mutual Termination Agreement, that it may have incurred Damages as a result of the Event of Default, that the Replacement DS Supplier has agreed in writing to be responsible for the payment of such Damages or to otherwise cure the Event of Default, in either case to the satisfaction of the Company in its sole discretion.

ARTICLE 5: BREACH AND DEFAULT

5.1 Events of Default

An Event of Default under this Agreement shall occur if a Party (the "Defaulting Party"):

- (i) Is the subject of a voluntary bankruptcy, insolvency or similar proceeding;
- (ii) Makes an assignment for the benefit of its creditors;
- (iii) Applies for, seeks consent to, or acquiesces in the appointment of a receiver, custodian, trustee, liquidator or similar official to manage all or a substantial portion of its assets;
- (iv) Is dissolved (other than pursuant to a consolidation, amalgamation or merger) or is the subject of a Merger Event;
- (v) Has a secured party take possession of all or substantially all of its assets or has a distress, execution, attachment, sequestration or other legal process levied, enforced or sued on or against all or substantially all of its assets;
- (vi) Has a resolution passed for its winding-up, official management or liquidation (other than pursuant to a consolidation, amalgamation or merger);
- (vii) In the case of a DS Supplier, PJM terminates the DS Supplier's ability to make purchases from PJM markets or PJM holds the Company responsible for the provision of DS Supply under this Agreement and PJM does not rescind such termination or assignment of responsibility within seven (7) Business Days;
 - (viii) Fails to comply with the creditworthiness requirements as set forth in

Article 6 of this Agreement, including, without limitation, compliance with the creditworthiness requirements to cover the Margin calculated under Section 6.5 or post any Margin due under Section 6.5 of this Agreement, within the time frames set forth in this Agreement;

- (ix) Is declared by PJM to be in default of any provision of any PJM Agreement, which default prevents a Party's performance hereunder if such failure is not remedied within three (3) Business Days after written notice;
- (x) Failure to make, when due, any payment required pursuant to this Agreement if such failure is not remedied within two (2) Business Days after written notice;
- (xi) Violates any federal, state or local code, regulation or statute applicable to the supply of Energy and/or AECs in a manner that materially, and adversely, affects the Party's performance under this Agreement, including by way of failure to continually satisfy all applicable FERC requirements, or, in the case of the DS Supplier, by way of failure to maintain any other governmental approvals required for participation in the Pennsylvania retail Energy market, or defaults on any obligation or other failure to comply with PJM requirements under the PJM Agreements;
 - (xii) Is the subject of an involuntary bankruptcy or similar proceeding;
- (xiii) Subject to Section 5.3 (b) of this Agreement, in the case of the Company, fails to accept DS Supply properly tendered by the DS Supplier under this Agreement;
- (xiv) Failure to perform any material covenant or obligation set forth in this Agreement, if such failure is not remedied within three (3) Business Days after written notice;

- (xv) Makes a materially incorrect or misleading representation or warranty under this Agreement or under any response to the DS Solicitation; or
- (xvi) Commits an act or makes an omission that constitutes an "Event of Default" under any other agreement(s) for the provision of DS Supply between the Company and the DS Supplier; and fails to remedy such condition, event or delinquency herein above described such that the other Party (the "Non-Defaulting Party") is completely made whole with respect to such condition, event or delinquency, within three (3) Business Days of receipt of written notice thereof from such Non-Defaulting Party; provided, however, that an Event of Default shall be deemed to have occurred immediately, without any need for the provision of notice thereof by the Non-Defaulting Party and without any right of cure on the part of the Defaulting Party, in the event of the occurrence of a condition, event or delinquency described in subsections "i", "ii", "iii", "iv", "v", "vi", "vii" or "viii" above. Termination of this Agreement by the PaPUC, other regulatory authority or court of law does not constitute an Event of Default under this Agreement.

(xvii) With respect to the DS Supplier's Guarantor, if any:

- any representation or warranty made by the Guarantor in connection with this Agreement is false or misleading in any material respect when made or when deemed made or repeated;
- 2. Guarantor fails to make, when due, any payment required or to perform any other material covenant or obligation in any guaranty made in connection with this Agreement and such

failure shall not be remedied within two (2) Business Days after written notice;

- 3. Guarantor's guaranty fails to be in full force and effect for purposes of this Agreement (other than in accordance with its terms) prior to the satisfaction of all obligations of such Party under this Agreement without the written consent of the other Party; or
- 4. Guarantor repudiates, disaffirms, disclaims, or rejects, in whole or in part, or challenges the validity of any guaranty.

5.2 Rights upon Default

Upon and during the continuation of an Event of Default, the Non-Defaulting Party shall have the right to suspend performance, provided that such suspension shall not continue for longer than ten (10) Business Days. At any time during or subsequent to the temporary suspension of performance, the Non-Defaulting Party may proceed with the steps outlined in Article 5.7. In addition to any other remedies available at law or in equity to the Non-Defaulting Party, if an Event of Default has occurred and is continuing, the Non-Defaulting Party shall have the right to implement all of the following remedies:

(i) Declare an Early Termination Date of this Agreement with respect to the obligations of the Defaulting Party without any liability or responsibility whatsoever except for obligations arising prior to the date of termination, by providing written notice to the Defaulting Party; provided, however, that this Agreement shall immediately terminate automatically and without notice in the case of any Event of Default in which a DS Supplier

is the Defaulting Party occurring under subsections (i), (ii), (iii), (iv), (v), (vi), (vii) or (viii) of Article 5.1 of this Agreement and such date of automatic termination shall be deemed the Early Termination Date of this Agreement with respect to such <u>DS</u> Supplier; and

(ii) Receive Damages in accordance with Section 5.3 of this Agreement.

The Non-Defaulting Party shall be entitled to elect or pursue one or more of the above remedies.

5.3 Damages Resulting From an Event of Default

- Early Termination By Company: Damages resulting from (i) the DS Supplier's failure to (A) provide DS Supply in conformance with Article 2.2 hereof or (B) pay PJM for purchases of any products or services from PJM, or other failure to comply with PJM requirements, such that PJM holds the Company responsible for the provision of DS Supply to meet the DS Supplier's DS Supplier Responsibility Share under this Agreement or (ii) the occurrence of any Event of Default attributable to the DS Supplier resulting in Early Termination, shall include all Costs incurred by the Company, acting in a commercially reasonable manner consistent with any statutory or regulatory requirements imposed by the Applicable Legal Authorities, in obtaining replacement services or in obtaining a replacement supplier, which Costs exceed the amounts that would have been payable to the defaulting DS Supplier under this Agreement. Costs incurred by the Company for the purpose of calculating Damages hereunder will consist of:
- (i) The cost of DS Supply allocated to the Company by the PJM OI due to the failure of the DS Supplier to meet obligations owing to the PJM OI in connection with its obligations under this Agreement;

- (ii) The costs of DS Supply purchased by the Company to replace DS Supply that a DS Supplier was obligated to supply under this Agreement during the term hereof;
- (iii) Administrative and legal costs associated with procuring replacement DS Supply; and
- (iv) Financial hedging costs incurred by the Company on behalf of DS Customers as a result of having to procure DS Supply not provided by the DS Supplier.

The Parties further recognize and agree that the final calculation of Damages hereunder may not be known for some time since the level of such Damages may be dependent upon the arrangements made by the Company to obtain replacement services or a replacement DS Supplier. The Company and the DS Supplier agree that, until the calculation of Damages under this provision is completed, the amount and payment to the Company of the Settlement Amount on behalf of DS Customers in the event of an Early Termination as set forth in Article 5.4 of this Agreement shall be immediately due and owing as an estimate of all Damages ultimately determined to be due and owing. After Damages have been finally determined under this Article 5.3, the amounts of Damages due and owing will be reconciled with payments already made by the DS Supplier under Section 5.4 of this Agreement.

Supply Tendered By DS Supplier: Damages resulting from the failure of the Company on behalf of Customers to accept DS Supply tendered by the DS Supplier necessary to meet the DS Supplier Responsibility Share of DS Load under this Agreement shall consist of the positive difference (if any) between (i) the amounts that would have been payable to the DS Supplier hereunder had the Company accepted the DS Supply tendered by the DS

Supplier necessary to meet the DS Supplier Responsibility Share of DS Load under this Agreement and (ii) the amount realized by the DS Supplier in disposing, in a commercially reasonable manner, of the DS Supply not accepted by the Company; provided, however, that the Company shall not be required to accept on behalf of any Customer, quantities of DS Supply utilized by Customers on an instantaneous basis as a function of electrical load, in excess of such Customer's instantaneous consumption of such component of DS Supply; and further provided that the Company shall not be liable for any Damages if this Agreement is terminated by the PaPUC, other regulatory authority or a court of law.

- of Default Attributable To the Company: Damages resulting from Early Termination due to an Event of Default attributable to the Company shall be as set forth in Section 5.4 of this Agreement. Damages calculated in accordance with said Article 5.4 shall be the exclusive remedy available to the DS Supplier in the event of Early Termination resulting from an Event of Default attributable to the Company.
- **Satisfy it AEPS Obligations**: Damages resulting from the DS Supplier's failure to continuously meet and satisfy all or any portion of its obligations under Section 2.2 (a)(viii) of this Agreement shall include, but not be limited to, the amount of all penalties, costs associated with the procurement of additional AECs, etc. including, without limitation, interest and other charges, if any, levied against the Company related to AEPS regulations, due to such DS Supplier's conduct or inaction.
- (e) Other Damages: Damages for Events of Default not specified above shall consist of the direct Damages incurred by the Non-Defaulting Party.

and the Non-Defaulting Party is the Company, then unless the Event of Default was a failure by the DS Supplier to meet any or all of its DS Supply obligations, the Company may elect, at its sole discretion, to offer to waive the default on such terms and conditions as the Company, at its sole discretion, may deem appropriate to propose a special remedy. Any such special remedy can only be offered to the DS Supplier if it first is specifically approved by the PaPUC in accordance with Commission Orders.

5.4 Declaration of an Early Termination Date and Calculation of Settlement Amount and Termination Payment

Defaulting Party shall have occurred and be continuing, the Non-Defaulting Party shall have the right (i) to designate a day, no earlier than the day such notice is effective and no later than twenty (20) days after such notice is effective, as a date for Early Termination ("Early Termination Date") to accelerate all amounts owing between the Parties and to liquidate and terminate the undertakings set forth in this Agreement, (ii) to withhold any payments due to the Defaulting Party under this Agreement, and (iii) to suspend performance; provided however, that an Early Termination Date shall be deemed to occur automatically and concurrently with the Event of Default, without any requirement for the provision of notice by the Non-Defaulting Party, with respect to an Event of Default under subsections (i), (ii), (iii), (iv), (v), (vi), (vii), and (viii) of Article 5.1 of this Agreement. The Non-Defaulting Party shall calculate, in a commercially reasonable manner, a Settlement Amount with respect to the obligations under this Agreement.

The DS Supplier may, in its sole discretion, select the notional quantity in the following subsection 5.4(a)(i) by checking the box below. If the DS Supplier does not select subsection 5.4(a)(i) by checking the box, it will be deemed to be excluded from this Agreement.

- (i) For the purposes of such determination, the DS Supply provided for under this Agreement for the period following the Early Termination Date through the remainder of the term of this Agreement shall be deemed to be those quantity amounts that would have been delivered on an hourly basis, had this Agreement been in effect during the previous calendar year adjusted for such DS Load changes as may have occurred since the previous calendar year.
- (b) Net Out of Settlement Amounts. The Non-Defaulting Party shall calculate a Termination Payment by aggregating all Settlement Amounts due under this Agreement or any other agreement(s) between the Company and the DS Supplier for the provision of DS Supply into a single amount by netting out (a) all Settlement Amounts that are due or will become due to the Defaulting Party, plus at the option of the Non-Defaulting Party, any cash or other form of security then available to the Non-Defaulting Party and actually received, liquidated and retained by the Non-Defaulting Party, plus any or all other amounts due to the Defaulting Party under this Agreement or any other agreement(s) between the Company and the DS Supplier for the provision of DS Supply against (b) all Settlement Amounts that are due or will become due to the Non-Defaulting Party, plus any or all other amounts due to the Non-Defaulting Party under this Agreement or any other agreement(s) between the Company and the DS Supplier for the provision of DS Supply, so that all such amounts shall be netted out to a single liquidated amount; provided,

however, that if the DS Supplier is the Defaulting Party and the Termination Payment is due to the DS Supplier, the Company shall be entitled to retain a commercially reasonable portion of the Termination Payment, which may be equal to the entire amount of the Termination Payment, as security for additional amounts that may be determined to be due and owing by the DS Supplier as Damages and further provided that any previously attached security interest of the Company in such retained amounts shall continue. The Termination Payment shall be due to or due from the Non-Defaulting Party as appropriate. If the Termination Payment has been retained by the Company as security for additional amounts that may be determined to be due and owing by the DS Supplier, and if, upon making a final determination of Damages, the Termination Payment, or any portion thereof, is to be made to the DS Supplier, the Company will pay simple interest on the Termination Payment amount being made to the DS Supplier. Simple interest will be calculated at the lower of the Interest Index or six (6) percent per annum.

- (c) <u>Notice of Termination Payment</u>. As soon as practicable after calculation of a Termination Payment, notice shall be given by the Non-Defaulting Party to the Defaulting Party of the amount of the Termination Payment and whether the Termination Payment is due to or due from the Non-Defaulting Party. The notice shall include a written statement explaining in reasonable detail the calculation of such amount. Subject to Article 5.4(b) above, the Termination Payment shall be made by the Party that owes it within three (3) Business Days after such notice is effective.
- (d) <u>Disputes With Respect to Termination Payment</u>. If the Defaulting Party disputes the Non-Defaulting Party's calculation of the Termination Payment, in whole or in part, the Defaulting Party shall, within three (3) Business Days of

receipt of Non-Defaulting Party's calculation of the Termination Payment, provide to the Non-Defaulting Party a detailed written explanation of the basis for such dispute; provided, however, that if the Termination Payment is due from the Defaulting Party, the Defaulting Party shall first transfer collateral to the Non-Defaulting Party in an amount equal to the Termination Payment, such collateral to be in a form acceptable to the Non-Defaulting Party as specified in the Termination Payment Dispute Notice.

(e) <u>Multiple DS Supply Agreements</u>. It is the intention of the Company and the DS Supplier that, in the event the DS Supplier is a party to other agreements with the Company for the provision of DS Supply that existed prior to the Effective Date of this Agreement or are entered into after the Effective Date of this Agreement, the Company will calculate a single Termination Payment applicable to all such agreements as set forth herein.

5.5 Step-up Provision

The Company may ask other DS Suppliers whether they wish to assume all or part of the delivery obligations on the same terms and price contained herein, but any DS Supplier shall not be obligated to assume any such step-up requests. Any agreement to make additional supply available shall be termed a "Step-Up", and is subject to compliance with the creditworthiness provisions of Article 6 of this Agreement and the DS Supplier's load cap as per the Company's approved default service procurement plan. For the avoidance of doubt, in the event that the DS Supplier does not respond to the Company's Step-Up request within the relevant timeframe, then the DS Supplier shall be deemed to have rejected the Company's request in full.

5.6 Setoff of Payment Obligations of the Non-Defaulting Party

Any payment obligations of the Non-Defaulting Party to the Defaulting Party pursuant to this Agreement or any other agreement(s) between the Company and the DS Supplier for the provision of DS Supply shall be set off: (i) first, to satisfy any payment obligations of the Defaulting Party to the Non-Defaulting Party pursuant to this Agreement or any other agreement(s) between the Company and the DS Supplier for the provision of DS Supply that are unsecured and not subject to any Guaranty; (ii) second, to satisfy any payment obligations of the Defaulting Party to the Non-Defaulting Party pursuant to this Agreement or any other agreement(s) between the Company and the DS Supplier for the provision of DS Supply that are unsecured, but which are subject to a Guaranty; and (iii) third, to satisfy any remaining payment obligations of the Defaulting Party to the Non-Defaulting Party pursuant to this Agreement or any other agreement(s) between the Company and the DS Supplier for the provision of DS Supply.

5.7 Preservation of Rights of Non-Defaulting Party

The rights of the Non-Defaulting Party under this Agreement, including without limitation Article 5.4 and 5.7 of this Agreement, shall be supplemental to, and not in lieu of_any right of recoupment, lien, or set-off afforded by applicable law, and all such rights are expressly preserved for the benefit of the Non-Defaulting Party.

a. <u>Duty to Mitigate</u>. Each Party agrees that it has a duty to mitigate damages and covenants that it will use commercially reasonable efforts to minimize any damages it may incur as a result of the other Party's failure to perform pursuant to this Agreement.

Party, the DS Supplier will make best efforts to facilitate the transfer or reassignment to the entity which is the replacement DS Supplier on the Early Termination Date, any and all of the replacement DS Supplier's rights to Auction Revenue Rights (ARRs) to which the replacement DS Supplier is entitled as a LSE pursuant to the PJM Agreements, which were transferred or assigned to the DS Supplier under Section 2.3 (Congestion and Congestion Management).

ARTICLE 6: CREDITWORTHINESS

6.1 Applicability

The DS Supplier agrees that it shall meet the creditworthiness requirements of this Article 6 at all times during the term of this Agreement and shall inform the Company immediately of any changes in its credit rating or financial condition. Without limitation of the foregoing, the DS Supplier shall, upon written request, affirmatively demonstrate to the Company, its compliance with the creditworthiness requirements set forth hereunder. The Company may establish less restrictive creditworthiness requirements under this Article 6 in a non-discriminatory manner.

6.2 Creditworthiness Determination

The DS Supplier may submit and maintain a security deposit in accordance with Section 6.4 of this Agreement in lieu of submitting to or being qualified under a creditworthiness evaluation. The DS Supplier shall have the opportunity to request that the Company re-evaluate its creditworthiness whenever an event occurs that the DS Supplier believes would improve the determination made by the Company of its

creditworthiness. The Company's credit re-evaluation must be completed as soon as possible but no longer than thirty (30) days after receiving a fully documented request. The Company must provide the rationale for its determination of the credit limit and any resulting security requirement. The Company must perform its credit re-evaluation and associated security calculation in a non-discriminatory manner. DS Supplier shall provide the Company and its agent's unrestricted access to audited financial statements; provided that if audited financial statements are not available, the Company, in its sole discretion, may specify other types of financial statements that will be accepted.

6.3 Credit Exposure Methodology

The credit exposure per tranche that will be required of the DS Supplier under this agreement will be determined by the DS Customer Group as stated on the Transaction Confirmation(s).

For the Industrial class, the credit exposure under this Agreement shall be \$140,000 times the number of tranches shown on the Transaction Confirmation(s). If the DS Supplier meets the Minimum Rating in Section 6.4, no security will be required as long as the Total Exposure Amount does not exceed the maximum credit limit of the DS Supplier or its Guarantor.

To calculate the daily exposure for each DS Supplier for the Residential and Commercial classifications as stated on the Transaction Confirmation(s), the MtM credit exposure methodology will be used. The "mark" for each Billing Month will be determined at the time the auction is completed based on the available Forward Market Prices and for the remaining Billing Months will be derived based on historical data. At the time the auction is completed, the MtM credit exposure for each DS Supplier shall be

equal to zero. Subsequently, the differences between the available Forward Market Prices on the valuation date and the "mark" prices for the corresponding Billing Months will be used to calculate the daily credit exposures for each DS Supplier. The total MtM credit exposure will be equal to 1.1 times the sum of the MtM credit exposures for each Billing Month. The methodology for calculation of the MtM credit exposure is illustrated in the example (using hypothetical numbers) set forth in Appendix B hereto.

6.4 Credit Limit

The following criteria constitute the Company's creditworthiness requirements for the DS Supplier to cover the Total Exposure Amount. In all instances, the most current senior unsecured debt rating (or, if unavailable, the most current corporate issuer rating) will be used.

(i) For a DS Supplier to be granted an unsecured line of credit, the DS Supplier must be rated by at least two of the following rating agencies: S&P, Moody's, or Fitch. The methodology for determining the credit rating to use is set forth in Appendix A of this Agreement. The Maximum Credit Limit to cover the Total Exposure Amount will be determined based on the credit matrix table in Appendix A of this Agreement.

The DS Supplier will be required to post cash or a letter of credit in an acceptable form as defined in Section 6.7 (b) of this Agreement (see standard format in Appendix F) for the Margin due the Company as set forth in Section 6.5 of this Agreement; or

(ii) For a DS Supplier having a Guarantor, in the case of a Guarantor organized under the laws of the United States, the Guarantor (1) must be rated by at least two of the following rating agencies: S&P, Moody's, or Fitch, and (2) must have a

minimum senior unsecured debt rating (or, if unavailable, corporate issuer rating) equal to the Minimum Rating. If the Guarantor is rated by only two rating agencies, and the ratings are split, the rating will be established based on the methodology outlined in Appendix A of this Agreement. The Maximum Credit Limit to cover the Total Exposure Amount that could be provided through the Guaranty (see standard format in Appendix G) will be determined based on the credit matrix table for Guarantors on Appendix A. The DS Supplier will be granted a credit limit equal to the lesser of (i) the amount of the Guaranty as provided to the Company at the time this Agreement is executed as such amount may be modified in any amended or substitute Guaranty provided to the Company during the term of this Agreement, or (ii) the Supplier's Maximum Credit Limit. The DS Supplier, however, may not increase or substitute its Guaranty for the purpose of increasing its applicable credit limit during the time period after the Company has made a Margin call but before the DS Supplier has posted the required Margin. Notwithstanding anything herein to the contrary, the DS Supplier may increase the limit of its Guaranty after satisfying a Margin call from the Company and upon the Company's receipt of an amended or substitute Guaranty increasing the limit of the Guaranty, the DS Supplier may request a return of Margin in accordance with Section 6.5 of this Agreement. The DS Supplier will be required to post cash or a letter of credit in an acceptable form as defined in Section 6.7(b) of this Agreement (see standard format in Appendix F) for the Margin due the Company as set forth in Section 6.5 of this Agreement; or

(iii) For a DS Supplier or Guarantor that has not been incorporated or otherwise formed under the laws of the United States and whose financial data is not denominated in United States currency and does not conform to generally accepted

accounting principles ("GAAP") in the United States, they shall supply the following additional information:

- a. A legal opinion of counsel qualified to practice in the foreign jurisdiction in which the DS Supplier or Guarantor is incorporated or otherwise formed that this Agreement is, or upon completion of execution formalities will become, the binding obligation of the DS Supplier or Guarantor in the jurisdiction in which it has been incorporated or otherwise formed; and
- b. The sworn certificate of the corporate secretary (or similar officer) of such DS Supplier or Guarantor that the person executing this Agreement on behalf of the DS Supplier has the authority to execute the Agreement and that the governing board of the DS Supplier or Guarantor has approved the execution of this Agreement;
- c. The sworn certificate of the corporate secretary (or similar officer) of such DS Supplier or Guarantor that the DS Supplier or Guarantor has been authorized by its governing board to enter into agreements of the same type as this Agreement; and
- d. Such other documents and certificates as may be required by the Company in its sole discretion.
- (iv) The posting of cash or a letter of credit as defined in Section 6.7 (b) below for the entire Total Exposure Amount as set forth in Section 6.5 of this Agreement.

6.5 Posting Margin and Return of Surplus Margin

(a) If at any time and from time to time during the term of this Agreement, the Total Exposure Amount, rounded by the Rounding amount, exceeds the DS Supplier's

or the Guarantor's credit limit by the Minimum Transfer Amount (MTA), then the Company on any Business Day, may request that the DS Supplier provide cash or a letter of credit in an acceptable form as defined in Article 6.7(b) of this Agreement (see standard format in Appendix F), in an amount equal to the Margin (less any Margin posted by the DS Supplier and held by the Company pursuant to this Agreement or any other agreement(s) between the Company and the DS Supplier for the provision of DS Supply).

If the DS Supplier receives written notice for Margin from the Company by 1:00 p.m. New York time on a Business Day, then the DS Supplier shall post Margin the next following Business Day, if posting cash, and by the second Business Day following the date of notice, if posting a letter of credit, unless the Company agrees in writing to extend the period to provide Margin. If the DS Supplier receives notice for Margin from the Company after 1:00 p.m. New York time on a Business Day, whether posting cash or a letter of credit, then the DS Supplier must post Margin the second Business Day following the date of notice unless the Company agrees in writing to extend the period to provide Margin. The Company will not unreasonably deny a request for a one-day extension of such period. In the event that the DS Supplier fails to post Margin when due in accordance with this Article 6.5, then an Event of Default under Article 5 of this Agreement will be deemed to have occurred and the Company will be entitled to the remedies set forth in Article 5 of this Agreement.

(b) Surplus Margin being held by the Company that is not needed to satisfy the Total Exposure Amount, as determined above, will be returned to the DS Supplier upon receipt of a written request by the DS Supplier. Surplus Margin means cash or a letter of credit posted by the DS Supplier as a result of a request by the Company pursuant to Article

6.5(a) that exceeds the Total Exposure Amount less the DS Supplier's or the Guarantor's credit limit (rounded by the Rounding Amount). If the resulting Surplus Margin amount is more than the Minimum Transfer Amount, it will be returned to the DS Supplier. If the DS Supplier posted cash and notice is received by 1:00 p.m. New York time on a Business Day, the surplus Margin will be returned by the next following Business Day and if the DS Supplier posted cash and notice is received by the Company after 1:00 p.m. New York time on a Business Day, the surplus Margin shall be returned by the second Business Day following the date of notice, unless the DS Supplier agrees in writing to extend the period to return the surplus Margin. If the DS Supplier posted a letter of credit, the surplus Margin shall be returned on the next Business Day following the Business Day on which the amendment to the letter of credit is received from the issuing bank, unless the DS Supplier agrees in writing to extend the period to return the surplus Margin. The DS Supplier will not unreasonably deny a request for a one-day extension of such period. In the event that the Company fails to return the surplus Margin when due in accordance with this Article, then an Event of Default under Article 5 of this Agreement will be deemed to have occurred and the DS Supplier will be entitled to the remedies set forth in Article 5 of this Agreement.

6.6 Grant of Security Interest/Remedies

To secure its obligations under this Agreement and to the extent that the DS Supplier posted Margin/collateral hereunder, the DS Supplier hereby grants to the Company a present and continuing security interest in, and lien on (and right of setoff against), and assignment of, all cash collateral and cash equivalent collateral and any and all proceeds resulting therefrom or the liquidation thereof, whether now or hereafter held by, on behalf of, or for the benefit of, the Company, and the DS Supplier and the Company

agree to take such action as is reasonably required to perfect the secured Party's first priority security interest in, and lien on (and right of setoff against), such collateral and any and all proceeds resulting therefrom or from the liquidation thereof. Upon or any time after the occurrence or deemed occurrence and during the continuation of an Event of Default or an Early Termination Date, the Company may do any one or more of the following: (i) exercise any of the rights and remedies of the Company with respect to all collateral, including any such rights and remedies under law then in effect; (ii) exercise its rights of setoff against any and all property of the DS Supplier in the possession of the Company whether held in connection with this Agreement or any other agreement(s) between the Company and the DS Supplier for the provision of DS Supply; (iii) draw on any outstanding letter of credit issued for its benefit; and (iv) liquidate all security held by or for the benefit of the Company free from any claim or right of any nature whatsoever of the DS Supplier, including any equity or right of purchase or redemption by the DS Supplier. The Company shall apply the proceeds of the collateral realized upon the exercise of such rights or remedies to reduce the DS Supplier's obligation under this Agreement or any other agreement(s) between the Company and the DS Supplier for the provision of DS Supply (the DS Supplier remaining liable for any amounts owing to the Company after such application), subject to the Company's obligation to return any surplus proceeds remaining after such obligations are satisfied in full.

All notices, demands or requests regarding credit requirements and credit related security or deposit transfers shall be in writing and shall be personally delivered or sent by overnight express mail, courier service or facsimile transmission (with the original transmitted by any of the other aforementioned delivery methods) addressed as follows:

If to a DS Supplier to:

Copy to:

If to the Company to:

FirstEnergy Corp. 341 White Pond Drive Akron, OH 44320

Attn: Credit Risk Management

Phone: (330) 315 6984(330) 315 7226

Facsimile: (330) 777-6582

Email: margin@firstenergycorp.comCredit_Risk@firstenergycorp.com

–Copy to:

FirstEnergy Corp. P.O. Box 16001 Reading, PA 19612-6001

Attn: Tori Giesler

Supervising Counsel Associate General Counsel

Phone: (610) 921-6658 Facsimile: (610) 939-8655

Email: tgiesler@firstenergycorp.com

Notice received after the close of the Business Day shall be deemed received on the next Business Day; provided that notice by facsimile transmission shall be deemed to have been received by the recipient if the recipient confirms receipt telephonically or in writing.

6.7 **Security Instruments**

At each DS Supplier's choice, the following are deemed to be acceptable methods for posting security, if required:

- (a) Cash; or
- (b) A standby irrevocable letter of credit acceptable to the Company, in its sole discretion, issued by a bank or other financial institution with a minimum "A"

senior unsecured debt rating (or, if unavailable, corporate issuer rating discounted one notch) from S&P and "A2" from Moody's (see standard format in Appendix F). The letter of credit shall state that it shall renew automatically for successive one-year or shorter periods, until terminated upon at least ninety (90) days prior written notice from the issuing financial institution. If the Company receives notice from the issuing financial institution that the letter of credit is being cancelled, the DS Supplier will be required to provide a substitute letter of credit from an alternative bank satisfying the minimum requirements. The receipt of the substitute letter of credit must be effective as of the cancellation date and delivered to the Company thirty (30) days before the cancellation date of the original letter of credit. If the DS Supplier fails to supply a substitute letter of credit as required, then the Company will have the right to draw on the existing letter of credit and to hold the amount as Margin.

If the credit rating of a bank or other financial institution from which a DS Supplier has obtained a letter of credit falls below the levels specified in Article 6 of this Agreement, the DS Supplier shall have two (2) Business Days following written notice by the Company to obtain a suitable letter of credit from another bank or other financial institution that meets those standards, unless such period is extended in writing by the Company. The Company shall have no obligation under this Agreement or otherwise to make or grant such extension.

6.8 Maintenance of Creditworthiness

(a) Reporting of Changes.

The DS Supplier shall promptly notify the Company of any change in its credit rating or financial condition or that of its Guarantor. The DS Supplier or Guarantor shall

also furnish evidence of an acceptable credit rating or financial condition upon the request of the Company.

(b) <u>Change in Credit Standing</u>.

The Company will re-evaluate the creditworthiness of a DS Supplier whenever it becomes aware of an adverse change, through the provision of notice by the DS Supplier or otherwise, in the DS Supplier's or Guarantor's credit standing. If the lowest credit rating (whether senior unsecured debt rating or corporate issuer rating) used to determine the DS Supplier's Maximum Credit Limit or its credit limit adversely changes, the Company will require additional security from the DS Supplier in accordance with Sections 6.4 of this Agreement. The additional security must be in a form acceptable to the Company in its sole discretion, as specified in Article 6.7 of this Agreement and must be posted as set forth in Section 6.5 of this Agreement.

6.9 Calling on Security

The Company may call upon the security posted by the DS Supplier if the DS Supplier fails to pay amounts due to the Company pursuant to this Agreement or any other agreement(s) between the Company and the DS Supplier for the provision of DS Supply after all of the following events occur:

- (a) Written Notice of Default is provided to the DS Supplier; and
- (b) Any applicable cure period associated with the written Notice of Default ends.

The foregoing notwithstanding, the security posted by the DS Supplier shall become due automatically without prior notice or right of cure in the case of any Event of Default arising under subsections (i), (ii), (iii), (iv), (v), (vi), (vii) and (viii) of Section 5.1

of this Agreement.

6.10 Interest on Cash Held by Company

The Company will pay simple interest calculated at the lower of the Interest Index or six (6) percent per annum on all cash held by the Company pursuant to this Agreement. Each Billing Month, the Company will prepare a statement of interest amounts due to the DS Supplier. The statement will be sent to the DS Supplier within three (3) Business Days after the end of the Billing Month via overnight mail or other expeditious means. The Company shall make interest payments on the first Business Day after the 5th day of each calendar month.

6.11 No Endorsement of DS Supplier

The Company's determination that a DS Supplier is creditworthy pursuant to the process set forth above, shall not be deemed to constitute an express or implied warranty or guarantee of any kind with respect to the financial or operational qualifications of the DS Supplier. The Company will treat all DS Suppliers in a non-discriminatory manner and shall provide no preference to any DS Supplier.

6.12 Multiple DS Supply Agreements

It is the intention of the Company and the DS Supplier that, in the event the DS Supplier is a party to other agreements with the Company for the provision of DS Supply that existed prior to the effective date of this Agreement or is entered into after the effective date of this Agreement, the Company will calculate the Margin applicable to all such agreements as set forth herein. Each DS Supplier that is a party to such other agreements with the Company for the provision of DS Supply hereby agrees that such other agreements are deemed amended by this Agreement for the purpose of calculating the Margin as

described herein.

6.13 Independent Credit Requirement per Tranche

The Independent Credit Requirement per Tranche ("ICRT") that will be required of DS Suppliers under each Agreement shall initially be \$1.5 million per Tranche and shall decline in accordance with the schedule included as part of Appendix A throughout the term hereof. The ICR under each Agreement is the ICRT times the number of Tranches.

ARTICLE 7: PROCEDURES FOR ENERGY SCHEDULING, CAPACITY RESOURCE SUBMISSION AND TRANSMISSION PROCUREMENT

7.1 Load Obligations

The Company and the DS Supplier acknowledge and agree that (1) the Company shall determine the DS Load, (2) the Company shall allocate the DS Supply obligation using the DS Supplier Responsibility Share, (3) the Company shall provide the DS Supplier's DS Supply obligation to PJM, and (4) the DS Supplier shall be responsible for meeting its DS Supply obligations as a LSE under the PJM Agreements.

7.2 Data Transmission

The procedures for transmitting load obligation data to PJM for DS Supplier's DS Load shall be as set forth by PJM.

7.3 Energy Scheduling

The Company is not obligated to provide any day ahead scheduling services. If the Company chooses to provide such services, the information provided is not guaranteed by the Company.

ARTICLE 8: THE ENERGY SETTLEMENT/RECONCILIATION PROCESS

8.1 Energy Settlement By PJM

The settlement process occurs at PJM to reflect the DS Supplier's actual Energy obligations in a supply/usage reconciliation process. The Energy obligations for each DS Supplier will be determined based on the DS Supplier Responsibility Share of the DS Load. The reconciled total DS Energy obligation will be based on the final total Energy loads for the Customers receiving DS service, including duration adjustments for marginal losses.

Any adjustments for billing and metering errors reported subsequent to the calculation of FMEA will be proportionally allocated by the Company to the DS Suppliers based on the respective DS Supplier Responsibility Share.

8.2 Energy Settlement by the Company

In the event that actual DS Customer consumption data is not available until after the PJM deadline for conducting the final settlement, the Company will conduct the settlement process with the DS Supplier. In the event PJM imposes penalties against the Company as a result of the DS Supplier's Transactions or failure to meet PJM requirements, such penalties shall be passed through by the Company, to the DS Supplier as part of this settlement process. In addition, all other applicable charges from PJM, including any billing adjustments, will be appropriately allocated to the DS Supplier.

ARTICLE 9: BILLING AND PAYMENT

9.1 The Company Payment of Obligations to the DS Supplier

The Company shall pay all amounts due to the DS Supplier hereunder in accordance with the following provisions:

- (a) Each Billing Month, the Company will prepare a Statement of amounts due to the DS Supplier. This Statement will show the aggregate amounts due based on the DS Fixed Price multiplied by the hourly Energy requirements of DS Supply used to determine the PMEA multiplied by the DS Fixed Percentage as shown on the Transaction Confirmation(s) for each hour of the Billing Month, plus the aggregate amounts due based on the DS Variable Price multiplied by the hourly Energy requirements of DS Supply used to determine the PMEA multiplied by the DS Variable Percentage, if applicable, as shown on the Transaction Confirmation(s) for each hour of the Billing Month.
- (b) The Statement will be sent to the DS Supplier within eight (8) Business Days after the end of the Billing Month via overnight mail or other expeditious means.
- (c) The Company shall make payment on the first Business Day after the 19th day of each calendar month.
- (d) To the extent that the FMEA differs from the PMEA, the Company shall pay or charge the DS Supplier for the PMEA/FMEA Adjustment Amount within the PJM deadline for conducting the final settlement.
- (e) If each Party owes an amount to the other Party pursuant to this Agreement, including any related interest, payments or credits, the Parties may satisfy their respective obligations to each other by netting the aggregate amounts due to one Party against the aggregate amounts due to the other Party, with the Party, if any, owing the greater aggregate amount paying the other Party the difference between the amounts owed.

- (f) Payments shall be subject to adjustment for any arithmetic errors, computation errors, meter reading errors, or other errors, provided that the errors become known within one (1) year of the termination of this Agreement.
- (g) The Company shall make payments of funds payable to the DS Supplier by electronic transfer to a bank designated by the DS Supplier.
- (h) If a good faith dispute arises between the Company and the DS Supplier regarding a Statement, the disputing Party shall be obligated to pay only the undisputed portion of the Statement, if any, and shall present the dispute in writing and submit supporting documentation to the non-disputing Party within one hundred twenty (120) calendar days from the date of the Statement in dispute. Statement disputes shall be addressed promptly, and in accordance with the dispute resolution procedures set forth in Article 11 of this Agreement. Upon resolution of a Statement dispute, any payments made to either Party will include simple interest on the payment at the lower of the Interest Index or six (6) percent per annum payable from the date that notice of a Statement dispute was received by the non-disputing Party.
- (i) If payment is made to the DS Supplier after the due date shown on the Statement, a late fee will be added to the unpaid balance until the entire Statement is paid. This late fee shall be the lesser of (a) the per annum rate of interest equal to the prime lending rate as may from time to time be published in The Wall Street Journal under "Money Rates" on such day (or if not published on such day on the most recent preceding day on which published), plus two percent (2%) or (b) the maximum rate permitted by applicable law.

9.2 Billing for DS Supplier's Obligations to Other Parties

The Company shall have no responsibility for billing between the DS Supplier and PJM; the DS Supplier and any Energy or Capacity source; or the DS Supplier and any other third party. The Company will be solely responsible for billing DS Customers for Default Service.

9.3 The DS Supplier Payment of Obligations to the Company

The DS Supplier shall pay all Charges it incurs hereunder in accordance with the following provisions:

- (a) Each Billing Month, the Company shall submit an invoice to the DS Supplier for all Charges owed by the DS Supplier under this Agreement. The DS Supplier shall make payment for Charges shown on the invoice. The due date will be on the first Business Day after the 19th day of each calendar month. The invoice will be sent to the DS Supplier within eight (8) Business Days after the end of the Billing Month via overnight mail or other expeditious means.
- (b) Invoices shall be subject to adjustment for any arithmetic errors, computation errors, meter reading errors, or other errors, provided that the errors become known within one (1) year of the termination of this Agreement.
- (c) The DS Supplier shall make payments of funds payable to the Company by electronic transfer to a bank designated by the Company.
- (d) If a good faith dispute arises between the Company and the DS Supplier regarding an invoice, the disputing Party shall pay only the undisputed portion of the invoice, if any, and shall present the dispute in writing and submit supporting documentation to the non-disputing Party within one hundred twenty (120) calendar days

from the due date of the invoice in dispute. Billing disputes shall be addressed promptly, and in accordance with the dispute resolution procedures set forth in Article 11 of this Agreement. Upon resolution of a billing dispute, any payments made to either Party will include simple interest on the payment at the lower of the Interest Index or six (6) percent per annum payable from the date that notice of a bill dispute was received by the non-disputing Party.

(e) If payment is made to the Company after the due date shown on the invoice, a late fee will be added to the unpaid balance until the entire invoice is paid. This late fee shall be the lesser of (a) the per annum rate of interest equal to the prime lending rate as may from time to time be published in The Wall Street Journal under "Money Rates" on such day (or if not published on such day on the most recent preceding day on which published), plus two percent (2%) or (b) the maximum rate permitted by applicable law.

ARTICLE 10: SYSTEM OPERATION

The Parties shall adhere to any applicable operational requirements of PJM necessary to protect the integrity of the transmission system within the PJM Control Area and the transmission systems of interconnected control areas, and shall satisfy any and all PJM, RFC and NERC criteria, when applicable. The DS Supplier shall also adhere to any applicable operational requirements of the Company necessary to protect the integrity of the Company's local distribution system.

10.1 Disconnection and Curtailment By the Company

The Company shall have the right, without incurring any liability to the DS Suppliers, to disconnect (or otherwise curtail, interrupt or reduce deliveries from) the DS Suppliers or to disconnect (or otherwise curtail, interrupt or reduce deliveries to) any

Customer whenever the Company determines in the exercise of its good faith discretion, or when the Company is directed by PJM, that such a disconnection, curtailment, interruption or reduction is necessary to facilitate construction, installation, maintenance, repair, replacement or inspection of any of the Company's facilities; or due to any other reason affecting the safe and reliable operation of the Company's or a Customer's facilities, including, without limitation, an Emergency, forced outage or potential overloading of the Company's transmission and/or distribution circuits, potential damage to any Customer's facilities or any risk of injury to persons or property.

10.2 Inadvertent Loss of Service to DS Customers

The Parties agree and acknowledge that service to DS Customers may be inadvertently lost due to storms, weather, accidents, breakage of equipment or other events beyond the reasonable control of the Company affecting the transmission and distribution system of the Company. Neither Party will have any liability to the other Party for the occurrence of such events except for the Company's obligation to pursue steps for the resumption of the disrupted service as set forth in Section 10.3 below. In no event will an inadvertent loss of service affect a Party's obligation to make any payments then due or becoming due with respect to performance rendered prior to such inadvertent loss of service.

10.3 Good Faith Efforts

The Company shall use good faith efforts to: (a) minimize any curtailment, interruption or reduction in service to DS Customers to the extent reasonably practicable under the circumstances; (b) provide the DS Supplier with prior notification of any curtailment, interruption or reduction in service to DS Customers, to the extent reasonably

practicable; and (c) resume service to DS Customers as promptly as reasonably practicable.

10.4 PJM Requirements

The DS Supplier acknowledges and agrees that, as a member of PJM, the Company is bound by all PJM operating instructions, policies and procedures as are currently set forth in the PJM Operating Manual, which are available through the Internet on the PJM Home Page (http://www.pjm.com), as may be revised from time to time, which are needed to maintain the integrity of the PJM system. The DS Supplier acknowledges and agrees that it will cooperate with the Company so that the Company will be in compliance with all PJM Emergency Operations Procedures, which include, but are not limited to, those procedures pertaining to minimum and maximum generation Emergencies, and measures requiring involuntary Customer participation, such as supply voltage reduction or full interruption of Customer load by either manual or automatic means.

10.5 Compliance with Governmental Directives

The DS Supplier also acknowledges and agrees that the Company may need to act in response to governmental or civil authority directives which may affect DS Customer load. The DS Supplier agrees to cooperate with the Company in order to comply with said directives.

ARTICLE 11: DISPUTE RESOLUTION

11.1 Informal Resolution of Disputes

Before pursuing resolution of any dispute arising out of this Agreement (other than an Event of Default under Article 5.1(i)-(ix), (xii), or (xvi)), the disputing Party shall provide written notice to the other Party setting forth the nature of the dispute, the amount involved, if any, and the remedies sought. The Parties shall use good faith and reasonable

commercial efforts to informally resolve such dispute. Such efforts shall last for a period of at least thirty (30) calendar days from the date that the notice of the dispute is first delivered from one Party to the other Party. Any amounts that are owed by one Party to the other Party as a result of resolution of a dispute pursuant to this Article 11.1 (Informal Resolution of Disputes), shall be paid within two (2) Business Days of such resolution and the payment shall include interest calculated at the Interest Index from the original due date through the date of payment.

11.2 Recourse to Agencies or Courts of Competent Jurisdiction

After the requirements of Article 11.1 (Informal Dispute Resolution) have been satisfied, all unresolved disputes, except as noted below, between the Parties shall be submitted to the appropriate authority. Nothing in this Agreement shall restrict the rights of either Party to file a complaint with the FERC under relevant provisions of the Federal Power Act ("FPA"), with the PaPUC under relevant provisions of the Applicable Legal Authorities, with a Pennsylvania State court or a federal court of competent jurisdiction and within reasonably close proximity to the Company. The Party's agreement hereunder is without prejudice to any Party's right to contest the jurisdiction of the agency or court to which a complaint is brought.

The Parties hereby acknowledge and agree that both Parties have negotiated and entered into this Agreement freely and in good faith and that the terms of this Agreement have not been affected in any way, either directly or indirectly, by (A) any fraud, duress, unfairness, or any inequity in the relative bargaining power of the Parties or (B) any manipulation, unlawful activity, disruption, anomaly, dysfunction, or other adverse market conditions of any type or description.

To the extent permitted by law and absent agreement to the contrary, each Party, for itself and its successors and assigns, hereby expressly and irrevocably waives its rights (i) to argue before any governmental authority that any review, modification, or rescission of this Agreement should be considered under any standard of review other than the "public interest" standard set forth in *United Gas Pipe Line Co. v. Mobile Gas Service Corp., 350 U.S. 332 (1956)* and *Federal Power Commission v. Sierra Pacific Power Co., 350 U.S. 348 (1956)*, affirmed by Morgan Stanley Capital Group, Inc. v. Public Utility District No. 1 of Snohomish County, Washington, et al., 554 U.S. 527 (2008) (the "Mobile-Sierra Doctrine"), and (ii) to argue before any governmental authority that any terms of this Agreement should be modified or rescinded based on (A) any claim of fraud, duress, unfairness, bad faith, or inequity in the relative bargaining power of the Parties or (B) any claim of market manipulation, unlawful activity, disruption, anomaly, dysfunction, or other adverse market conditions of any type or description.

ARTICLE 12: REGULATORY AUTHORIZATIONS AND JURISDICTION

12.1 Compliance with Applicable Legal Authorities

The Company and the DS Supplier are subject to, and shall comply with, all existing or future applicable feederal, State and local laws, all existing or future duly-promulgated orders or other duly-authorized actions of PJM or of Applicable Legal Authorities.

12.2 FERC Jurisdictional Matters

The inclusion herein of descriptions of procedures or processes utilized by PJM or otherwise subject to the jurisdiction of FERC is intended solely for informational purposes.

If anything stated herein is found by the FERC to conflict with or be inconsistent with any provision of the FPA, or any rule, regulation, order or determination of the FERC under the FPA or if any existing procedures or processes utilized by PJM are duly modified, the applicable FERC rule, regulation, order, determination or modification shall control. To the extent required under any provision of the FPA, or any rule, regulation, order or determination of the FERC under the FPA, the Company and/or the DS Supplier, if applicable, shall use reasonable commercial efforts to secure, from time to time, all appropriate orders, approvals and determinations from the FERC necessary to support this Agreement.

12.3 Energy Efficiency, Conservation, and Retail Market Programs

DS Supplier acknowledges that DS Customers may participate in energy efficiency and conservation programs offered by the Company (required by Applicable Legal Authorities or otherwise offered by the Company whether voluntarily or not), by PJM, or by other third parties and, for the avoidance of doubt, any programs offered or conducted by the Company or other entities relating to or arising from the PaPUC's Investigation of Pennsylvania's Retail Electricity Market, PaPUC Docket No. I-2011-2237952 (including legislation enacted to address the Commission's Final Order in Docket No. I-2011-2237952), and that such participation may reduce or change the amount of DS Supply that DS Supplier is required to provide and the amount of monies it may receive under this Agreement. The Company shall have no obligation whatsoever to DS Supplier with respect to the effect, if any, of such programs. DS Supplier is solely responsible for determining the effect, if any, of such programs on future load requirements.

ARTICLE 13: LIMITATION OF REMEDIES, LIABILITY AND DAMAGES

13.1 Limitations on Liability

Except as set forth in this Agreement, there is no warranty of merchantability or fitness for a particular purpose, and any and all implied warranties are disclaimed. The Parties confirm that the express remedies and measures of Damages provided in this Agreement satisfy the essential purposes hereof. For breach of any provision for which an express remedy or measure of Damages is provided, such express remedy or measure of Damages shall be the sole and exclusive remedy, the obligor's liability shall be limited as set forth in such provision and all other remedies or Damages at law or in equity are waived. If no remedy or measure of Damages is expressly provided herein, the obligor's liability shall be limited to direct actual Damages only, such direct actual Damages shall be the sole and exclusive remedy and all other remedies or Damages at law or in equity are waived. Unless expressly herein provided, neither Party shall be liable for consequential, incidental, punitive, exemplary or indirect Damages, lost profits or other business interruption Damages, by statute, in tort or contract, under any indemnity provision or otherwise. It is the intent of the Parties that the limitations herein imposed on remedies and the measure of Damages be without regard to the cause or causes related thereto, including the negligence or any Party, whether such negligence by sole, joint or concurrent, or active or passive. To the extent any Damages required to be paid hereunder are liquidated, the Parties acknowledge that the Damages are difficult or impossible to determine, or otherwise obtaining an adequate remedy is inconvenient and the Damages calculated hereunder constitute a reasonable approximation of the harm or loss.

13.2 Risk of Loss

Solely for purposes of determining risk of loss and for determining the indemnity obligations under Article 14 of this Agreement, the Company shall be deemed to have custody and control of the electric Energy delivered by the DS Supplier upon receipt thereof into the Company's distribution system and until delivery thereof at the retail electric meter of the Customer; and the DS Supplier shall be deemed to have custody and control of the DS Supply at all times prior to receipt thereof by the Company. The Party deemed to have custody and control of DS Supply shall be responsible for all loss or damage to property or injury or death to persons arising in connection with such DS Supply while in its custody and control and shall indemnify the other Parties with respect to same as set forth in Article 14 of this Agreement.

ARTICLE 14: INDEMNIFICATION

14.1 Indemnification

(a) Should the Company become the defendant in, or obligor for, any third party claims and/or liabilities for losses, penalties, expenses, damage to property, injury to or death of any person including a Party's employees or any third parties, that were caused by or occur in connection with an act or omission of the DS Supplier with respect to an obligation arising under or in connection with this Agreement, or for which the DS Supplier has otherwise assumed liability under the terms of this Agreement, the DS Supplier shall defend (at the Company's option), indemnify and hold harmless the Company, its shareholders, board members, directors, officers and employees, from and against any and all such third party claims and/or liabilities, except to the extent that a court of competent jurisdiction determines that the losses, penalties, expenses or damages were

caused wholly or in part by the gross negligence or willful misconduct of the Company. The Company may, at its own expense, retain counsel and participate in the defense of any such suit or action.

- the defendant in, or obligor for, any third party claims and/or liabilities for losses, penalties, expenses, damage to property, injury to or death of any person including a Party's employees or any third parties, that were caused by or occur in connection with an act or omission of the Company with respect to an obligation arising under or in connection with this Agreement, or for which the Company has otherwise assumed liability under the terms of this Agreement, the Company shall defend (at the option of the Indemnified DS Supplier), indemnify and hold harmless the Indemnified DS Supplier, its shareholders, board members, directors, officers and employees, from and against any and all such third party claims and/or liabilities, except to the extent that a court of competent jurisdiction determines that the losses, penalties, expenses or damages were caused wholly or in part by the gross negligence or willful misconduct of the Indemnified DS Supplier. The Indemnified DS Supplier may, at its own expense, retain counsel and participate in the defense of any such suit or action.
- (c) If either Party intends to seek indemnification under Article 14.1(a) or 14.1(b), as applicable, from the other Party, the Party seeking indemnification shall give the other Party notice of such claim within ninety (90) days of the later of the commencement of, or the Party's actual knowledge of, such claim or action. Such notice shall describe the claim in reasonable detail, and shall indicate the amount, estimated if necessary, of the claim that has been, or may be, sustained by said Party. To the extent that

the other Party will have been actually and materially prejudiced as a result of the failure to provide such notice, such notice will be a condition precedent to any liability of the other Party under the provisions for indemnification contained in this Agreement. Neither Party may settle or compromise any claim without the prior consent of the other Party; provided, however, said consent shall not be unreasonably withheld, conditioned or delayed.

14.2 Survives Agreement

The obligation of a Party to defend, indemnify, and hold harmless another Party under this Article shall survive termination of this Agreement, and shall not be limited in any way by any limitation on the amount or type of damages, compensation or benefits payable by or for either Party under any statutory scheme, including any Worker's Compensation Acts, Disability Benefit Acts or other Employee Benefit Acts.

ARTICLE 15: FORCE MAJEURE

15.1 Force Majeure

Notwithstanding anything in this Agreement to the contrary, the Parties shall be excused from performing their respective obligations under this Agreement (other than the obligation to make payments with respect to performance prior to the event of Force Majeure) and shall not be liable for damages or otherwise due to their failure to perform, during any period that one Party is unable to perform due to an event of Force Majeure, provided that the Party declaring an event of Force Majeure shall: (i) act expeditiously to resume performance; (ii) exercise all commercially reasonable efforts to mitigate or limit damages to the other Party; and (iii) fulfills the requirements set forth in Article 15.2 (Notification).

15.2 Notification

A Party unable to perform under this Agreement due to an event of Force Majeure shall: (i) provide prompt written notice of such event of Force Majeure to the other Party, which shall include an estimate of the expected duration of the Party's inability to perform due to the event of Force Majeure; and (ii) provide prompt notice to the other Party when performance resumes.

ARTICLE 16: MISCELLANEOUS PROVISIONS

16.1 Notices

Unless otherwise stated herein, all notices, demands or requests required or permitted under this Agreement shall be in writing and shall be personally delivered or sent by overnight express mail or courier service. Notice may also be provided via e-mail or facsimile transmission (with the original transmitted by any of the other delivery methods specified in the previous sentence) addressed per the notification information for the DS Supplier and Company as set forth in Exhibit 2 hereto.

Such notices, demands or requests shall also be provided to such other person at such other address as a Party may designate by like notice to the other Party. Notice received after the close of the Business Day shall be deemed received on the next Business Day.

16.2 No Prejudice of Rights

The failure of a Party to insist on any one or more instances upon strict performance of any provisions of this Agreement, or to take advantage of any of its rights hereunder, shall not be construed as a waiver of any such provisions or the relinquishment of any such right or any other right hereunder, which shall remain in full force and effect. No term or

condition of this Agreement shall be deemed to have been waived and no breach excused unless such waiver or consent to excuse is in writing and signed by the Party claimed to have waived or consented to excuse.

16.3 Assignment

Parties shall not assign any of their rights or obligations under this Agreement without obtaining the prior written consent of the non-assigning Party, which consent shall not be unreasonably withheld. The Company agrees that it shall grant its consent to a proposed assignment by the DS Supplier if the proposed assignee meets all of the Company's creditworthiness requirements then in effect under this Agreement and any applicable load cap restrictions. No assignment of this Agreement shall relieve the assigning Party of any of its obligations under this Agreement until such obligations have been assumed by the assignee and all necessary consents have been obtained. Any assignment in violation of this Section 16.3 shall be void; provided, however, the Company may assign any or all of its rights and obligations under this Agreement notwithstanding anything contained herein to the contrary, without the DS Supplier's consent, to any entity succeeding to all or substantially all of the assets of the Company, if such assignee agrees, in writing, to be bound by all of the terms and conditions hereof and all necessary regulatory approvals are obtained. The DS Supplier may, with prior written notice to the Company but without obtaining the approval of the Company, assign the accounts, revenues or proceeds under this Agreement to a third party. The Company agrees that, following receipt of such notice of the assignment of accounts, revenues or proceeds and such other documentation that the Company may reasonably request, the Company will pay amounts becoming due to the assigning DS Supplier under this Agreement directly to the designated assignee; provided, however, that nothing herein shall enlarge or expand the rights of such designated assignee beyond the rights granted to the DS Supplier and the right of such designated assignee to receive payments shall be subject to all defenses, offsets and claims of the Company arising under this Agreement.

16.4 Governing Law and Venue

To the extent not subject to the jurisdiction of the FERC, questions including those concerning the formation, validity, interpretation, execution, amendment, termination and construction of this Agreement shall be governed by the laws of the Commonwealth of Pennsylvania, without regard to principles of conflicts of law. Except for matters jurisdictional to FERC, the PUC or the appellate courts having jurisdiction over the PUC or FERC matters, all disputes hereunder shall be resolved in the Pennsylvania State court or Federal court of competent jurisdiction and within reasonably close proximity to the Company. Each Party hereby waives its respective rights to any jury trial with respect to any litigation arising under or in connection with this Agreement.

16.5 Regulatory Approvals

DS Supplier agrees to cooperate, to the fullest extent necessary, to obtain any and all required State, Federal or other regulatory approvals of the Agreement and/or Transaction Confirmations hereunder. The commencement of the Delivery Period and the obligations hereto are subject to (i) the receipt or waiver by Company of all Company required regulatory approvals, (ii) the receipt or waiver by DS Supplier of all DS Supplier required regulatory approvals, and (iii) Pennsylvania PUC approval.

16.6 Headings

The headings and subheadings contained in this Agreement are used solely for convenience and do not constitute a part of the Agreement between the Parties hereto, nor

should they be used to aid in any manner in the construction of this Agreement.

16.7 Third Party Beneficiaries

This Agreement is intended solely for the benefit of the Parties hereto and nothing in this Agreement shall be construed to create any duty, or standard of care with reference to, or any liability to, any person not a Party to this Agreement.

16.8 General Miscellaneous Provisions

- (a) This Agreement shall not be interpreted or construed to create an association, joint venture, or partnership between the Parties, or to impose any partnership obligation or liability upon any Party. No Party shall have any right, power, or authority to enter into any agreement or undertaking for, or on behalf of, or to act as or be an agent or representative of, or to otherwise bind, any other Party.
- (b) Cancellation, expiration or Early Termination of this Agreement shall not relieve the Parties of obligations that by their nature survive such cancellation, expiration or termination, including warranties, remedies, promises of indemnity and confidentiality.
- (c) Should any provision of this Agreement be held invalid or unenforceable, such provision shall be invalid or unenforceable only to the extent of such invalidity or unenforceability without invalidating or rendering unenforceable any other provision hereof unless it materially changes the agreement of the Parties; provided that in such event the Parties shall use commercially reasonable efforts to amend this Agreement or any Transaction in order to give effect to the original intention of the Parties.
- (d) Each of the Parties acknowledges that it has read this Agreement, understands it, and agrees to be bound by its terms. This Agreement is intended by the Parties as a final expression of their agreement. The Parties further agree that this

Agreement is the complete and exclusive statement of agreement and supersedes all proposals (oral or written), understandings, representations, conditions, warranties, covenants and all other communications between the Parties relating thereto. This Agreement shall be considered for all purposes as prepared through the joint efforts of the Parties and shall not be construed against one Party or the other as a result of the preparation, substitution, submission or other event of negotiation, drafting or execution hereof. Each Party further agrees that it will not assert, or defend itself, on the basis that any applicable tariff is inconsistent with this Agreement or any Transaction.

16.9 Taxes

As between the Parties: (i) The DS Supplier is responsible for the payment of all taxes imposed by all present and future Federal, state, municipal or other taxes imposed by any taxing authority on the wholesale sales of DS Supply under this Agreement; and (ii) The Company is responsible for the payment of all taxes imposed by all present and future Federal, state, municipal or other taxes imposed by any taxing authority on retail sales of DS Supply under this Agreement. Should the DS Supplier be required to remit any Pennsylvania State Sales and Use Taxes directly to the applicable taxing authority, other than taxes previously collected by the DS Supplier on behalf of the Company, the Company will defend and indemnify the DS Supplier for such Sales and Use Taxes and will pay to the DS Supplier all such tax amounts upon demand. If any Transaction is exempt from the payment of any such taxes, the affected DS Supplier will, if requested, provide the Company with valid tax exemption certificates. Should the Company be required to remit any such taxes directly to any applicable taxing authority, other than taxes previously collected by the Company directly from the DS Supplier, the DS Supplier will

defend and indemnify the Company and will pay to the Company all such tax amounts upon demand.

16.10 Audit

Each Party has the right on at least three (3) Business Days prior written notice, at its sole expense and during normal working hours, to examine the records of the other Party to the extent reasonably necessary to verify the accuracy of any statement, charge or computation made pursuant to this Agreement. If any such examination reveals any inaccuracy in any statement, the necessary adjustments in such statement and the payments thereof will be made in accordance with Article 9 (Billing) and 9.1 (i) (Interest on Unpaid Balances) of this Agreement.

16.11 Rules of Interpretation

The following principles shall be observed in the interpretation and construction of this Agreement:

- (a) Unless otherwise stated, the terms "include" and "including" when used in this Agreement shall be interpreted to mean by way of example only and shall not be considered limiting in any way;
- (b) All titles and headings used herein are for convenience and reference purposes only, do not constitute a part of this Agreement and shall be ignored in construing or interpreting the obligations of the parties under this Agreement;
- (c) References to the singular include the plural and vice versa;
- (d) References to Articles, Sections, Clauses and the Preamble are, unless the context indicates otherwise, references to Articles, Sections, Clauses and the Preamble of this Agreement;

- (e) In carrying out its rights, obligations and duties under this Agreement, each Party shall have an obligation of good faith and fair dealing; and
- (f) If any payment due under this Agreement would be, by operation of the terms and conditions of any provision hereof, due and payable on a day other than a Business Day, such payment shall be made on the next following Business Day.

16.12 Confidentiality

- (a) Each Party shall hold in confidence and not release or disclose any document or information furnished by the other Party in connection with this Agreement, unless:
 (i) compelled to disclose such document or information by judicial, regulatory or administrative process or other provisions of law; (ii) such document or information is generally available to the public; (iii) such document or information was available to the receiving Party on a non-confidential basis; (iv) such document or information was available to the receiving Party on a non-confidential basis from a third-party, provided that the receiving Party does not know, and, by reasonable effort, could not know that such third-party is prohibited from transmitting the document or information to the receiving Party by a contractual, legal or fiduciary obligation or (v) such disclosure is made to PJM or Pa PUC and is necessary in order for the Transactions contemplated by this Agreement to be consummated or to otherwise comply with the provisions of this Agreement.
- (b) Notwithstanding any other provision of this Section 16.12, a Party may disclose to its employees, representatives and agents all documents and information furnished by the other Party in connection with this Agreement, provided that such employees, representatives and agents have been advised of the confidentiality

provisions of this Section 16.12, and further provided that in no event shall a document or information be disclosed in violation of the standard of conduct requirements established by FERC.

- (c) A Party receiving notice or otherwise concluding that any confidential document or information furnished by the other Party in connection with this Agreement is being sought under any provision of law, to the extent it is permitted to do so under any applicable law, shall: (i) promptly notify the other Party; and (ii) use reasonable efforts in cooperation with the other Party to seek confidential treatment of such confidential information.
- (d) The Parties agree that monetary damages may be inadequate to compensate a Party for the other Party's breach of its obligations under this Section 16.12. Each Party accordingly agrees that the other Party shall be entitled to equitable relief, by way of injunction or otherwise, if the receiving Party breaches or threatens to breach its obligations under this Article 16.12, which equitable relief shall be granted without bond or proof of damages, and the receiving Party shall not plead in defense that there would be an adequate remedy at law.

16.13 Federal Acquisition Regulation

If any of the following clauses prescribed by the Federal Acquisition Regulation ("FAR"), 48 Code of Federal Regulations Chapter 1, should be deemed to apply to this Agreement, the DS Supplier shall comply with the requirements of such clause(s), and shall include the terms or substance of such clause(s) in its subcontracts, as and to the extent required by the FAR:

1) Clean Air and Water: § 52.223-2;

- Contract Work Hours and Safety Standards Act-Overtime Compensation: § 52.222-4;
- 3) Equal Opportunity: § 52.222-26;
- 4) Affirmative Action for and Employment Reports on Special Disabled and Vietnam Era Veterans: § 52.222-35 and § 52.222-37;
- 5) Affirmative Action for Handicapped Workers: § 52.222-36;
- 6) Utilization of Small Business Concerns and Small Disadvantaged Business
 Concerns and Small Business and Small Disadvantaged Business
 Subcontracting Plan: § 52.219-8 and § 52-219-9.

In case of a conflict between the provisions of the FAR and the balance of this Agreement, the requirements of the FAR shall prevail.

16.14 Binding Terms

This Agreement and the rates, terms and conditions herein shall remain in effect for the entire term hereof and each Party agrees not to seek any change to such rates, terms and conditions pursuant to the FPA, if the FPA is deemed to have jurisdiction over this Agreement, including on the grounds that they are not just and reasonable.

16.15 Amendment

This Agreement, including the appendices hereto, cannot be amended without the written agreement of all Parties prior to such amendment becoming effective. Except as provided in Appendix C and the Transaction Confirmation(s), the rates, terms and conditions contained in this Agreement are not subject to change under Sections 205 or 206 of the Federal Power Act absent the mutual written agreement of the Parties. Absent the agreement of all parties to the proposed change, the standard of review for changes to

this Agreement proposed by a Party, a non-Party or the FERC acting *sua sponte* shall be the "public interest" standard of review set forth in *United Gas Pipe Line Co. v. Mobile Gas Service Corp.*, 350 U.S. 332 (1956) and Federal Power Commission v. Sierra Pacific Power Co., 350 U.S. 348 (1956), affirmed by Morgan Stanley Capital Group, Inc. v. Public Utility District No. 1 of Snohomish County, Washington, et al., 554 U.S. 527 (2008) (the "Mobile-Sierra Doctrine").

16.16 Counterparts

This Agreement may be executed in counterparts, each of which will be considered an original, but all of which shall constitute one instrument.

16.17 Successors

This Agreement and all of the provisions hereof are binding upon, and inure to the benefit of, the Parties and their respective successors and permitted assigns.

IN WITNESS WHEREOF, the Parties her	reto have caused this Agreement to be executed
by their duly authorized representatives as	of the date first set forth above.
ATTEST:	[Applicable EDC]
By:	By:

IN WITNESS WHEREOF, the Parties hereto have caused this Agreement to be executed				
by their duly authorized representatives as	s of the date first set forth above.			
ATTEST:	DS Supplier			
By:	By:			
	<u> </u>			
Name:	Name:			
Title:	Title:			

APPENDIX A- MAXIMUM UNSECURED CREDIT

Credit Rating of the DS Supplier			Maximum Credit Limit (calculated as the lesser of the percentage of TNW or the Credit Limit			
Cap below)				or the credit Ellint		
S&P	Moody's	Fitch	Percentage of TNW	Credit Limit Cap		
A- and above	A3 and above	A- and above	16%	\$ 75MM 50MM		
BBB +	Baa1	BBB +	16%	\$ 75MM 50MM		
BBB	Baa2	BBB	10%	\$ 50MM 35MM		
BBB-	Baa3	BBB-	8%	\$ 25MM 20MM		
BB+	Ba1	BB+	4%	\$ 15MM 10MM		
BB	Ba2	BB	3%	\$10MM5MM		
BB-	Ba3	BB-	2%	\$ 5MM 2MM		
Below BB-	Below Ba3	Below BB-	0%	\$0MM		

Credit Rating Determination Methodology

The DS Supplier or it Guarantor must have a minimum senior unsecured debt rating (or, if unavailable, corporate issuer rating) equal to the Minimum Rating. If the DS Supplier or its Guarantor is rated by only two rating agencies, and the ratings are split, the <u>lowerhigher</u> rating will be used. If the DS Supplier or its Guarantor is rated by three rating agencies, and the ratings are split, the lower of the two highest ratings will be used; provided, however, that in the event that the two highest ratings are common, such common rating will be used. The maximum level of the credit limit to cover the Total Exposure Amount will be determined based on the above table <u>and will be aggregated – meaning</u>, this is the <u>maximum credit limit for all the Companies combined</u>.

Minimum Rating – The lowest credit rating for a DS Supplier, as set forth in this Appendix A, that can obtain unsecured credit.

Independent Credit Requirement per Tranche (ICRT)

Schedule for ICRT - FEPA DSPVI

- * ICRT required for both Residential and Commercial tranches (not required for Industrial)
 - * ICRT **not** required for 6-month tranches
 - * ICRT netted with prior ICRT

requirements

Month _		24-Month Product	12-Month Product		
		<u>(\$/tranche)</u>	<u>(\$/tranche)</u>		
Month 1	_	<u>1,500,000</u>	<u>1,500,000</u>		
Month 2	_	<u>1,500,000</u>	<u>1,500,000</u>		
Month 3	_	<u>1,500,000</u>	1,200,000		
Month 4	-	<u>1,500,000</u>	1,200,000		
Month 5	_	<u>1,500,000</u>	1,000,000		
Month 6	_	<u>1,500,000</u>	1,000,000		
Month 7	_	<u>1,200,000</u>	800,000		
Month 8	_	<u>1,200,000</u>	800,000		
Month 9	_	<u>1,200,000</u>	600,000		
Month 10	_	<u>1,200,000</u>	600,000		
Month11	_	<u>1,000,000</u>	400,000		
Month 12	-	<u>1,000,000</u>	400,000		
Month 13	_	<u>1,000,000</u>			
Month 14	_	<u>1,000,000</u>			
Month 15	_	800,000	_		
Month 16	_	800,000	_		
Month 17	_	800,000	_		
Month 18	_	800,000	_		
<u>Month 19</u>		<u>600,000</u>	_		
Month 20		<u>600,000</u>	_		
Month 21		<u>600,000</u>	_		
Month 22		<u>400,000</u>	_		
Month 23		<u>400,000</u>	_		
Month 24	_	<u>400,000</u>	_		

APPENDIX B – MTM EXPOSURE AMOUNT CALCULATION INFORMATION

Table 1 contains the initial marks¹ for each month of the DS auction period. Monthly marks (example only,) are provided for a twelve month period. For the months, two-month blocks² or quarterly blocks³ where broker quotes are available, broker quotes will be used for those months. For all the remaining months the EDCs will be using a proprietary method that reflects forward market conditions. The initial mark for each Billing Month is the initial mark that was calculated on the date that the DS auction closes and will not change over the life of the contract.

After the close of the DS auction On-Peak Energy Forward and Off-Peak Energy Forward prices will change. In addition, the on-peak and off-peak loads used to calculate the MtM Exposure Amount will be adjusted monthly to reflect the most current changes. On-Peak and Off-Peak Energy Forward prices for the months, two-month blocks or quarterly blocks where at least two broker quotes are available will be equal to the broker quotes. In case quotes for a component of a block and for the block are both available, the EDCs reserve the right not to use both the component of a block and the block if they are inconsistent with each other. However, when this inconsistency occurs the EDC must use either the component or the block. On-Peak and Off-Peak Energy Forward prices for the months, two-month blocks or quarterly blocks where broker quotes are unavailable will be equal to the last available broker quotes or in case they have not been quoted on the broker sheets since the DS auction closed, they will be equal to the marks set at the close of the DS auction.

¹ Initial marks represent Market Price Hub on-peak prices.

 $^{^2}$ For two-month and quarterly blocks for which the average for the block and a component of the block are both quoted, the component will be equal to its quoted price and the other months in the block will be constructed so that the weighted average (weighted by on-peak hours in each month) of the block equals the quote for the block; e.g., Q4 2013 = \$50 and Oct 2013 = \$40; therefore, Oct 2013 = \$40 and Nov-Dec 2013 = \$55 (\$50*(336+336+368)-\$40*336)/(336+368)=\$54.77. If only the block is quoted, that price will be used for all relevant months; e.g., Jan/Feb 2014 = \$35, then Jan 2014 = \$35 and Feb 2014 = \$35.

MtM Calculation Example

Parameters

On the closing day of the auction, the following parameters are set

- 1. The expected monthly On-Peak Load per tranche for each EDC.
- 2. The expected monthly Off-Peak Load per tranche for each EDC.
- 3. The monthly on-peak forward prices (to be used as the inception price "initial mark" for each month of the supply period).
- 4. The monthly off-peak forward prices (to be used as the inception price "initial mark" for each month of the supply period)

Indicative on-peak and off-peak loads per tranche for each EDC will be made available 14 days prior to the auction.

All Energy Prices are based on a Market Price Hub that the Company will specify as follows: PJM Western Hub

Table 1 - Data set on the Closing Day of the Auction (MWh/tranche)*

	On-Peak Volume ³	Off-Peak Volume ⁴	Initial Mark On- Peak Price ⁵	Initial Mark Off- Peak Price ⁶
Month 1				_
Month 2				
Month 3				
Month 4				
Month 5				
Month 6				
Month 7				
Month 7				
Month 8				
Month 9				
Month 10				
Month 11				
Month 12				

^{*} Table 1 can be found at the FirstEnergy Pennsylvania Default Service Program website at http://www.fepaauction.com/Documents/MarkToMarketCalculations.aspx.

EXAMPLE

Table 2 – Post Auction Close MTM Calculation (MWh/tranche)**

	On-Peak Load per Tranche	Off-Peak Load per Tranche	Initial Mark On- Peak	Initial Mark Off- Peak	On-Peak Energy Forward	Off-Peak Energy Forward	MtM ⁹
	(MWh)	(MWh)	Price	Price	Price ⁷	Price ⁸	
Month 1							
Month 2							
Month 3							
Month 4							
Month 5							
Month 6							
Month 7							
Month 8							
Month 9							
Month 10							
Month 11							
Month 12							

Total

^{**} Table 2 can be found at the FirstEnergy Pennsylvania Default Service Program website at http://www.fepaauction.com/Documents/MarkToMarketCalculations.aspx.

³ On-peak and off-peak volumes will be adjusted monthly.

⁴ On-peak and off-peak volumes will be adjusted monthly.

⁵ Initial Mark On-peak price set at day auction closes. Remains constant through term of agreement

⁶ Initial Mark Off-peak price set at day auction closes. Remains constant through term of agreement.

⁷ On-peak Energy Forward as available and quoted by referenced market makers.

⁸ Off-peak Energy Forward as available and quoted by referenced market makers.

⁹ MTM = (On Peak Load * (On Peak Energy Forward Price - Initial Mark On Peak Price) + (Off Peak Load

^{*(}Off Peak Energy Price- Initial Mark Off Peak Price)

APPENDIX C - DS SUPPLY SPECIFICATIONS

The following DS Supply specifications will be specified in Transaction Confirmations to this Agreement.

Product:

DS Supply: All necessary Energy, Capacity, AECs for AEPS Act compliance, Ancillary Services, transmission services -including Network Integration Transmission Service, all transmission and distribution losses, and congestion and imbalance costs associated with the provision of such services, as well as such other services or products that the DS Supplier may be required, by PJM or any governmental body having jurisdiction, to provide in order to meet the DS Supplier Responsibility Share for serving DS Load.

Appendix D - describes Company and DS Supplier responsibilities for PJM Billing Statement Line Item Credits and Charges associated with the Product. In addition, any unaccounted for energy and historical tie line, generation, and retail customer meter charges not set forth in Appendix D shall be the responsibility of the Company through each EDC's respective non-bypassable Default Service Support Rider.

<u>Appendix E</u> - further describes DS Supplier responsibilities for compliance with the AEPS Act in the product specification.

82

DS Customer Group:

Each Transaction Confirmation shall be associated with DS Supply to one of the following DS Customer categories as defined in the DS Tariff:

<u>Residential</u> – **Met-Ed and Penelec** (Rate RS, and Rate GS – Volunteer Fire Company, Non-Profit Ambulance Service, Rescue Squad and Senior Center Service Rate)

Penn Power (Rate Schedules RS; and GS Special Provision for Volunteer Fire Companies, Non-Profit Senior Citizen Centers, Non-Profit Rescue Squads, and Non-Profit Ambulance Services)

West Penn (Rate Schedule 10 and Rate Schedule 20 special provision for Volunteer Fire Company, Non-Profit Ambulance Service, Non-Profit Rescue Squad and Non-Profit Senior Citizen Center)

<u>Commercial</u> – **Met-Ed** (Rate GS-Small, Rate GS-Medium (PTC), Rate MS, Borderline Service, Street Lighting Service, Ornamental Street Lighting, <u>LED Streetlighting Service</u>, and Outdoor Lighting Service)

Penelec (Rate GS-Small, Rate GS-Medium (PTC), Rate H, Borderline Service, High Pressure Sodium Vapor Street Lighting Service, Municipal Street Lighting Service, LED Streetlighting Service, and Outdoor Lighting Service)

Penn Power (Rate Schedules GS (excluding GS Special Rule GSDS), PNP, GM (PTC), PLS, SV, SVD, and <u>LEDSM</u>)

West Penn (Rate Schedules 20, 30 (PTC), 51, 52, 53, 54, 55, 56, 57, 58, 71 and 72)

<u>Industrial</u> – Met-Ed (Rate Schedules GS-Medium (HP), GS-Large, GP, and TP)

Penelec (Rate Schedules GS-Medium (HP), GS-Large, GP, and LP)

Penn Power (Rate Schedules GM (HP), GS-Large, GP, GT, or GS if such GS Customers

also are under Special Rule GSDS)

West Penn (Rate Schedules 30 (HP), 35, 40, 44, 46 and Tariff No. 37 – Pennsylvania State

University)

Delivery Point: [METED RESID AGG, PENELEC RESID AGG,

PENNPOWER_RESID_AGG, APS_RESID_AGG as applicable for the appropriate

EDC]

Delivery Period: The term of the Company's Default Service Plan is from June 1, 2019

2023 to May 31, 2023 2027. The applicable Delivery Period for awarded contracts will be

as identified on each Transaction Confirmation within the Default Service Plan date range.

Number of Tranches and Percentage for Each Tranche:

Residential – For Metropolitan Edison Company there are [TBD] total Residential

tranches available. Each tranche represents [TBD]% of the Residential DS Load. For

Pennsylvania Electric Company there are [TBD] total Residential tranches available.

Each tranche represents [TBD]% of the Residential DS Load. For Pennsylvania Power

Company there are [TBD] total Residential tranches available. Each tranche represents

[TBD]% of the Residential DS Load. For West Penn Power Company there are [TBD]

total Residential tranches available. Each tranche represents [TBD]% of the Residential

DS Load. Tranches won for the applicable Delivery Period will be specified on the

Transaction Confirmation.

84

Commercial – For **Metropolitan Edison Company** there are [TBD] total Commercial tranches available. Each tranche represents approximately [TBD]% of the Commercial DS Load. For **Pennsylvania Electric Company** there are [TBD] total Commercial tranches available. Each tranche represents approximately [TBD]% of the Commercial DS Load. For **Pennsylvania Power Company** there are [TBD] total Commercial tranches available. Each tranche represents approximately [TBD]% of the Commercial DS Load. For West **Penn Power Company** there are [TBD] total Commercial tranches available. Each tranche represents approximately [TBD]% of the Commercial DS Load. Tranches won for the applicable Delivery Period will be specified on the Transaction Confirmation. Industrial – For **Metropolitan Edison Company** there are [TBD] total Industrial tranches available. Each tranche represents [TBD]% of the Industrial DS Load. For **Pennsylvania** Electric Company there are [TBD] total Industrial tranches available. Each tranche represents [TBD]% of the Industrial DS Load. For **Pennsylvania Power Company** there are [TBD] total Industrial tranches available. Each tranche represents [TBD]% of the Industrial DS Load. For West Penn Power Company there are [TBD] total Industrial tranches available. Each tranche represents [TBD]% of the Industrial DS Load. Tranches won for the applicable Delivery Period will be specified on the Transaction Confirmation.

DS Supplier Responsibility Share:

Fixed percentage share of DS Load for DS Customer Group associated with Transaction Confirmation. Typically, number of tranches won x Tranches Percentage for the DS Customer Group.

DS Fixed Percentage/DS Variable Percentage:

The percentage of DS Supply provided at a fixed price and the percentage of DS Supply provided at a variable price. For each Transaction Confirmation, DS Fixed Percentage + DS Variable Percentage specified shall add to 100%.

APPENDIX D – RESPONSIBILITIES FOR PJM BILLING LINE ITEMS AS DEFINED IN APPLICABLE PJM AGREEMENT OR MANUAL

		Respon	nsible Party	
ID#	PJM Billing Statement Line Items	Buyer	DS Supplier	
ID#	CHARGES			
1000	Network Integration Transmission Service		X	
1102	Network Integration Transmission Service (exempt)		X	
1104	Network Integration Transmission Service Offset	X		
1108	Transmission Enhancement	X		
1110	Direct Assignment Facilities		X	
1115	Transmission Enhancement Settlement (EL05-121-009)	X		
1120	Other Supporting Facilities		X	
1130	Firm Point-to-Point Transmission Service		X	
1133	Firm Point-to-Point Transmission Service Resale Charge		X	
1140	Non-Firm Point-to-Point Transmission Service		X	
1143	Non-Firm Point-to-Point Transmission Service Resale Charge		X	
1200	Day-ahead Spot Market Energy		X	
1205	Balancing Spot Market Energy		X	
1210	Day-ahead Transmission Congestion		X	
1215	Balancing Transmission Congestion		X	
1218	Planning Period Congestion Uplift		X	
1220	Day-ahead Transmission Losses		X	

1230	1225	Balancing Transmission Losses		X
1240 Day-ahead Economic Load Response X 1241 Real-time Economic Load Response X 1245 Emergency Load Response X 1250 Meter Error Correction X 1260 Emergency Energy X 1301 PJM Scheduling, System Control and Dispatch Service – Control Area Administration 1302 PJM Scheduling, System Control and Dispatch Service – FTR Administration 1303 PJM Scheduling, System Control and Dispatch Service – Market Support 1304 PJM Scheduling, System Control and Dispatch Service – Regulation Market Administration 1305 PJM Scheduling, System Control and Dispatch Service – Capacity Resource/Obligation Mgmt. 1306 PJM Scheduling, System Control and Dispatch Service – Advanced Second Control Center 1308 PJM Scheduling, System Control and Dispatch Service Refund – Control Area Administration 1309 PJM Scheduling, System Control and Dispatch Service Refund – FTR Administration 1310 PJM Scheduling, System Control and Dispatch Service Refund – FTR Administration 1311 PJM Scheduling, System Control and Dispatch Service Refund – HTR Administration 1311 PJM Scheduling, System Control and Dispatch Service Refund – Market Support 1311 PJM Scheduling, System Control and Dispatch Service Refund – Regulation Market Administration 1312 PJM Scheduling, System Control and Dispatch Service Refund – Capacity Resource/Obligation Mgmt. 1312 PJM Scheduling, System Control and Dispatch Service Refund – Capacity Resource/Obligation Mgmt. 1313 PJM Scheduling, System Control and Dispatch Service Refund – Capacity Resource/Obligation Mgmt. 1314 PJM Scheduling, System Control and Dispatch Service Refund – Capacity Resource/Obligation Mgmt. 1315 PJM Scheduling, System Control and Dispatch Service Refund – Capacity Resource/Obligation Mgmt.		-		
1241 Real-time Economic Load Response X	1230	Inadvertent Interchange		X
1241 Real-time Economic Load Response X	1240	D 1 15 ' 1 15		37
1245 Emergency Load Response X	1240	Day-ahead Economic Load Response		X
1245 Emergency Load Response X	1241	Real-time Economic Load Response		X
1250 Meter Error Correction X				
1260 Emergency Energy X	1245	Emergency Load Response		X
1260 Emergency Energy X				
1301 PJM Scheduling, System Control and Dispatch Service – Control Area Administration 1302 PJM Scheduling, System Control and Dispatch Service – FTR Administration 1303 PJM Scheduling, System Control and Dispatch Service – Market Support 1304 PJM Scheduling, System Control and Dispatch Service – Regulation Market Administration 1305 PJM Scheduling, System Control and Dispatch Service – Capacity Resource/Obligation Mgmt. 1306 PJM Scheduling, System Control and Dispatch Service – Advanced Second Control Center 1308 PJM Scheduling, System Control and Dispatch Service Refund – Control Area Administration 1309 PJM Scheduling, System Control and Dispatch Service Refund – FTR Administration 1310 PJM Scheduling, System Control and Dispatch Service Refund – Market Support 1311 PJM Scheduling, System Control and Dispatch Service Refund – Market Support 1312 PJM Scheduling, System Control and Dispatch Service Refund – Regulation Market Administration 1312 PJM Scheduling, System Control and Dispatch Service Refund – Capacity Resource/Obligation Mgmt.	1250	Meter Error Correction	X	
1301 PJM Scheduling, System Control and Dispatch Service – Control Area Administration 1302 PJM Scheduling, System Control and Dispatch Service – FTR Administration 1303 PJM Scheduling, System Control and Dispatch Service – Market Support 1304 PJM Scheduling, System Control and Dispatch Service – Regulation Market Administration 1305 PJM Scheduling, System Control and Dispatch Service – Capacity Resource/Obligation Mgmt. 1306 PJM Scheduling, System Control and Dispatch Service – Advanced Second Control Center 1308 PJM Scheduling, System Control and Dispatch Service Refund – Control Area Administration 1309 PJM Scheduling, System Control and Dispatch Service Refund – FTR Administration 1310 PJM Scheduling, System Control and Dispatch Service Refund – Market Support 1311 PJM Scheduling, System Control and Dispatch Service Refund – Market Support 1312 PJM Scheduling, System Control and Dispatch Service Refund – Regulation Market Administration 1312 PJM Scheduling, System Control and Dispatch Service Refund – Capacity Resource/Obligation Mgmt.	1260	Emergency Energy		Y
Dispatch Service – Control Area Administration 1302 PJM Scheduling, System Control and Dispatch Service – FTR Administration 1303 PJM Scheduling, System Control and Dispatch Service – Market Support 1304 PJM Scheduling, System Control and Dispatch Service – Regulation Market Administration 1305 PJM Scheduling, System Control and Dispatch Service – Capacity Resource/Obligation Mgmt. 1306 PJM Scheduling, System Control and Dispatch Service – Advanced Second Control Center 1308 PJM Scheduling, System Control and Dispatch Service Refund – Control Area Administration 1309 PJM Scheduling, System Control and Dispatch Service Refund – FTR Administration 1310 PJM Scheduling, System Control and Dispatch Service Refund – Market Support 1311 PJM Scheduling, System Control and Dispatch Service Refund – Market Support 1312 PJM Scheduling, System Control and Dispatch Service Refund – Regulation Market Administration 1312 PJM Scheduling, System Control and Dispatch Service Refund – Capacity Resource/Obligation Mgmt.	1200	Emergency Emergy		Λ
Administration 1302 PJM Scheduling, System Control and Dispatch Service – FTR Administration 1303 PJM Scheduling, System Control and Dispatch Service – Market Support 1304 PJM Scheduling, System Control and Dispatch Service – Regulation Market Administration 1305 PJM Scheduling, System Control and Dispatch Service – Capacity Resource/Obligation Mgmt. 1306 PJM Scheduling, System Control and Dispatch Service – Advanced Second Control Center 1308 PJM Scheduling, System Control and Dispatch Service Refund – Control Area Administration 1309 PJM Scheduling, System Control and Dispatch Service Refund – FTR Administration 1310 PJM Scheduling, System Control and Dispatch Service Refund – Market Support 1311 PJM Scheduling, System Control and Dispatch Service Refund – Market Support 1312 PJM Scheduling, System Control and Dispatch Service Refund – Regulation Market Administration 1312 PJM Scheduling, System Control and Dispatch Service Refund – Regulation Market Administration 1312 PJM Scheduling, System Control and Dispatch Service Refund – Capacity Resource/Obligation Mgmt.	1301	PJM Scheduling, System Control and		X
Administration 1302 PJM Scheduling, System Control and Dispatch Service – FTR Administration 1303 PJM Scheduling, System Control and Dispatch Service – Market Support 1304 PJM Scheduling, System Control and Dispatch Service – Regulation Market Administration 1305 PJM Scheduling, System Control and Dispatch Service – Capacity Resource/Obligation Mgmt. 1306 PJM Scheduling, System Control and Dispatch Service – Advanced Second Control Center 1308 PJM Scheduling, System Control and Dispatch Service Refund – Control Area Administration 1309 PJM Scheduling, System Control and Dispatch Service Refund – FTR Administration 1310 PJM Scheduling, System Control and Dispatch Service Refund – Market Support 1311 PJM Scheduling, System Control and Dispatch Service Refund – Market Support 1312 PJM Scheduling, System Control and Dispatch Service Refund – Regulation Market Administration 1312 PJM Scheduling, System Control and Dispatch Service Refund – Regulation Market Administration 1312 PJM Scheduling, System Control and Dispatch Service Refund – Capacity Resource/Obligation Mgmt.				
Dispatch Service – FTR Administration 1303 PJM Scheduling, System Control and Dispatch Service –Market Support 1304 PJM Scheduling, System Control and Dispatch Service – Regulation Market Administration 1305 PJM Scheduling, System Control and Dispatch Service – Capacity Resource/Obligation Mgmt. 1306 PJM Scheduling, System Control and Dispatch Service – Advanced Second Control Center 1308 PJM Scheduling, System Control and Dispatch Service Refund – Control Area Administration 1309 PJM Scheduling, System Control and Dispatch Service Refund – FTR Administration 1310 PJM Scheduling, System Control and Dispatch Service Refund – Market Support 1311 PJM Scheduling, System Control and Dispatch Service Refund – Regulation Market Administration 1312 PJM Scheduling, System Control and Dispatch Service Refund – Regulation Market Administration 1312 PJM Scheduling, System Control and Dispatch Service Refund – Capacity Resource/Obligation Mgmt.				
1303 PJM Scheduling, System Control and Dispatch Service –Market Support 1304 PJM Scheduling, System Control and Dispatch Service – Regulation Market Administration 1305 PJM Scheduling, System Control and Dispatch Service – Capacity Resource/Obligation Mgmt. 1306 PJM Scheduling, System Control and Dispatch Service – Advanced Second Control Center 1308 PJM Scheduling, System Control and Dispatch Service Refund – Control Area Administration 1309 PJM Scheduling, System Control and Dispatch Service Refund – FTR Administration 1310 PJM Scheduling, System Control and Dispatch Service Refund – Market Support 1311 PJM Scheduling, System Control and Dispatch Service Refund – Market Support 1312 PJM Scheduling, System Control and Dispatch Service Refund – Regulation Market Administration 1312 PJM Scheduling, System Control and Dispatch Service Refund – Capacity Resource/Obligation Mgmt. 1314 PJM Scheduling, System Control and Dispatch Service Refund – Capacity Resource/Obligation Mgmt.	1302	PJM Scheduling, System Control and		X
Dispatch Service –Market Support 1304 PJM Scheduling, System Control and Dispatch Service – Regulation Market Administration 1305 PJM Scheduling, System Control and Dispatch Service – Capacity Resource/Obligation Mgmt. 1306 PJM Scheduling, System Control and Dispatch Service – Advanced Second Control Center 1308 PJM Scheduling, System Control and Dispatch Service Refund – Control Area Administration 1309 PJM Scheduling, System Control and Dispatch Service Refund – FTR Administration 1310 PJM Scheduling, System Control and Dispatch Service Refund – Market Support 1311 PJM Scheduling, System Control and Dispatch Service Refund – Regulation Market Administration 1312 PJM Scheduling, System Control and Dispatch Service Refund – Regulation Market Administration 1312 PJM Scheduling, System Control and Dispatch Service Refund – Capacity Resource/Obligation Mgmt.		Dispatch Service – FTR Administration		
1304 PJM Scheduling, System Control and Dispatch Service – Regulation Market Administration X Dispatch Service – Capacity Resource/Obligation Mgmt. X Dispatch Service – Capacity Resource/Obligation Mgmt. X Dispatch Service – Advanced Second Control Center X Dispatch Service – Advanced Second Control Center X Dispatch Service Refund – Control Area Administration X Dispatch Service Refund – Control Area Administration X Dispatch Service Refund – FTR Administration X Dispatch Service Refund – Market Support X Dispatch Service Refund – Market Support X Dispatch Service Refund – Regulation Market Administration X Dispatch Service Refund – Regulation Market Administration X Dispatch Service Refund – Capacity Resource/Obligation Mgmt. X X Dispatch Service Refund – Capacity Resource/Obligation Mgmt.	1303	PJM Scheduling, System Control and		X
Dispatch Service – Regulation Market Administration 1305 PJM Scheduling, System Control and Dispatch Service – Capacity Resource/Obligation Mgmt. 1306 PJM Scheduling, System Control and Dispatch Service – Advanced Second Control Center 1308 PJM Scheduling, System Control and Dispatch Service Refund – Control Area Administration 1309 PJM Scheduling, System Control and Dispatch Service Refund – FTR Administration 1310 PJM Scheduling, System Control and Dispatch Service Refund – Market Support 1311 PJM Scheduling, System Control and Dispatch Service Refund – Market Support 1312 PJM Scheduling, System Control and Dispatch Service Refund – Regulation Market Administration 1312 PJM Scheduling, System Control and Dispatch Service Refund – Capacity Resource/Obligation Mgmt.		Dispatch Service –Market Support		
Administration 1305 PJM Scheduling, System Control and Dispatch Service – Capacity Resource/Obligation Mgmt. 1306 PJM Scheduling, System Control and Dispatch Service – Advanced Second Control Center 1308 PJM Scheduling, System Control and Dispatch Service Refund – Control Area Administration 1309 PJM Scheduling, System Control and Dispatch Service Refund – FTR Administration 1310 PJM Scheduling, System Control and Dispatch Service Refund – Market Support 1311 PJM Scheduling, System Control and Dispatch Service Refund – Regulation Market Administration 1312 PJM Scheduling, System Control and Dispatch Service Refund – Regulation Market Administration 1312 PJM Scheduling, System Control and Dispatch Service Refund – Capacity Resource/Obligation Mgmt.	1304	PJM Scheduling, System Control and		X
1305 PJM Scheduling, System Control and Dispatch Service – Capacity Resource/Obligation Mgmt. 1306 PJM Scheduling, System Control and Dispatch Service – Advanced Second Control Center 1308 PJM Scheduling, System Control and Dispatch Service Refund – Control Area Administration 1309 PJM Scheduling, System Control and Dispatch Service Refund – FTR Administration 1310 PJM Scheduling, System Control and Dispatch Service Refund – Market Support 1311 PJM Scheduling, System Control and Dispatch Service Refund – Regulation Market Administration 1312 PJM Scheduling, System Control and Dispatch Service Refund – Capacity Resource/Obligation Mgmt.		<u> </u>		
Dispatch Service – Capacity Resource/Obligation Mgmt. 1306 PJM Scheduling, System Control and Dispatch Service – Advanced Second Control Center 1308 PJM Scheduling, System Control and Dispatch Service Refund – Control Area Administration 1309 PJM Scheduling, System Control and Dispatch Service Refund – FTR Administration 1310 PJM Scheduling, System Control and Dispatch Service Refund – Market Support 1311 PJM Scheduling, System Control and Dispatch Service Refund – Regulation Market Administration 1312 PJM Scheduling, System Control and Dispatch Service Refund – Capacity Resource/Obligation Mgmt.		Administration		
Resource/Obligation Mgmt. 1306 PJM Scheduling, System Control and Dispatch Service – Advanced Second Control Center 1308 PJM Scheduling, System Control and Dispatch Service Refund – Control Area Administration 1309 PJM Scheduling, System Control and Dispatch Service Refund – FTR Administration 1310 PJM Scheduling, System Control and Dispatch Service Refund – Market Support 1311 PJM Scheduling, System Control and Dispatch Service Refund – Regulation Market Administration 1312 PJM Scheduling, System Control and Dispatch Service Refund – Capacity Resource/Obligation Mgmt.	1305	- ·		X
1306 PJM Scheduling, System Control and Dispatch Service – Advanced Second Control Center 1308 PJM Scheduling, System Control and Dispatch Service Refund – Control Area Administration 1309 PJM Scheduling, System Control and Dispatch Service Refund – FTR Administration 1310 PJM Scheduling, System Control and Dispatch Service Refund – Market Support 1311 PJM Scheduling, System Control and Dispatch Service Refund –Regulation Market Administration 1312 PJM Scheduling, System Control and Dispatch Service Refund – Capacity Resource/Obligation Mgmt.		± •		
Dispatch Service – Advanced Second Control Center 1308 PJM Scheduling, System Control and Dispatch Service Refund – Control Area Administration 1309 PJM Scheduling, System Control and Dispatch Service Refund – FTR Administration 1310 PJM Scheduling, System Control and Dispatch Service Refund – Market Support 1311 PJM Scheduling, System Control and Dispatch Service Refund – Regulation Market Administration 1312 PJM Scheduling, System Control and Dispatch Service Refund – Capacity Resource/Obligation Mgmt.				
Control Center 1308 PJM Scheduling, System Control and Dispatch Service Refund – Control Area Administration 1309 PJM Scheduling, System Control and Dispatch Service Refund – FTR Administration 1310 PJM Scheduling, System Control and Dispatch Service Refund – Market Support 1311 PJM Scheduling, System Control and Dispatch Service Refund – Regulation Market Administration 1312 PJM Scheduling, System Control and Dispatch Service Refund – Capacity Resource/Obligation Mgmt.	1306			X
PJM Scheduling, System Control and Dispatch Service Refund – Control Area Administration PJM Scheduling, System Control and Dispatch Service Refund – FTR Administration PJM Scheduling, System Control and Dispatch Service Refund – Market Support PJM Scheduling, System Control and Dispatch Service Refund – Market Support PJM Scheduling, System Control and Dispatch Service Refund – Regulation Market Administration PJM Scheduling, System Control and Dispatch Service Refund – Capacity Resource/Obligation Mgmt.		<u> -</u>		
Dispatch Service Refund – Control Area Administration PJM Scheduling, System Control and Dispatch Service Refund – FTR Administration PJM Scheduling, System Control and Dispatch Service Refund – Market Support PJM Scheduling, System Control and Dispatch Service Refund – Regulation Market Administration PJM Scheduling, System Control and Dispatch Service Refund – Regulation Market Administration PJM Scheduling, System Control and Dispatch Service Refund – Capacity Resource/Obligation Mgmt.	1200			
Administration 1309 PJM Scheduling, System Control and Dispatch Service Refund – FTR Administration 1310 PJM Scheduling, System Control and Dispatch Service Refund – Market Support 1311 PJM Scheduling, System Control and Dispatch Service Refund – Regulation Market Administration 1312 PJM Scheduling, System Control and Dispatch Service Refund – Capacity Resource/Obligation Mgmt.	1308			X
1309 PJM Scheduling, System Control and Dispatch Service Refund – FTR Administration 1310 PJM Scheduling, System Control and Dispatch Service Refund – Market Support 1311 PJM Scheduling, System Control and Dispatch Service Refund –Regulation Market Administration 1312 PJM Scheduling, System Control and Dispatch Service Refund – Capacity Resource/Obligation Mgmt.		-		
Dispatch Service Refund – FTR Administration 1310 PJM Scheduling, System Control and Dispatch Service Refund – Market Support 1311 PJM Scheduling, System Control and Dispatch Service Refund – Regulation Market Administration 1312 PJM Scheduling, System Control and Dispatch Service Refund – Capacity Resource/Obligation Mgmt.	1200			37
Administration 1310 PJM Scheduling, System Control and Dispatch Service Refund – Market Support 1311 PJM Scheduling, System Control and Dispatch Service Refund –Regulation Market Administration 1312 PJM Scheduling, System Control and Dispatch Service Refund – Capacity Resource/Obligation Mgmt.	1309	<u> </u>		X
1310 PJM Scheduling, System Control and Dispatch Service Refund – Market Support 1311 PJM Scheduling, System Control and Dispatch Service Refund – Regulation Market Administration 1312 PJM Scheduling, System Control and Dispatch Service Refund – Capacity Resource/Obligation Mgmt.		-		
Dispatch Service Refund – Market Support 1311 PJM Scheduling, System Control and Dispatch Service Refund – Regulation Market Administration 1312 PJM Scheduling, System Control and Dispatch Service Refund – Capacity Resource/Obligation Mgmt.	1210			V
1311 PJM Scheduling, System Control and Dispatch Service Refund –Regulation Market Administration 1312 PJM Scheduling, System Control and Dispatch Service Refund – Capacity Resource/Obligation Mgmt.	1310	- ·		X
Dispatch Service Refund –Regulation Market Administration 1312 PJM Scheduling, System Control and Dispatch Service Refund – Capacity Resource/Obligation Mgmt.	1211			V
Market Administration 1312 PJM Scheduling, System Control and Dispatch Service Refund – Capacity Resource/Obligation Mgmt.	1311			Λ
1312 PJM Scheduling, System Control and Dispatch Service Refund – Capacity Resource/Obligation Mgmt.				
Dispatch Service Refund – Capacity Resource/Obligation Mgmt.	1312			Y
Resource/Obligation Mgmt.	1312			Λ
		·		
Time in the intering of the (initial) I didning	1314			X
		The state of the s		

1315	FERC Annual Charge Recovery	X
1316	Organization of PJM States, Inc. (OPSI) Funding	X
1317	North American Electric Reliability Corporation (NERC)	X
1318	Reliability First Corporation (RFC)	X
1320	Transmission Owner Scheduling, System Control and Dispatch Service	X
1330	Reactive Supply and Voltage Control from Generation and Other Sources Service	X
1340	Regulation and Frequency Response Service	X
1350	Energy Imbalance Service	X
1360	Synchronized Reserve	X
1365	Day-ahead Scheduling Reserve	X
1370	Day-ahead Operating Reserve	X
1371	Day-ahead Operating Reserve for Load Response	X
1375	Balancing Operating Reserve	X
1376	Balancing Operating Reserve for Load Response	X
1377	Synchronous Condensing	X
1378	Reactive Services	X
1380	Black Start Service	X
1400	Load Reconciliation for Spot Market Energy	X
1410	Load Reconciliation for Transmission	X
1420	Load Reconciliation for Transmission Losses	X
1430	Load Reconciliation for Inadvertent	X
1440	Load Reconciliation for PJM Scheduling, System Control and Dispatch Service	X
1376 1377 1378 1380 1400 1410 1420 1430	Balancing Operating Reserve for Load Response Synchronous Condensing Reactive Services Black Start Service Load Reconciliation for Spot Market Energy Load Reconciliation for Transmission Congestion Load Reconciliation for Transmission Losses Load Reconciliation for Inadvertent Interchange Load Reconciliation for PJM Scheduling,	X X X X X X X X X X

1441	Load Reconciliation for PJM Scheduling,	X
	System Control and Dispatch Service	
	Refund	
1445	Load Reconciliation for FERC Annual	X
1113	Charge Recovery	
1446	Load Reconciliation for Organization of	X
1440		Λ
1.4.5	PJM States, Inc. (OPSI) Funding	
1447	Load Reconciliation for North American	X
	Electric Reliability Corporation (NERC)	
1448	Load Reconciliation for Reliability First	X
	Corporation (RFC)	
1450	Load Reconciliation for Transmission	X
	Owner Scheduling, System Control and	
	Dispatch Service	
1460	Load Reconciliation for Regulation and	X
1100	Frequency Response Service	
1470		X
14/0	Load Reconciliation for Synchronized	^
1.477	Reserve	37
1475	DASR Load Reconciliation	X
1.450	T 1D 11 1 0 0 1 D	**
1478	Load Reconciliation for Operating Reserve	X
1400	I ID 'II' (' C C I	V
1480	Load Reconciliation for Synchronous	X
	Condensing	
1490	Load Reconciliation for Reactive Services	X
1500	Financial Transmission Rights Auction	X
1300	Thanelar Transmission Rights Paction	
1600	RPM Auction	X
1000	KI WI Auction	A
1610	Logational Daliability	X
1010	Locational Reliability	A
1650	No. 11.4 Constitution	V
1650	Non-Unit Specific Capacity Transaction	X
1.550	D 1D 1HDC 1	**
1660	Demand Resource and ILR Compliance	X
	Penalty	
1661	Capacity Resource Deficiency	X
1662	Generation Resource Rating Test Failure	X
1663	Qualifying Transmission Upgrade	X
	Compliance Penalty	
1664	Peak Season Maintenance Compliance	X
1004		
1665	Penalty Peak Hour Period Availability	V
1665	Peak-Hour Period Availability	X

1710	PJM/MISO Seams Elimination Cost		X
1710			Λ
1700	Assignment		
1720	RTO Start-up Cost Recovery		X
1730	Expansion Cost Recovery	X	
1900	Unscheduled Transmission Service		X
1910	Ramapo Phase Angle Regulators		X
1710	Ramapo i nase rangie Regulators		71
1020	Chat's a Dansau		V
1920	Station Power		X
1930	Generation Deactivation and RMR		
	Generating Unit Declarations Before		
	PaPUC Approval of the Company's Default		X
	Service Program in PaPUC Docket Nos. P-		
	2013-2391368 et al.		
1930	Generation Deactivation and RMR		
1750	Generating Unit Declarations After PaPUC		
		v	
	Approval of the Company's Default Service	X	
	Program in PaPUC Docket Nos. P-2013-		
	2391368 et al.		
1950	Virginia Retail Administrative Fee		X
1980	Miscellaneous Bilateral		X
1995	PJM Annual Membership Fee		X
1773	1 31v1 7 ximidai viemoersinp 1 ee		71
ID#	CREDITS		
1D#	CREDITS		
2100	N. I.		**
2100	Network Integration Transmission Service		X
2102	Network Integration Transmission Service		X
	(exempt)		
2104	Network Integration Transmission Service		X
	Offset		
2106	Non-Zone Network Integration		X
2100	Transmission Service		Λ
2100		77	
2108	Transmission Enhancement	X	
2110	Direct Assignment Facilities		X
2115	Transmission Enhancement Settlement	X	
	(EL05-121-009)		
2120	Other Supporting Facilities		X
	Sand Supporting Lucinities		4.5
L	<u> </u>		

2130	Firm Point-to-Point Transmission Service	X
2132	Internal Firm Point-to-Point Transmission Service	X
2133	Firm Point-to-Point Transmission Service Resale Credit	X
2140	Non-Firm Point-to-Point Transmission Service	X
2142	Internal Non-Firm Point-to-Point Transmission Service	X
2143	Non-Firm Point-to-Point Transmission Service Resale Credit	X
2210	Transmission Congestion	X
2211	Day Ahead Transmission Credit (Formerly BLI 2210)	X
2215	Balancing Transmission Congestion Credit	X
2217	Planning Period Excess Congestion	X
2218	Planning Period Congestion Uplift	X
2220	Transmission Losses	X
2240	Day-ahead Economic Load Response	X
2241	Real-time Economic Load Response	X
2245	Emergency Load Response	X
2260	Emergency Energy	X
2320	Transmission Owner Scheduling, System Control and Dispatch Service	X
2330	Reactive Supply and Voltage Control from Generation and Other Sources Service	X
2340	Regulation and Frequency Response Service	X
2350	Energy Imbalance Service	X
2360	Synchronized Reserve	X
2365	Day-ahead Scheduling Reserve	X
2370	Day-ahead Operating Reserve	X
		L

2371	Day-ahead Operating Reserve for Load Response	X
2375	Balancing Operating Reserve	X
2376	Balancing Operating Reserve for Load Response	X
2377	Synchronous Condensing	X
2378	Reactive Services	X
2380	Black Start Service	X
2415	Balancing Transmission Congestion Load Reconciliation Credit	X
2420	Load Reconciliation for Transmission Losses	X
2500	Financial Transmission Rights Auction	X
2510	Auction Revenue Rights	X
2600	RPM Auction	X
2620	Interruptible Load for Reliability	X
2630	Capacity Transfer Rights	X
2640	Incremental Capacity Transfer Rights	X
2650	Non-Unit Specific Capacity Transaction	X
2660	Demand Resource and ILR Compliance Penalty	X
2661	Capacity Deficiency Resource	X
2662	Generation Resource Rating Test Failure	X
2663	Qualifying Transmission Upgrade Compliance Penalty	X
2664	Peak Season Maintenance Compliance Penalty	X
2665	Peak-Hour Period Availability	X
2710	PJM/MISO Seams Elimination Cost Assignment	X
2720	RTO Start-up Cost Recovery	X

2730	Expansion Cost Recovery	X	
2910	Ramapo Phase Angle Regulators		X
2930	Generation Deactivation and RMR Generating Unit Declarations Before PaPUC Approval of the Company's Default Service Program in PaPUC Docket Nos. P- 2013-2391368 <i>et al.</i>		X
2930	Generation Deactivation and RMR Generating Unit Declarations After PaPUC Approval Of the Company's Default Service Program in PaPUC Docket Nos. P- 2013-2391368 <i>et al.</i>	X	
2950	Virginia Retail Administrative Fee		X
2980	Miscellaneous Bilateral		X
2996	Annual PJM Cell Tower		X
2997	Annual PJM Building Rent		X

^{**}Any PJM fees or charges not specifically identified as being the responsibility of the EDC shall be the responsibility of the EGS. Line Items 2100, 2102, and 2104 are Transmission Owner Revenues.

APPENDIX E – DS SUPPLIER'S OBLIGATIONS FOR AEPS COMPLIANCE

To satisfy AEPS with respect to the DS Supplier's Responsibility Share, DS Supplier shall fulfill the following obligations:

- 1. Providing sufficient AECs for each tranche awarded via the DS Solicitation less the Allocated AECs; <u>if any</u>
- 2. Paying any AEPS penalties, costs, charges, etc. assessed against the DS Supplier and/or the Company associated with the DS Supplier's non-performance with AEPS requirements;
- 3. Submitting to the Company proof of AEPS compliance under this Agreement in such form and manner as may be required by the Company.
- 4. Provide to the Company all information the Company may require to comply with the AEPS Act and its implementing regulations and other Requirements of Law, including, but not limited to the price paid per AEC required by 73 Pa.C.S. §1648.3(e)(8).

This Appendix E shall confirm the Alternative Energy Portfolio Standards Obligation of the Transaction Date as defined in the Transaction Confirmation.

Alternative Energy Portfolio Standards Obligations for the period beginning June 1, 2019 2023 based on the total MWh supplied by DS Supplier:

Compliance Period	<u>Tier I</u>	Tier I Solar	Tier II
6/1/ 2019 - <u>2023</u> to 5/31/ 2020 2	2024	7.50 <u>8.00</u> %	0.44 <u>50</u> %
	8.20 10.00%		
6/1/ 2020 - <u>2024</u> to 5/31/ 2021 2	<u> 2025</u>	8.00%	0.50%
	10.00%		
6/1/ 2021 - <u>2025</u> to 5/31/ 2022 2	2026	8.00%	0.50%
	10.00%		
6/1/ 2022 - <u>2026</u> to 5/31/ 2023 2	2027	8.00%	0.50%
	10.00%		

The percentages set forth above are those applicable for the first DS Solicitation and may be revised for future DS Solicitations to reflect changes in law or other applicable regulatory requirements.

The above amounts are estimates and will vary based on actual load served. DS Supplier will need to true-up, higher or lower, actual credits needed based on Monthly Settlement Amount.

If Alternative Energy Portfolio requirements change by <u>#Federal or state</u> law or any other reason, the <u>Companies DS Suppliers</u> shall be responsible for any incremental AEPS

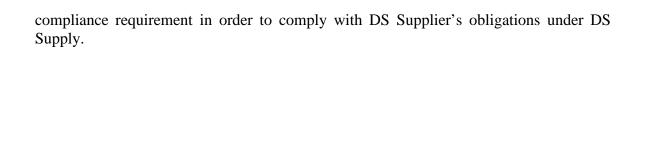


EXHIBIT 1

TRANSACTION CONFIRMATION

This Trans	saction Confirm	nation letter is being	g provi	ded pursu	ıant t	o and in ac	cordan	ce with
the Agreement da	nted	between		("Co	ompa	any") and _		
("DS Supplier").	Terms used bu	t not defined herein	n shall	have the	mea	nings ascrib	ed to t	hem in
the Agreement.	This Transac	tion Confirmation	shall	confirm	the	following	terms	of the
Transaction agree	ed to on	("Transaction D	ate").					

Product: DS Supply

DS Customer Group: Residential

Delivery Point: [METED_RESID_AGG, PENELEC_RESID_AGG PENNPOWER_RESID_AGG, or APS_RESID_AGG as applicable]

Delivery Period: June 1, 2019 2023 through May 31, 2020 2024 (Example of a

12 Month Product)

DS Supplier Responsibility Share: X Tranches won of Y Total Tranches

DS Fixed Price = \$XX.XX/MWh as bid by DS Supplier

DS Fixed Percentage = 95%

DS Variable Price = The DS Variable Price is the real time hourly total LMP for the Delivery Point, plus a fixed adder of \$20.00/MWh.

DS Variable Percentage = 5%

Corrections to DS Variable Price: In the event that PJM changes the location or mechanism by which the LMP for the Delivery Point is calculated, the Company will recalculate a new DS Variable Price for this Agreement. The PMEA/FMEA Adjustment Amount shall reflect any changes to these prices.

Total Allocated AECs: For Met-Ed/Penelec/Penn Power: Tier I (Solar) AECs equal 100% of AEPS solar photovoltaic requirements associated with the DS Supplier Responsibility Share. For West Penn: XX Tier I non-solar AECs and X Tier I solar AECs. To Be Determined

Please confirm that the terms stated herein accurately reflect the agreement reached on the date above between DS Supplier and Company by returning an executed copy of this Transaction Confirmation. The signatories to this Transaction must have the authority to enter into this Transaction.

<u>DS SUPPLIER</u>
By:
Name:
Title:

EXHIBIT 1

TRANSACTION CONFIRMATION

This Trans	saction Confirmation letter is b	eing provided pursuant to and in accordance with
the Agreement da	ated between	("Company") and
("DS Supplier").	Terms used but not defined he	erein shall have the meanings ascribed to them in
the Agreement.	This Transaction Confirmat	ion shall confirm the following terms of the
Transaction agree	ed to on("Transactio	n Date").
Product:	DS Supply	
	omer Group: Commercial	
Delivery	Point: [METED_RESID_AGO WER_RESID_AGG, or APS_F	, — — —
Delivery	Period: June 1, 2019-2023 the	rough May 31, 2020 - <u>2024</u> (Example of a
12 Month	Product)	
DS Suppl	ier Responsibility Share: X	Tranches won of Y Total Tranches
DS Fixed	Price = \$XX.XX/MWh as bid	by DS Supplier
DS Fixed	Percentage = 100%	
AEPS solar photo		enn Power: Tier I (Solar) AECs equal 100% of d with the DS Supplier Responsibility Share. For er I solar AECs.
above between D	OS Supplier and Company by	rately reflect the agreement reached on the date returning an executed copy of this Transaction tion must have the authority to enter into this
Company		DS SUPPLIER
By:		By:
Name:		Name:
Title:		Title:

EXHIBIT 1

TRANSACTION CONFIRMATION

This Tran	saction Confirmation letter is bein	ng provided pursu	ant to and in ac	cordance with
the Agreement da	ated between	("Ce	ompany") and _	
	Terms used but not defined here			
	This Transaction Confirmation		_	
· ·			the following	terms or the
Transaction agree	ed to on ("Transaction I	Date").		
D 1 4	D0.0 1			
	DS Supply			
DS Custo	omer Group: Industrial			
•	Point: [METED_RESID_AGG, 2000] WER_RESID_AGG, or APS_RE	-	-	
Delivery	Period: June 1, <u>2019 2023</u> throu	ıgh May 31, 202	0 - <u>2024</u> (Examp	le of a
12 Month	Product)			
DS Suppl	lier Responsibility Share: X Tra	anches won of Y	Total Tranches	
DS Fixed	Price = \$XX.XX/MWh as bid by	DS Supplier		
	able Price = The DS Variable Price ery Point, plus a fixed adder of \$4.		e hourly total LI	MP for
which the LMP	OS Variable Price: In the event the for the Delivery Point is calculator this Agreement. The PMEA/I prices.	ted, the Compar	y will recalcula	ate a new DS
AEPS solar photo	AECs: For Met Ed/Penelec/Penrovoltaic requirements associated voluments and X Tier I non-solar AECs and X Tier	vith the DS Supp	*	*
above between I	hat the terms stated herein accura OS Supplier and Company by re- he signatories to this Transaction	turning an execu	ited copy of thi	is Transaction
Company	,	DS SUI	PPLIER	
By:		By:		
Name:		Name:		
Title:		Title		

EXHIBIT 2 FORM OF NOTICE

Any notices required under this Agreement shall be made as follows:

Buyer: DS Supplier:

All Notices: All Notices:

FirstEnergy Corp. DS Company

P.O. Box 16001 Street

Reading, PA 19612-6001 City/State/Zip

Attn: Dean Stathis Attn:

Director Regulated Commodity Sourcing

Phone: (610) 921-6766 Phone:
Facsimile: (330) 777-6441 Facsimile:
Email: dstathis@firstenergycorp.com
Duns:
Duns:

Federal Tax ID Number: Federal Tax ID Number:

Copy to:

FirstEnergy Corp.

P.O. Box 1600176 South Main Street 8th Floor Reading, PA 19612-6001Akron, OH 44308 Attn: Eileen M. Mikkelsen: Joanne Savage

VP Rates & Regulatory Affairs Director Rates & Regulatory Affairs

Phone: (330) 384-5166(610) 921 6525

Facsimile: (330) 315-4358

Email: mikkelsene@firstenergycorp.com jmsavage@firstenergycorp.com

Invoices: & Payment:

—Invoices: & Payments:

FirstEnergy Corp.

P.O. Box 1600176 South Main Street Reading Akron, PA OH 19612-600144308

Attn: Robert BrownJim Sensenig-

Manager, Regulated Settlements Supervisor, Regulated Commodity Sourcing-

Phone: (610) 921-6543- (216) 970 8357 Phone:

Facsimile: (330) 777-6441_ Facsimile:

Email: rdbrown@firstenergycorp.comjjsensenig@firstenergycorp.com_

Scheduling: Scheduling:

FirstEnergy Corp.

76 South Main Street800 Cabin Hill Drive

Akron, OH Greensburg, PA 15601

Attn: Cindy Teamann Tiffanne L. Cowan Attn:

Manager, Regulated Settlements Manager Regulated Settlements

Phone: (724) 838 6672(330) 761 4474 Phone:

Facsimile: Facsimile:

Email: cteaman@firstenergycorp.com Email:

Payments: Payments:

FirstEnergy Corp.

76 South Main Street P.O. Box 16001

Reading, PA 19612-6001 Akron, OH 44308

Attn: Robert BrownJim Sensenig Attn:

Manager, Regulated SettlementsSupervisor, Regulated Commodity Sourcing

Phone: (216) 970 8357(610) 921 6543 Phone:

Facsimile: (330) 777-6441 Facsimile:

Email: rdbrown@firstenergycorp.comjjsensenig@firstenergycorp.com Email:

Wire Transfer: Wire Transfer

BNK: JP Morgan Chase, NY BNK:

FirstEnergy Service Co.

ABA: 021000021 ABA: ACCT: -323-396496 ACCT: Credit and Collections: Credit and Collections:

FirstEnergy Corp. 341 White Pond Drive Akron, OH 44320

Attn: Martin Massie Justin Gawne Attn:

Credit Analyst Credit Analyst

Phone: (330) 315-6894 330-315-7226 Phone:

Facsimile: Facsimile:

Email: margin@firstenergycorp.commassiem@firstenergycorp.com Email:

With additional Notices of an With Additional Notices of an

Event of Default to: Event of Default to:

FirstEnergy Corp. P.O. Box16001

Reading, PA 19612-6001

Attn: Tori Giesler Attn:

Supervising-Managing CounselAssociate General Counsel
Phone: (610) 921-6658 Phone:
Facsimile: (610) 939-8655 Facsimile:
Email: tgiesler@firstenergycorp.com Email:

APPENDIX F - LETTER OF CREDIT DOCUMENTATION

Sample DS Letter of Credit			
	[Insert Date] Letter of Credit No. [Insert Credit No]		
То	: [Insert Company Name] ("Beneficiary")		
1.	We hereby establish in your favor this irrevocable transferable Letter of Credit (this		
	"Letter of Credit") for the account of(the "Applicant"), in		
	the amount of \$, effective immediately and available to you at sight		
	upon demand at our counters at(Location) and expiring 364		
	days from date of issuance, unless terminated earlier in accordance with the provisions		
	hereof.		
2.	This Letter of Credit is issued at the request of the Applicant, and we hereby irrevocably		
	authorize you to draw on us, in accordance with the terms and conditions hereof, up to		
	the maximum amount of this Letter of Credit, subject to reduction as provided in		
	paragraph 11 hereof. This Letter of Credit may be drawn upon an Event of Default		
	under the DS Suppler Master Agreement(s) between the Applicant and you, dated		
	and the DS Supplier Supplier Master Agreement(s) between the		
	Applicant and you, dated		

3. A partial or full drawing hereunder may be made by you on any Business Day on or

prior to the expiration of this Letter of Credit by delivering, by no later than 11:00 A.M.

- 4. We hereby agree to honor a drawing hereunder made in compliance with the terms and provisions of this Letter of Credit by transferring in immediately available funds the amount specified in the draft delivered to us in connection with such drawing to such account at such bank in the United States as you may specify in your draft delivered to us pursuant to Paragraph 3 hereof, by 3:00 P.M. (New York, NY time) on the date of such drawing, if delivery of this requisite document is made prior to 11:00 AM (New York, NY time) on a Business Day pursuant to Paragraph 3 herein above, but at the opening of business on the first Business Day next succeeding the date of such drawing if delivery of the requisite document is made on or after 11:00 AM (New York, NY time) on any Business Day pursuant to Paragraph 3 herein above.
- 5. If a demand for payment made by you hereunder does not, in any instance, conform to the terms and conditions of this Letter of Credit, we shall give you prompt notice (not exceeding three (3) Business Days following the date of receipt of the documents) that the demand for payment was not effected in accordance with the terms and conditions of this Letter of Credit, stating the reasons that the demand for payment was not effected

¹ If the issuer of the Letter of Credit is located in an area that is not in the Eastern time zone, this time and all other times in this Letter of Credit, and the definition of a Business Day should be adjusted accordingly.

in accordance with such terms and conditions, and that we will upon your instructions hold any documents at your disposal or return the same to you. Upon being notified that the demand for payment was not effected in conformity with this Letter of Credit, you may attempt to correct any such non-conforming demand for payment to the extent that you are entitled to do so, provided, however, in such event a conforming demand for payment must be timely made in accordance with the terms of this Letter of Credit.

6. This Letter of Credit shall automatically terminate and be delivered to us for cancellation on the earliest of (i) the making by you of the drawings in an amount equal to the maximum amount available to be made hereunder, (ii) the date we receive from you a Certificate of Expiration in the form of Annex 3 hereto, or (iii) will be automatically extended without written amendment for successive additional one (1) year periods from the current or any future extended expiry date, unless at least ninety (90) days prior to such date of expiration, we give written notice to the Beneficiary by registered or certified mail, return receipt requested, or by overnight courier, at the address set forth above, or at such other address of which prior written notice has been provided to us, that we elect not to renew this irrevocable standby Letter of Credit for such additional one (1) year period.

7. As used herein:

"Business Day" shall mean any day on which commercial banks are not authorized or required to close in New York, New York and any day on which payments can be effected on the Fed wire system.

8. This Letter of Credit is assignable and transferable, in accordance with Annex 4, to an entity who you certify to us in the form of Annex 4, and we hereby consent to such

assignment or transfer, provided that this Letter of Credit may not otherwise be amended or modified without consent from us, you and the Applicant, and except as otherwise expressly stated herein, is subject to the Uniform Customs and Practice for Documentary Credits – 2007 Revision, ICC Publication No. 600, or any successor publication thereto (the "<u>UCP</u>"). Any and all transfer fees, expenses and costs shall be borne by the Applicant. This Letter of Credit shall, as to matters not governed by the UCP, be governed and construed in accordance with New York law, without regard to principles of conflicts of law. Transfers fees shall be borne by the Applicant.

This Letter of Credit sets forth in full our undertaking, and such undertaking shall not in any way be modified, amended, changed, amplified or limited by reference to any document, instrument or agreement referred to herein, except for Annexes 1 through 6 hereto and the notices referred to herein; and any such reference shall not be deemed to incorporate herein by reference any document, instrument or agreement except as set forth above.

- automatically reduced by the amount of any drawings paid through us referencing this Letter of Credit No. _____. Partial drawings are permitted hereunder.
- 11. Faxed document(s) are acceptable. Presentation by fax must be made to fax number _____ confirmed by telephone to _____.
- 12. In the event of act of God, riot, civil commotion, insurrection, war, terrorism or by any

strikes or lock outs, or any cause beyond our control, that interrupts our business, and causes the place for presentation of this Letter of Credit to be closed for business on the last day of presentation, the expiration date of this Letter of Credit shall be automatically extended without amendment to a date thirty (30) calendar days after the place for presentation reopens for business.

13. This original Letter of Credit has be	en sent to the beneficiary EDC located at				
above (as per App	licant's instructions). The aggregate amount				
paid to the during the	paid to the during the validity of this Letter of Credit will not exceed				
the amount of this Letter of Credit. Any demands or communications in the form of					
the attached Annexes or other communications directed to us under this Letter of Credit					
must be signed by an Authorized Officer of the Acceptance or					
rejection of any amendments to this Letter of Credit must be signed by an Authorized					
Officer of the					
	Very truly yours,				
(Bank)					
By:	By:				
Name: [Insert Name]	Name: [Insert Name]				
Title: [Insert Title]	Title: [Insert Title]				
Date: [Insert Date]	Date: [Insert Date]				

Annex 1 to Letter of Credit

DRAWING UNDER LETTER OF CREDIT NO. [InsertCreditNo.]			
[Insert	Date]		
То:	[Insert Bank]		
	[Insert Address]		
	Attention: Standby Letter of Credit U	Jnit	
Ladies and Gentlemen:			
in the	The undersigned is making a drawing amount specified below and hereby co	_	the above-referenced Letter of Credit to you as follows:
_	italized terms used herein that are deformed in the Letter of Credit.	ined he	rein shall have the meanings ascribed
Date], aggreg	rsuant to Paragraph 2 of the Letter of the undersigned is entitled to make a gate amount of \$[Insert Dollars], inasm S Supplier Master Agreement between	drawing nuch as	g under the Letter of Credit in the there is an Event of Default under
3. We acknowledge that, upon your honoring the drawing herein requested, the amount of the Letter of Credit available for drawing shall be automatically decreased by an amount equal to this drawing.			
		Very to	ruly yours,
[Insert Company Name]			
By: Name Title: Date:	[Insert Name] [Insert Title] [Insert Date]	By: Name Title: Date:	[Insert Name] [Insert Title] [Insert Date]

Annex 2 to Letter of Credit		
DRAWING UNDER LETTER OF CREDIT NO. [Insert Credit No.]	
[Insert Date]		
ON [Business day immediately succeeding date of	presentation]	
PAY TO: [Insert- Company Name]		
\$ [Insert Dollars]		
FOR VALUE RECEIVED AND CHARGE TO ACC [Insert Credit No.]	OUNT OF LETTER OF CREDIT NO.	
OF		
[Insert Bank]		
[Insert Address]		
The [Insert Company]		
By:	By:	
Name: [Insert Name]	Name: [Insert Name]	
Title: [Insert Title] Title: [Insert Title] Date: [Insert Date] Date: [Insert Date]		
Date. [most Date]	Date. [Hibert Date]	

Annex 3 to Letter of Credit

_	FICATE OF EXPIRATION TTER OF CREDIT NO. [Insert Cred Date]	it No.]
То:	[Insert Bank] [Insert Address]	
	Attention: Standby Letter of Credit U	Jnit
Ladies and Gentlemen: The undersigned hereby certifies to you that the above referenced Letter of Credit may be cancelled without payment. Attached hereto is said Letter of Credit, marked cancelled.		
[Insert	Company Name]	
Title:	[Insert Name] [Insert Title] [Insert Date]	By: Name: [Insert Name Title: [Insert Title] Date: [Insert Date]

cc: [InsertApplicantNarne]

Annex 4 to Letter of Credit

NOTICE OF TRANSFER OF LETTER OF CREDIT NO. [Insert Credit No.]

[Insert Date]

To: [Insert Bank]

[Insert Address]

To Whom It May Concern:

Re: Credit [Insert Credit No.]
Issued by: [Insert Name]
Advice No.: [Insert Advise No.]

For the value received, the undersigned beneficiary hereby irrevocably transfers to:

[Insert Transferee Name] (Name of Transferee)

[Insert Address] (Address)

All rights of the undersigned beneficiary to draw under the above Letter of Credit in its entirety.

By this transfer, all rights of the undersigned beneficiary in such Letter of Credit are transferred to the transferee and the transferee shall have the sole rights as beneficiary thereof, including sole rights relating to any amendments whether increases or extensions or other amendments and whether now existing or hereafter made. All amendments are to be advised direct to the transferee without necessity of any consent of or notice to the undersigned beneficiary.

The advice of such Letter of Credit is returned herewith, and we ask you to endorse the transfer on the reverse thereof, and forward it direct to the transferee with your customary notice of transfer.

Enclosed is a certified check in the amount of \$ [Insert Amount] in payment of your transfer commission and in addition we agree to pay to you on demand any expenses that may be incurred by you in conjunction with this transfer.

Very Truly Yours, [Insert Signature of Company] (Signature of the Company)

The above signature with title as stated conforms to that on file with us and is authorized for the execution of said instruments.

(Name of authenticating party)

[Insert Signature of Authenticating Party]
(Authorized signature of authenticating party)

Name: [Insert Name]
Title: [Insert Title]

APPENDIX G - GUARANTY

GUARANTY (this "Guaranty"), dated as of [Insert Date], made by ______ (the "Guarantor"), a corporation organized and existing under the laws of [Insert Law References] in favor of [Insert Company Name] (the "Guaranteed Party"), a corporation organized and existing under the laws of the Commonwealth of Pennsylvania.

Terms not defined herein take on the meaning given to them in the DS Supplier Master Agreement(s). Guarantor enters into this Guaranty in consideration of, and as an inducement for Guaranteed Party having entered into or entering into the "Agreements" with [Insert Name] (Name), a [Insert State] (State) corporation (the "DS Supplier"), which may involve the extension of credit by the Guaranteed Party. Guarantor, subject to the terms and conditions hereof, hereby unconditionally and absolutely guarantees to the Guaranteed Party the full and prompt payment when due, subject to an applicable grace period and upon demand in writing from the Guaranteed Party to the Guarantor's attention at the address for Guarantor set forth in Section 11 hereof of any and all amounts payable by the DS Supplier to the Guaranteed Party arising out of the Agreement(s), and,

- 1. The Guarantor, as primary obligor and not merely as surety, hereby irrevocably and unconditionally guarantees the full and prompt payment when due (whether by acceleration or otherwise) of the principal and interest on any sums due and payable by the BGS Supplier as a result of an Event of Default under the Agreement(s) (including, without limitation, indemnities, damages, fees and interest thereon, pursuant to the terms of the Agreement(s)). Notwithstanding anything to the contrary herein, the maximum aggregate liability of the Guarantor under this Guaranty shall Option 1 (in no event exceed [Insert Limit Amount].) Option 2 (in no event exceed the lesser of [Insert Limit Amount] or the sum of the Total Exposures Amounts under the Agreement(s).) All such principal, interest, obligations and liabilities, collectively, are the "Guaranteed Obligations". This Guaranty is a guarantee of payment and not of collection.
- 2. The Guarantor hereby waives diligence, acceleration, notice of acceptance of this Guaranty and notice of any liability to which it may apply, and waives presentment and all demands whatsoever except as noted herein, notice of protest, notice of dishonor or nonpayment of any such liability, suit or taking of other action by any Guaranteed Party against, and any other notice to, any party liable thereon (including the Guarantor or any other guarantor), filing of claims with a court in the event of the insolvency or bankruptcy of the DS Supplier, and any right to require a proceeding first against the DS Supplier.
- 3. The Guaranteed Party may, at any time and from time to time, without notice to or consent of the Guarantor, without incurring responsibility to the Guarantor and without impairing or releasing the obligations of the Guarantor hereunder, upon or without any terms or conditions: (i) take or refrain from taking any and all actions with respect to the Guaranteed Obligations, any Document or any person (including the DS Supplier) that the Guaranteed Party determines in its sole discretion to be necessary or

- appropriate; (ii) take or refrain from taking any action of any kind in respect of any security for any Guaranteed Obligation(s) or liability of the DS Supplier to the Guaranteed Party; or (iii) compromise or subordinate any Guaranteed Obligation(s) or liability of the DS Supplier to the Guaranteed Party including any security for such Guaranteed Obligation(s) or liability of the DS Supplier to the Guaranteed Party.
- 4. Subject to the terms and conditions hereof, the obligations of the Guarantor under this Guaranty are absolute and unconditional and, without limiting the generality of the foregoing, shall not be released, discharged or otherwise affected by: (i) any extension, renewal, settlement, compromise, waiver, consent, discharge or release by the DS Supplier concerning any provision of the Agreement(s) in respect of any Guaranteed Obligations of the DS Supplier; (ii) the rendering of any judgment against the DS Supplier or any action to enforce the same; (iii) the existence, or extent of, any release, exchange, surrender, non-perfection or invalidity of any direct or indirect security for any of the Guaranteed Obligations; (iv) any modification, amendment, waiver, extension of or supplement to any of the Agreement(s) or the Guaranteed Obligations agreed to from time to time by the DS Supplier and the Guaranteed Party; (v) any change in the corporate existence (including its constitution, laws, rules, regulations or powers), structure or ownership of the BGS Supplier or the Guarantor, or any insolvency, bankruptcy, reorganization or other similar proceedings affecting the DS Supplier or its assets, the Guarantor or any other guarantor of any of the Guaranteed Obligations; (vi) the existence of any claim, set-off or other rights which the Guarantor may have at any time against the DS Supplier, the Guaranteed Party or any other corporation or person, whether in connection herewith or in connection with any unrelated transaction; provided that nothing herein shall prevent the assertion of any such claim by separate suit or compulsory counterclaim; (vii) the invalidity, irregularity or unenforceability in whole or in part of the Agreement(s) or any Guaranteed Obligations or any instrument evidencing any Guaranteed Obligations or the absence of any action to enforce the same, or any provision of applicable law or regulation purporting to prohibit payment by the DS Supplier of amounts to be paid by it under the Agreement(s) or any of the Guaranteed Obligations; and (viii) except for a failure to comply with any applicable statute of limitations, any other act or omission to act or delay of any kind of the DS Supplier, any other guarantor, the Guaranteed Party or any other corporation or person or any other event, occurrence or circumstance whatsoever which might, but for the provisions of this paragraph, constitute a legal or equitable discharge of the Guarantor's obligations hereunder.
- 5. The Guarantor hereby irrevocably waives (a) any right of reimbursement or contribution, and (b) any right of salvage against the DS Supplier of any collateral security or guaranty or right of offset held by the Guaranteed Party.
- 6. The Guarantor will not exercise any rights, which it may acquire by way of subrogation until all Guaranteed Obligations to the Guaranteed Party pursuant to the Agreement(s) have been paid in full.

- 7. Subject to the terms and conditions hereof, this Guaranty is a continuing one and all liabilities to which it applies or may apply under the terms hereof shall be conclusively presumed to have been created in reliance hereon. Except for a failure to comply with any applicable statute of limitations, no failure or delay on the part of the Guaranteed Party in exercising any right, power or privilege hereunder, and no course of dealing between the Guarantor and the Guaranteed Party, shall operate as a waiver thereof; nor shall any single or partial exercise of any right, power or privilege hereunder preclude any other or further exercise thereof or the exercise of any other right, power or privilege. The rights, powers and remedies herein expressly provided are cumulative and not exclusive of any rights, powers or remedies, which the Guaranteed Party would otherwise have. No notice to or demand on the Guarantor in any case shall entitle the Guarantor to any other or further notice of demand in similar or other circumstances or constitute a waiver of the rights of the Guaranteed Party to any other or further action in any circumstances without notice or demand.
- 8. This Guaranty shall be binding upon the Guarantor and upon its successors and assigns and shall inure to the benefit of and be enforceable by the Guaranteed Party and its successors and assigns; provided, however, that the Guarantor may not assign or transfer any of its rights or obligations hereunder without the prior written consent of the Guaranteed Party. The assignment rights of the Guaranteed Party will be in accordance with the terms of the underlying Agreement(s).
- 9. Neither this Guaranty nor any provision hereof may be changed, waived, discharged or terminated except upon written agreement of the Guaranteed Party and the Guarantor.
- 10. The Guarantor agrees that its liability as guarantor shall continue and remain in full force and effect in the event that all or any part of any payment made hereunder or any obligation or liability guaranteed hereunder is recovered (as a fraudulent conveyance, preference or otherwise) rescinded or must otherwise be reinstated or returned due to bankruptcy or insolvency laws or otherwise.
- 11. All notices and other communications hereunder shall be made at the addresses by hand delivery, by the next day delivery service effective upon receipt or by certified mail return receipt requested (effective upon scheduled weekday delivery day) or telefacsimile (effective upon receipt of evidence, including telefacsimile evidence, that telefacsimile was received).

If to the Guarantor: [Insert Guarantor]

If to the Guaranteed Party: [Insert Guaranteed Party]

- 12. If claim is ever made upon the Guaranteed Party for repayment or recovery of any amount or amounts received in payment or on account of any of the Guaranteed Obligations and the Guaranteed Party repays all or part of such amount by reason of (a) any judgment, decree or order of any court or administrative body having jurisdiction over such payee or any of its property, or (b) any settlement or compromise of any such claim effected by such payee with any such claimant (including the Guarantor), then and in such event the Guarantor agrees that any such judgment, decree, order, settlement or compromise shall be binding upon it, notwithstanding any revocation hereof or the cancellation of the Agreement(s) or other instrument evidencing any liability of the Guarantor, and the Guarantor shall be and remain liable to the Guaranteed Party hereunder for the amount so repaid or recovered to the same extent as if such amount had never originally been received by any such payee.
- 13. The Guarantor hereby certifies that it satisfies the Minimum Rating as defined in the Agreement(s).
- 14. This Guaranty shall remain in full force and effect until all Guaranteed Obligations have been fully and finally performed, at which point it will expire. The Guarantor may terminate this Guaranty upon thirty (30) days prior written notice to the Guaranteed Party which termination shall be effective only upon receipt by the Guaranteed Party of alternative means of security or credit support, as specified in the Agreement(s) and in a form reasonably acceptable to the Guaranteed Party. Upon the effectiveness of any such expiration or termination, the Guarantor shall have no further liability under this Guaranty, except with respect to the Guaranteed Obligations entered into prior to the time the expiration or termination is effective, which Guaranteed Obligations shall remain guaranteed pursuant to the terms of this Guaranty until finally and fully performed.
- 15. The Guarantor represents and warrants that: (i) it is duly organized and validly existing under the laws of the jurisdiction in which it was organized and has the power and authority to execute, deliver, and perform this Guaranty; (ii) no authorization, approval, consent or order of, or registration or filing with, any court or other governmental body having jurisdiction over the Guarantor is required on the part of the Guarantor for the execution, delivery and performance of this Guaranty except for those already made or obtained; (iii) this Guaranty constitutes a valid and legally binding agreement of the Guarantor, and is enforceable against the Guarantor, except as the enforceability of this Guaranty may be limited by the effect of any applicable bankruptcy, insolvency, reorganization, moratorium or similar laws affecting creditor's rights generally and by general principles of equity; and (iv) the execution, delivery and performance of this Guaranty by the Guarantor have been and remain duly authorized by all necessary corporate or comparable action and do not contravene any provision of its [insert appropriate corporate organizational document, such as Declaration of Trust, Limited Liability Agreement, Articles of Incorporation or bylaws] or any law, regulation or contractual restriction binding on it or its assets.

- 16. This Guaranty and the rights and obligations of the DS Supplier and the Guarantor hereunder shall be construed in accordance with and governed by the laws of the Commonwealth of Pennsylvania. The Guarantor and Guaranteed Party jointly and severally agree to the exclusive jurisdiction of State and Federal courts located in the Commonwealth of Pennsylvania over any disputes arising or relating to this Guaranty and waive any objections to venue or inconvenient forum. The Guarantor and Guaranteed Party each hereby irrevocably waive any and all rights to trial by jury with respect to any legal proceeding arising out of or relating to this Guaranty.
- 17. This writing is the complete and exclusive statement of the terms of this Guaranty and supersedes all prior oral or written representations, understandings, and agreements between the Guaranteed Party and the Guarantor with respect to subject matter hereof. The Guaranteed Party and the Guarantor agree that there are no conditions to the full effectiveness of this Guaranty.
- 18. Every provision of this Guaranty is intended to be severable. If any term or provision hereof is declared to be illegal or invalid for any reason whatsoever by a court of competent jurisdiction, such illegality or invalidity shall not affect the balance of the terms and provisions hereof, which terms and provisions shall remain binding and enforceable. This Guaranty may be executed in any number of counterparts, each of which shall be an original, but all of which together shall constitute one instrument.
- 19. No Trustee or shareholder of Guarantor shall be held to any liability whatsoever for any obligation under this Guaranty, and such Guaranty shall not be enforceable against any such Trustee in their or his or her individual capacities or capacity. This Guaranty shall be enforceable against the Trustees of Guarantor only as such, and every person, firm, association, trust or corporation having any claim or demand arising under this Guaranty and relating to Guarantor, its shareholders or Trustee shall look solely to the trust estate of Guarantor for the payment or satisfaction thereof.

IN WITNESS WHEREOF, the Guarantor has caused this Guaranty to be executed and delivered as of the date first above written to be effective as of the earliest effective date of any of the Agreement(s).

(GUARANTOR) Accepted and Agreed to:

[Insert Guarantor] [Insert Name]

By: [Insert Company Name]

Name: [Insert Name] Name: [Insert Name]
Title: [Insert Title] Title: [Insert Title]

APPENDIX H- CAPACITY PROXY PRICE

For purposes of this Appendix: (i) the "PJM RPM Zonal Net Load Price" is the price charged by PJM to LSEs for capacity in the Company's PJM zone under the Reliability Pricing Model ("RPM") or its successor; and (ii) the "Capacity Proxy Price" (CPP) for the Company is \$

/MW-day.

The CPP for each Company will be the average of the capacity prices from the last auctions of the previous two Capacity Market Auctionss conducted by PJM.

In the event a CPP is implemented, Section 9.1 (a) of the SMA is replaced with the following:

Each Billing Month after the Capacity Proxy Price is known for the applicable energy year, the Company will prepare a Statement of amounts due to the DS Supplier. This Statement will show the aggregate amounts due based on the DS Fixed Price multiplied by the hourly Energy requirements of DS Supply used to determine the PMEA multiplied by the DS Fixed Percentage as shown on the Transaction Confirmation(s) for each hour of the Billing Month, plus the aggregate amounts due based on the DS Variable Price multiplied by the hourly Energy requirements of DS Supply used to determine the PMEA multiplied by the DS Variable Percentage, if applicable, as shown on the Transaction Confirmation(s) for each hour of the Billing Month. For each Billing Month of Energy Year after the Capacity Proxy Price is known, an additional line item will show the difference between the PJM RPM Zonal Net Load Price actually charged for load served on the day for the Company's PJM zone and the Capacity Proxy Price multiplied by the DS Supplier Responsibility Share of the Company Capacity obligation (expressed in MW) for each day of the Billing Month in question.

APPENDIX I – ASSIGNMENT AGREEMENT

ASSIGNMENT, ASSUMPTION AND RELEASE AGREEMENT

Agreement") dated as of	 (the "Assignment Execution Date") by and
among:	
("Transferor")	
("Transferee")	
	<u>and</u>

[Applicable EDC listed here – Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company, or West Penn Power Company], a corporation and a public utility organized and existing under the laws of Pennsylvania ("Remaining Party").

RECITALS

<u>WHEREAS</u> as identified in Schedule 1 hereto, Transferor and Remaining Party
have in place the Default Service Supplier Master Agreement between Remaining Party
and Transferor dated _______, including the associated appendices attached
thereto (collectively referred to herein as "Agreement");

WHEREAS Transferor has agreed to assign to Transferee and Transferee has agreed to assume all of the rights, liabilities, duties and obligations of Transferor under and in respect of the Agreement on and subject to the terms contained herein;

WHEREAS Remaining Party is willing to consent to such assignment and assumption as herein set forth and to accept Transferee as its counterparty with respect to the Agreement in the place and stead of Transferor pursuant to the terms of this Assignment Agreement; and

WHEREAS Transferor and Remaining Party have agreed to release and discharge, as a result and to the extent, of the assignment and assumption described above, their respective future obligations under and in respect of the Agreement all as more fully set forth below.

NOW THEREFORE, for good and valuable consideration (receipt and sufficiency of which are hereby acknowledged), the parties hereto mutually covenant and agree as follows:

- 1. Assignment and Assumption. Transferor hereby assigns, conveys, transfers and delivers to Transferee, and Transferee hereby accepts and assumes, in each case as of the Assignment Execution Date, Transferor's entire right, title, estate and interest in and to, and Transferor's rights, liabilities, duties and obligations under, the Agreement from and after the Effective Date, for Transferee's sole use and benefit absolutely. For purposes of this Assignment Agreement, the term "Effective Date" shall mean _______.
- 2. Acceptance by Transferee. Transferee hereby assumes and accepts the aforesaid Agreement, and covenants and agrees with Remaining Party and Transferor that from and after the Assignment Execution Date, Transferee will be bound by, observe and perform, carry out and fulfill all covenants and agreements, duties and obligations under the Agreement from and after the Effective Date that were formerly required to be observed and performed by Transferor under the terms of the Agreement, and that the Agreement shall be fully enforceable against Transferee by Remaining Party, in each case, as if Transferee were an original party thereto.
- 3. Consent and Acceptance by Remaining Party. In satisfaction of Section 16.3 of the Agreement, Remaining Party hereby consents to the assignment and assumption of the Agreement in accordance with the terms set forth herein and accepts Transferee as the party to perform the obligations of Transferor under the Agreement from and after the Effective Date, and Remaining Party agrees that it shall not make any claim against Transferee as a consequence of or relating to the observance and performance of the covenants, representations and agreements under, or any default, breach or non-performance attributable to Transferor under the Agreement or any other transaction entered into pursuant to the Agreement prior to the Effective Date, regardless of when Remaining Party's cause of action accrued.

4. Release.

(a) Effective as of and from the Effective Date, Remaining Party hereby releases and forever discharges Transferor from all obligations to Remaining Party with respect to the Agreement and of and from any and all liability as a consequence of or relating to all manner of action and actions, cause or causes of action, suits, debts, dues, sums of money, claims and demands whatsoever at law or in equity ("Claims") arising out of, or which are in any way related to, the Agreement after and including the Effective Date; provided that, for certainty, the foregoing shall not release or discharge Transferor in respect of the settlement, payment or performance of any liabilities or obligations due and payable or due to be performed, including without limitation payment of any adjustments thereof, or causes

of action for breach of the Agreement, with respect to periods prior to the Effective Date (the "Transferor Excluded Liabilities) and all such Transferor Excluded Liabilities shall be paid or performed by Transferor in accordance with the terms of the Agreement.

- (b) Effective as of and from the Effective Date, Transferor hereby releases and forever discharges Remaining Party from all obligations to Transferor with respect to the Agreement and of and from any and all liability as a consequence of or relating to all Claims arising out of, or which are in any way related to, the Agreement after and including the Effective Date; provided that, for certainty, the foregoing shall not release or discharge Remaining Party in respect of the settlement, payment or performance of any liabilities or obligations due and payable or due to be performed, including without limitation payment of any adjustments thereof, with respect to periods prior to the Effective Date (the "Remaining Party Excluded Liabilities"), and all such Remaining Party Excluded Liabilities shall be paid or performed by Remaining Party in accordance with the terms of the Agreement.
- (c) In respect of the Agreement, effective from and after the Effective Date,
 Remaining Party and Transferee each undertake liabilities and obligations
 towards the other and acquire rights against each other identical in their
 terms as if Transferee were Transferor and with Remaining Party remaining
 the counterparty, save for any rights, liabilities or obligations of Remaining
 Party with respect to any Remaining Party Excluded Liabilities, if any, or
 Transferor with respect to any Transferor Excluded Liabilities, if any.
- 5. Further Assurances. Each party hereto agrees that it shall, from time to time and at all times hereafter, execute such further assurances and do all such acts and things as may be reasonably required for the purpose of vesting in Transferee the rights and obligations of Transferor in the Agreement as assigned to, and assumed by, Transferee and effecting the release and other transactions set forth herein, including, at the request of Remaining Party, executing a new default service supplier master agreement with the same terms and conditions of the Agreement.

6. Address for Notices.	
The address for Transferor for notices shall be:	
The address for Transferor for notices shall be.	
	
The address for the Transferee for notices shall be:	

- 7. Enurement. This Assignment Agreement shall enure to the benefit of and be binding upon the parties hereto and their respective successors and assigns.
- 8. Counterpart Execution. This Assignment Agreement may be executed in separate counterparts and delivered by facsimile, or as an attachment to an electronic message (such as a pdf, tif or other mutually acceptable type of file attachment) each of which when so executed and delivered shall constitute the one and the same original document.
- 9. Governing Law; Waiver of Jury Trial. This Assignment Agreement will be governed by and construed in accordance with the laws of the Commonwealth of Pennsylvania, without giving effect to principles of conflicts of laws. Any judicial action arising out of, resulting from, or in any way relating to this Assignment Agreement shall be brought only in a state or federal court of competent jurisdiction located in the Commonwealth of Pennsylvania, except to the extent subject to the jurisdiction of the Federal Energy Regulatory Commission ("FERC"), Pennsylvania Public Utility Commission ("PUC") or appellate courts having jurisdiction over the PUC or FERC matters. EACH PARTY WAIVES, TO THE FULLEST EXTENT PERMITTED BY APPLICABLE LAW, ANY RIGHT IT MAY HAVE TO A TRIAL BY JURY IN RESPECT OF ANY SUIT, ACTION OR PROCEEDING RELATING TO THIS ASSIGNMENT AGREEMENT. EACH PARTY CERTIFIES **THAT** REPRESENTATIVE, AGENT OR ATTORNEY OF THE OTHER PARTY HAS REPRESENTED, EXPRESSLY OR OTHERWISE, THAT SUCH OTHER PARTY WOULD NOT, IN THE EVENT OF SUCH A SUIT ACTION OR PROCEEDING, SEEK TO ENFORCE THE FOREGOING WAIVER.

10. Representations, Warranties and Covenants.

Transferor hereby represents and warrants that: (i) its right, title, estate and (a) interest in and to the Agreement is free and clear of any liens, charges, pledges, options, mortgages, deeds of trust, security interests, restrictions (whether on voting, sale, transfer, disposition, or otherwise), and easements, whether imposed by law, agreement, understanding, or otherwise whatsoever, (ii) it has the power and authority to effect the sale, assignment and transfer of the Agreement and to execute this Assignment Agreement; (iii) it is a "public utility" as such term is defined under the Federal Power Act, (iv) it has no captive customers; (v) it does not own, or provide transmission services over, transmission facilities subject to the jurisdiction of the Federal Energy Regulatory Commission; (vi) assuming the truthfulness of the representations of Transferee set forth in Section 11(b)(iii), (iv) and (v) below, the transfer of rights under the Agreement falls within the blanket authorization granted under 18 C.F.R. Section 33.1(c)(16); (vii) the Agreement has not been amended or modified and is in full force and effect; (viii) no event or condition has occurred that constitutes, or will with the passage of time constitute, an event of default or termination under the Agreement; (ix) there are no material disputes pending or to its knowledge threatened related to any rights or obligations transferred by this Assignment Agreement; (x) as of the Assignment Execution Date, it has performed all of its obligations under the Agreement that are required to be performed and will have performed all such obligations as of the Effective Date; (xi) it is acting for its own account, and it has made its own independent decisions to enter into this Assignment Agreement and as to whether this Assignment Agreement is appropriate or proper for it based upon its own judgment and upon advice from such advisers as it has deemed necessary; (xii) it is not relying on any communication (written or oral) of the other parties as investment advice or as a recommendation to enter into this Assignment Agreement; it being understood that information and explanations related to the terms and conditions of this Assignment Agreement shall not be considered investment advice or a recommendation to enter into this Assignment Agreement; (xiii) no communication (written or oral) received from any of the other parties shall be deemed to be an assurance or guarantee as to the expected results of this Assignment Agreement; (xiv) it is capable of assessing the merits of and understanding (on its own behalf or through independent professional advice), and understands and accepts, the terms, conditions and risks of this Assignment Agreement; (xv) it is also capable of assuming, and assumes, the risks of this Assignment Agreement; and (xvi) none of the other parties is acting as a fiduciary for or an adviser to it in respect of this Assignment Agreement.

(b) Transferee hereby represents and warrants that: (i) it has the power and authority to accept and assume the sale, purchase, assignment and transfer of the Agreement and to execute this Assignment Agreement; (ii) it is qualified to do business in the Commonwealth of Pennsylvania; (iii) it is a "public utility" as such term is defined under the Federal Power Act, (iv) it has no captive customers; (v) it does not own, or provide transmission services over, transmission facilities subject to the jurisdiction of the Federal Energy Regulatory Commission; (vi) it is a "Load Serving Entity" as defined in the Agreement in good standing with PJM Interconnection, LLC ("PJM") and is in compliance with all applicable PJM obligations, rules and regulations; (vii) assuming the truthfulness of the representations of Transferor set forth in Section 10(a)(iii), (iv) and (v) above, the transfer of rights under the Agreement falls within the blanket authorization granted under 18 C.F.R. Section 33.1(c)(16); (viii) it is acting for its own account, and it has made its own independent decisions to enter into this Assignment Agreement and as to whether this Assignment Agreement is appropriate or proper for it based upon its own judgment and upon advice from such advisers as it has deemed necessary; (ix) it is not relying on any communication (written or oral) of the other parties as investment advice or as a recommendation to enter into this Assignment Agreement; it being

understood that information and explanations related to the terms and conditions of this Assignment Agreement shall not be considered investment advice or a recommendation to enter into this Assignment Agreement (x) no communication (written or oral) received from any of the other parties shall be deemed to be an assurance or guarantee as to the expected results of this Assignment Agreement; (xi) it is capable of assessing the merits of and understanding (on its own behalf or through independent professional advice), and understands and accepts, the terms, conditions and risks of this Assignment Agreement and the Agreement; (xii) it is also capable of assuming, and assumes, the risks of this Assignment Agreement and the Agreement; and (xiii) none of the other parties is acting as a fiduciary for or an advisor to it in respect of this Assignment Agreement.

- (c) Transferee hereby represents and warrants (i) that each representation and warranty of the Transferor set forth in the Agreement is true, correct and complete with respect to Transferee as of the Assignment Execution Date and will be true, correct and complete as of the Effective Date, and hereby makes each such representation and warranty for the benefit of Remaining Party as if set forth in full herein, and (ii) that Transferee is familiar with and meets all of Remaining Party's creditworthiness requirements and all applicable load-cap requirements, currently in effect under and pursuant to the Agreement. Transferee acknowledges that Remaining Party is relying upon, and agrees that Remaining Party may rely upon, the representations and warranties of Transferee set forth in this Assignment Agreement in providing its consent to and acceptance of the assignment to and assumption by Assignee of the Agreement.
- (d) Transferee hereby agrees to be bound by the terms of the Agreement and to perform all of the obligations thereunder in accordance with the terms thereof.

Each party hereto represents and warrants to the others that: (i) this Assignment Agreement and, as to Remaining Party and Transferee, the Agreement, do not and will not violate or conflict with its charter, articles or certificate of incorporation, or by-laws (or comparable constitutive documents), any statute, law, rule, regulation or ordinance, or any judgment, order, consent order, stipulated agreement, writ, injunction, or decree of any court or governmental agency, applicable to it or any agreement to which it is a party or by which it or any of its property is bound; provided that the Remaining Party shall provide an informational filing to the PUC advising of the execution of this Assignment Agreement after the Assignment Execution Date; (ii) its obligations hereunder and, as to Remaining Party and Transferee, under the Agreement are legal, valid and binding on it, and enforceable in accordance with their terms; and (iii) the person signing this

- Assignment Agreement for such party is an officer, director, and/or partner of such party and is authorized and duly empowered to do so.
- **11. Informational Filing.** The parties acknowledge that Remaining Party shall provide an informational filing to the PUC advising of the execution of this Assignment Agreement after the Assignment Execution Date.
- 12. Costs and Expenses. The parties will each pay their own costs and expenses (including legal fees) incurred in connection with this Assignment Agreement and as a result of the negotiation, preparation and execution of this Assignment Agreement.
- 13. Amendments. No amendment, modification or waiver in respect of this Assignment Agreement will be effective unless in writing (including a writing evidenced by a facsimile transmission) and executed by each of the parties.
- 14. Waiver. No waiver under this Assignment Agreement is effective unless it is in writing and signed by the party waiving its right. Any waiver authorized on one occasion is effective only in that instance and only for the purpose stated and does not operate as a waiver on any future occasion. None of the following constitutes a waiver or estoppel of any right, remedy, power, privilege or condition arising from this Assignment Agreement: (a) any failure or delay in exercising any right, remedy, power or privilege or in enforcing any condition under this Assignment Agreement; or (b) any act, omission or course of dealing between the parties.
- 15. Cumulative Remedies. All rights and remedies provided in this Assignment Agreement are cumulative and not exclusive, and the exercise by either party of any right or remedy does not preclude the exercise of any other rights or remedies that may now or subsequently be available at law, in equity, by statute, in any other agreement between the parties or otherwise.
- 16. No Third Party Beneficiaries. This Assignment Agreement benefits solely the parties to this Assignment Agreement and their respective permitted successors and assigns and nothing in this Assignment Agreement, express or implied, confers on any other person any legal or equitable right, benefit or remedy of any nature whatsoever under or by reason of this Assignment Agreement.
- 17. Headings; Defined Terms. The headings in this Assignment Agreement are for reference only and do not affect the interpretation of this Assignment Agreement.

 Capitalized terms used herein and not otherwise defined shall have the meaning set forth in the Agreement.
- 18. Severability. If any term or provision of this Assignment Agreement is invalid, illegal or unenforceable in any jurisdiction, such invalidity, illegality or unenforceability does not affect any other term or provision of this Assignment Agreement or invalidate or render unenforceable such term or provision in any other jurisdiction. Upon such determination that any term or other provision is

invalid, illegal or unenforceable, the parties to this Assignment Agreement shall negotiate in good faith to modify this Assignment Agreement so as to effect the original intent of the parties as closely as possible in a mutually acceptable manner in order that the transactions contemplated hereby be consummated as originally contemplated to the greatest extent possible.

[signature page follows]

IN WITNESS WHEREOF the parties have executed this Assignment Agreement on the respective dates specified below with effect from and including the Assignment Execution Date.

	TRANSFEROR:	
	By:	
	Name:	
	Title:	
	Date:	
	TRANSFEREE:	
	By:	
	Name:	
	Title:	
	Date:	
[Applicable EDC listed her	REMAINING PARTY:	Ilootnia
	<u>e – Metropolitan Edison Company, Pennsylvania E</u> ower Company, or West Penn Power Company]	лестто
Company, 1 emisyivama 1 (ower Company, or West Felli Fower Company	
	By:	
	Name:	
	Title:	
	Date:	

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

METROPOLITAN EDISON COMPANY
Docket No. P-2021
PENNSYLVANIA ELECTRIC COMPANY
Docket No. P-2021
PENNSYLVANIA POWER COMPANY
Docket No. P-2021
WEST PENN POWER COMPANY
Docket No. P-2021
DEFAULT SERVICE PROGRAMS
June 1, 2023 - May 31, 2027

Direct Testimony
Of
James D. Reitzes and Nicholas E. Powers

List of Topics Addressed

Analysis of Default Service Supply Plans

TABLE OF CONTENTS

		Page
I.	INTRODUCTION AND PURPOSE OF TESTIMONY	1
II.	THE DESIGN OF THE SUPPLY PLAN FOR THE COMPANIES'	
	DEFAULT SERVICE CUSTOMERS CONFORMS WITH THE	
	REQUIREMENTS OF ACT 129, SUCH THAT IT WILL RESULT	
	IN THE LEAST COST OVER TIME FOR THOSE CUSTOMERS	6
III.	CONCLUSION	29

1		DIRECT TESTIMONY
2 3		OF JAMES D. REITZES AND NICHOLAS E. POWERS
4	I.	INTRODUCTION AND PURPOSE OF TESTIMONY
5	Q.	Dr. Reitzes, please state your name, title, and business address.
6	A.	My name is James D. Reitzes, and I am a Principal of The Brattle Group ("Brattle"). My
7		business address is 1800 M Street NW, Suite 700 North, Washington, D.C.
8	Q.	Please describe briefly your educational and professional backgrounds.
9	A.	I hold a Ph.D. in Economics from the University of Wisconsin and a Bachelor of Arts in
10		Economics and History from Stanford University. My areas of specialization within
11		economics are industrial organization, which includes the examination of firm behavior
12		under various market conditions and international trade. Additionally, I have also
13		completed field courses in finance. I have worked on competition and regulatory matters
14		for more than thirty years, including five years while employed with the Federal Trade
15		Commission and more than twenty-five years in private consulting practice. Appendix A
16		provides further detail regarding my professional experience and educational background.
17	Q.	Dr. Powers, please state your name, title, and business address.
18	A.	My name is Nicholas E. Powers, and I am a Principal of Brattle. My business address is
19		1800 M Street NW, Suite 700 North, Washington, D.C.
20	Q.	Dr. Powers, please describe briefly your educational and professional backgrounds.
21	A.	I hold a Ph.D. in Business Economics from the University of Michigan and a Bachelor of
22		Science in Applied Economics and Management from Cornell University. My areas of
23		specialization within economics are industrial organization and environmental economics.

I have also completed field courses in economic theory. For more than a decade, I have worked on matters related to competition and regulation, both in the electricity industry and more generally. Appendix B provides further detail regarding my professional experience and educational background.

A.

5 Q. Dr. Reitzes, please summarize your prior professional experience with respect to electric power matters.

For over twenty years, I participated in a variety of regulatory and competition matters involving the electric power industry. Specifically, I testified before the Federal Energy Regulatory Commission ("FERC") and in state regulatory proceedings on a number of occasions, addressing such issues as the competitive implications of mergers and acquisitions and assessing whether energy, transmission rights, renewable energy credits, or other assets were purchased or sold at the best possible price.

On several occasions, I have been involved in the design of procurement processes to satisfy default service program ("DSP") obligations (also known as standard offer service, provider of last resort, among other names), including the analysis of costs and risks associated with full-requirements, auction-based procurements and portfolio procurement strategies. In addition, I have submitted written testimony on these issues to state public utility commissions, including the Pennsylvania Public Utility Commission ("Commission").

My past experience also includes the design and management of auctions and request for proposals ("RFP") to purchase or sell various energy-related products, including energy, transmission rights, renewable energy credits, and other products. I have authored several

- articles concerning price determination and competition in general and electric power
 markets, which have been published in economics and energy-sector trade journals.
- Q. Dr. Powers, please summarize your prior professional experience with respect to
 electric power matters.
- I have significant experience conducting economic analyses regarding competition and regulatory issues in the electric power industry. This includes conducting damages assessments in litigation matters and analyses of price effects, market power, and anticompetitive behavior in several litigation proceedings arising from the California electricity crisis of 2000–2001.

10

11

12

13

14

- Additionally, I have conducted econometric analyses of the load impacts of time-of-use pricing programs in the electric industry, submitting expert reports before the Maryland Public Service Commission. I have also acted as both an independent evaluator and an advisor to several procurement processes in the electricity sector involving renewable energy, transmission capacity, and other energy products.
- Or. Reitzes, have you submitted testimony previously to the Commission on behalf of the Companies?
- 17 A. Yes, I submitted testimony with the Commission on behalf of Metropolitan Edison
 18 Company ("Met-Ed") and Pennsylvania Electric Company ("Penelec") regarding their
 19 inaugural DSP and procurement of Solar Photovoltaic Alternative Energy Credits
 20 ("SPAECs") decided in Docket Nos. P-2009-2093053 and P-2009-2093054 ("DSP I").
 21 That testimony examined least-cost methods of procuring power for default service
 22 customers and purchasing SPAECs for meeting requirements under Pennsylvania's

- Alternative Energy Portfolio Standards ("AEPS") Act. In addition, I submitted rebuttal testimony with the Commission on behalf of Penn Power regarding its Interim Default Service Program decided in Docket No. P-00072305.
- 4 I have also submitted written testimony with the Commission on behalf of Met-Ed, 5 Penelec, Pennsylvania Power Company ("Penn Power"), and West Penn Power Company 6 ("West Penn") (individually referred to as "Company" and in any combination as the 7 "Companies") in each of their subsequent default service proceedings, which were decided 8 in Docket Nos. P-2011-2273650, P-2011-2273668, P-2011-2273669, and P-2011-2273670 9 ("DSP II"); Docket Nos. P-2013-2391368, P-2013-2391372, P-2013-2391375, and 10 P-2013-2391378 ("DSP III"); Docket Nos. P-2015-2511333, P-2015-2511351, P-2015-11 2511355, and P-2015-2511356 ("DSP IV"); and in Docket Nos. P-2017-2637855, P-2017-2637857, P-2017-2637858, and P-2017-2637866 ("DSP V"), respectively. Among other 12 13 topics, my testimonies, again, examined the least-cost methods of obtaining power for 14 default service customers and issues related to whether the Companies' proposed power 15 procurement plan provided a prudent mix of power from spot, short-, and long-term 16 purchases.

17 Q. Have you and Dr. Powers prepared any exhibits to accompany your testimony?

18 A. Yes, Dr. Powers and I have prepared Met-Ed/Penelec/Penn Power/West Penn Exhibit

19 JDR/NEP-1, which is attached hereto and will be discussed later herein.

20 Q. What is the purpose of your testimony and for whom are you testifying?

A. Together, we are testifying on behalf of the Companies. Our testimony analyzes the proposed procurement of residential full-requirements service, commercial full-

requirements service, and hourly-priced service by the Companies, as further described in James Catanach and Wanyun Zhong's respective direct testimonies (Met-Ed/Penelec/Penn Power/West Penn Statement No. 2) and (Met-Ed/Penelec/Penn Power/West Penn Statement No. 3, respectively). We also review the Companies' proposed long-term solar procurement for energy and SPAECs. We explain why the nature of the products being procured, as well as the procurement method itself, will produce a prudent mix of spot, short-, and long-term purchases that provides the "least cost over time" to default service customers and satisfies other applicable provisions of Pennsylvania's Act 129 of 2008 ("Act 129"). We also assess whether proposed changes to the frequency of changes to the default service "price to compare" ("PTC") are beneficial to customers. In so doing, we explain why the Companies' proposed procurement should be approved by the Commission.

Q. Is Brattle an independent third party?

A.

Yes. Brattle is not owned, managed, controlled, or directed by any of the Companies or their affiliates. Brattle has no ownership in or control over the Companies or any of the FirstEnergy Corp. ("FirstEnergy") affiliates. Neither the Companies nor any other FirstEnergy affiliate has any ownership in or control over Brattle.

1 2 3 4	11.	SERVICE CUSTOMERS CONFORMS WITH THE REQUIREMENTS OF ACT 129, SUCH THAT IT WILL RESULT IN THE LEAST COST OVER TIME FOR THOSE CUSTOMERS
5	Q.	Can you provide an overview of the Companies' proposed DSPs?
6	A.	Yes, we can. The Companies propose to acquire full-requirements, load-following
7		generation service for non-shopping residential and commercial default service customers
8		through descending-clock auctions for the service period beginning June 2023 and ending
9		May 2027. Residential default service load will be priced based on a nearly even mix of
10		12- and 24-month, full-requirements, fixed-price purchases that account for 95% of load;
11		spot-priced purchases will account for the remaining 5%.1
12		The pricing of commercial default service load will differ slightly in that some portion
13		(roughly 29%) will be based on 6-month full-requirements, fixed-price purchases, though
14		the majority (roughly 71%) will be based on 12- and 24-month full-requirements, fixed-
15		price purchases. The pricing of industrial default service load, consistent with the
16		Companies' past default service supply plans, will be based on 100% spot-market
17		purchases.
18		Under the Companies' proposal, the auction participants will make offers to supply
19		"tranches"; each tranche represents the full-requirements, load-following generation
20		service obligation for a defined segment (i.e., percentage) of load for a particular default
21		service customer class. Each tranche for the residential class will consist of 5% spot-priced

¹ Specifically, at any point in time during the default service period, roughly 49% of the load obligation will effectively be priced based on one-year purchases, while another 46% of load will be priced based on two-year purchases. A small fixed quantity of load will be satisfied from energy procured by the Companies through solar power purchase agreements ("PPAs"), paired with spot purchases. We describe this aspect of the default service program in further detail later in this testimony. The reported shares of load obligation that are to be met with one-year purchases, twoyear purchases, and spot purchases do not account for this "solar plus spot" purchase of a fixed block of power.

energy (plus a \$20/MWh fixed adder intended to offset other cost components of the full-requirements obligation associated with the spot-priced default service load, including capacity, ancillary services, certain transmission services, AEPS Act compliance, and other costs). The remaining 95% of the residential class and all of the commercial class energy requirements will be supplied at a fixed price per megawatt hour ("MWh"), as bid by the winning auction participants. The customers receiving default service will be billed at a fixed price per kilowatt hour that will change every six months, with the timing synchronized to PJM Interconnection, LLC's ("PJM") energy year, which begins on June 1 and lasts through May 31.²

There will be separate default service products for each Company and for commercial and residential customer classes, but these products will be procured simultaneously in the same auction. Auctions will be held twice per year. Typically, the auctions for these customer classes will occur every September and March, though the first auction will take place in November 2022 (rather than in September of that year). The November 2022 auction will coincide with the November auction for DSP V. The mix of tranches offered in each auction will vary.

Tranches with a 12-month generation service supply obligation to serve residential or commercial default service customers will be auctioned starting in November 2022, with subsequent procurements occurring annually thereafter every March and September through March 2026. Tranches with a 24-month generation service supply obligation to serve residential or commercial default service customers will also be auctioned starting in

² Specifically, a new PTC will take effect on June 1 and December 1 of every year and remain in effect for the ensuing six-month period.

November 2022, with subsequent procurements occurring every March and September through March 2025. Tranches with a 6-month generation service supply obligation (for commercial customers only) will be auctioned annually every March and September from 2023 through 2026. The Companies propose to replace the 3-month generation service product with the 6-month generation service product that was procured for commercial default service customers under DSP V. Mr. Catanach provides a timeline showing the auction procurement schedule by load type and the duration of the supply obligation in an exhibit to his direct testimony (Met-Ed/Penelec/Penn Power/West Penn Exhibit JHC-1).

The winning bidders for the full-requirements, load-following procurements for the residential, commercial, and industrial classes will be responsible for energy, capacity, ancillary services, relevant PJM fees and administrative expenses, and certain transmission costs associated with their share of default service load (including congestion costs and marginal transmission losses). They will not be responsible for Regional Transmission Expansion Plan ("RTEP") charges; Expansion Cost-Recovery Charges; Reliability Must Run/generation deactivation charges; historical out-of-market adjustments related to tie lines, generation, and retail customer-metering costs; unaccounted-for energy costs; or any FERC-approved reallocation of PJM RTEP charges related to Docket No. EL05-121-009 (collectively referred to as "non-market-based charges," or "NMB charges"). The costs associated with NMB charges will be charged to customers directly through a non-bypassable tariff rider (i.e., each Company' Default Service Support Riders (hereinafter "DSSR")).

For the industrial class, 100% of load will be acquired through an annual auction process in which suppliers bid on a full-requirements, load-following product whose energy price is set at the PJM real-time price. In addition to a fixed adder of \$4/MWh intended to cover capacity, ancillary services, AEPS Act compliance, and other costs associated with meeting this full-requirements obligation, suppliers may bid an additional adder over the PJM real-time price to cover any remaining costs or provide a potential profit margin. Industrial class auctions for each Company will be held every March from 2023 to 2026 (for delivery beginning June 1 of the year of the auction and ending May 31 of the subsequent calendar year), and these procurements will occur at the same time as the auctions for the residential and commercial classes.

In addition to the above areas of responsibility, suppliers of the full-requirements, load-following tranches will bear the costs of complying with AEPS Act requirements. In particular, default service suppliers will be responsible for meeting 100% of the non-solar Tier I and Tier II AEPS Act requirements. Default service suppliers will also be responsible for meeting solar Tier I AEPS Act requirements less any SPAEC allocations received from existing long-term SPAEC contracts³ or from the Companies' proposed long-term solar PPAs.

Q. Are there any long-term energy purchases included in the Companies' proposed DSP?

A. Yes. The Companies will continue to support the development of the Pennsylvania solar industry by procuring—through multi-year PPAs—the energy and SPAECs generated by one or more new in-state solar photovoltaic projects with total capacity up to 20 MW. The

³ Note that Met-Ed, Penelec, and Penn Power have several SPAEC contracts that end May 31, 2024. Met-Ed, Penelec, and Penn Power will allocate these SPAECs to retail and wholesale suppliers based on their share of MWhs serviced for the energy year ending May 31, 2024.

winning project(s) will be selected through a competitive procurement process in which the developer or owner of each qualified project will offer a \$/MWh price which it will receive for each MWh of solar energy generated over the term of the PPAs.⁴ The energy generated by the selected project(s) will be paired with spot purchases to satisfy a fixed quantity of default service load during specified hours of the day. The SPAECs that the Companies purchase through the solar PPAs will be allocated to residential default suppliers in proportion to the amount of load served over the course of the energy year (after reserving a small portion to meet the AEPS requirements of the residential default service load that the Companies are serving with the solar PPA(s) and the associated spot purchases).

- 11 Q. As requested by the Commission's January 23, 2020 Secretarial Letter, in your opinion, does the term length of the products proposed in the Companies' DSP serve as "evidence showing how [the] [Companies'] DSP proposal complies with the prudent mix requirements of the Public Utility Code and case law"?⁵
- 15 A. Yes. Pursuant to Act 129, the electric power procured under an electric distribution
 16 company's ("EDC's") DSP proposal must include a "prudent mix" of spot-market
 17 purchases and short- and long-term contracts.⁶ That said, though neither of us is an
 18 attorney, we have been advised by counsel that under Pennsylvania case law, most notably
 19 the *Popowsky* case cited in the January 2020 Secretarial Letter, a "prudent mix" of

⁴ The dollar price per MWh will be paid in exchange for the energy and the accompanying solar alternative energy credit.

⁵ Investigation into Default Service and PJM Interconnection, LLC. Settlement Reforms, Secretarial Letter, Docket No. M-2019-3007001, at 8 (issued January 23, 2020) ("January 2020 Secretarial Letter"). ⁶ 66 Pa.C.S. § 2807(e)(3.2).

generation sources can include only one of the foregoing when it is the most prudent course and likely to result in the least cost over time.⁷

The Companies' proposed procurement design comports with both Act 129 and Pennsylvania case law as it will result in a prudent mix of spot-purchases and short- and long-term contracts. The use of 12- and 24-month contracts should provide some measure of cost stability, which is a primary objective when procuring generation supply for default service. The 5% of residential load that is priced according to the PJM real-time market, and the 29% of commercial load that is priced based on biannual purchases, both provide customers some exposure to short-term price signals. Lastly, residential default service customers will be further insulated from instability in the prices of both energy and SPAECs through the Companies' proposed long-term solar PPAs.

_

Implementation of Act 129 of October 15, 2008; Default Service and Retail Electric Markets, Final Rulemaking Order, Docket No. L-2009-2095604, at 40 (entered Oct. 4, 2011) ("2011 Final Rulemaking Order").

⁷ Popowsky v. Pa. PUC, 71 A.3rd 1112, 1117 (Pa. Commw. Ct. 2013).

⁸ The Commission's Final Order in Docket No. L-2009-2095604 recognizes that relative cost stability is an -objective in procuring default service supply:

As stated earlier in this Order, the "least cost over time" standard should not be confused with the presumption that default prices will always equal the lowest cost price for power at any particular point in time. In implementing default service standards, the Commission must be concerned about rate stability as well as other considerations such as ensuring a "prudent mix" of supply and ensuring safe and reliable service. In our view, a default service plan that meets the "least cost over time" standard should not have, as its singular focus, the achievement of the absolute lowest cost over the default service plan time frame but rather a cost for power that is both relatively stable and also economical relative to other options.

1 Q. Do you believe that the Companies' proposed DSPs are consistent with 66 Pa.C.S. § 2 2807(e)(3.4), which requires that they be designed to ensure "the least cost to 3 customers over time"? 4 Yes, we do. As Dr. Reitzes has explained in testimonies submitted in the Companies' A. previous DSP proceedings, the use of a competitive process to procure a full-requirements 5 6 product is designed to induce aggressive bidding among suppliers who can manage 7 portfolios of energy, transmission, and capacity products to meet the load obligations of a given class of customers. The competitiveness of the bidding process, coupled with the 8 9 nature of the product that is being procured, will result in an outcome where the suppliers 10 who can manage those portfolios at the least cost over time (or who believe that they can 11 obtain the components of their portfolios at the lowest prices over time) are the winning 12

bidders.

⁹ See DSP I—Joint Petition of Metropolitan Edison Company and Pennsylvania Electric Company for Approval of Their Default Service Programs, Joint Petition of Metropolitan Edison Company and Pennsylvania Electric Company, Met-Ed/Penelec, Statement No. 8, Docket Nos. P-2009-2093053 and P-2009-2093054 (filed February 20, 2009) (Met-Ed and Penelec), Petition of Pennsylvania Power Company for Approval of Interim Default Service Plan, Petition of Pennsylvania Power Company for Approval of Interim Default Service Supply Plan, Penn Power Statement No. 9-RM, (filed May 2, 2007) (Penn Power); DSP II—Joint Petition of Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company, and West Penn Power Company for Approval of Their Default Service Programs, Joint Petition of Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company, and West Penn Power Company, Met-Ed/Penelec/Penn Power/West Penn Statement No. 6, Docket Nos. P-2011-2273650, P-2011-2273668, P-2011-2273669, P-2011-2273670 (filed November 17, 2011); DSP III— Joint Petition of Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company, and West Penn Power Company for Approval of Their Default Service Programs, Joint Petition of Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company, and West Penn Power Company, Met-Ed/Penelec/Penn Power/West Penn Statement No. 3, Docket Nos. P-2013-2391368, P-2013-2391372, P-2013-2391375, P-2013-2391378 (filed November 2, 2013); DSP IV—Joint Petition of Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company, and West Penn Power Company for Approval of Their Default Service Programs, Joint Petition of Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company, and West Penn Power Company, Met-Ed/Penelec/Penn Power/West Penn Statement, No. 2, Docket Nos. P-2015-2511333, P-2015-2511351, P-2015-2511355, P-2015-2511356 (filed November 3, 2015); and DSP V—Joint Petition of Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company, and West Penn Power Company for Approval of Their Default Service Programs, Joint Petition of Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company, and West Penn Power Company, Met-Ed/Penelec/Penn Power/West Penn Statement No. 3, Docket Nos. P-2017-2637855, P-2017-2637857, P-2017-2637858, and P-2017-2637866 (filed December 11, 2017).

Q. How does the reliance upon a full-requirements product contribute to a procurement strategy that is designed to ensure "the least cost to customers over time" as required

under Act 129?

As stated previously in this testimony, the full-requirements product which the Companies A. seek to supply through their respective default service procurements is known as a "tranche"; it is a clearly defined product. Tranches represent a defined percentage of the load of a particular customer class that the default service supplier must serve, including the provision of energy, capacity, ancillary services, and certain transmission services (but excluding NMB charges). Default service suppliers also are responsible for fulfilling the requirements of the AEPS Act, as we described earlier in our testimony. With a clear product definition established in this manner, all bidders will put forth offers to supply an identical product so that the winners are chosen purely on the basis of their price offers.

This will lead to a transparent and efficient bidding process.

By bidding on a full-requirements product that must be supplied at a fixed price per MWh, the suppliers assume various risks, such as those relating to price uncertainty and volumetric uncertainty due to variations in weather, customer shopping behavior, fuel prices facing generators, and other market factors. Those suppliers who consider themselves to be the most adept portfolio managers in terms of handling these risks (or who have the lowest expectations regarding the future prices for energy, ancillary services, etc.) will place the lowest bids in the procurement. Thus, the procurement process is intended to rely on the skills of the best electric power portfolio managers to achieve the least cost over time for default service customers while maintaining a certain degree of rate stability.

The Commission appears to accept this viewpoint as well, as stated in its discussion of full-requirements procurements in the Final Rulemaking Order in Docket No. L-2009-2095604:

The major benefit associated with the FR [full-requirements] approach is that the procurement function is delegated to the electric supplier which is presumably better equipped with the necessary personnel and infrastructure to perform the activities associated with acquiring electric supplies in the complex and ever changing wholesale market environment. The FR process insulates default supply customers from the volatility associated with wholesale market conditions with the supplier bearing the risks of factors such as customer migration, weather, load variation and economic activity.

2011 Final Rulemaking Order, at 54.

A.

Q. How does the reliance upon full-requirements products compare to the alternative where the EDC instead uses a managed-portfolio approach?

In comparing the merits of a full-requirements approach versus a managed-portfolio approach to procuring generation supply for default service customers, the Commission has previously expressed concern that the managed portfolio approach could produce higher costs and greater pricing risk for consumers if the EDC does not prove to be an adept portfolio manager. For example, in its 2011 Final Rulemaking Order, the Commission stated:

On balance, we are not persuaded that the MP [managed portfolio] approach is superior to the FR approach in achieving the "least cost to customers" while also achieving the other objectives of "prudent mix" of products and price stability. The MP approach has clear advantages to the retail markets and the retail customer <u>provided</u> the EDC is capable of performing the full range of portfolio management functions....Our principal concerns are that EDCs do not currently possess the requisite expertise and infrastructure to perform these portfolio management duties and the risks to retail customers from EDC inexperience in performing these functions is too great. We are also mindful of the fact that the current default supply process, with the EDC acting as the default supplier and distribution entity purchasing its supply from electric suppliers knowledgeable about the workings of the

2		created the market structure we now operate within.
3		2011 Final Rulemaking Order 55-56.
4		Not only is the full-requirements approach intended to conform with the principles of least-
5		cost procurement, the winning bidders are supplying a product that is designed to provide
6		adequate and reliable service. The default service suppliers themselves will not be
7		expected to have difficulty providing such a product, given that the product's primary
8		components (e.g., energy, capacity, ancillary services) can readily be acquired through the
9		PJM market. Default service suppliers can similarly acquire Pennsylvania-compliant
10		alternative energy credits ("AECs"), including required in-state SPAECs and Tier I AECs
11		through increasingly mature and liquid AEC markets.
12		Moreover, the use of 12- and 24-month full-requirements purchases for residential and
13		commercial customers should provide some measure of cost stability for those customers
14	Q.	In its January 2020 Secretarial Letter, the Commission requested that "the large
15		EDCs include in their upcoming DSP filings a 10-year history of their PTC changes
16		and assess the benefits of a 6-month PTC change compared to a 3-month PTC
17		change." Have you done such an assessment?
18	A.	Yes. Pursuant to this directive, included in the testimony of Patricia Larkin (Met-
19		Ed/Penelec/Penn Power/West Penn Statement No. 5) is Exhibit PML-1, which provides
20		historical data on PTC changes.
21		Turning to an assessment of the comparative benefits of 6-month PTC changes versus 3-
22		month PTC changes, the primary advantage of a 6-month PTC change is the infrequency

of their occurrence (vis-à-vis 3-month changes). All customers generally prefer less frequent PTC changes; commercial customers in particular appreciate the likely reduction in the seasonal volatility of prices related to fewer PTC changes. Residential customers should also see a reduction in PTC volatility arising from fluctuations in the E-factor, as explained below.

A.

Q. How will commercial customers be affected by the switch to a 6-month PTC change?

For commercial customers, the switch to include a 6-month product instead of a 3-month product in the default service generation supply portfolio should serve to lessen seasonal volatility. In recent years, energy market prices in the PJM zones corresponding to the four Companies are generally higher in the winter and lower in other parts of the year, particularly in the spring.¹⁰ This translates to a higher procurement cost for the tranches with 3-month delivery periods covering December through February and lower costs for the tranches in the other 3-month delivery periods.

Instead of having the PTC for commercial customers fluctuate in part because of seasonal changes in power costs arising from a 3-month delivery period for part of the generation supply portfolio, there will instead be two 6-month power procurements, with one procurement covering the summer and fall seasons and another covering the winter and spring seasons. Combining the winter and spring procurements and the summer and fall procurements should smooth out seasonal price variations, producing a smaller and less frequent shift in the PTC due to seasonal factors.

¹⁰ We confirmed the seasonal pattern of prices described here using hourly energy price data from January 2017 through October 2021 for the four relevant zones. Specifically, we calculated a load-weighted locational marginal

through October 2021 for the four relevant zones. Specifically, we calculated a load-weighted locational marginal price ("LMP") for each three-month season. In all four zones, LMPs were on average highest in the winter (December through February) and lowest in the spring (March through May).

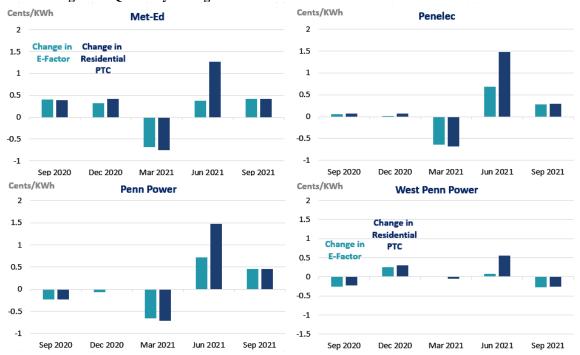
Q.	How will res	sidential custon	ers be affected	by the switch	to a 6-month	PTC change?
----	--------------	------------------	-----------------	---------------	--------------	-------------

A. Because residential customers are supplied by a portfolio consisting of 1- and 2-year products, changes to the PTC in three out of four quarters (in September, December, and March) are not driven by variations in default procurement prices, as is the case for commercial customers. Instead, in those quarters, the changes to the PTC are driven largely by changes in the "E-factor," which, as Patricia Larkin explains, is a "charge or credit...for quarterly reconciliation of any under- or over-collection of actual revenues against actual costs for each class from prior rate periods."

Figure 1 below displays this graphically for each of the four Companies. Specifically, the quarterly changes in the residential PTC are almost entirely explained by the quarterly changes in the corresponding E-factor in that quarter. The only exceptions to this pattern occur in June, when the composition of the portfolio that determines the cost of the default supply changes as old contracts expire and new contracts take effect.

¹¹ Met-Ed/Penelec/Penn Power/West Penn Statement No. 5 at 4.





Sources: Residential PTC data provided in PML-1. Data on residential E-Factor provided by the Companies.

In preparing her testimony, Patricia Larkin has recalculated the E-factor over the 2020-21 period based on the method the Companies will use if the Companies' proposed shift from the 3-month to the 6-month PTC is approved. As Met-Ed/Penelec/Penn Power/West Penn Exhibit PML-2 of Patricia Larkin's testimony (Met-Ed/Penelec/Penn Power/West Penn Statement No. 5) demonstrates, it is generally the case that the 6-month E-factor would have been less volatile than the 3-month E-factor over that time period. Accordingly, the PTC will also be less volatile, all things being equal. In general, we would expect that averaging the E-factor changes over a 6-month period, as compared to a 3-month period, will produce less frequent and smaller PTC changes related to the E-factor.

We also expect that there will continue to be moderate adjustments to the residential PTC every June, as new auction prices reflecting current market conditions replace auction-

clearing prices associated with expiring 12- and 24-month default service tranches, where those prices were determined under different market conditions in previous years. However, there is no reason to expect that the shift from the 3-month to the 6-month PTC change will affect that portion of the PTC change that is driven by year-over-year differences in procurement prices. At the same time, the reduction in the volatility of the E-factor will, all things being equal, lead to less volatility of the PTC adjustments.

A.

In addition to their proposal to move from 3-month PTC changes to 6-month PTC changes, the Companies are also proposing to change the procurement schedule for residential customers, as the Companies intend to conduct procurements twice per year (every spring and fall). Under DSP V, the Companies conduct procurements three times per year (October/November, January, and April). Conducting two procurements per year should lead to reduced auction-related costs in procuring default service generation supplies compared to three procurements per year, which we expect, all things being equal, to result in some modest reduction in average PTC rates.

Q. Have previous full-requirements default service procurements resulted in substantial participation?

Yes, there has been substantial participation, based on recent experience with the Companies' competitive procurements of full-requirements supplies for their default service customers. For example, the number of registered bidders in default service supply auctions for Met-Ed, Penelec, Penn Power, and West Penn has ranged from ten to sixteen

for DSP V procurements that have taken place to date, spanning the period from October

2 2018 to June 2021.¹²

Q. Have the Companies' previous default service auctions resulted in reasonable prices that reflected expected wholesale market conditions?

A.

Yes, they have. Our analysis of the prices resulting from recent default service auctions conducted for the Companies' residential and commercial customers shows that the resulting prices were only slightly above the combined wholesale energy, capacity, ancillary service, and Network Integration Transmission Service ("NITS") costs that were projected at the time of each auction for the corresponding delivery periods. ¹³ This analysis is set forth in Met-Ed/Penelec/Penn Power/West Penn Exhibit JDR/NEP-1.

For our analysis, we first estimated the expected wholesale energy costs to serve retail loads of the Companies' residential and commercial customers. For this calculation, we used PJM West forward prices, which we adjusted for the delivery location by using the difference in spot-energy prices between the PJM West hub and the corresponding zonal price (e.g., METED, PENELEC, PENN POWER, or APS).¹⁴ We then adjusted these flat prices by the load-shape factor of the Companies' residential and commercial non-shopping customers to reflect the fact that the retail load of these customer classes is, on

¹² The reported range reflects the number of bidders who registered for each of the twelve procurements held under DSP V thus far.

¹³ We did not include costs associated with alternative energy credits needed to satisfy AEPS requirements. Given the exclusion of these costs, our estimates of implied risk premiums in providing default service may be somewhat overstated.

¹⁴ For this "basis" adjustment, we used 2016 as the reference year for default service auctions that occurred in 2016 and 2017. We used 2018 as the reference year for default service auctions that occurred in 2018 and 2019; and we used 2020 as the reference year for default service auctions that occurred in 2020 and April 2021. METED, PENELEC, APS, and PENN POWER zonal prices are used for the respective Met-Ed, Penelec, West Penn, and Penn Power basis adjustments.

1	average, higher during hours with higher prices. The resulting energy prices were in the
2	range of \$24-\$36/MWh for Met-Ed, \$25-\$36/MWh for Penelec, \$25-\$36/MWh for Penn
3	Power, and \$26-\$37/MWh for West Penn.

To calculate the capacity-cost component of serving the Companies' residential and commercial customers, we relied on the PJM base residual auction ("BRA") prices for the appropriate delivery periods. Then, we converted these capacity prices expressed in dollars per megawatt day ("\$/MW-day") into levelized capacity costs (expressed in \$/MWh) by using the ratio of peak-to-average load for each customer class. The resulting levelized capacity prices were in the range of \$8-\$17/MWh for Met-Ed, \$8-\$17/MWh for Penelec, \$7-\$18/MWh for Penn Power, and \$7-\$17/MWh for West Penn.

For ancillary service costs, we used the actual observed costs, which ranged from \$0.97 to \$1.21 per MWH between 2016 and 2020.¹⁶

For NITS costs, we used costs expressed in \$/MW-day, as provided by the Companies, starting when NITS became the default service supplier's responsibility in June 2013. As we did with the capacity prices, we converted NITS costs into levelized costs (expressed in \$/MWh) by using the ratio of peak-to-average load for each customer class. The resulting levelized NITS costs were in the range of \$5-\$13/MWh for Met-Ed, \$4-\$11/MWh for Penelec, \$12-\$17/MWh for Penn Power, and \$3-\$4/MWh for West Penn.

¹⁵ For this capacity price adjustment, we used 2016 load data for default service auctions that occurred in 2016 and 2017; 2018 load data was used for default service auctions that occurred in 2018 and 2019; and 2020 load data was used for default service auctions that occurred in 2020 and 2021.

¹⁶ For ancillary service costs, we used: 2016 costs for default service auctions that occurred in 2016 and 2017; 2018 costs for default service auctions that occurred in 2018 and 2019; and 2020 costs for auctions that occurred in 2018 and 2019.

¹⁷ We used the same load data for the NITS cost adjustment as for the capacity price adjustment.

Finally, we added together the energy, capacity, ancillary service, and NITS costs to estimate the expected wholesale market cost of serving the Companies' residential and commercial customers. This represents our estimate of the expected cost of serving retail customers without accounting for any potential risk premium that default service suppliers may include in their bid prices to reflect volumetric and price uncertainty. We refer to this estimated cost as the "Estimated No-Risk Price", as shown in Met-Ed/Penelec/Penn Power/West Penn Exhibit JDR/NEP-1.

Our estimated cost of serving retail customers is conservative as it does not include the costs of AECs needed to meet AEPS requirements, as well as any other costs not described above that are incurred by suppliers of default service. Therefore, the "risk premium" referenced in Met-Ed/Penelec/Penn Power/West Penn Exhibit JDR/NEP-1, which is calculated as the difference between the auction price and the sum of the expected cost of serving the customer (i.e., the sum of energy, capacity, ancillary services, and NITS costs), may be larger than the "true" risk-premium to the extent that any material costs have been omitted.

In spite of the conservatism of our cost calculations, the average difference between the auction price and expected cost is relatively modest. The average risk premiums expressed in \$/MWh were \$2.95/MWh for Met-Ed, \$2.15/MWh for Penelec, \$2.24/MWh for Penn Power, and \$1.54/MWh for West Penn. Expressed as a percentage of the Estimated No-Risk Price, the risk premiums were, on average, 5.96% for Met-Ed, 4.63% for Penelec, 4.10% for Penn Power, and 3.54% for West Penn. Our results are summarized below in Table 2, and further detail is provided in Met-Ed/Penelec/Penn Power/West Penn Exhibit JDR/NEP-1.

Table 2: Average Estimated Risk Premium in Default Service Full-Requirements Auctions (October 2016-April 2021): DSP IV and V

EDC	Risk Premium (\$/MWh)	Risk Premium (% of No-Risk Price)
Met-Ed	2.95	5.96%
Penelec	2.15	4.63%
Penn Power	2.24	4.10%
West Penn Power	1.54	3.54%

Source: The Brattle Group.

4 Q. What are the advantages of conducting a simultaneous procurement for Met-Ed,

Penelec, Penn Power, and West Penn?

1 2

A.

By conducting a simultaneous procurement for the Companies for all classes, more potential bidders can be attracted to the procurement process. Transaction costs for both bidders and the Companies also can be reduced through a simultaneous procurement. When the procurement mechanism is a simultaneous, multi-round, descending-clock procurement, bidders can switch from one utility's product to another in response to price differences that they believe are not reflective of underlying supply-cost differences. This behavior leads to a potentially more economically efficient outcome and contributes to pricing that is more consistent among the four Companies.

By procuring default supply in this fashion, the prices of default service for Met-Ed, Penelec, Penn Power, and West Penn customers are more closely in line with one another (i.e., one is not low-priced or high-priced relative to the others simply because it was procured at a different point in time). This provides the added benefit of simplifying administrative and regulatory oversight.

By contrast, even if the auctions occur only days apart, a sequential default service auction process among the different Companies could lead to price disparities that do not reflect actual differences in generation supply costs across the Companies. Under a sequential auction process, generation suppliers for default service customers must make strategic decisions on how much supply to offer and what price to accept in one Company's auction based on their expectations of the results of subsequent auctions by the other Companies. With a simultaneous auction process, a generation supplier can determine how much supply to offer to a given Company based on the current auction prices for that Company and all other Companies.

Q. Do the proposed procurement formats conform with the requirements of Act 129?

- 11 A. Yes, they do. Section 2807(e)(3.1), Title 66, of the Pennsylvania Consolidated Statutes 12 specifies that:
 - [T]he default service provider shall provide electric generation supply to that customer pursuant to a commission-approved competitive procurement plan. The electric power acquired shall be procured through competitive procurement processes and shall include one or more of the following:
- 17 18

13

1415

16

1

2

3

4

5

6

7

8

9

10

- (i) auctions;
- 19 (ii) requests for proposal;
- 20 (iii) bilateral agreements entered into at the sole discretion of the default service provider. . . .
- 22 66 Pa.C.S. § 2807(e)(3.1). The procurement format proposed by the Companies is a descending-clock auction process, as explicitly permitted by Section 2807(e)(3.1).

1	Q.	Is the proposed procurement format designed to achieve a competitive result, which
2		would be essential to achieving the least cost to customers over time?
3	A.	Yes, the auctions are designed to produce competitive outcomes as they are
4		nondiscriminatory, fair, and open. An auction mechanism encourages supplier

participation and is therefore aimed at achieving the least cost by selecting the

lowest-priced bids.

The descending-clock auction format is nondiscriminatory because any party can participate as long as it satisfies the criteria used in the application process. This procurement format is fair and transparent because suppliers clearly understand how the final solicitation prices are determined and how to compete for a winning position.

In a descending-clock auction, each of the bidders can observe the prevailing price during each round of the auction. Each bidder can then determine whether it is in their economic interest to continue supplying the desired product at the current price as the price falls from one round to the next. The auction ends when prices have decreased to the point where enough bidders have dropped out, such that the amount of power that remaining active bidders are willing to supply equals the amount of power needed.

The rules of the descending-clock auction are pre-specified in a way that can be thoroughly replicated and verified. Because bidders are pre-qualified, the evaluation of bids is on a price-only basis, which is intended to produce a fair, least-cost result.

The openness and transparency of the auction format encourages participation in the bidding process. The winning bidders are those that offer to supply full-requirements

service at the lowest prices (i.e., the least cost). Consequently, the entire process is consistent with achieving a competitive outcome.

3 Q. Why is it that the superior portfolio managers will place the lowest bids in these full4 requirements procurements?

To serve default service customers, a prospective supplier must assemble a portfolio comprised of competitively priced wholesale products—such as, fixed-price, fixed-quantity, forward energy purchases, and long-term energy contracts. Prospective suppliers are likely to pay similar prices for forward energy purchases, implying that differences in their auction bids are principally related to perceived differences in the cost of satisfying uncertain customer load, as well as perceived differences in the cost of bearing other

sources of risk.

The suppliers submitting the lowest bids will be those that are the most efficient portfolio managers (or otherwise require the least compensation for bearing pricing and volumetric risk) or those that are most optimistic about the possibility of relatively low spot and forward prices over the course of the delivery period. In this fashion, the Companies' DSPs are designed to achieve the least cost to customers over time.

Q. Does not the competitiveness of the auction procurement process depend on the competitiveness of the underlying wholesale market?

A. Taking the competitiveness of the wholesale market as given, the auction process, by itself, can be competitive if it has sufficient participation. A concern might arise, however, that the wholesale market is not competitive, leading to insufficient auction participation and a

less-than-fully-competitive outcome because prospective suppliers are not confident in their ability to obtain physical power supplies at reasonable prices.

However, there is ample reason to believe that the wholesale market is sufficiently competitive to support a competitive pricing outcome for the Companies' default service auction process. The PJM wholesale market, including the forward and spot markets that are relevant to supplying Met-Ed, Penelec, Penn Power, and West Penn, has numerous potential suppliers.

Furthermore, PJM's markets have an active market monitor, and the PJM day-ahead- and real-time markets have procedures in place to mitigate abuses of market power. Specifically, PJM has stringent *ex ante* mitigation processes that impose cost-based restrictions on the bids of wholesale suppliers in its day-ahead- and real-time markets whenever structural conditions exist that may lead to potential exercises of market power. This mitigation indirectly constrains longer-term forward prices as well, given that forward prices are representative of expected future spot prices and that energy purchasers can substitute between products of different durations. Besides its energy markets, PJM also has market-power-mitigation processes in its capacity markets.

As mentioned above, participation in the Companies' default service supply auctions would likely be hindered if prospective participants were concerned that PJM's wholesale markets were not competitive, or that energy trading in PJM was not sufficiently robust to avoid incurring substantial transactions costs. However, past results suggest that this is not the case, as there have historically been anywhere from ten to sixteen bidders in recent full-requirements procurement auctions for Met-Ed, Penelec, Penn Power, and West Penn.

1	Q.	Are there contingency plans in place for alternative procurement strategies if any
2		given auction appears to attract limited interest or if a winning supplier subsequently
3		defaults on its obligation before or during a delivery period?

- 4 A. Yes. As described in detail in Wanyun Zhong's direct testimony (Met-Ed/Penelec/Penn Power/West Penn Statement No. 3), the Companies are proposing to continue the contingency plans that were previously approved by the Commission in the Companies' DSP V proceeding.
- Q. Do you think that the plan to enter into long-term contracts for the energy and SPAECs associated with up to 20 MW of new solar generating capacity contributes to the objectives of Act 129?
- 11 A. Yes, we do. First, the contracts will ensure that the DSP VI plan includes a long-term
 12 component as part of its prudent mix. This will provide an additional source of cost
 13 certainty to residential default service customers with respect to the overall price paid for
 14 energy and SPAECs procured under the proposed PPAs.

Because the proposed PPAs will be awarded through a competitive procurement process, there is incentive for the solar developers to compete over the cost of providing the energy and SPAECs, which helps to achieve the least cost to customers over time. The suppliers submitting the lowest bids, after considering project viability and other factors, will be those whose solar projects are the most economic, whether due to lower financing costs, higher capacity factors, or other considerations.

- Finally, the long-term solar energy and SPAEC procurement contained in the Companies'
- 2 proposed DSPs will directly support further development of the solar power industry in the
- 3 Commonwealth.
- 4 Q. Have you reviewed the documents that the Companies propose to use for the proposed
- 5 Solar PPA RFP, and do you anticipate that they will produce results that are
- 6 consistent with the objectives of Act 129?
- 7 A. Yes, and we have assisted in the development of these documents. Based on our experience
- 8 conducting SPAEC RFPs and other RFPs for renewable power, and for the reasons
- 9 mentioned above, we expect that this procurement design will produce a fair, open, and
- 10 non-discriminatory process that will ultimately yield a competitive outcome for the
- procurement of solar energy and SPAECs.

12 III. <u>CONCLUSION</u>

- 13 Q. Can you summarize how the proposed plan to procure full-requirements service for
- default service customers leads to the "least cost to customers over time" in the
- provision of default service supply?
- 16 A. Yes. The Companies propose to use an auction process to acquire generation to satisfy
- 17 95% (approximately) of the residential and 100% of the commercial default service load
- through full-requirements, load-following procurements of 6-month (for commercial
- customers), 12-month, and 24-month durations. Approximately 5% of residential load will
- be from the PJM spot market, where a \$20/MWh adder is also applied. All load obligations
- will be priced based on the results of these fixed-priced procurements of varying durations.
- The Companies will also enter into long-term solar PPAs to procure both energy and

SPAECs, which will provide some additional stability in the prices of both energy and SPAECs for residential customers.

Industrial default service load will be priced based on the PJM real-time market, plus a \$4/MWh adder. Suppliers will compete for this load through an auction process where they will bid an additional adder to cover any costs (or profit margin requirements) that remain after the \$4/MWh adder, which is intended to defray a portion of the capacity, ancillary services, AEPS Act, and other costs that are part of the full-requirements obligation.

The winners of the fixed-price, full-requirements, load-following auctions must function as portfolio managers by procuring a combination of energy, capacity, ancillary services, and certain transmission products needed to ensure adequate and reliable service to default service customers in the face of load and price uncertainty. Because the winners in these auctions will be the ones that offer default service supply at the lowest reasonable prices, the proposed descending clock auctions necessarily choose as winning bidders those suppliers that can, or at least believe they can, provide this portfolio of products at the least cost over time. As a result, the proposed supply plan produces the least cost over time relative to other procurement methods, assuming that the procurements themselves are competitive.

The procurement format (a descending-clock auction) is designed to be open, fair, and transparent. Supplier participation is encouraged as bidders are pre-qualified through an open, transparent application process, where relevant information about the procurement is posted to a public website. By accounting for any non-price factors, such as bidder

- 1 creditworthiness in the qualification requirements, the bids are evaluated on a price-only
- basis, which leads to a lowest-price outcome. For these reasons, the procurement process
- and the supply plan work together to achieve the least cost to customers over time.
- 4 Q. Does this conclude your direct testimony?
- 5 A. Yes, it does.

6

APPENDIX A James David Reitzes

Principal

Washington, DC

+1.202.955.5050

James.Reitzes@brattle.com

Dr. James D. Reitzes received his B.A. in economics and history from Stanford University, and his Ph.D. in economics from the University of Wisconsin. He specializes in providing economic analyses and expert testimony pursuant to regulatory proceedings and strategy work in the energy and transportation sectors and litigation in the areas of antitrust and competition.

Dr. Reitzes has provided expert analysis and testimony in energy-related competition and regulatory matters before the Federal Energy Regulatory Commission, state public utility commissions, and federal antitrust agencies. In the transportation sector, he has offered expert analysis and testimony in proceedings involving the U.S. Department of Transportation, U.S. Department of Justice, the European Commission, the European Court of First Instance, and national antitrust authorities. He also has provided economic consulting services to clients in the United States, Canada, the European Union, South America, and Africa.

Since joining The Brattle Group as a Principal in April 1998, Dr. Reitzes has been involved in energy regulatory, strategy, and litigation matters for utilities, RTOs, cooperatives, municipal power providers, and industrial customers. More specifically, Dr. Reitzes has been involved in formulating and managing auction and RFP processes for procuring and selling electric power supplies (including renewable power and renewable energy credits), assessing the competitive impact and efficiencies arising from integration and consolidation in natural gas transport markets, valuing investments in specified electric generation assets as well as specified energy and capacity purchases (in comparison to other generation or procurement alternatives), analyzing the value and risks associated with particular features of power purchase agreements and EPC contracts, designing energy procurement strategies to support standard-offer service obligations, critiquing market-monitoring policies and market design features of electric power markets, assessing the competitive implications of mergers and acquisitions in power markets, providing analyses of alleged market manipulation and exercises of market power in the energy sector, and designing transitional regulation strategies.

Dr. Reitzes has authored several articles on energy markets and firm strategies with respect to pricing, quality, R&D investment, and merger behavior, published in leading economics and legal journals. He also is an author of a book that assesses the domestic impact of U.S. international trade policies.

REPRESENTATIVE ENERGY SECTOR EXPERIENCE

Procurement (Auction) Management, Design, and Bidding Strategy

• For three utilities in Pennsylvania, designed and managed the procurement of solar photovoltaic alternative energy credits (SPAECs) on multiple occasions and submitted testimony describing the procurement process and benchmarking the results against expected market prices. Responsibilities included: (i) designing and drafting the auction



rules, structure, and bid forms; (ii) overseeing the provision of auction-related information on the procurement website; (iii) corresponding with interested bidders; (iv) interacting with company personnel regarding bidder credit issues; (v) hosting bidder information sessions; (vi) evaluating bid materials; (vii) building a financial model to determine the likely value of the solar energy credits; (viii) providing a benchmarking study to determine if the bids were reflective of market fundamentals; and (ix) drafting a report to the Pennsylvania Public Utility Commission to secure approval of the procurements.

- For utilities in Ohio, developed the design, management, and implementation of an auction
 process to serve standard service offer customers, and submitted accompanying testimony.
 Also participated in the development of software to implement the auction process and
 identify the winning bidders.
- On multiple occasions, I have served as a member of an independent team evaluating bids to provide electric energy and capacity (and renewable energy credits) from various proposed generation projects.
- For an unregulated trading affiliate of a regulated utility, provided strategic bidding advice and financial analysis in a multi-round ascending clock auction to acquire PPAs for virtually divested generation assets. Assisted in the development of financial models to value the various PPAs, and in formulating between-round bidding strategies, including helping with algorithms to estimate the remaining amount of eligibility of competing bidders.
- For a municipal power provider that was a partial owner of a power plant in Illinois, designed and managed an RFP process to either sell the ownership stake in the plant or alternatively sell the output entitlement through a long-term PPA agreement. Responsibilities included: (i) developing target sale structures; (ii) formulating a schedule for completing the sale; (iii) developing and drafting the RFP documents and bid process tools; (iv) soliciting interest for the sale; (v) managing the RFP bid process; (vi) qualifying the bids; (vii) evaluating final bids and assisting in the negotiation of final terms; and (viii) preparing a report summarizing the RFP process.
- For industrial customers and municipalities in Texas in a stranded cost proceeding, submitted testimony to the Public Utility Commission of Texas that analyzed auction design issues pertaining to the sale of generation assets, including the potential impact on



- sale prices of conducting an auction when an outside entity has a right-of-first-refusal (ROFR) to purchase the assets at the winning auction price.
- For the owner of a merchant transmission line connecting PJM with NYISO, designed and managed an RFP process to sell transmission scheduling rights on multiple occasions. Responsibilities included: (i) designing the auction; (ii) drafting rules and bid forms; (iii) developing marketing materials and conducting various types of market analyses to assist bidders in understanding the value proposition offered by the transmission rights; (iv) identifying potentially interested bidders; (v) assisting in the development of other auction materials including bidder participation agreements and purchase and sale contract provisions; (vi) hosting a website and overseeing the provision of auction-related information through the website; (vii) communicating with potential bidders; (viii) responding to bidder questions and posting answers to those questions on the auction website; (ix) interacting with the client regarding a variety of bidder-related issues; (x) selecting the winning bidders; and (xi) preparing a report describing the auction process that was submitted to the Federal Energy Regulatory Commission.
- For an owner of another merchant transmission line connecting PJM with NYISO, designed and managed an RFP process to sell transmission scheduling rights. Responsibilities included: (i) designing the auction; (ii) drafting auction rules and bid forms; (iii) identifying potentially interested bidders; (iv) providing analyses to describe the value proposition offered to holders of transmission rights for the line; (v) developing other marketing materials; (vi) assisting in the development of other auction materials such as bidder qualification forms and purchase and sale agreements; (vii) hosting a website and overseeing the provision of auction-related information through the website; (viii) communicating with potential bidders; (ix) responding to bidder inquiries; (x) interacting with the client regarding a variety of bidder-related issues; (xi) selecting the winning bidders; and (xii) assisting in the preparation of a report submitted to the Federal Energy Regulatory Commission describing the auction process.
- For the owner of a proposed merchant transmission line connecting Ontario and PJM, designed and managed an open solicitation process to solicit interest and indicative offers for transmission rights (prior to the decision to construct the merchant line). Responsibilities included: (i) designing and drafting the solicitation rules and forms; (ii) identifying and marketing to potentially interested parties; (iii) providing analyses to describe the value of the transmission rights; (iv) developing other marketing materials for



the solicitation; (v) hosting a website and overseeing the provision of solicitation-related information through the website; (vi) communicating with interested parties; (vii) responding to inquiries; (viii) interacting with the client regarding a variety of solicitation-related issues; and (ix) selecting a short list of interested parties for purposes of conducting negotiations regarding a purchase and sale agreement for future transmission rights.

- For the owner of a proposed merchant transmission line connecting Quebec and New York City, designed and managed an open solicitation process to solicit interest and offers for transmission rights (prior to the decision to construct the merchant line). Responsibilities included: (i) designing and drafting the solicitation documents, information memorandum, and expression-of-interest forms; (ii) identifying and marketing to potentially interested parties; (iii) developing other marketing materials for the solicitation; (iv) hosting a website and overseeing the provision of solicitation-related information through the website; (v) communicating with interested parties; (vi) responding to bidder inquiries; (vii) interacting with the client regarding a variety of solicitation-related issues; (viii) assisting in the selection of a short list of interested parties for purposes of conducting negotiations regarding a purchase and sale agreement for future transmission rights; and (ix) preparing a report for the Federal Energy Regulatory Commission describing the opern solicitation process.
- Have been part of the Brattle team serving as the Independent Auction Monitor (IAM) for the Southern Company energy auction. Southern Company must supply its excess power resources under specified terms and conditions into a day-ahead and hour-ahead energy auction that is overseen by an external monitor. Our role is to: (i) verify Southern's calculations of available capacity to offer into the auctions; (ii) confirm that any transmission service necessary to accommodate a purchase under the auction is not unreasonably withheld; (iii) verify that the auction has cleared properly; (iv) ensure that internal data control restrictions are maintained to protect bidder information; (v) report complaints to the FERC; and (vi) independently file reports with the FERC regarding the auction.



Retail Market Design and Power Procurement for Utilities with Retail Load Obligations (e.g., including Standard-Offer Service Customers)

- For a utility in Pennsylvania, submitted testimony on multiple occasions that analyzed the cost and risk differences associated with full-requirements versus block-and-spot procurements of power supplies for default service customers. Analysis included estimates of the implied price premium for covering volumetric and pricing risk that was associated with past procurements of full-requirements power supplies, showing that this premium was relatively modest in size.
- For a utility in Eastern Canada, analyzed generation procurement options and competitive procurement design. The issues analyzed included the expansion of the internal generation portfolio to meet load; the use of long-term PPAs and increased transfer capability to acquire imported power suppliers from target geographic regions; conversion of the existing generation portfolio from fossil fuel to renewable generation to meet renewable energy targets; and the consideration of alternative transmission expansion strategies to facilitate power imports from geographic areas identified as the lowest cost for acquiring power supplies in the long term.
- For a utility in Pennsylvania, submitted testimony that estimated the expected level and variance in procurement costs associated with different portfolio strategies for providing electric power to default service customers. Analysis showed how different portfolio combinations of spot and forward purchases were likely to perform under different assumptions regarding the timing and frequency of forward purchases.
- For a utility in Maryland, submitted testimony that assessed differences in the expected cost and risk profile of different portfolio strategies for procuring power supplies for standard offer service customers. Analyzed how the use of a fixed-price default service product without switching restrictions provides customers with a potentially valuable option that may significantly increase the cost of supplying default service customers with full-requirements power. Assessed how load uncertainty affects the cost and risk of providing generation service for default service customers.
- For a utility in Pennsylvania, submitted testimony that assessed methods of supplying
 default service customers and the relationship between various facets of default service
 policy and the development of increased shopping by retail, residential, and commercial
 customers. Testimony analyzed the impact on customer shopping rates (and the



competitive retail electric market) arising from the imposition of an "adder" to the price-to-compare, as well as from holding a retail opt-in auction subsequent to the purchase of power supplies for default service customers. Testimony also analyzed the magnitude of the "risk premium" embedded in the prices of past auctions to acquire full-requirements power supplies for default service customers.

 For a utility in Ohio, assessed a utility's proposed rate plan for self-supplying generation service to standard service offer customers, and compared its costs against the costs of procuring power from market sources under full-requirements contracts.

Asset Valuation

- For the City of San Antonio, performed a valuation of a nuclear power plant, and compared its value against alternative technologies including gas-fired, wind, and solar powered generation. Our analysis included a risk assessment of how the plant's value could be affected by changes in natural gas prices, environmental policy, and construction costs. Historical volatilities and implied volatilities derived from options were used to derive a distribution of potential valuation outcomes. Our results were submitted in a public report and hearing, as well as in briefings to the Mayor, City Manager, City Council, and the public.
- For a major overseas utility and investor in generation assets, performed a valuation of a proposed nuclear power plant in ERCOT and estimated the values of different types of PPAs associated with the output of the power plant. Made recommendations as to various structures for potential PPA agreements, and performed valuations associated with changes in individual PPA features. Identified potentially interested counterparties for PPA agreements. Also, performed a valuation analysis for the power plant for the "residual" period beyond the expiration of the PPA agreements. This analysis required predicting the expected level and variance of future power prices under differing outcomes regarding the price of natural gas and greenhouse gas policy.
- For a group of municipal power providers and industrial customers, performed a valuation
 of various power plants for a stranded cost proceeding. Built a financial model to estimate
 the assets' values at the time as sale, as well as analyzed comparable transactions to form an
 alternative valuation estimate.



- Built financial model to perform valuation analysis of renewable energy credits. This
 model was used to evaluate the results of several procurements of solar renewable energy
 credits conducted by Pennsylvania utilities, and the results of the model were presented to
 the Pennsylvania Public Utility Commission.
- On several occasions for utilities in the Mid-Atlantic and Midwest regions, have used multi-factor risk models to estimate the expected cost and cost distribution associated with different portfolio strategies for procuring power supplies for default service customers.

Competition Analysis

- For a merger of two major utilities in the western United States, estimated the pricing impacts associated with alternative generation divestiture scenarios through the use of a Cournot oligopoly simulation model. Assisted in the drafting of testimony related to the merger's impact on competition and other issues.
- For an independent power producer, submitted testimony to FERC assessing the competitive impacts of a high-profile merger involving two major utilities and generation owners within PJM, as well as the competitive effects associated with specific proposed market power mitigation measures.
- For a group of municipal power companies, analyzed a proposed merger involving two
 major utilities with generation supplies in the mid-atlantic and midwest regions. Reviewed
 the Delivered Price Test (DPT) analysis conducted on behalf of the merger applicants, and
 analyzed the sensitivity of applicants' results to changes in assumptions regarding power
 prices, gas prices, and available suppliers of imported power into the geographic area of
 interest.
- For two merging utilities in New York, analyzed vertical market power issues related to the merged entities' ownership of both transmission and generation assets, including the strategic use of transmission outages and other forms of transmission withholding to induce increases in power prices. Examined potential pricing impacts using a security-constrained, least-cost dispatch model.
- For PJM, served as the lead author of a Brattle study that analyzed PJM's protocols for mitigating market power, comparing those protocols to the ones used in other major RTO markets and internationally (e.g., the United Kingdom, Australia, and Nordpool). Made



- recommendations for potential changes to PJM's market power mitigation practices, and presented findings to various PJM member committees.
- For two merging electric and gas utilities with overlapping service territories in New England, analyzed the competitive impacts of their merger, specifically as it related to market power concerns arising from the supply of gas to dual-fuel industrial customers, interconnection policy with respect to industrial customers, and vertical market power issues related to supplying gas to competitive generation suppliers. Presented analysis to Federal Trade Commission attorneys and economists.
- For two merging electric and gas utilities in North Carolina, analyzed the competitive impact of the merger on gas transport markets and the price of delivered gas to North Carolina customers, including competing generation suppliers. Submitted analysis to the North Carolina Utilities Commission along with an expert report.
- For an owner and operator of natural gas pipelines, provided a white paper to the competition authorities that presented a framework for analyzing the cost and benefits of further consolidation of pipeline ownership, and assessed the efficiencies that have arisen from prior consolidations of complementary pipeline assets.
- For the U.S. government, analyzed the pricing impacts arising from an alleged cornering of a major commodity market for an oil and gas derivative product. Formulated and estimated an econometric model to identify whether an "artificial price" had resulted from the alleged behavior consistent with the exercise of significant market power. Also provided estimates of damages attributable to the price overcharges stemming from the alleged manipulation.
- For the Government of Western Australia, analyzed market power mitigation mechanisms in their wholesale electricity market (WEM), including: (i) the objectives of market power mitigation and the criteria that should be used to evaluate mitigation measures; (ii) the effectiveness of the existing market power mitigation approach in the WEM; (iii) ways to improve their existing approach; (iv) proposed alternative approaches and their pros and cons based on international experience with similar market designs and approaches (e.g., in New Zealand, United Kingdom, and other similar power markets); and (v) methods for determining which alternative approach most closely meets the desired criteria for market power mitigation.



- For a major New Zealand electric power generation company and retailer, analyzed whether the generator's behavior created an alleged "undesirable trading situation" (UTS) as defined in New Zealand's electricity regulations. The alleged UTS involved the dispatch and wholesale pricing of hydroelectric power between November 2019 and January 2020, focusing on how water resources were used and the nature of bids to offer generation into the market. Submitted two reports to the New Zealand Electricity Authority that analyzed the generator's behavior in terms of pricing, output and economic incentives; assessed reports offered by other experts on similar issues; and examined the generator's pricing behavior in the context of other energy-only electricity markets (i.e., no capacity market) and their regulatory features.
- For a governmental authority concerned about market power and consumer protection issues within its retail electric markets, prepared a report that examined retail electricity markets and their performance in other jurisdictions where regulatory oversight spanned from limited intervention to more regulated (or closely monitored). The report identified key policy measures for protecting customers and promoting retail competition that have been implemented in those jurisdictions, and analyzed whether those measures were effective.

PUBLICATIONS

Journals

"Domestic Versus International Capital Mobility: Some Empirical Evidence," with Donald J. Rousslang, *Canadian Journal of Economics*, Vol. 21, No. 2 (May 1988): 312-323.

"The Impact of Quotas and Tariffs on Strategic R&D Behavior," *International Economic Review*, Vol. 32, No. 4 (November 1991): 985-1007.

"Anticompetitive Effects of Mergers in Markets with Localized Competition," with David T. Levy, *Journal of Law, Economics, and Organization*, Vol. 8, No. 2 (April 1992): 427-440.

"Quality Choice, Trade Policy, and Firm Incentives," *International Economic Review*, Vol. 33, No. 4 (November 1992): 817-835.

"Basing-Point Pricing and Incomplete Collusion," with David T. Levy, *Journal of Regional Science*, Vol. 33. No. 1 (February 1993): 27-35.

"Ocean Shipping Economics: Comment," Contemporary Policy Issues, Vol. 11, No. 3 (July 1993): 81-85.



"Product Differentiation and the Ability to Collude: Where Being Different Can Be an Advantage," with David T. Levy, *Antitrust Bulletin*, Vol. 38, No. 2 (Summer 1993): 349-368.

"Antidumping Policy," *International Economic Review*, Vol. 34, No. 4 (November 1993): 745-763 [reprinted in Douglas R. Nelson and Hylke Vandenbussche editors, *The WTO and Anti-Dumping: Volume 1* (Cheltenham, UK: Edward Elgar Publishers, 2005): 392-410].

"The Importance of Localized Competition in the 1992 Merger Guidelines: How Closely Do Merging Firms Compete?" with David T. Levy, *ABA Antitrust Law Journal*, Vol. 62, No. 3 (Spring 1994): 695-716.

"Market-Share Quotas," with Oliver R. Grawe, *Journal of International Economics*, Vol. 36, No. 3/4 (May 1994): 431-447.

"Price Discrimination and Mergers," with David T. Levy, *Canadian Journal of Economics*, Vol. 28, No. 2 (May 1995): 427-436.

"In the Matter of Weyerhaeuser Company: The Use of the Hold-Separate Order in a Merger with Horizontal and Vertical Effects," with Robert P. Rogers and Laurence Schumann, *Journal of Regulatory Economics*, Vol. 11, No. 3 (May 1997): 271-289.

"Market Power and Collusion in the Ocean Shipping Industry: Is a Bigger Cartel a Better Cartel?" with Paul S. Clyde, *Economic Inquiry*, Vol. 36, No. 2 (April 1998): 292-304.

"Is it Efficient to Impose Costs on Small-Volume Equity Traders?" with Paul S. Clyde, *International Journal of the Economics of Business*, Vol. 6, No. 1 (April 1999): 81-92.

"Lessons from the First Year of Competition in the California Electricity Markets," with Robert Earle, Philip Hanser, and Weldon Johnson, *The Electricity Journal*, Vol. 12, No. 8 (October 1999): 57-76.

"Entry Policy and Entry Subsidies," with Oliver R. Grawe, *Review of International Economics,* Vol. 7, No. 4 (November 1999): 715-731.

"Deregulation and Monitoring of Electric Power Markets," with Robert L. Earle and Philip Q Hanser, *The Electricity Journal*, Vol. 13, No. 8 (October 2000): 11-25.

"Strategic Pricing When Electricity Is Storable," with Alfredo Garcia and Ennio Stachetti, *Journal of Regulatory Economics*, Vol. 20, No. 3 (November 2001): 223-247.

"Rolling Seas in Liner Shipping," with Kelli L. Sheran, *Review of Industrial Organization*, Vol. 20, No. 1 (February 2002): 51-59.

"Regional Interactions in Electricity Prices in the Eastern United States," with Gregory R. Leonard, Adam C. Schumacher, and James G. Bohn, in Michael A. Crew and Joseph C. Schuh editors, *Markets, Pricing, and Deregulation of Utilities* (Boston: Kluwer Academic Publishers, 2002): 109-142.



"Designing Standard-Offer Service to Facilitate Electric Retail Restructuring," with Lisa V. Wood, J. Arnold Quinn, and Kelli L. Sheran, *The Electricity Journal*, Vol. 15, No. 9 (November 2002): 34-51.

"Can Mergers to Monopoly, Price Fixing, and Market-Division Agreements Raise Welfare?" with Paul S. Clyde, *International Journal of the Economics of Business*, Vol. 11, No. 1 (February 2004): 69-90.

"Forward and Spot Prices in Electricity and Gas Markets: Does 'Storability' Matter?" with J. Arnold Quinn and Adam C. Schumacher, in Michael A. Crew and Menahem Spiegel editors, *Obtaining the Best from Regulation and Competition* (Boston: Kluwer Academic Publishers, 2005): 109-135.

"Incentive Contracts for Infrastructure, Litigation and Weak Institutions," with Alfredo Garcia and Benavides, *Journal of Regulatory Economics*, Vol. 27, No. 1 (January 2005): 5-24.

"Dynamic Pricing & Learning in Electricity Markets," with Alfredo Garcia and Enrique Campos, *Operations Research*, Vol. 53, No. 2 (March-April 2005): 231-241.

"Estimating the Economic 'Trade' Value of Increased Transmission Capability," with Andrew N. Kleit, *The Electricity Journal*, Vol. 19, No. 2 (March 2006): 69-78.

"International Perspectives on Electricity Market Monitoring and Market Power Mitigation," with Jose A. Garcia, *Review of Network Economics*, Vol. 6, No. 3 (September 2007): 397-424.

"Downstream Price-Cap Regulation and Upstream Market Power," *Journal of Regulatory Economics*, Vol. 33, No. 2 (April 2008): 179-200.

"Airline Alliances and Systems Competition," with Diana Moss, *Houston Law Review*, Vol. 45, No. 2 (Summer 2008): 293-332.

"The Effectiveness of FERC's Transmission Policy: Is Transmission Used Efficiently and When Is It Scarce?" with Andrew N. Kleit, *Journal of Regulatory Economics*, Vol. 34, No. 1 (August 2008): 1-26.

"Competition for Exclusive Customers: Comparing Equilibrium and Welfare under One-Part and Two-Part Pricing," with Glenn A. Woroch, *Canadian Journal of Economics*, Vol. 41, No. 3 (August 2008): 1046-1086.

"Competitive Effects of Exchanges or Sales of Airport Landing Slots," with Brendan McVeigh, Nicholas Powers, and Samuel Moy, *Review of Industrial Organization*, Vol. 46, No. 2 (March 2015): 95-125.

Books

The Regional Welfare Effects of U.S. Import Restraints on Apparel, Petroleum, Steel and Textiles, with Randi Boorstein, Michael Metzger, and Morris Morkre, Avebury Press, 1996.



Completed Studies

"Case Studies of the Price Effects of Horizontal Mergers," *Staff Report of the Federal Trade Commission,* April 1992, with coauthors.

"The Effectiveness of Collusion under Antitrust Immunity - The Case of Liner Shipping Conferences," *Staff Report of the Federal Trade Commission*, December 1995, with coauthor.

"The Effectiveness of Dutch Airport Transport Policy," study prepared for the Dutch Ministry of Transport, December 2002, with coauthors.

"The Economic Impact of an EU-US Open Aviation Area," study prepared for the European Commission - Directorate-General for Energy and Transport, December 2002, with coauthors.

"Study to Assess the Potential Impact of Proposed Amendments to Council Regulation 2299/89 with regard to Computerised Reservation Systems," study prepared for the European Commission - Directorate-General for Energy and Transport, October 2003, with coauthors.

PRESENTATIONS

"Genco Pricing & Genco Asset Values under Deregulation," presented to the Center for Business Intelligence Conference, Chicago, IL, September 18, 1998.

"Ancillary Services: New Business Opportunities in Competitive Ancillary Services Markets," presented at Electric Utility Consultants Workshop on Strategies for Pricing and Selling Ancillary Services, Denver, CO, September 9, 1999.

"Profit-Maximizing Strategies and Gaming: Market Power and Power Markets," presented to the Center for Business Intelligence Conference on Pricing Power Products and Services, Chicago, IL, October 14, 1999.

"Strategic Behavior and Power Market Prices," presented to the EPRI Asset &Risk Management Group, Washington, DC, June 23, 2000.

"Regional Interactions in Electricity Prices in the United States," presented to the CRRI Research Seminar, Newark, NJ, May 3, 2002.

"Standard-Offer Service and Retail Restructuring of Electric Markets," presented to the CRRI Eastern Conference, Newport, RI, May 23, 2002.

"The Economic Impact of an EU-US Open Aviation Area," presented to the U.S. Department of State, the European Commission (US office), and the Heritage Foundation, Washington, DC in 2002 and 2003, and the Association of European Airlines, Brussels, Belgium, 2003.



"Transactions Costs Across Electricity Markets: Does Restructuring Matter?" presented to the CRRI Eastern Conference, Skytop, PA, May 22, 2003.

"Identifying the Relationship between Spot and Futures Prices for Electricity and Natural Gas," presented to the Center for Research in Regulated Industries (CRRI) Research Seminar, Newark, NJ, May 7, 2004, and the CRRI Eastern Conference, Skytop, PA, May 21, 2004.

"Geographic Integration, Transmission Constraints, and Electricity Restructuring," presented to the Federal Energy Regulatory Commission, Federal Trade Commission, Energy Information Administration, in Washington, DC, in 2004 and 2005, and the 10th Annual POWER Research Conference on Electricity Industry Restructuring of the University of California Energy Institute, Berkeley, CA, March 18, 2005.

TESTIMONY/EXPERT REPORTS

Testimony before the Advisory Commission on Conferences in Ocean Shipping, 1991, relating to an econometric analysis of the determinants of ocean freight rates, and the conclusions of that study with respect to the existence of market power in ocean shipping.

Expert Submission - Appendix J, Volume 1, Prehearing Brief on Behalf of Petitioner, Certain Flat Rolled Carbon Steel Products, June 21, 1993, U.S. International Trade Commission Investigation Nos. 701-TA-319-332, 334, 336-342, 344, and 347-353 (final); 731-TA-573-579, 581-592, 594-597, 599-609, and 612-619 (final). Analysis included a critique of methods used to evaluate domestic injury in trade cases. Also authored part of submission for post-hearing brief.

Expert Report Submitted to the European Court of First Instance on Behalf of the European Commission relating to the Petition of the Transatlantic Agreement to Annul the Commission's Decision of October 19, 1994, including a rebuttal of the expert economic analysis offered by the members of the Transatlantic Agreement in support of their collective restrictions on capacity utilization and their coordinated activity in setting certain types of freight rates.

Testimony in the Matter of Henry H. Godfrey v. Benjamin F. Hofheimer, III, *et. al.*, 1995, on behalf of defendant relating to the appropriate calculation of damages in a breach-of-contract dispute.

Expert Report Submitted to the Environmental Protection Agency, 2000, on behalf of a trade group of aluminum smelters assessing the economic costs of revised land-disposal restriction standards for spent aluminum potliners (K088), 2000.

Two Expert Reports Submitted to the U.S. District Court for the District of Maryland, 2001, in the matter of Charles River Associates Inc. v. Hale Trans, Inc., assessing the quality and cost effectiveness of economic expertise provided in a predatory-pricing matter.



Expert Report Submitted to the U.S. District Court for the District of Columbia in the Matter of DAG Enterprises Inc. v. Exxon Mobil Corporation, 2003, regarding the suitability of a prospective purchaser as an acquirer of Mobil assets under the antitrust standards used by the Federal Trade Commission.

Expert Report Submitted to the Federal Energy Regulatory Commission (Docket No. EC05-43-000) 2005 on behalf of Midwest Generation, regarding the competitive impact of the proposed merger of Exelon Corporation and Public Service Enterprise Group and the mitigation measures offered by the parties.

Expert Reports submitted to the U.S. Department of Transportation (Docket No. OST-2004-19214), 2005, on behalf of American Airlines, regarding the competitive impact of the proposed application for antitrust immunity of an airline alliance consisting of Delta, Northwest, KLM, Air France, Alitalia, and Czech Airlines.

Expert Report and Testimony before the Public Utility Commission of Texas (Docket No. 31056), 2005, on behalf of the Cities served by AEP Texas Central Company, the Texas Industrial Energy Consumers, and the Alliance for Valley Healthcare, regarding the competitiveness of an auction held to sell an ownership share in a nuclear power plant and the commercial reasonableness of the actions taken by the seller.

Expert Reports submitted to the U.S. Department of Transportation (Docket No. OST-2005-22922), 2006, on behalf of American Airlines, regarding the competitive impact of the proposed Star Alliance expansion to include LOT and Swiss airlines and expand antitrust immunity between Air Canada and United Airlines.

Expert Report and Testimony before the Public Service Commission of Maryland, (Case No. 9117, Phase 1), 2007 on behalf of Potomac Electric Power Company and Delmarva Power & Light Company, regarding the risks and costs associated with portfolio procurement of electric power supplies as opposed to relying on a full-requirements auction-based procurement method.

Expert Report submitted to the Pennsylvania Public Utility Commission (Docket No. P-0072305), 2008, on behalf of Pennsylvania Power Company, regarding the risks and costs associated with different procurement methods for obtaining electric power supplies to serve default-service customers.

Expert Report and Testimony before the Public Utility Commission of Ohio (Case No. 08-936-EL-SSO), 2008, on behalf of Ohio Edison Company, The Cleveland Electric Illuminating Company, and The Toledo Edison Company, regarding the rationale for using an auction process to procure full-requirements electric power supplies for standard-service-offer customers, as well as a description of the responsibilities undertaken by myself and The Brattle Group as manager of that procurement.

Expert Report submitted to the Pennsylvania Public Utility Commission (Docket Nos. P-2009-2093053 and P-2009-2093054), 2009, on behalf of Metropolitan Edison Company and Pennsylvania Electric Company, describing the design of an RFP process for procuring solar photovoltaic alternative energy credits and the management of that process by myself and The Brattle Group, as well as an analysis of the



desirability of meeting default service obligations through the auction-based procurement of full-requirements power supplies.

Various Expert Reports submitted between 2008 and 2010 to the U.S. Department of Transportation (Docket No. OST-2008-0252) and the European Commission describing the competitive impact of the proposal by the oneworld alliance to receive antitrust immunity, including various assessments of the impact on non-stop and connecting passengers that relied on econometric analysis of airline fare data and other empirical methods.

Reports submitted to the Pennsylvania Public Utility Commission, 2010, 2011, 2012, and 2013 as the Independent Procurement Manager for the procurement of Solar Photovoltaic Alternative Energy Credits by Metropolitan Edison Company, Pennsylvania Electric Company, and Pennsylvania Power Company including a description of the RFP process, a benchmarking of procurement prices against both current short-term prices and expected long-term prices for solar credits (based on a proprietary financial model), and the conformity of the procurement to the standards of least-cost procurement provided under Pennsylvania law.

Expert Reports (and Deposition) submitted to the U.S. District Court for the Middle District of Tennessee, 2012, in the matter of Watson Carpet & Floor Covering Inc. v. Mohawk Industries Inc., regarding the competitive effects of a carpet manufacturer's alleged refusal to sell its products to a carpet dealer serving production homebuilders in Nashville and surrounding counties.

Expert Reports and Testimony before the Pennsylvania Public Utility Commission (Docket Nos. P 2011-2273650, P-2011-2273668, P-2011-2273669, and P-2011-2273670), 2011 and 2012, on behalf of Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company, and West Penn Power Company, analyzing the Companies' procurement strategies for supplying default service customers, describing the design of an RFP process for procuring solar photovoltaic alternative energy credits (and the management of that process by myself and The Brattle Group), proposing an auction process for outsourcing the provision of generation service for time-of-use customers, describing an "opt-in" auction process to promote the switching of default service customers to competitive retail supply, and describing a customer referral program that is also designed to promote retail competition.

Expert Reports before the Pennsylvania Public Utility Commission (Docket Nos. P-2013-2391368, P-2013-2391372, P-2013-2391375, P-2013-2391378), 2013 and 2014, on behalf of Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company, and West Penn Power Company, analyzing the Companies' procurement strategies for supplying default service customers.

Report submitted and Testimony provided to the Canadian Radio-television and Telecommunications Commission (CRTC Docket No. 2014-76-1), 2014, on behalf of the Canadian Competition Bureau analyzing market power in the wireless market, including an analysis of industry profitability, an assessment of the impact on prices, market shares, profits, consumer surplus, and market penetration arising from the entry of an additional nationwide carrier, and an analysis of the cost impact for incumbent carriers arising from changes in spectrum availability used to accommodate additional entry.



Expert Reports before the Pennsylvania Public Utility Commission (Docket Nos. P-2015-2511333, P-2015-2511351, P-2015-2511355, and P-2015-2511356), 2015, on behalf of Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company, and West Penn Power Company, analyzing the Companies' procurement strategies for supplying default service customers and the competitiveness of the proposed procurement process, and estimating the pricing and volumetric risk premium associated with past procurements.

Expert Report before the North Carolina Utilities Commission (Docket. Nos. E-2 Sub 1095, E-7 Sub 1100, and G-9 Sub 682), 2016, on behalf of Duke Energy, relating to an analysis of potential market power issues and the potential for competitive harm associated with the acquisition by Duke Energy of Piedmont Natural Gas, as it applies to the combination of electric and retail gas activities and the transport and delivery of natural gas.

Expert Reports before the Pennsylvania Public Utility Commission (Docket Nos. P-2017-2637855, P2017-2637857, P-2017-2637858, and P-2017-2637866), 2017, on behalf of Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company, and West Penn Power Company, analyzing the companies' proposed procurement strategies for supplying default service customers in terms of the "least cost" standard and other legislative requirements and updating estimates of the pricing and volumetric risk premium associated with past procurements.

Expert Report submitted to the Federal Court of Australia (New South Wales), 2019, in the matter of *Alister Dalton and others v. Volkswagen AG and others*, on behalf of claimants, providing an econometric analysis that assessed the impact of the "diesel emissions issue" on the resale prices of affected VW vehicles.

Expert Report and Supplemental Report submitted to Court of Amsterdam (Case No. C/13/486440 / HA ZA 11-944; C/13/561169 / HA ZA 14-283), 2019 and 2020, on behalf of claimants, related to the estimation of the volume of commerce affected by an alleged cartel agreement among major international airlines pertaining to fuel surcharges.

Expert Reports submitted to the Electricity Authority of New Zealand, 2020, on behalf of Meridian Energy, related to the market impact of an alleged undesirable trading situation (UTS) involving Meridian's electricity pricing and dispatch of hydroelectric power between November 2019 and January 2020.

Expert Declaration submitted to the US District Court for the Central District of California, 2020, in the matter of William Morris Endeavor Entertainment, LLC, et al., v. Writers Guild of America West, Inc., et al., on behalf of Writers Guild of America West, related to the economic incentives on agents created by the joint ownership of a talent agency and a film/television production entity.



PROFESSIONAL ACTIVITIES

Consultant to the *World Bank* on the formation of regional trading blocs, the *European Community* (DG IV) on antitrust and transportation issues, and the *Government of Canada* (Competition Bureau) on antitrust and transportation issues.

Advisory Board Member of the Center for Research in Regulated Industries

Member of the Atlantic Energy Group

Referee for the following journals: American Economic Review, Canadian Journal of Economics, Contemporary Policy Issues, European Economic Review, International Economic Review, International Journal of the Economics of Business, Journal of Economics, Journal of Economics and Business, Journal of Economic Integration, Journal of Industrial Economics, Journal of International Economics, Journal of Regulatory Economics, Oxford Economic Papers, and Review of International Economics.

Teaching Experience: Introductory Macroeconomics; Introductory Microeconomics



APPENDIX B NICHOLAS E. POWERS

Senior Associate

Washington, DC

+1.202.419.3369

Nicholas.Powers@brattle.com

Dr. Powers specializes in conducting econometric and economic analysis and applying concepts from industrial organization and regulatory economics in competition, regulatory, and other litigation matters, with a focus on the electricity sector.

His electricity experience includes several key analyses of price effects, market power, and anticompetitive behavior. In addition, he conducts econometric analysis of innovative pricing programs in the electric industry. He has supported expert testimony in three separate litigation proceedings arising from the California electricity crisis of 2000–2001. He has also overseen the statistical analyses in several New Source Review cases and performed damages and other analyses in energy-related litigation proceedings. For the Department of Energy, Dr. Powers coauthored two reports on electric grid infrastructure and approaches to valuation of various grid assets, and for multiple clients he has analyzed retail electric market conditions and regulatory developments. He has also acted as both an independent evaluator and an advisor to several procurement processes in the electricity sector, and has estimated the cost and feasibility of renewables-only energy portfolios.

Dr. Powers also has extensive experience conducting analysis for and submitting expert reports in regulatory proceedings in other industries. This includes the extensive analysis of regression-based costing models in the postal industry, rate of return analysis in the telecommunications industry, and econometric analysis of the renewable fuels market.

In the competition space, he has performed analysis estimating cartel impacts in large-scale price-fixing cases, anticompetitive effects resulting from a proposed merger, and price effects of competitor entry and exit in proposed joint ventures. Dr. Powers regularly provides economic analysis of cartel behavior and also has experience analyzing exclusionary practices.

EDUCATION

- Ph.D., Business Economics, University of Michigan, Ross School of Business, 2010
- B.S., Applied Economics and Management, Cornell University, 2000

AREAS OF EXPERTISE

- Electric Industry
- Regulatory Costing Principles
- Econometric Analysis
- Antitrust and Collusion
- Transportation



1

EXPERIENCE

Energy and Environmental

- For the California parties, conducted several key pieces of analysis evaluating effects of tariff
 violations in the Summer of 2000 on CAISO market prices and drafted portions of expert
 testimony, in a litigation matter before the FERC arising from the California electricity crisis.
- For the California parties, conducted econometric analyses detecting the exercise of market power and price discrimination in the 2001 "CERS" period of the California electricity crisis.
 This analysis formed the basis of key parts of the testimony of two expert witnesses.
- Supervised the analysis for four cases in support of testimony relating to alleged New Source Review (NSR) violations at coal-fired power plants. For a Southeastern power cooperative, analysis of government's claims included examination of alternative baseline emission calculations, analysis of changes in fuel quality, and evaluation of long-run patterns in utilization, generation, and emissions, as well as econometric analysis of the determinants of emissions. For a Midwestern utility, analysis consisted of identifying long-term trends in pricing strategy, market dispatch outcomes, and emissions prices to inform PROMOD runs in order to generate emissions projections that are consistent with NSR regulations. For a Mid-Atlantic utility, the analysis focused on long-run variation in coal plant operations, including analysis of changing market conditions that influenced that variation.
- In conjunction with a Commssion-mandated time-of-use ("TOU") pricing pilot, analyzed the
 impacts of TOU prices on peak load and conservation in three Maryland electric utilities.
 Designed and implemented a matching-based regression methodology; co-authored two
 reports presenting our findings.
- For multiple regulated utilities in Pennsylvania, on multiple occasions, designed and managed the procurement of solar photovoltaic alternative energy credits (SPAECs). Responsibilities included: (i) designing the auction rules and bid forms; (ii) building a financial model to determine the likely value of the solar energy credits; (iii) providing a benchmarking study to determine if the bids were reflective of market fundamentals; and (iv) drafting a report to the Pennsylvania Public Utility Commission to secure approval of the procurements.



- For Transmission Developers Inc., managed sale of transmission rights for Champlain Hudson Power Express transmission project. Prepared report in support of Section 205 filing for submission to the Federal Energy Regulatory Commission.
- For an expert report submitted as part of a revenue requirements proceeding, benchmarked BC
 Hydro's non-fuel operations and maintenance costs against those of U.S. investor-owned
 utilities.
- In follow-on work, developed testimony assessing the value or appropriateness of a suite of cost benchmarking reports as proposed by BC Hydro.
- For the Department of Energy and Pacific Northwest National Laboratory, coauthored a
 baseline report on electric transmission, distribution, and storage infrastructure in the United
 States as part of the inaugural Quadrennial Energy Review process.
- For the Department of Energy and Pacific Northwest National Laboratory, coauthored a report on the valuation of electric power systems and technologies as part of the Quadrennial Energy Review process.
- Coauthored a report analyzing the economics and reliability of alternative energy portfolios (approaching 100% renewable power) for the City of Memphis.
- For a Southeastern generation and transmission electric cooperative, oversaw preparation of expert damages report and advised counsel on same in the context of an arbitration proceeding stemming from an alleged breach of contract.
- Advised a large nonprofit energy buying consortium in a procurement of retail electric service
 for their members, assessing offers over a variety of products, services, and geographic areas,
 and assisting in negotiations with several large retail electric suppliers.
- For a valuation matter concerning a back-office IT services provider to retail energy suppliers, supervised the analysis for and supported industry witness in a report assessing the status and prospects of the retail energy service business in restructured states.
- On behalf of Growth Energy, coauthored a report analyzing the role that higher ethanol blends
 of gasoline (E85) could play in meeting the proposed 2017 renewable volume obligations
 (RVOs) under the Renewable Fuel Standards (RFS) program. The report was filed with Growth
 Energy's comments in the Environmental Protection Agency's rulemaking docket regarding
 proposed renewable fuel standards for 2017.



- Researched alternative rate plans and presented results to senior management of a mid-sized electric utility as part of a regulatory strategy consulting engagement.
- For a utility in the Southeastern United States, conducted a review of NERC region load forecasts. This consisted of econometric analysis to weather-normalize actual loads and evaluate the portion of the forecast error that could be attributed to variations in weather.
- For a mid-Atlantic utility, estimated economic benefits to ratepayers from natural gas service, as portion of eventual PUC filing justifying investments related to storm resilience of distribution system.

Antitrust

- In a large civil case concerning alleged collusion in the corrugated packaging industry, executed the econometric analysis forming the basis of a report critiquing plaintiff's damages estimates. Supported the expert testimony of Nobel laureate Daniel McFadden.
- On behalf of purchasers of air cargo (plaintiffs) in a class action civil suit, conducted econometric and other statistical analyses in order to estimate economic damages from alleged price-fixing. Supported the expert testimony of Nobel laureate Daniel McFadden.
- Advise plaintiff's counsel and external funders on damages in a cartel class action. Co-authored
 confidential expert report on volume of commerce issues related to incompleteness of client
 data. Support damages analysis of Nobel laureate Daniel McFadden.
- Advise counsel representing a large multinational industrial firm by estimating overcharges stemming from a series of price-fixing conspiracies covering several input commodities.
- Analyzed the competitive effects associated with a joint venture in the music industry.
- Analyzed the competitive effects associated with a proposed merger in the medical equipment industry.
- Analyzed Surface Transportation Board waybill data to identify potential competitive effects in the context of a proposed railroad merger.
- Analyzed the competitive effects associated with a proposed merger in the venue management industry.
- Analyzed the anti-competitive impacts resulting from a proposed merger in the television broadcast industry.



- Performed econometric estimates of the price effects resulting from competitor entry and exit
 in geographic product markets to support expert testimony that assessed anti-competitive
 effects from a proposed joint venture in the airline industry.
- Conducted econometric analysis in evaluation of expert testimony that sought to quantify network effects in the payment card industry.
- Identified flaws in the econometric analysis of opposing experts in the context of settlement negotiations arising from price-fixing allegations in the plastics manufacturing industry.
- Oversaw preparation of expert report and quantification of damages, on behalf of plaintiffs, stemming from exclusionary conduct.
- Supported testifying expert, on behalf of plaintiffs, in a competition matter related to vertical restraints.

Other Regulatory

- On behalf of United Parcel Service, manage analysis and support expert witness in several regulatory dockets before the Postal Regulatory Commission. Apply regulatory economic principles and econometric expertise to detailed knowledge of USPS costing models; provide input on economic arguments and regulatory strategy. Conducted econometric analyses and assisted in the preparation of reports and testimony in a number of Dockets before the Postal Regulatory Commission, including Dockets ACR2014, RM2015-7, RM2016-2, and RM2016-3. Coauthored expert report critiquing a proposed change to costing principles in the Purchased Highway Transportation cost segment, in Docket RM2016-12.
- Managed the analysis in support of multiple verified statements filed in a railroad trackage
 rights proceeding before the Surface Transportation Board, leveraging the Brattle Rail Network
 Model. Our analysis relied on a variety of data sources, including confidential Carload Waybill
 Sample data, proprietary railroad traffic tapes, and Form R-1 data.
- For an express package delivery carrier, managed the construction of an integrated Excel-based cost and demand financial forecasting model of the United States Postal Service (USPS), based on public USPS data and filings in previous Postal Regulatory Commission dockets.
- Submitted an expert report analyzing the rate of return of a land-based telecommunications network in Alaska for a proceeding before the Federal Communications Commission.



Other Litigation

- In a lawsuit brought by the City of Ontario, CA against Los Angeles World Airports, evaluated
 the reliability of plaintiff's claim for damages in excess of \$3 billion for alleged mismanagement
 of the Ontario airport.
- For a class of Australian owners of Volkswagen vehicles, analyzed the impact of the diesel emissions issue on resale prices for VW vehicles affected by non-compliant emissions "defeat devices."

PROFESSIONAL AFFILIATIONS

- American Economic Association
- Energy Bar Association

ACADEMIC HONORS AND FELLOWSHIPS

- Thomas W. Leabo Memorial Award (University of Michigan), 2007
- Fred and Barbara Erb Fellowship (University of Michigan), 2005-2009

EXPERT REPORTS AND REGULATORY FILINGS

"PC44 Time of Use Pilots: End-of-Pilot Evaluation," by Sanem Sergici, Ahmad Faruqui, Nicholas Powers, Sai Shetty, and Ziyi Tang. Prepared for Maryland Joint Utilities and Filed with the Maryland Public Utility Commission, October 4, 2021.

"PC44 Time of Use Pilots: Year 1 Evaluation," by Sanem Sergici, Ahmad Faruqui, Nicholas Powers, Sai Shetty, and Jingcheng Jiang. Prepared for Maryland Joint Utilities and Filed with the Maryland Public Utility Commission, September 15, 2020.

"Expert Declaration of Kevin Neels and Nicholas Powers." (before the Postal Regulatory Commission, related to the Statutory Review of the System for Regulating Rates and Classes for Market Dominant Products, in Docket No. RM2017-3), February 2020.

Expert Report and Supplemental Report submitted to Court of Amsterdam (Case No. C/13/486440 / HA ZA 11-944; C/13/561169 / HA ZA 14-283), 2019 and 2020, on behalf of claimants, related to the estimation of the volume of commerce affected by an alleged cartel agreement among major international airlines pertaining to fuel surcharges.



"Evaluation, Measurement and Verification Plan for the PC44 Time-of-Use Rate Pilots," by Sanem Sergici, Ahmad Faruqui, and Nicholas Powers. Prepared for Maryland Public Service Commission PC44 Rate Design Work Group, June 2018.

"Rate of Return Analysis of GCI's TERRA Network," by William P. Zarakas, Agustin J. Ros, and Nicholas E. Powers. Prepared for GCI Communication Corp., March 2018.

"Report of Dr. Kevin Neels and Dr. Nicholas Powers to Accompany UPS Comments in Docket No. RM2016-12" (before the Postal Regulatory Commission, related to costing principles in the highway transportation segment), October 2016. Reply Report also submitted.

"Report of Dr. Kevin Neels and Dr. Nicholas Powers to Accompany UPS Comments in Docket No. RM2016-12" (before the Postal Regulatory Commission, related to costing principles in the highway transportation segment), October 2016. Reply Report also submitted.

"Peeking Over the Blendwall: An Analysis of the Proposed 2017 Renewable Volume Obligations," by Marc Chupka, J. Michael Hagerty, Nicholas E. Powers, and Sarah Germain. Prepared for Growth Energy, July 2016; filed with comments in Docket EPA-HQ-OAR-2016-0004.

ACADEMIC PUBLICATIONS

"Competitive Effects of Exchanges or Sales of Airport Landing Slots," by James D. Reitzes, Brendan McVeigh, Nicholas E. Powers, and Samuel Moy, Review of Industrial Organization, August 2014.

"Measuring the Impact of the Toxics Release Inventory: Evidence from Manufacturing Plant Births," by Nicholas E. Powers, U.S. Census Bureau Center for Economic Studies Working Paper Series, March 2013.

"Does Disclosure Reduce Pollution? Evidence from India's Green Rating Project," by Nicholas E. Powers, Allen Blackman, Thomas P. Lyon, and Urvashi Narain, Environmental and Resource Economics, March 2011.

"Do State Renewable Portfolio Standards Promote In-state Renewable Generation?" (with Haitao Yin) Energy Policy, February 2010.

OTHER REPORTS AND PUBLICATIONS

"Differing Proof Requirements for Global Class Actions: Using Economic Analysis to Guide Future Policymakers," by Nicholas Powers, John Roberti, and Kelse Moen. Antitrust, Vol. 35, No. 3, Summer 2021.



"Power to Memphis: Options for a Reliable, Affordable, and Greener Future," by Jürgen Weiss, Judy Chang, Nicholas E. Powers, and Kai Van Horn. Prepared for Friends of the Earth, January 2019.

"Valuation of Electric Power System Services and Technologies," by Ira H. Shavel, Michael Hagerty, Nicholas E. Powers, Yingxia Yang, and Roger Lueken. Prepared for the U.S. Department of Energy, Office of Electricity Delivery and Energy Reliability, August 2016.

"Electricity Baseline Report for the US Power System," by Ira Shavel, J. Michael Hagerty, Nicholas Powers, and Yingxia Yang. Prepared for Pacific Northwest National Laboratory and the Department of Energy, April 2015.

"Developing a Market Vision for MISO - Supporting a Reliable and Efficient Electricity System in the Midcontinent," by Samuel A. Newell, Kathleen Spees, and Nicholas E. Powers. Prepared for the Midcontinent Independent System Operator, Inc. (MISO), January 2014.

SELECTED PRESENTATIONS

"The Incremental Cost Test When Technology Choice is Endogenous" at the Center for Research in Regulated Industries Eastern Conference (2018)

"Analyzing the Competitive Effects of Exchanges or Sales of Airport Landing Slots" at the International Industrial Organization Conference (2012)

"The Toxics Release Inventory and Manufacturing Plant Births" at Penn State University (2010), University of Maryland (2010), U.S. Census Center for Economic Studies (2009)

"Does Disclosure Reduce Pollution? Evidence from India's Green Rating Project", at Association for Public Policy Analysis and Management Fall Conference (2009), Allied Social Sciences Association Annual Meetings (2008), Southern Economics Association Annual Meetings (2007)



Default Service Full Requirements Auction Price to Expected Wholesale Market Costs: Met-Ed, October 2016 - April 2021

Utility	Auction Month	Product	Duration months	Delivery Period Start	Delivery Period End	PJM West Fo Price \$/MWh Off Peak		Zonal Premiu PJM We \$/MWh	st	Zone Adjust		All Hours Flat Load Price \$/MWh	Load Shape Factor %	Load Shape Adjusted Price \$/MWh	Average Capacity Price \$/MWh	Capacity Scaling Factor	Adjusted Capacity Price Adder \$/MWh	Ancillary Services Add-in \$/MWh	Average NITS Rate \$/MWh	NITS Scaling Factor	Adjusted NITS Rate Adder \$/MWh	Estimated No-Risk Price \$/MWh	Auction Price \$/MWh	Estimated Ris	.k Premiun %
						[1]	/ COR	[2]	7 CUK	[3]	7 COX	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]
Met-Ed	Oct-16	Residential	12	Jun-17	May-18	27.13	39.65	-4.40	-4.71	22.73	34.94	28.40	9.51%	31.10	5.78	2.44	14.08	0.97	2.58	2.44	6.29	52.44	53.09	0.65	1.239
Met-Ed	Oct-16	Residential	24	Jun-17	May-19	26.33	38.36	-4.40	-4.71	21.93	33.65	27.37	9.51%	29.98	6.79	2.44	16.55	0.97	2.58	2.44	6.29		53.13	-0.66	-1.239
Met-Ed	Oct-16	Commercial	12	Jun-17	May-18	27.13	39.65	-4.40	-4.71	22.73	34.94	28.40	6.78%	30.33	5.78	1.99	11.51	0.97	2.58	1.99	5.14		52.82	4.87	10.159
Met-Ed Met-Ed	Oct-16 Jan-17	Commercial Residential	24 12	Jun-17 Jun-17	May-19 May-18	26.33 28.17	38.36 40.21	-4.40 -4.40	-4.71 -4.71	21.93 23.77	33.65 35.50	27.37 29.22	6.78% 9.51%	29.23 31.99	6.79 5.78	1.99 2.44	13.53 14.08	0.97 0.97	2.58 2.58	1.99 2.44	5.14 6.29		53.08 56.29	4.20 2.96	8.609 5.549
Met-Ed	Jan-17	Residential	24	Jun-17	May-19	27.08	38.75	-4.40	-4.71	22.67	34.04	27.96	9.51%	30.61	6.79	2.44	16.55	0.97	2.58	2.44	6.29		57.99	3.56	6.549
Met-Ed	Jan-17	Commercial	12	Jun-17	May-18	28.17	40.21	-4.40	-4.71	23.77	35.50	29.22	6.78%	31.20	5.78	1.99	11.51	0.97	2.58	1.99	5.14		55.29	6.47	13.259
Met-Ed	Jan-17	Commercial	24	Jun-17	May-19	27.08	38.75	-4.40	-4.71	22.67	34.04	27.96	6.78%	29.85	6.79	1.99	13.53	0.97	2.58	1.99	5.14	49.50	55.54	6.04	12.209
Met-Ed	Apr-17	Residential	12	Jun-17	May-18	28.79	40.63	-4.40	-4.71	24.39	35.92	29.75	9.51%	32.57	5.78	2.44	14.08	0.97	2.58	2.44	6.29		57.91	4.00	7.419
Met-Ed	Apr-17	Residential	24	Jun-17	May-19	27.66	38.81	-4.40	-4.71	23.26	34.10	28.30	9.51%	30.99	6.79	2.44	16.55	0.97	2.58	2.44	6.29		58.44	3.64	6.649
Met-Ed	Apr-17	Commercial	12	Jun-17	May-18	28.79 27.66	40.63 38.81	-4.40 -4.40	-4.71	24.39 23.26	35.92 34.10	29.75	6.78%	31.76 30.22		1.99 1.99	11.51 13.53	0.97	2.58 2.58	1.99 1.99			56.76 56.18		14.939
Met-Ed Met-Ed	Apr-17 Oct-17	Commercial Residential	24 12	Jun-17 Jun-17	May-19 May-18	27.66	38.81	-4.40 -4.40	-4.71 -4.71	25.26 25.06	34.10	28.30 29.09	6.78% 9.51%	30.22	6.79 5.78	2.44	14.08	0.97 0.97	2.58	1.99 2.44	5.14 6.29		56.18 54.92	6.32 1.73	3.259
Met-Ed	Oct-17	Commercial	12	Jun-17 Jun-17	May-18	29.46	38.44	-4.40	-4.71	25.06	33.73	29.09	6.78%	31.85	5.78	1.99	11.51	0.97	2.58	1.99			55.79		14.609
Met-Ed	Nov-17	Commercial	12	Jun-18	May-19	25.92	35.94	-1.55	-2.40	24.36	33.54	28.66	6.83%	30.61	7.81	1.93	15.08	1.09	2.98	1.93	5.75		55.79		6.229
Met-Ed	Nov-17	Residential	12	Jun-18	May-19	25.92	35.94	-1.55	-2.40	24.36	33.54	28.66	9.51%	31.38	7.81	2.21	17.28	1.09	2.98	2.21	6.59	56.35	54.92	-1.43	-2.539
Met-Ed	Jan-18	Commercial	12	Jun-18	May-19	26.28	35.87	-1.55	-2.40	24.72	33.46	28.82	6.83%	30.78	7.81	1.93	15.08	1.09	2.98	1.93	5.75		54.15		2.769
Met-Ed	Jan-18	Residential	12	Jun-18	May-19	26.28	35.87	-1.55	-2.40	24.72	33.46	28.82	9.51%	31.56	7.81	2.21	17.28	1.09	2.98	2.21	6.59		55.55	-0.97	-1.729
Met-Ed	Apr-18	Commercial	12	Jun-18	May-19	27.71	37.01	-1.55	-2.40	26.16	34.61	30.12	6.83%	32.17	7.81	1.93	15.08	1.09	2.98	1.93			54.35		0.499
Met-Ed Met-Ed	Apr-18 Oct-18	Residential Commercial	12 24	Jun-18 Jun-19	May-19 May-21	27.71 26.52	37.01 36.52	-1.55 -1.55	-2.40 -2.40	26.16 24.97	34.61 34.12	30.12 29.25	9.51% 6.83%	32.98 31.25	7.81 4.44	2.21 1.93	17.28 8.57	1.09 1.09	2.98 3.75	2.21 1.93	6.59 7.25		57.19 50.33	-0.75 2.17	-1.309 4.519
Met-Ed	Oct-18	Commercial	12	Jun-19	May-20	28.25	37.97	-1.55	-2.40	26.70	35.56	30.85	6.83%	32.96	4.70	1.93	9.07	1.09	3.29	1.93			51.49		4.109
Met-Ed	Oct-18	Residential	24	Jun-19	May-21	26.52	36.52	-1.55	-2.40	24.97	34.12	29.25	9.51%	32.04	4.44	2.21	9.83	1.09	3.75	2.21	8.31		51.71	0.45	0.879
Met-Ed	Oct-18	Residential	12	Jun-19	May-20	28.25	37.97	-1.55	-2.40	26.70	35.56	30.85	9.51%	33.79	4.70	2.21	10.40	1.09	3.29	2.21	7.28		52.29	-0.26	-0.499
Met-Ed	Jan-19	Commercial	24	Jun-19	May-21	27.49	38.23	-1.55	-2.40	25.94	35.83	30.57	6.83%	32.65	4.44	1.93	8.57	1.09	3.75	1.93	7.25		51.83		4.589
Met-Ed	Jan-19	Commercial	12	Jun-19	May-20	29.61	40.14	-1.55	-2.40	28.05	37.74	32.59	6.83%	34.81	4.70	1.93	9.07	1.09	3.29	1.93	6.35		51.86	0.54	1.069
Met-Ed	Jan-19	Residential	24	Jun-19	May-21	27.49	38.23	-1.55	-2.40	25.94	35.83	30.57	9.51%	33.47	4.44	2.21	9.83	1.09	3.75	2.21	8.31		53.90		2.289
Met-Ed Met-Ed	Jan-19 May-19	Residential Commercial	12 24	Jun-19 Jun-19	May-20 May-21	29.61 26.68	40.14 36.48	-1.55 -1.55	-2.40 -2.40	28.05 25.13	37.74 34.08	32.59 29.32	9.51% 6.83%	35.69 31.32	4.70 4.44	2.21 1.93	10.40 8.57	1.09 1.09	3.29 3.75	2.21 1.93	7.28 7.25		54.05 50.83	-0.40 2.60	-0.749 5.399
Met-Ed	May-19	Commercial	12	Jun-19	May-20	28.40	37.67	-1.55	-2.40	26.85	35.27	30.79	6.83%	32.89	4.70	1.93	9.07	1.09	3.29	1.93	6.35		51.35		3.95%
Met-Ed	May-19	Residential	12	Jun-19	May-20	28.40	37.67	-1.55	-2.40	26.85	35.27	30.79	9.51%	33.72	4.70	2.21	10.40	1.09	3.29	2.21	7.28		53.73		2.389
Met-Ed	May-19	Residential	24	Jun-19	May-21	26.68	36.48	-1.55	-2.40	25.13	34.08	29.32	9.51%	32.11	4.44	2.21	9.83	1.09	3.75	2.21	8.31		53.21	1.88	3.659
Met-Ed	Oct-19	Commercial	12	Jun-20	May-21	22.38	31.36	-1.55	-2.40	20.83	28.96	24.63	6.83%	26.32	4.18	1.93	8.07	1.09	4.22	1.93	8.15		48.52	4.89	11.219
Met-Ed	Oct-19	Residential	12	Jun-20	May-21	22.38	31.36	-1.55	-2.40	20.83	28.96	24.63	9.51%	26.98	4.18	2.21	9.25	1.09	4.22	2.21	9.35		50.83	4.16	8.929
Met-Ed	Jan-20	Commercial	12	Jun-20	May-21	21.41	29.01	-1.55	-2.40	19.85	26.61	23.02	6.83%	24.59	4.18	1.93	8.07	1.09	4.22	1.93	8.15		46.24	4.34	10.369
Met-Ed Met-Ed	Jan-20 Apr-20	Residential Commercial	12 12	Jun-20 Jun-20	May-21 May-21	21.41 21.18	29.01 28.47	-1.55 -1.55	-2.40 -2.40	19.85 19.63	26.61 26.07	23.02 22.64	9.51% 6.83%	25.20 24.19	4.18 4.18	2.21 1.93	9.25 8.07	1.09 1.09	4.22 4.22	2.21 1.93	9.35 8.15		48.67 47.93	3.77 6.43	8.419 15.499
Met-Ed	Apr-20 Apr-20	Commercial	24	Jun-20 Jun-20	May-21	21.18	28.47	-1.55 -1.55	-2.40	19.63	26.07	22.64	6.83%	24.19	5.47	1.93	10.56	1.09	4.22	1.93	9.60		50.80		11.809
Met-Ed	Apr-20	Residential	12	Jun-20	May-21	21.18	28.47	-1.55	-2.40	19.63	26.07	22.64	9.51%	24.80	4.18	2.21	9.25	1.09	4.22	2.21			49.09		10.349
Met-Ed	Apr-20	Residential	24	Jun-20	May-22	21.18	28.47	-1.55	-2.40	19.63	26.07	22.64	9.51%	24.80	5.47	2.21	12.10	1.09	4.97	2.21	11.01		52.12	3.12	6.379
Met-Ed	Nov-20	Commercial	24	Jun-21	May-23	24.57	32.98	-1.55	-2.40	23.01	30.58	26.56	6.83%	28.37	5.66	1.93	10.93	1.09	5.44	1.93	10.50		54.86		7.809
Met-Ed	Nov-20	Commercial	12	Jun-21	May-22	24.91	33.48	-1.55	-2.40	23.35	31.08	26.97	6.83%	28.81	6.76	1.93	13.04	1.09	5.72	1.93	11.05		54.75		1.409
Met-Ed	Nov-20	Residential	12	Jun-21	May-22	24.91	33.48	-1.55	-2.40	23.35	31.08	26.97	9.51%	29.53	6.76	2.21	14.95	1.09	5.72	2.21	12.67		58.91	0.66	1.149
Met-Ed Met-Ed	Nov-20 Jan-21	Residential Commercial	24 24	Jun-21 Jun-21	May-23 May-23	24.57 23.97	32.98 32.59	-1.55 -1.55	-2.40 -2.40	23.01 22.41	30.58 30.19	26.56 26.06	9.51% 6.83%	29.08 27.84	5.66 5.66	2.21 1.93	12.54 10.93	1.09 1.09	5.44 5.44	2.21 1.93	12.04 10.50		57.52 54.40	2.78 4.04	5.079 8.039
Met-Ed	Jan-21 Jan-21	Commercial	12	Jun-21 Jun-21	May-22	24.19	32.59	-1.55 -1.55	-2.40	22.41	30.19	26.06	6.83%	28.13	6.76	1.93	13.04	1.09	5.72	1.93	11.05		55.67	2.35	4.419
Met-Ed	Jan-21	Residential	12	Jun-21	May-22	24.19	32.94	-1.55	-2.40	22.64	30.54	26.34	9.51%	28.84	6.76	2.21	14.95	1.09	5.72	2.21	12.67		59.44		3.279
Met-Ed	Jan-21	Residential	24	Jun-21	May-23	23.97	32.59	-1.55	-2.40	22.41	30.19	26.06	9.51%	28.54	5.66	2.21	12.54	1.09	5.44	2.21	12.04		58.43	4.23	7.819
Met-Ed	Apr-21	Commercial	24	Jun-21	May-23	24.70	33.81	-1.55	-2.40	23.15	31.41	27.02	6.83%	28.86	5.66	1.93	10.93	1.09	5.44	1.93	10.50		57.72		12.339
Met-Ed	Apr-21	Commercial	12	Jun-21	May-22	25.26	34.65	-1.55	-2.40	23.71	32.24	27.70	6.83%	29.60	6.76	1.93	13.04	1.09	5.72	1.93			58.52	3.74	6.839
Met-Ed	Apr-21	Residential	12	Jun-21	May-22	25.26	34.65	-1.55	-2.40	23.71	32.24	27.70	9.51%	30.34	6.76	2.21	14.95	1.09	5.72	2.21	12.67		62.95	3.90	6.609
Met-Ed	Apr-21	Residential	24	Jun-21	May-23	24.70	33.81	-1.55	-2.40	23.15	31.41	27.02	9.51%	29.59	5.66	2.21	12.54	1.09	5.44	2.21	12.04	55.25	61.39	6.14	11.129
Met-Ed Aver	age																							2.95	5.969

Default Service Full Requirements Auction Price to Expected Wholesale Market Costs: Penelec, October 2016 - April 2021

Utility	Auction Month	Product	Duration months	Delivery Period Start	Delivery Period End	PJM West Fo Price \$/MWh Off Peak		Zonal Premiu PJM We \$/MWh		Zone Adjust \$/MW Off Peak		All Hours Flat Load Price \$/MWh	Load Shape Factor %	Load Shape Adjusted Price \$/MWh	Average Capacity Price \$/MWh	Capacity Scaling Factor	Adjusted Capacity Price Adder \$/MWh	Ancillary Services Add-in \$/MWh	Average NITS Rate \$/MWh	NITS Scaling Factor	Adjusted NITS Rate Adder \$/MWh	Estimated No-Risk Price \$/MWh	Auction Price \$/MWh	Estimated Risi	k Premiun %
						[1]	reux	[2]	reux	[3]		[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]
Penelec	Oct-16	Residential	12	Jun-17	May-18	27.13	39.65	-2.28	-2.64	24.84	37.01	30.50	6.62%	32.52	5.78	2.49	14.36	0.97	2.58	2.49	6.42	54.26	50.59	-3.67	-6.77
Penelec	Oct-16	Residential	24	Jun-17	May-19	26.33	38.36	-2.28	-2.64	24.05	35.72	29.47	6.62%	31.42			16.88	0.97	2.58	2.49	6.42	55.69	50.29	-5.40	-9.70
Penelec	Oct-16	Commercial	12	Jun-17	May-18	27.13	39.65	-2.28	-2.64	24.84	37.01	30.50	5.60%	32.21			9.72	0.97	2.58	1.68	4.34	47.24	53.12	5.88	12.44
Penelec	Oct-16 Jan-17	Commercial	24 12	Jun-17	May-19	26.33 28.17	38.36 40.21	-2.28 -2.28	-2.64 -2.64	24.05 25.88	35.72 37.57	29.47 31.31	5.60% 6.62%	31.12 33.38			11.43 14.36	0.97 0.97	2.58 2.58	1.68 2.49	4.34 6.42	47.86 55.13	53.62 52.06	5.76 -3.07	12.02 -5.57
Penelec Penelec	Jan-17 Jan-17	Residential Residential	24	Jun-17 Jun-17	May-18 May-19	27.08	38.75	-2.28	-2.64	25.88	36.11	30.05		32.04			16.88	0.97	2.58	2.49		56.31	52.06	-4.07	-7.23
Penelec	Jan-17	Commercial	12	Jun-17	May-18	28.17	40.21	-2.28	-2.64	25.88	37.57	31.31	5.60%	33.07			9.72	0.97	2.58	1.68	4.34	48.10	54.59	6.49	13.49
Penelec	Jan-17	Commercial	24	Jun-17	May-19	27.08	38.75	-2.28	-2.64	24.79	36.11	30.05	5.60%	31.74			11.43	0.97	2.58	1.68	4.34	48.48	54.33	5.85	12.07
Penelec	Apr-17	Residential	12	Jun-17	May-18	28.79	40.63	-2.28	-2.64	26.51	37.99	31.84	6.62%	33.95	5.78	2.49	14.36	0.97	2.58	2.49	6.42	55.70	53.99	-1.71	-3.06
Penelec	Apr-17	Residential	24	Jun-17	May-19	27.66	38.81	-2.28	-2.64	25.38	36.17	30.39	6.62%	32.40		2.49	16.88	0.97	2.58	2.49	6.42	56.67	54.25	-2.42	-4.289
Penelec	Apr-17	Commercial	12	Jun-17	May-18	28.79	40.63	-2.28	-2.64	26.51	37.99	31.84	5.60%	33.63			9.72	0.97	2.58	1.68	4.34	48.66	54.91	6.25	12.849
Penelec	Apr-17	Commercial	24	Jun-17	May-19	27.66	38.81	-2.28	-2.64	25.38	36.17	30.39	5.60%	32.10			11.43	0.97	2.58	1.68	4.34	48.84	54.59	5.75	11.779
Penelec Penelec	Oct-17 Oct-17	Residential Commercial	12 12	Jun-17 Jun-17	May-18 May-18	29.46 29.46	38.44 38.44	-2.28 -2.28	-2.64 -2.64	27.18 27.18	35.80 35.80	31.18 31.18	6.62% 5.60%	33.25 32.93		2.49 1.68	14.36 9.72	0.97 0.97	2.58 2.58	2.49 1.68	6.42 4.34	54.99 47.96	52.45 53.98	-2.54 6.02	-4.629 12.549
Penelec	Nov-17	Commercial	12	Jun-17	May-19	25.92	35.94	-0.84	-1.28	25.08	34.65	29.56	5.06%	31.06		1.80	14.02	1.09	2.98	1.80	5.34	51.51	53.98	2.47	4.809
Penelec	Nov-17	Residential	12	Jun-18	May-19	25.92	35.94	-0.84	-1.28	25.08	34.65	29.56	6.39%	31.45		1.93	15.05	1.09	2.98	1.93	5.74	53.33	52.45	-0.88	-1.659
Penelec	Jan-18	Commercial	12	Jun-18	May-19	26.28	35.87	-0.84	-1.28	25.44	34.58	29.72		31.22		1.80	14.02	1.09	2.98	1.80	5.34	51.67	52.17	0.50	0.969
Penelec	Jan-18	Residential	12	Jun-18	May-19	26.28	35.87	-0.84	-1.28	25.44	34.58	29.72	6.39%	31.62		1.93	15.05	1.09	2.98	1.93	5.74	53.50	52.86	-0.64	-1.199
Penelec	Apr-18	Commercial	12	Jun-18	May-19	27.71	37.01	-0.84	-1.28	26.88	35.73	31.02	5.06%	32.59		1.80	14.02	1.09	2.98	1.80	5.34	53.04	53.97	0.93	1.769
Penelec	Apr-18	Residential	12	Jun-18	May-19	27.71	37.01	-0.84	-1.28	26.88	35.73	31.02	6.39%	33.01		1.93	15.05	1.09	2.98	1.93	5.74	54.88	54.00	-0.88	-1.619
Penelec	Oct-18	Commercial	24	Jun-19	May-21	26.52	36.52	-0.84	-1.28	25.69	35.24	30.16	5.06%	31.68			7.97	1.09	3.75	1.80	6.74	47.48	49.31	1.83	3.859
Penelec Penelec	Oct-18 Oct-18	Commercial Residential	12 24	Jun-19 Jun-19	May-20 May-21	28.25 26.52	37.97 36.52	-0.84 -0.84	-1.28 -1.28	27.42 25.69	36.68 35.24	31.76 30.16	5.06% 6.39%	33.36 32.09		1.80 1.93	8.43 8.56	1.09 1.09	3.29 3.75	1.80 1.93	5.90 7.24	48.78 48.97	50.45 49.47	1.67 0.50	3.429 1.029
Penelec	Oct-18	Residential	12	Jun-19	May-21	28.25	37.97	-0.84	-1.28	27.42	36.68	31.76	6.39%	33.79			9.05	1.09	3.29	1.93	6.34	50.26	50.61	0.35	0.699
Penelec	Jan-19	Commercial	24	Jun-19	May-21	27.49	38.23	-0.84	-1.28	26.66	36.94	31.47	5.06%	33.06			7.97	1.09	3.75	1.80		48.86	51.25	2.39	4.899
Penelec	Jan-19	Commercial	12	Jun-19	May-20	29.61	40.14	-0.84	-1.28	28.77	38.86	33.49	5.06%	35.19	4.70	1.80	8.43	1.09	3.29	1.80	5.90	50.61	52.40	1.79	3.549
Penelec	Jan-19	Residential	24	Jun-19	May-21	27.49	38.23	-0.84	-1.28	26.66	36.94	31.47	6.39%	33.48		1.93	8.56	1.09	3.75	1.93		50.37	51.74	1.37	2.739
Penelec	Jan-19	Residential	12	Jun-19	May-20	29.61	40.14	-0.84	-1.28	28.77	38.86	33.49	6.39%	35.63			9.05	1.09	3.29	1.93		52.11	52.63	0.52	0.999
Penelec	May-19	Commercial	12	Jun-19	May-20	28.40	37.67	-0.84	-1.28	27.56	36.39	31.70	5.06%	33.30			8.43	1.09	3.29	1.80	5.90	48.72	51.08	2.36	4.849
Penelec	May-19	Commercial	24 12	Jun-19 Jun-19	May-21	26.68 28.40	36.48 37.67	-0.84 -0.84	-1.28 -1.28	25.85 27.56	35.19 36.39	30.22 31.70	5.06% 6.39%	31.75 33.72			7.97 9.05	1.09 1.09	3.75 3.29	1.80 1.93	6.74 6.34	47.55 50.20	50.01 51.00	2.46 0.80	5.189 1.599
Penelec Penelec	May-19 May-19	Residential Residential	24	Jun-19 Jun-19	May-20 May-21	26.68	36.48	-0.84	-1.28	25.85	35.19	30.22	6.39%	32.16		1.93	8.56	1.09	3.75	1.93	7.24	49.04	50.45	1.41	2.889
Penelec	Oct-19	Commercial	12	Jun-20	May-21	22.38	31.36	-0.84	-1.28	21.55	30.07	25.54	5.06%	26.83			7.50	1.09	4.22	1.80		43.00	47.14	4.14	9.629
Penelec	Oct-19	Residential	12	Jun-20	May-21	22.38	31.36	-0.84	-1.28	21.55	30.07	25.54	6.39%	27.17	4.18	1.93	8.06	1.09	4.22	1.93	8.14	44.46	47.07	2.61	5.879
Penelec	Jan-20	Commercial	12	Jun-20	May-21	21.41	29.01	-0.84	-1.28	20.57	27.73	23.92	5.06%	25.13	4.18	1.80	7.50	1.09	4.22	1.80	7.58	41.30	45.82	4.52	10.939
Penelec	Jan-20	Residential	12	Jun-20	May-21	21.41	29.01	-0.84	-1.28	20.57	27.73	23.92	6.39%	25.45			8.06	1.09	4.22	1.93	8.14	42.74	45.63	2.89	6.779
Penelec	Apr-20	Commercial	12	Jun-20	May-21	21.18	28.47	-0.84	-1.28	20.35	27.19	23.55	5.06%	24.74		1.80	7.50	1.09	4.22	1.80	7.58	40.91	47.32	6.41	15.669
Penelec	Apr-20	Commercial	24 24	Jun-20	May-22	21.18 21.18	28.47 28.47	-0.84	-1.28	20.35	27.19 27.19	23.55	5.06%	24.74 25.05		1.80 1.93	9.82 10.54	1.09	4.97	1.80		44.57	49.45	4.88 2.75	10.949
Penelec Penelec	Apr-20 Apr-20	Residential Residential	24 12	Jun-20 Jun-20	May-22 May-21	21.18	28.47	-0.84 -0.84	-1.28 -1.28	20.35 20.35	27.19	23.55 23.55	6.39% 6.39%	25.05 25.05			8.06	1.09 1.09	4.97 4.22	1.93 1.93	9.59 8.14	46.27 42.34	49.02 46.85	4.51	5.949 10.659
Penelec	Nov-20	Commercial	24	Jun-20 Jun-21	May-21	24.57	32.98	-0.84	-1.28	23.73	31.70	27.46		28.85			10.17	1.09	5.44	1.93		42.34	54.01	4.51	8.319
Penelec	Nov-20	Commercial	12	Jun-21	May-22	24.91	33.48	-0.84	-1.28	24.07	32.19	27.87	5.06%	29.28			12.13	1.09	5.72	1.80		52.77	54.80	2.03	3.849
Penelec	Nov-20	Residential	24	Jun-21	May-23	24.57	32.98	-0.84	-1.28	23.73	31.70	27.46	6.39%	29.22		1.93	10.92	1.09	5.44	1.93	10.48	51.70	53.86	2.16	4.179
Penelec	Nov-20	Residential	12	Jun-21	May-22	24.91	33.48	-0.84	-1.28	24.07	32.19	27.87	6.39%	29.66		1.93	13.02	1.09	5.72	1.93	11.03	54.80	54.80	0.00	0.009
Penelec	Jan-21	Commercial	24	Jun-21	May-23	23.97	32.59	-0.84	-1.28	23.13	31.31	26.96	5.06%	28.33		1.80	10.17	1.09	5.44	1.80	9.76	49.34	53.55	4.21	8.539
Penelec	Jan-21	Commercial	12	Jun-21	May-22	24.19	32.94	-0.84	-1.28	23.35	31.66	27.24	5.06%	28.62			12.13	1.09	5.72	1.80		52.11	54.59	2.48	4.769
Penelec	Jan-21	Residential	24	Jun-21	May-23	23.97	32.59 32.94	-0.84 -0.84	-1.28	23.13	31.31 31.66	26.96	6.39%	28.69 28.98		1.93	10.92 13.02	1.09	5.44 5.72	1.93		51.17	54.59 55.53	3.42	6.689 2.599
Penelec Penelec	Jan-21 Apr-21	Residential Commercial	12 12	Jun-21	May-22 May-22	24.19 25.26	32.94 34.65	-0.84 -0.84	-1.28 -1.28	23.35 24.43	31.66 33.36	27.24 28.61	6.39% 5.06%	28.98 30.06			13.02 12.13	1.09 1.09	5.72 5.72	1.93 1.80	11.03 10.27	54.13 53.55	55.53 57.84	1.40 4.29	2.599 8.029
Penelec Penelec	Apr-21 Apr-21	Commercial	12 24	Jun-21 Jun-21	May-22 May-23	25.26	33.81	-0.84	-1.28 -1.28	24.43	33.36	28.61	5.06%	29.34		1.80	10.17	1.09	5.72	1.80	9.76	53.55	57.84 57.03	6.68	13.27
Penelec	Apr-21	Residential	24	Jun-21	May-23	24.70	33.81	-0.84	-1.28	23.87	32.53	27.92	6.39%	29.71		1.93	10.17	1.09	5.44	1.93	10.48	52.19	58.12	5.93	11.35
Penelec	Apr-21	Residential	12	Jun-21	May-22	25.26	34.65	-0.84	-1.28	24.43	33.36	28.61	6.39%	30.44			13.02	1.09	5.72	1.93		55.58	60.04	4.46	8.029
Penelec Aver					,																			2.15	4,639
enerec Aver	age																							2.15	4.0.

Default Service Full Requirements Auction Price to Expected Wholesale Market Costs: Penn Power, October 2016 - April 2021

												All 11				Ci4.	Adjusted	Ancillary		NUTC	A 41	Estimated			
				Delivery	Delivery	PJM West Forward		Zonal Premiu				All Hours Flat Load		Load Shape	-	Capacity	Capacity			NITS	Adjusted NITS Rate		Auction		
Utility	Auction Month	Daniel III	Dti	,			orward	Zonai Premiui PJM We:		7 4-1:			Load Shape		Capacity	Scaling	Price	Services Add-in	Average NITS Rate	Scaling Factor	Adder	No-Risk	Price	Estimated Risk	di Danasia
Utility	Auction Month	Product	Duration months	Period Start	Period End	Price \$/MWh		S/MWh	St	Zone Adjust		Price \$/MWh	Factor %	Price S/MWh	Price S/MWh	Factor	Adder \$/MWh	S/MWh	S/MWh	Factor	S/MWh	Price S/MWh	S/MWh	S/MWh	x Premium
			months				Peak		Peak	Off Peak	Peak	Sylvivoli	70	3/10/00//	Sylvivoli		Sylvivon	Sylviveri	Sylvivon		Syminer	şyiviviii	Sylvivon	3/14/44/11	/0
						[1]		[2]		[3]		[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]
Penn Power	Oct-16	Residential	12	Jun-17	May-18	27.13	39.65	-1.66	-1.85	25.47	37.80	31.20	6.16%	33.12	5.77	2.25	13.00	0.97	5.14	2.25	11.58	58.67	55.07	-3.60	-6.13%
Penn Power	Oct-16	Residential	24	Jun-17	May-19	26.33	38.36	-1.66	-1.85	24.67	36.51	30.17	6.16%	32.03	6.80	2.25	15.32	0.97	5.14	2.25			55.21	-4.68	-7.82%
Penn Power	Oct-16	Commercial	12	Jun-17	May-18	27.13	39.65	-1.66	-1.85	25.47	37.80	31.20	7.48%	33.53	5.77	2.31	13.36	0.97	5.14	2.31	11.91		64.37	4.60	7.70%
Penn Power	Oct-16	Commercial	24	Jun-17	May-19	26.33	38.36	-1.66	-1.85	24.67	36.51	30.17	7.48%	32.43	6.80	2.31	15.74	0.97	5.14	2.31	11.91	61.05	64.42	3.37	5.53%
Penn Power	Jan-17	Residential	12	Jun-17	May-18	28.17	40.21	-1.66	-1.85	26.51	38.36	32.01	6.16%	33.98	5.77	2.25	13.00	0.97	5.14	2.25	11.58	59.53	58.30	-1.23	-2.07%
Penn Power	Jan-17	Residential	24	Jun-17	May-19	27.08	38.75	-1.66	-1.85	25.42	36.90	30.75	6.16%	32.64	6.80	2.25	15.32	0.97	5.14	2.25	11.58	60.51	58.15	-2.36	-3.90%
Penn Power	Jan-17	Commercial	12	Jun-17	May-18	28.17	40.21	-1.66	-1.85	26.51	38.36	32.01	7.48%	34.41	5.77	2.31	13.36	0.97	5.14	2.31	11.91	60.64	64.13	3.49	5.75%
Penn Power	Jan-17	Commercial	24	Jun-17	May-19	27.08	38.75	-1.66	-1.85	25.42	36.90	30.75	7.48%	33.05	6.80	2.31	15.74	0.97	5.14	2.31	11.91	61.67	65.20	3.53	5.72%
Penn Power	Apr-17	Residential	12	Jun-17	May-18	28.79	40.63	-1.66	-1.85	27.13	38.77	32.54	6.16%	34.55	5.77	2.25	13.00	0.97	5.14	2.25	11.58	60.09	59.86	-0.23	-0.39%
Penn Power	Apr-17	Residential	24	Jun-17	May-19	27.66	38.81	-1.66	-1.85	26.00	36.96	31.09		33.01	6.80	2.25	15.32	0.97	5.14	2.25			57.94	-2.93	-4.82%
Penn Power	Apr-17	Commercial	12	Jun-17	May-18	28.79	40.63	-1.66	-1.85	27.13	38.77	32.54	7.48%	34.98	5.77	2.31	13.36	0.97	5.14	2.31	11.91		63.47	2.26	3.69%
Penn Power	Oct-17	Residential	12	Jun-17	May-18	29.46	38.44	-1.66	-1.85	27.80	36.59	31.88	6.16%	33.84	5.77	2.25	13.00	0.97	5.14	2.25			59.89	0.50	0.84%
Penn Power	Oct-17	Commercial	12	Jun-17	May-18	29.46	38.44	-1.66	-1.85	27.80	36.59	31.88		34.27	5.77	2.31	13.36	0.97	5.14	2.31			66.74	6.24	10.31%
Penn Power	Nov-17	Commercial	12	Jun-18	May-19	25.92	35.94	-0.41	-0.96	25.50	34.97	29.94	5.58%	31.61	7.83	1.88	14.70	1.09	6.24	1.88			66.74	7.62	12.89%
Penn Power	Nov-17	Residential	12	Jun-18	May-19	25.92	35.94	-0.41	-0.96	25.50	34.97	29.94	7.65%	32.23	7.83	2.21	17.33	1.09	6.24	2.21			59.89	-4.58	-7.11%
Penn Power	Jan-18	Commercial	12	Jun-18	May-19	26.28	35.87	-0.41	-0.96	25.87	34.90	30.10		31.78	7.83	1.88	14.70	1.09	6.24	1.88			64.34	5.05	8.53%
Penn Power	Jan-18	Residential	12	Jun-18	May-19	26.28	35.87	-0.41	-0.96	25.87	34.90	30.10		32.40	7.83	2.21	17.33	1.09	6.24	2.21	13.82		60.95	-3.69	-5.71%
Penn Power	Apr-18	Commercial	12	Jun-18	May-19	27.71	37.01	-0.41	-0.96	27.30	36.05	31.40		33.15 33.80	7.83 7.83	1.88	14.70 17.33	1.09	6.24	1.88	11.72 13.82		63.85 65.84	3.19	5.26%
Penn Power	Apr-18	Residential	12	Jun-18	May-19	27.71	37.01	-0.41	-0.96	27.30	36.05	31.40				2.21		1.09	6.24	2.21				-0.20	
Penn Power Penn Power	Oct-18 Oct-18	Residential	24 12	Jun-19 Jun-19	May-21	26.52 28.25	36.52 37.97	-0.41 -0.41	-0.96 -0.96	26.11 27.84	35.56 37.00	30.53 32.13	7.65% 7.65%	32.87 34.59	4.22 4.71	2.21 2.21	9.33 10.43	1.09 1.09	6.42 6.30	2.21 2.21	14.21 13.94		58.80 60.38	1.29 0.32	2.25% 0.54%
Penn Power	Jan-19	Residential Commercial	24	Jun-19	May-20 May-21	27.49	38.23	-0.41	-0.96	27.04	37.00	31.85	5.58%	33.63	4.71	1.88	7.91	1.09	6.42	1.88	12.05		62.64	7.96	14.55%
Penn Power	Jan-19	Commercial	12	Jun-19	May-21	29.61	40.14	-0.41	-0.96	29.19	39.18	33.87	5.58%	35.76	4.71	1.88	8.85	1.09	6.30	1.88	11.82		63.67	6.15	10.69%
Penn Power	Jan-19	Residential	24	Jun-19	May-20	27.49	38.23	-0.41	-0.96	27.08	37.27	31.85	7.65%	34.29	4.71	2.21	9.33	1.09	6.42	2.21	14.21		59.87	0.15	1.61%
Penn Power	Jan-19	Residential	12	Jun-19	May-21	29.61	40.14	-0.41	-0.96	29.19	39.18	33.87	7.65%	36.46	4.71	2.21	10.43	1.09	6.30	2.21	13.94		60.70	-1.23	-1.98%
Penn Power	May-19	Commercial	24	Jun-19	May-21	26.68	36.48	-0.41	-0.96	26.27	35.52	30.60	5.58%	32.31	4.22	1.88	7.91	1.09	6.42	1.88	12.05		60.87	7.50	14.06%
Penn Power	May-19	Commercial	12	Jun-19	May-20	28.40	37.67	-0.41	-0.96	27.99	36.71	32.07	5.58%	33.86	4.71	1.88	8.85	1.09	6.30	1.88			61.45	5.83	10.47%
Penn Power	May-19	Residential	24	Jun-19	May-21	26.68	36.48	-0.41	-0.96	26.27	35.52	30.60	7.65%	32.94	4.22	2.21	9.33	1.09	6.42	2.21	14.21		58.34	0.76	1.329
Penn Power	May-19	Residential	12	Jun-19	May-20	28.40	37.67	-0.41	-0.96	27.99	36.71	32.07	7.65%	34.53	4.71	2.21	10.43	1.09	6.30	2.21	13.94		60.19	0.20	0.33%
Penn Power	Oct-19	Residential	12	Jun-20	May-21	22.38	31.36	-0.41	-0.96	21.97	30.40	25.92	7.65%	27.90	3.72	2.21	8.23	1.09	6.54	2.21	14.48		55.17	3,47	6.719
Penn Power	Jan-20	Residential	12	Jun-20	May-21	21.41	29.01	-0.41	-0.96	21.00	28.05	24.30	7.65%	26.16	3.72	2.21	8.23	1.09	6.54	2.21	14.48	49.96	53.02	3.06	6.13%
Penn Power	Apr-20	Commercial	12	Jun-20	May-21	21.18	28.47	-0.41	-0.96	20.77	27.51	23.93		25.26	3.72	1.88	6.98	1.09	6.54	1.88	12.28	45.61	53.90	8.29	18.179
Penn Power	Apr-20	Commercial	24	Jun-20	May-22	21.18	28.47	-0.41	-0.96	20.77	27.51	23.93	5.58%	25.26	5.99	1.88	11.25	1.09	7.06	1.88	13.26	50.85	58.90	8.05	15.82%
Penn Power	Apr-20	Residential	12	Jun-20	May-21	21.18	28.47	-0.41	-0.96	20.77	27.51	23.93	7.65%	25.76	3.72	2.21	8.23	1.09	6.54	2.21	14.48	49.56	52.36	2.80	5.65%
Penn Power	Apr-20	Residential	24	Jun-20	May-22	21.18	28.47	-0.41	-0.96	20.77	27.51	23.93	7.65%	25.76	5.99	2.21	13.26	1.09	7.06	2.21	15.63	55.74	57.09	1.35	2.42%
Penn Power	Nov-20	Residential	12	Jun-21	May-22	24.91	33.48	-0.41	-0.96	24.49	32.52	28.25	7.65%	30.41	8.27	2.21	18.30	1.09	7.58	2.21	16.78	66.57	63.34	-3.23	-4.86%
Penn Power	Nov-20	Residential	24	Jun-21	May-23	24.57	32.98	-0.41	-0.96	24.15	32.02	27.84	7.65%	29.97	5.33	2.21	11.79	1.09	7.60	2.21	16.83		61.48	1.81	3.03%
Penn Power	Jan-21	Commercial	12	Jun-21	May-22	24.19	32.94	-0.41	-0.96	23.78	31.98	27.62	5.58%	29.16		1.88	15.52	1.09	7.58	1.88			63.34	3.35	5.589
Penn Power	Jan-21	Residential	24	Jun-21	May-23	23.97	32.59	-0.41	-0.96	23.56	31.63	27.34	7.65%	29.43	5.33	2.21	11.79	1.09	7.60	2.21	16.83		62.15	3.01	5.109
Penn Power	Jan-21	Residential	12	Jun-21	May-22	24.19	32.94	-0.41	-0.96	23.78	31.98	27.62	7.65%	29.73	8.27	2.21	18.30	1.09	7.58	2.21	16.78		63.98	-1.91	-2.90%
Penn Power	Apr-21	Commercial	24	Jun-21	May-23	24.70	33.81	-0.41	-0.96	24.29	32.85	28.30	5.58%	29.88	5.33	1.88	10.00	1.09	7.60	1.88			64.80	9.56	17.319
Penn Power	Apr-21	Commercial	12	Jun-21	May-22	25.26	34.65	-0.41	-0.96	24.85	33.68	28.99		30.60	8.27	1.88	15.52	1.09	7.58	1.88			67.22	5.78	9.419
Penn Power	Apr-21	Residential	12	Jun-21	May-22	25.26	34.65	-0.41	-0.96	24.85	33.68	28.99	7.65%	31.20	8.27	2.21	18.30	1.09	7.58	2.21	16.78		69.56	2.19	3.269
Penn Power	Apr-21	Residential	24	Jun-21	May-23	24.70	33.81	-0.41	-0.96	24.29	32.85	28.30	7.65%	30.46	5.33	2.21	11.79	1.09	7.60	2.21	16.83	60.17	64.92	4.75	7.89%
Penn Power A																								2.24	4.10%

Default Service Full Requirements Auction Price to Expected Wholesale Market Costs: West Penn Power, October 2016 - April 2021

West Penn Power	Oct-16 Oct-16			Period Start	Period End	Price \$/MWh	rward	Zonal Premiu PJM We \$/MWh	st	Zone Adjuste	1	All Hours Flat Load L Price \$/MWh		Load Shape Adjusted Price \$/MWh	Capacity Price \$/MWh	Scaling Factor	Price Adder \$/MWh	Ancillary Services Add-in \$/MWh	Average NITS Rate \$/MWh	NITS Scaling Factor	Adjusted NITS Rate Adder \$/MWh	No-Risk Price \$/MWh	Auction Price \$/MWh	Estimated Risk	k Premium %
West Penn Power						Off Peak	Peak	Off Peak	Peak	Off Peak	Peak	[4]	[5]	[6]	[7]	[8]	[9]	[10]	[11]	[12]	[13]	[14]	[15]	[16]	[17]
** CSC L CHILL L OME!		Residential	12	Jun-17	May-18	27.13	39.65	-0.36	-0.50	26.76	39.15	32.52	4.88%	34.11	5.78	2.16	12.50	0.97	1.76	2.16	3.80	51.38	53.33		3.80%
West Penn Power		Residential	24	Jun-17	May-19	26.33	38.36	-0.36	-0.50	25.97	37.86	31.49	4.88%	33.03	6.80	2.16	14.72	0.97	1.76	2.16	3.80	52.52	53.02		0.95%
West Penn Power	Oct-16	Commercial	12	Jun-17	May-18	27.13	39.65	-0.36	-0.50	26.76	39.15	32.52	1.82%	33.11	5.78	2.20	12.71	0.97	1.76	2.20	3.87	50.66	52.79		4.20%
West Penn Power	Oct-16	Commercial	24	Jun-17	May-19	26.33	38.36	-0.36	-0.50	25.97	37.86	31.49	1.82%	32.06	6.80	2.20	14.98	0.97	1.76	2.20	3.87	51.88	52.91	1.03	1.99%
West Penn Power	Jan-17	Residential	12	Jun-17	May-18	28.17	40.21	-0.36	-0.50	27.80	39.71	33.33	4.88%	34.96	5.78	2.16	12.50	0.97	1.76	2.16	3.80	52.23	54.44		4.23%
West Penn Power	Jan-17	Residential	24	Jun-17	May-19	27.08	38.75	-0.36	-0.50	26.71	38.25	32.07	4.88%	33.64	6.80	2.16	14.72	0.97	1.76	2.16	3.80	53.13	54.14	1.01	1.90%
West Penn Power	Jan-17	Commercial	12	Jun-17	May-18	28.17	40.21	-0.36	-0.50	27.80	39.71	33.33	1.82%	33.94	5.78	2.20	12.71	0.97	1.76	2.20	3.87	51.49	54.11	2.62	5.08%
West Penn Power	Jan-17	Commercial	24 12	Jun-17	May-19	27.08 28.79	38.75 40.63	-0.36 -0.36	-0.50 -0.50	26.71 28.43	38.25 40.13	32.07 33.86	1.82% 4.88%	32.66 35.52	6.80 5.78	2.20	14.98 12.50	0.97 0.97	1.76	2.20	3.87 3.80	52.47 52.79	53.64 55.63		2.23% 5.39%
West Penn Power West Penn Power	Apr-17 Apr-17	Residential Residential	24	Jun-17 Jun-17	May-18 May-19	27.66	38.81	-0.36	-0.50	27.30	38.31	32.41	4.88%	34.00	6.80	2.16 2.16	14.72	0.97	1.76 1.76	2.16 2.16		53.49	54.27	0.78	1.46%
West Penn Power	Apr-17	Commercial	12	Jun-17	May-19	28.79	40.63	-0.36	-0.50	28.43	40.13	33.86	1.82%	34.48	5.78	2.10	12.71	0.97	1.76	2.10	3.87	52.03	52.89		1.65%
West Penn Power	Apr-17	Commercial	24	Jun-17	May-19	27.66	38.81	-0.36	-0.50	27.30	38.31	32.41	1.82%	33.00	6.80	2.20	14.98	0.97	1.76	2.20	3.87	52.82	53.11	0.29	0.55%
West Penn Power	Oct-17	Residential	12	Jun-17	May-18	29.46	38.44	-0.36	-0.50	29.10	37.94	33.20	4.88%	34.82	5.78	2.16	12.50	0.97	1.76	2.16		52.09	52.16		0.13%
West Penn Power	Oct-17	Commercial	12	Jun-17	May-18	29.46	38.44	-0.36	-0.50	29.10	37.94	33.20	1.82%	33.81	5.78	2.20	12.71	0.97	1.76	2.20	3.87	51.36	51.95	0.59	1.15%
West Penn Power	Nov-17	Commercial	12	Jun-18	May-19	25.92	35.94	-0.01	-0.06	25.90	35.87	30.57	5.34%	32.20	7.83	1.82	14.26	1.09	1.76	1.82	3.20	50.76	51.95	1.19	2.35%
West Penn Power	Nov-17	Residential	12	Jun-18	May-19	25.92	35.94	-0.01	-0.06	25.90	35.87	30.57	8.12%	33.05	7.83	2.16	16.93	1.09	1.76	2.16	3.80	54.88	52.16		-4.95%
West Penn Power	Jan-18	Commercial	12	Jun-18	May-19	26.28	35.87	-0.01	-0.06	26.26	35.80	30.73	5.34%	32.37	7.83	1.82	14.26	1.09	1.76	1.82	3.20	50.93	51.90		1.91%
West Penn Power	Jan-18	Residential	12	Jun-18	May-19	26.28	35.87	-0.01	-0.06	26.26	35.80	30.73	8.12%	33.22	7.83	2.16	16.93	1.09	1.76	2.16	3.80	55.05	52.62		-4.41% 5.55%
West Penn Power West Penn Power	Apr-18 Apr-18	Commercial	12 12	Jun-18 Jun-18	May-19 May-19	27.71 27.71	37.01 37.01	-0.01 -0.01	-0.06 -0.06	27.70 27.70	36.95 36.95	32.03 32.03	5.34% 8.12%	33.74 34.63	7.83 7.83	1.82 2.16	14.26 16.93	1.09 1.09	1.76 1.76	1.82 2.16	3.20 3.80	52.30 56.45	55.20 54.92		-2.72%
West Penn Power	Oct-18	Residential Commercial	24	Jun-19	May-15	26.52	36.52	-0.01	-0.06	26.51	36.46	31.17	5.34%	32.83	4.21	1.82	7.67	1.09	1.64	1.82	2.98	44.57	48.00		7.70%
West Penn Power	Oct-18	Commercial	12	Jun-19	May-20	28.25	37.97	-0.01	-0.06	28.24	37.90	32.76	5.34%	34.51	4.70	1.82	8.56	1.09	1.64	1.82	2.99	47.15	49.55		5.10%
West Penn Power	Oct-18	Residential	24	Jun-19	May-21	26.52	36.52	-0.01	-0.06	26.51	36.46	31.17	8.12%	33.70	4.21	2.16	9.10	1.09	1.64	2.16	3.54	47.43	47.35		-0.16%
West Penn Power	Oct-18	Residential	12	Jun-19	May-20	28.25	37.97	-0.01	-0.06	28.24	37.90	32.76	8.12%	35.42	4.70	2.16	10.16	1.09	1.64	2.16		50.22	48.96	-1.26	-2.50%
West Penn Power	Jan-19	Commercial	24	Jun-19	May-21	27.49	38.23	-0.01	-0.06	27.48	38.17	32.48	5.34%	34.22	4.21	1.82	7.67	1.09	1.64	1.82	2.98	45.95	49.64	3.69	8.02%
West Penn Power	Jan-19	Commercial	12	Jun-19	May-20	29.61	40.14	-0.01	-0.06	29.59	40.08	34.50	5.34%	36.34	4.70	1.82	8.56	1.09	1.64	1.82	2.99	48.98	50.75		3.62%
West Penn Power	Jan-19	Residential	12	Jun-19	May-20	29.61	40.14	-0.01	-0.06	29.59	40.08	34.50	8.12%	37.30	4.70	2.16	10.16	1.09	1.64	2.16	3.55	52.10	51.03		-2.05%
West Penn Power	Jan-19	Residential	24	Jun-19	May-21	27.49	38.23	-0.01	-0.06	27.48	38.17	32.48	8.12%	35.12	4.21	2.16	9.10	1.09	1.64	2.16	3.54	48.85	49.40		1.13%
West Penn Power	May-19	Commercial	12 24	Jun-19	May-20	28.40 26.68	37.67 36.48	-0.01 -0.01	-0.06 -0.06	28.39 26.67	37.61	32.70 31.23	5.34% 5.34%	34.45 32.90	4.70 4.21	1.82 1.82	8.56 7.67	1.09 1.09	1.64 1.64	1.82 1.82	2.99 2.98	47.08 44.64	48.71 47.54	1.63 2.90	3.45% 6.50%
West Penn Power West Penn Power	May-19 May-19	Commercial Residential	24	Jun-19 Jun-19	May-21 May-21	26.68	36.48	-0.01	-0.06	26.67	36.41 36.41	31.23	8.12%	33.77	4.21	2.16	9.10	1.09	1.64	2.16	3.54	47.50	47.54	0.11	0.23%
West Penn Power	May-19	Residential	12	Jun-19	May-21	28.40	37.67	-0.01	-0.06	28.39	37.61	32.70	8.12%	35.36	4.70	2.16	10.16	1.09	1.64	2.16		50.15	49.17	-0.98	-1.96%
West Penn Power	Oct-19	Commercial	12	Jun-20	May-21	22.38	31.36	-0.01	-0.06	22.37	31.29	26.55	5.34%	27.97	3.72	1.82	6.77	1.09	1.64	1.82	2.98	38.81	43.13		11.14%
West Penn Power	Oct-19	Residential	12	Jun-20	May-21	22.38	31.36	-0.01	-0.06	22.37	31.29	26.55	8.12%	28.70	3.72	2.16	8.04	1.09	1.64	2.16	3.54	41.37	44.10	2.73	6.60%
West Penn Power	Jan-20	Commercial	12	Jun-20	May-21	21.41	29.01	-0.01	-0.06	21.39	28.95	24.93	5.34%	26.26	3.72	1.82	6.77	1.09	1.64	1.82	2.98	37.10	40.41	3.31	8.92%
West Penn Power	Jan-20	Residential	12	Jun-20	May-21	21.41	29.01	-0.01	-0.06	21.39	28.95	24.93	8.12%	26.95	3.72	2.16	8.04	1.09	1.64	2.16	3.54	39.62	41.11	1.49	3.76%
West Penn Power	Jan-20	Residential	24	Jun-20	May-22	21.41	29.01	-0.01	-0.06	21.39	28.95	24.93	8.12%	26.95	5.24	2.16	11.32	1.09	1.64	2.16	3.54	42.91	44.07	1.16	2.71%
West Penn Power	Apr-20	Commercial	12	Jun-20	May-21	21.18	28.47	-0.01	-0.06	21.17	28.41	24.56	5.34%	25.87	3.72	1.82	6.77	1.09	1.64	1.82	2.98	36.71	40.78		11.09%
West Penn Power	Apr-20	Commercial	24	Jun-20	May-22	21.18	28.47	-0.01	-0.06	21.17	28.41	24.56	5.34%	25.87	5.24	1.82	9.54	1.09	1.64	1.82	2.98	39.48	44.88		13.68% 7.89%
West Penn Power	Apr-20	Residential	12 24	Jun-20	May-21 May-22	21.18	28.47 28.47	-0.01 -0.01	-0.06 -0.06	21.17	28.41	24.56 24.56	8.12% 8.12%	26.55 26.55	3.72 5.24	2.16	8.04 11.32	1.09 1.09	1.64	2.16	3.54 3.54	39.22 42.51	42.31 45.39	3.09 2.88	7.89% 6.79%
West Penn Power West Penn Power	Apr-20 Nov-20	Residential Commercial	24	Jun-20 Jun-21	May-22 May-23	21.18 24.57	32.98	-0.01	-0.06	21.17 24.55	28.41 32.92	28.47	5.34%	26.55	4.57	2.16 1.82	8.32	1.09	1.64 1.61	2.16 1.82	2.94	42.51	45.39 45.01	2.88	6.29%
West Penn Power	Nov-20	Commercial	12	Jun-21	May-22	24.91	33.48	-0.01	-0.06	24.89	33.42	28.88	5.34%	30.42	6.76	1.82	12.30	1.09	1.64	1.82	2.99	46.81	45.88		-1.98%
West Penn Power	Nov-20	Residential	12	Jun-21	May-22	24.91	33.48	-0.01	-0.06	24.89	33.42	28.88	8.12%	31.23	6.76	2.16	14.61	1.09	1.64	2.16	3.55	50.47	49.48		-1.96%
West Penn Power	Nov-20	Residential	24	Jun-21	May-23	24.57	32.98	-0.01	-0.06	24.55	32.92	28.47	8.12%	30.78	4.57	2.16	9.88	1.09	1.61	2.16	3.49	45.25	47.76		5.56%
West Penn Power	Jan-21	Commercial	24	Jun-21	May-23	23.97	32.59	-0.01	-0.06	23.95	32.53	27.97	5.34%	29.46	4.57	1.82	8.32	1.09	1.61	1.82	2.94	41.82	44.98	3.16	7.56%
West Penn Power	Jan-21	Commercial	12	Jun-21	May-22	24.19	32.94	-0.01	-0.06	24.18	32.88	28.25	5.34%	29.76	6.76	1.82	12.30	1.09	1.64	1.82	2.99	46.14	46.25		0.24%
West Penn Power	Jan-21	Residential	24	Jun-21	May-23	23.97	32.59	-0.01	-0.06	23.95	32.53	27.97	8.12%	30.24	4.57	2.16	9.88	1.09	1.61	2.16	3.49	44.71	48.29		8.02%
West Penn Power	Jan-21	Residential	12	Jun-21	May-22	24.19	32.94	-0.01	-0.06	24.18	32.88	28.25	8.12%	30.54	6.76	2.16	14.61	1.09	1.64	2.16		49.79	49.82		0.07%
West Penn Power	Apr-21	Commercial	24	Jun-21	May-23	24.70	33.81	-0.01	-0.06	24.69	33.75	28.93	5.34%	30.48	4.57	1.82	8.32	1.09	1.61	1.82	2.94	42.83	47.76		11.50%
West Penn Power	Apr-21	Commercial	12	Jun-21	May-22	25.26	34.65 33.81	-0.01	-0.06	25.25	34.58	29.62 28.93	5.34% 8.12%	31.20	6.76 4.57	1.82	12.30 9.88	1.09	1.64	1.82	2.99 3.49	47.58	49.38	1.80	3.78% 10.90%
West Penn Power West Penn Power	Apr-21 Apr-21	Residential Residential	24 12	Jun-21 Jun-21	May-23 May-22	24.70 25.26	34.65	-0.01 -0.01	-0.06 -0.06	24.69 25.25	33.75 34.58	28.93	8.12% 8.12%	31.28 32.02	6.76	2.16 2.16	9.88 14.61	1.09	1.61 1.64	2.16 2.16	3.49	45.74 51.26	50.73 53.16	4.99 1.90	3.70%
		nesidential	12	Juli-21	ividy=22	23.20	34.03	-0.01	-0.06	23.23	34.38	25.02	0.1270	32.02	0.76	2.10	14.01	1.09	1.04	2.10	5.55	31.20	33.10		
West Penn Power Aver	age																							1.54	3.54%

- Only includes 12 and 24 month auctions.
 [1]: Source: S&P Capital IQ. PJM West Hub futures prices were averaged over last five trading days prior to the auction, and over all contract months in the delivery period.
 [2]: Zonal premiums were calculated by taking the average difference LMP between PJM West Hub and the zone of the utility.

 - | 2| 2 onal premiums were calculated by taking the average difference LMP between PJM West Hub and the zone of the utility.
 | 3| 1| + 2|
 | 4| Weighted average of peak and off-peak zone adjusted prices.
 | 5| Percentage difference between the straight average LMP and load-weighted average LMP. Load-weighted average LMP based on hourly historical load for non-shopping customers in the relevant customer class.
 | 6| 4| x(1+5)|
 | 7| Capacity price increased by the installed reserve margin for the delivery period.
 | 8| Ratio between peak and average load for 2016 and 2020.
 | 9| 7| x(8)|
 | 9| Marco between peak and average load for 2016 and 2020.
 | 9| William of ancillary service costs for 2016 and 2020.
 | 10| Sum of ancillary service costs for 2016 and 2020.
 | 11| NITS daily rate converted to an average hourly rate. For future years with unknown NITS rates, The Brattle Group has applied 2022 NITS rates based on their own assumption.
 | 13| Ratio between peak and average load for 2016 and 2020.
 | 13| (1| x(2) | 1| x(1) | 1| x(3) | 1| x(4) | x(6) | x(6)

 - [13]; [11] \(\forall \) [14] [16]; [16] + [10] + [10] + [13] [15]; Announced auction price from First Energy website. [16]: [15] [14] [17]; [16] [17] [18]

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

METROPOLITAN EDISON COMPANY
Docket No. P-2021
PENNSYLVANIA ELECTRIC COMPANY
Docket No. P-2021
PENNSYLVANIA POWER COMPANY
Docket No. P-2021
WEST PENN POWER COMPANY
Docket No. P-2021
DEFAULT SERVICE PROGRAMS
June 1, 2023 to May 31, 2027

Direct Testimony Of Patricia M. Larkin

List of Topics Addressed

Rate Design and Cost Recovery Time Of Use Default Service Rider Other Related Matters

TABLE OF CONTENTS

		Page
I.	INTRODUCTION AND BACKGROUND	1
II.	RATE DESIGN AND COST RECOVERY	2
III.	TIME-OF-USE DEFAULT SERVICE RIDERS	13
IV.	OTHER RELATED MATTERS	22
V.	CONCLUSION	22

1	DIRECT TESTIMONY	
2	\mathbf{OF}	
3	PATRICIA M. LARKIN	

4 I. <u>INTRODUCTION AND BACKGROUND</u>

- 5 Q. Please state your name and business address.
- 6 A. My name is Patricia M. Larkin, and my business address is 2800 Pottsville Pike, Reading,
- 7 Pennsylvania 19605.

8 Q. By whom are you employed and in what capacity?

9 A. I am employed by FirstEnergy Service Company as an Analyst – Rates and Regulatory 10 Affairs - Pennsylvania. The Pennsylvania Rates Department provides regulatory support 11 for each of FirstEnergy Corp.'s ("FirstEnergy") wholly-owned Pennsylvania distribution 12 operating companies, including Metropolitan Edison Company ("Met-Ed"), Pennsylvania Electric Company ("Penelec"), Pennsylvania Power Company ("Penn Power") and West 13 Penn Power Company ("West Penn") (individually, a "Company" and in any combination, 14 15 the "Companies"). I am responsible to the Director - Rates and Regulatory Affairs -16 Pennsylvania for the development, coordination, preparation and presentation of the Companies' accounting and financial data in their rate-related matters before the 17 18 Pennsylvania Public Utility Commission ("Commission") and New York State Public 19 Service Commission. I am also responsible for tariff interpretation, tariff filings, and the 20 design and development of retail electric rates.

21 Q. What is your educational background?

A. I have a Bachelor of Science degree in Accounting from DeSales University, and a Master of Business Administration degree from Alvernia University. I have over twenty years of

- 1 experience with FirstEnergy. My educational background and work experience are more
- 2 fully described in Appendix A to this statement.
- 3 Q. Have you ever testified before the Commission?
- 4 A. Yes, I have testified before the Commission in other rate-related matters.
- 5 Q. On whose behalf are you testifying in this proceeding?
- 6 A. I am testifying on behalf of Met-Ed, Penelec, Penn Power and West Penn. My testimony
- 7 equally applies to all of the Companies, unless otherwise stated.
- 8 Q. What is the purpose of your direct testimony?
- 9 A. My testimony will describe the following elements of the Companies' proposed sixth
- Default Service Programs ("DSPs" and collectively, "DSP VI") that are the subject of this
- proceeding: (1) rate design and cost recovery; (2) Time of Use Default Service Rate
- 12 ("TOU") Riders; and (3) other related matters.
- 13 Q. Have you prepared any exhibits to accompany your testimony?
- 14 A. Yes. Met-Ed/Penelec/Penn Power/West Penn Exhibits PML-1 through PML-31 were
- prepared by me or under my supervision and are described in detail later in my testimony.
- 16 II. RATE DESIGN AND COST RECOVERY
- 17 Q. As part of DSP VI, are the Companies proposing any changes to their existing retail
- 18 customer classifications residential, commercial and industrial?
- 19 A. No. The Companies will continue to procure default service supplies separately for each
- of the three retail customer classes. The rate schedules that comprise each customer class

in the proposed DSPs are consistent with the rate schedules approved as part of the Companies' current DSPs (collectively, "DSP V").¹

A.

Q. Please provide an overview of the Companies' current default service rate design.

The default service rates for the Companies' residential and commercial customer classes consist of a single flat per kilowatt hour ("kWh") energy charge, which is charged through each Company's Price to Compare ("PTC") Default Service Rate Rider ("PTC Rider"). Under the PTC Riders approved by the Commission in DSP V, the Companies currently project the cost of generation supply for residential and commercial default service customers with a demand less than 100 kW on a quarterly basis. Those projection periods are synchronized with PJM Interconnection, L.L.C.'s ("PJM") planning year (June 1-May 31), corresponding to the quarters of June to August, September to November, December to February, and March to May. This projection forms the basis of the PTC that customers may use to evaluate competitive generation service offerings by electric generation suppliers ("EGSs").

The Companies' industrial customer classes' default service rates are based upon the PJM real-time hourly locational marginal price ("LMP") for each Company's respective PJM-designated delivery zone, plus associated costs incurred to provide hourly-priced service. The industrial customer class default service rates are charged through the Hourly Pricing

¹ See Joint Petition of Metro. Edison Co., Pennsylvania Elec. Co., Pennsylvania Power Co., and West Penn Power Co. for Approval of their Default Serv. Programs for the Period Beginning June 1, 2019 through May 31, 2023, Docket Nos. P-2017-2637855 et al. (Opinion and Order entered Sept. 4, 2018) ("September 2018 Order"). In the September 2018 Order, the Commission approved a partial settlement of the Companies' DSP V proceeding ("DSP V Settlement") and resolved the remaining contested issues, including the residential procurement schedule, continuation of the Customer Referral Program ("CRP"), and shopping by customers enrolled in the Companies' Customer Assistance Program ("CAP") for products priced above the Price to Compare rate. On February 28, 2019, the Commission entered a Final Order ("February 2019 Order" and together with the September 2018 Order, the "DSP V Orders") adopting rules and procedures for the CAP shopping program approved in the September 2018 Order and revising the Companies' CRP scripts.

- 1 ("HP") Default Service Rate Riders ("HP Riders") in the Companies' retail electric service 2 tariffs.
- Q. What costs do the Companies recover under the default service rates currently inplace?
- The default service rates currently recover: (1) generation costs, certain transmission costs, ancillary service costs, and costs to comply with Alternative Energy Portfolio Standards ("AEPS") requirements, as described by the Companies' witness James H. Catanach in Met-Ed/Penelec/Penn Power/West Penn Statement No. 2; (2) supply management and administrative costs, as contemplated by 52 Pa. Code § 69.1808; (3) applicable taxes; and (4) a charge or credit, or "E-factor," for quarterly reconciliation of any under or overcollection of actual revenues against actual costs for each class from prior rate periods.
- Q. Are the Companies proposing to maintain their existing default service rate design in DSP VI?

A. Generally, the Companies are adopting the same rate design employed in DSP V, which the Commission has previously approved as consistent with the Pennsylvania Public Utility Code ("Code") and the Commission's default service regulations. The only changes the Companies are proposing for DSP VI are: (1) default service rate changes for the residential and commercial classes under the PTC Riders every six months rather than every three months; (2) reconciliation of the over/undercollection component of the PTC and HP Riders on a semi-annual basis instead of a quarterly basis; and (3) limited tariff revisions to align their PTC and HP Riders with the DSP VI procurement plan, including recovery of costs associated with the proposed solar power purchase agreements ("PPAs"), described in detail by Mr. Catanach.

Q. As requested by the Commission's January 2020 Secretarial Letter,² did the Companies consider a six-month, instead of three-month, adjustment schedule for default service rates based on the history of the Companies' PTCs?

Yes. The Companies examined their PTCs for the residential and commercial classes since January 1, 2011 and the potential benefits presented by a six-month default service supply price projection period. Met-Ed/Penelec/Penn Power/West Penn Exhibit PML-1 presents each Company's PTC history by quarter and procurement class. Based on that analysis, the Companies found that semi-annual default service rate adjustments under the PTC Riders will benefit customers and should be adopted for the following reasons.

First, semi-annual price changes will align with the Companies' proposed semi-annual procurements. As Mr. Catanach explains in his testimony, the Companies are proposing to eliminate the three-month fixed-price full requirements product for the commercial class to provide consistency in the auction dates across the residential and commercial classes. Second, changing rates less frequently offers customers more price certainty and stability.³ Third, semi-annual rate changes require fewer auctions, potentially lowering the administrative fees passed on to customers through the PTC and HP Riders. Finally, semi-annual rates create efficiencies for both the Companies in the calculation of rates and Commission staff and other parties in the review of rates. In sum, the Companies found that moving to semi-annual rate adjustments appropriately balances the responsiveness of the PTC to current market conditions and provides price stability benefits for customers.

A.

² Investigation into Default Serv. and PJM Interconnection, LLC Settlement Reforms, Docket No. M-2019-3007101 (Secretarial Letter issued Jan. 23, 2020) ("January 2020 Secretarial Letter") at 8-9.

³ Drs. James D. Reitzes and Nicholas E. Powers provide an assessment of the price stability benefits of a 6-month PTC change compared to a 3-month PTC change for the residential and commercial classes in Met-Ed/Penelec/Penn Power/West Penn Statement No. 4.

1 Q. What are the proposed effective dates for the semi-annual PTC Rider rates?

- 2 A. The Companies are proposing to offer rates effective June 1 and December 1. These periods were chosen to align with the DSP June 1 start date.
- Q. Please explain what an over/undercollection is with respect to the Companies' PTC
 and HP Riders.
- 6 As I mentioned earlier in my testimony, the Companies compare their actual default service A. 7 supply costs to the billed revenue they receive from customers under the PTC and HP 8 Riders for default service. Over/under recoveries are driven by two principal factors: the 9 difference between projected and actual supply costs and billing cycle lag. Customer 10 billing cycles are not perfectly aligned with the actual incurrence of generation supply 11 costs. Because customers are billed at different times throughout the month, the revenue 12 from the month reflects sales from the subject month and the prior month that may have 13 experienced higher or lower usage. This billing cycle lag results in a timing difference 14 between revenue and expense that can produce significant fluctuations in the PTC that are 15 not directly related to the underlying cost of default service supply. Default service supply 16 costs are the largest component of the PTC that may be used by shopping customers and 17 default service customers to evaluate competitive offers. Therefore, to the extent possible, 18 the PTC and HP Riders should generally reflect projected costs and not increases or 19 decreases from prior periods.
- Q. Are the Companies proposing any modifications to their existing reconciliation mechanisms to mitigate fluctuations in the PTC caused by over/under collections?
- A. Yes. The Companies currently reconcile the E-Factor of the PTC and HP Riders on a quarterly basis. Modifications are necessary to reconcile the over/under collections for all

classes on a semi-annual basis rather than a quarterly basis. To implement a semi-annual reconciliation, the Companies propose a transition period that would include over/under collections experienced from January 1, 2023 through March 31, 2023 to be recovered over the six-month period from June 1, 2023 through November 30, 2023. Thereafter, the over/under collections experienced from October 1 to March 31 would be recovered during the June-November period of the same year, while the over/under collections experienced from April 1 to September 30 would be recovered during the December 1 to May 31 period.

By using a semi-annual schedule for reconciliation of "over or under" amounts instead of a quarterly schedule, fluctuations in default service prices will be smoothed out as shown on Met-Ed/Penelec/Penn Power/West Penn Exhibit PML-2 and clearer pricing signals will be sent to both customers and competitive suppliers. In addition, rates under the PTC and HP Riders that more closely track the cost of default service supply will provide customers

A.

Q. Are the Companies proposing any other changes to their PTC and HP Riders?

with improved information for their shopping decisions.

Yes. As explained by Mr. Catanach, the Companies are proposing to enter into long-term PPAs to continue to support the development of solar projects in Pennsylvania. The solar alternative energy credits ("SPAECs") associated with the PPAs would be used to help satisfy the solar photovoltaic AEPS requirements of serving residential default service customers. The energy produced by the selected project(s) will be paired with spot purchases to satisfy a fixed quantity of residential default service load. The Companies are proposing revisions to the definition of default service costs (" DS_{Exp2} ") in their PTC Riders to include costs associated with the solar PPAs.

- Q. Are you sponsoring any exhibits that show the proposed changes to the Companies' tariffs necessary to implement these changes to the PTC and HP Riders?
- A. Yes. Met-Ed/Penelec/Penn Power/West Penn Exhibits PML-3 through PML-6 reflect changes to the tariff definitions in each of the Companies' retail electric service tariffs; Met-Ed/Penelec/Penn Power/West Penn Exhibits PML-7 through PML-10 show the changes to the Companies' PTC Riders; and Met-Ed/Penelec/Penn Power/West Penn Exhibits PML-11 through PML-15 present the modifications to the Companies' HP Riders.
- 8 Q. Are the Companies requesting a waiver of the Commission's regulations to 9 implement a semi-annual adjustment of default service rates under the PTC Riders? Yes. Pursuant to the Commission's regulations (52 Pa. Code § 54.187(i)), default service 10 A. 11 rates shall be adjusted on a quarterly basis, or more frequently, for customers with load 12 requirements between 25 and 500 kilowatts ("kW"). The Commission has approved six-13 month periods for adjustment of rates for customers that are not receiving hourly-priced default service for other electric distribution companies ("EDCs").4 Therefore, the 14 15 Companies request a waiver of these regulations, to the extent necessary, to implement a

semi-annual rate adjustment schedule for the commercial class under the PTC Riders.

16

⁴ See, e.g., Petition of Duquesne Light Co. for Approval of Its Default Serv. Program for the Period from June 1, 2021 through May 31, 2025, Docket No. P-2020-3019522 (Jan 14, 2021) ("DLC DSP IX Order") at 15-16; Petition of PPL Elec. Utils. Corp. for Approval of Its Default Serv. Program for the Period from June 1, 2021 through May 31, 2025, Docket No. P-2020-3019356 (Dec. 17, 2020) ("PPL DSP V Order") at 13, 153.

Q. Are the Companies also seeking a waiver of the Commission's regulations to implement semi-annual reconciliation of the over/undercollection component of the

PTC and HP Riders?

A.

Yes. As I explained previously, the Commission's regulations (52 Pa. Code § 54.187(i)) require adjustment of default service rates on a quarterly basis, or more frequently, for commercial customers with load requirements up to 500 kW. Those regulations (52 Pa. Code § 54.187(j)) also provide that default service rates shall be adjusted monthly, or more frequently for customers with load requirements equal to or greater than 500 kW. However, the Commission has recognized that more extended periods for over/undercollection reconciliation may help keep default service rates more market reflective,⁵ and the Commission has granted other EDCs a waiver from these regulations in recent default service proceedings to implement a semi-annual E-Factor reconciliation for commercial and industrial customers.⁶ The Companies request a waiver of these regulations, to the extent necessary, to implement a semi-annual reconciliation schedule for all customer classes throughout DSP VI to mitigate potential default service rate volatility due to billing cycle lag.

[.]

⁵ See Investigation of Pennsylvania's Retail Elec. Mkt.: Recommendations Regarding Upcoming Default Serv. Plans, Docket No. I-2011-2237952 (Order entered Dec. 16, 2011) at 54-55.

⁶ See, e.g., Petition of PECO Energy Co. for Approval of Its Default Serv. Program for the Period from June 1, 2021 through May 31, 2025, Docket No. P-2020-3019290 (Opinion and Order entered Dec. 3, 2020) ("PECO DSP V Order") at 66.

- Q. Are the designs of the PTC Rider rates for the residential and commercial customer classes and the HP Rider rates for the industrial customer class consistent with the
- 3 Commission's default service regulations and the Code?
- 4 Yes. The Commission's regulations at 52 Pa. Code § 54.187(d) state that default service A. 5 rates may not use a declining block structure. For the residential class, the Code at Section 6 2807(e)(7) and the regulations at 52 Pa. Code § 54.187(h) provide that rates shall change 7 no more frequently than on a quarterly basis. Consistent with these requirements, the Companies' proposed PTC Rider rates for the residential and commercial customers 8 9 employ a flat per kWh rate design, with rates that will change on a semi-annual basis. The 10 hourly-priced service offered under the HP Riders is consistent with Commission 11 precedent, the Commission's regulations at 52 Pa. Code §§ 54.187(i) and (j), other 12 applicable provisions of those regulations, and the Commission's prior approval of the Companies' customer class definitions and service offerings. 13
- Q. Describe the Companies' DSS Riders and the costs currently recovered through theseriders.
- 16 A. The DSS Rider is a non-bypassable rider, which recovers various categories of costs at
 17 each of the Companies. All Companies' DSS Riders recover four categories of costs: (1)
 18 the uncollectible accounts expense incurred through the provision of default service and on
 19 behalf of EGSs through the purchase of receivables programs for residential and small
 20 commercial customers; (2) retail enhancement costs for the CRPs; (3) customer education

costs; and (4) non-market based ("NMB") charges.⁷ In addition to these four categories,
Met-Ed's DSS Rider recovered non-utility generation ("NUG") costs through May 31,
2018; Penelec's DSS Rider recovered NUG costs through May 31, 2021. Penn Power's
DSS Rider may also recover any Federal Energy Regulatory Commission ("FERC")approved Midcontinent Independent System Operator ("MISO") Transmission Expansion
Plan costs, PJM integration fees, and MISO exit fees associated with Penn Power's move
from MISO to PJM.

8 Q. Are the Companies proposing any changes to their DSS Riders?

9 A. Yes. Met-Ed and Penelec are proposing to eliminate the NUG components. The NUG components, which are currently set to \$0, were previously used to amortize the final over/under collection of the Companies' NUG Riders. These proposed revisions to the DSS Riders are reflected in Met-Ed/Penelec/Penn Power/West Penn Exhibits PML-16 and PML-17.

Q. Are Met-Ed and Penelec proposing any changes to their NUG Riders?

14

15 A. Yes. Met-Ed and Penelec propose to eliminate the NUG Riders because all NUG contracts
16 have expired and the riders are no longer active. The Companies also propose to eliminate
17 any references to the NUG Riders throughout their tariffs.

⁷ NMB Charges currently include FERC approved costs for: (i) PJM Regional Transmission Expansion Plan charges; (ii) PJM Expansion Cost Recovery charges; (iii) PJM charges for Reliability Must Run generating unit declarations and charges associated with plants deactivated on or after July 24, 2014; (iv) historical tie line, generation, and retail customer meter adjustments; (v) unaccounted for energy; (vi) any FERC-approved reallocation of PJM Regional Transmission Expansion Plan charges related to Docket No. EL05-121-009; and (vii) any other FERC-approved PJM charges billed by PJM that will not be reconciled through the PTC and/or HP Riders and as approved for recovery under the DSS Riders by the Commission.

1	Q.	Will the Solar Photovoltaic Requirements Charge ("SPVRC") Riders remain in place	.ce
---	----	--	-----

- 2 for the upcoming default service term?
- 3 A. Yes. Met-Ed, Penelec and Penn Power are not proposing any changes to their SPVRC
- 4 Riders at this time to continue to allow them to recover costs associated with legacy solar
- 5 contracts that expire in 2024 as explained by Mr. Catanach in Met-Ed/Penelec/Penn
- 6 Power/West Penn Power Statement No. 2. The SPVRC Riders will continue to be non-
- bypassable and apply to all delivery service customers. West Penn does not have a SPVRC
- 8 Rider and is not proposing one as part of its DSP VI.

9 Q. Are the Companies proposing any changes to their Electric Generation Supplier

10 Coordination Tariffs ("Supplier Tariffs")?

- 11 A. Yes, there are two proposed changes to the Companies' Supplier Tariffs. First, the
- 12 Companies are eliminating language related to transferring SPAECs to EGSs. Second, as
- explained in Met-Ed/Penelec/Penn Power/West Penn witness Joanne M. Savage's
- testimony (Statement No. 1), the Companies are proposing to continue the purchase of
- receivables program clawback provision on a permanent basis, and therefore, the
- 16 Companies are eliminating the language describing it as a pilot with an end date. Those
- 17 changes are all reflected in Met-Ed/Penelec/Penn Power/West Penn Exhibits PML-18 to
- 18 PML-21.

III. TIME-OF-USE DEFAULT SERVICE RIDERS

- 2 Q. Do the Companies currently offer TOU default service rate options as required by
- 3 Act 129 of 2008 ("Act 129")?8

1

- 4 A. Yes. The Companies currently offer TOU rate options to residential default service
- 5 customers through their Commission-approved Time-of-Use Default Service Riders
- 6 ("TOU Riders" or "Rider K"). The current TOU Rider rate structure offers a rate higher
- 7 than the PTC for on-peak hours and a reduced rate for all other hours during the months of
- 8 June, July and August. 10 The TOU default service rate for all other months does not reflect
- an on-peak or off-peak differential. Eligible residential customers contract with a
- 10 Commission-certified EGS for TOU default service under the switching rules set forth in
- the Companies' Supplier Tariffs.

12 Q. Are the Companies proposing any changes to their TOU rate offerings?

- 13 A. Yes. Since the Commission's initial approval of Rider K for each Company, the scope of
- an EDC's obligation to offer TOU rates to default service customers was the subject of
- litigation before the Commission and Commonwealth Court. 11 Following this litigation,

⁸ 66 Pa.C.S. § 2807(f)(5). The hourly-priced default service rate for the industrial customer class already meets Act 129 requirements.

⁹ See Joint Petition of Metro. Edison Co., Pennsylvania Elec. Co. Pennsylvania Power Co., and West Penn Power Co. for Approval of their Default Serv. Programs, Docket Nos. P-2011-2273650 et al. (Opinion and Order entered Feb. 15, 2013); Pa. P.U.C. v. Metro. Edison Co., Docket No. R-2014-2428745 (Recommended Decision dated Mar. 9, 2015 ("Met-Ed Recommended Decision"), pp. 21, 29; Pa. P.U.C. v. Pennsylvania Elec. Co., Docket No. R-2014-2428743 (Recommended Decision dated Mar. 9, 2015 ("Penelec Recommended Decision") at 22, 29-30. The Commission adopted and approved the Met-Ed Recommended Decision and Penelec Recommended Decision by an Opinion and Order entered on April 9, 2015 at Docket No. R-2014-2428745 and Docket No. R-2014-2428743, respectively.

¹⁰ Under Met-Ed's and Penelec's current TOU Riders, on-peak hours are on weekdays from 8:00 a.m. to 8:00 p.m. (9:00 a.m. to 9:00 p.m. for Rate Schedule RT). On-peak hours are from 12 p.m. to 9 p.m. on weekdays for Penn Power and West Penn.

¹¹ See Petition of PPL Elec. Utils. Corp. for Approval of a New Pilot Time-of-Use Program, Docket No. P-2013-2389572 (Order entered Sept. 11, 2014) (holding that Act 129 did not require PPL Electric Utilities Corp. ("PPL") to offer TOU rates directly to customer-generators); Dauphin Cty. Indus. Dev. Auth. v. Pa. P.U.C., 123 A.3d 1124, 1136 (Pa. Cmwlth. 2015) (holding that Act 129 does not authorize default service providers to delegate the obligation to offer TOU rates to customers with smart meters to EGSs).

the Commission proposed a new TOU structure for PPL Electric Utilities Corporation to satisfy Act 129 requirements, but clarified that EDCs would have "the flexibility to propose other alternatives and/or modifications regarding their TOU operations" for Commission review and approval in future DSP filings. ¹² In light of these developments, in the DSP V Settlement, the Companies agreed to propose new TOU default service rate options in the earlier of their first base rate or default service proceedings following full implementation of smart meter back-office functionality. The Companies' smart meter back-office functionality is now in place; therefore, the Companies are making a specific proposal regarding TOU in this proceeding.

Q. What guidelines did the Companies follow in developing their new TOU rates?

In addition to the guidance provided in the April 2017 Secretarial Letter, the Companies considered the following objectives in designing their proposed TOU Riders to comply with Act 129 and Commission requirements: (1) a simple and understandable TOU rate design to incent customers to shift their usage patterns to off-peak hours; (2) incentives for electric vehicle ("EV") operators as envisioned by the Commission in its investigation of potential opportunities to better reflect wholesale cost causation in default service rates; and (3) cost-causation principles to link the TOU pricing structure to the PJM wholesale markets for energy and capacity that drive the cost of the Companies' default service auctions.

A.

_

¹² Petition of PPL Elec. Utils. Corp. for Approval of a New Pilot Time-of-Use Program, Docket Nos. P-2013-2389572 and M-2016-2578051 (Secretarial Letter issued Apr. 6, 2017) ("April 2017 Secretarial Letter") at 4. The Commission approved TOU default service rate options that deviated from the guidance in the April 2017 Secretarial Letter in the DLC DSP IX Order (pp. 46-58) and the PECO DSP V Order (pp. 18-22, 26-31).

1 Q. Please provide an overview of the Companies' proposed TOU rate design.

A. The Companies are proposing TOU rates that differentiate prices across three periods (onpeak, super off-peak, and off-peak) that remain the same year-round based on price
multipliers discussed later in my testimony designed to motivate customers to shift usage
to lower-cost, off-peak hours. The Companies are proposing the same TOU pricing periods
for both the residential and small commercial classes, as shown in the table below.

TOU Pricing Period	Year-Round Days/Hours Included
<u>On-Peak</u>	2 p.m. – 9 p.m. Monday through Friday
Super Off-Peak	11 p.m. – 6 a.m. Every day
Off-Peak	All other hours

Like the Companies' current TOU Riders, the proposed TOU rate design is structured to establish a rate premium compared to the Companies' standard, non-time varying default service rate during the on-peak period and rate discounts from the applicable PTC Rider rate during two off-peak periods. The Companies' proposed TOU rates include a super off-peak pricing period to encourage EV charging during overnight low-priced energy hours, thereby lowering the overall total cost of EV ownership. The off-peak period consists of all other hours.

Q. What customers are eligible for the TOU Riders?

A. Consistent with the April 2017 Secretarial Letter, the Companies' proposed TOU rates will be available to default service customers with smart meters who are not receiving HP

default service, with one exception. Residential customers enrolled in the Companies'

2 CAPs will not be eligible for the TOU Riders.

Q. Why are CAP customers ineligible for the TOU Riders?

A. CAPs offer a reduced bill to participants for their electric service based on their ability to pay regardless of their actual amount of their utility bill. The selection of a TOU rate could negatively affect those benefits as CAP customers may have less flexibility to shift their usage to off peak hours. In addition, as Ms. Savage explains in her direct testimony (Met-Ed/Penelec/Penn Power/West Penn Statement No. 1), effective June 1, 2019, the Companies implemented CAP shopping rules that limit the terms of offers from EGSs (including rates at or below the PTC) in accordance with the Commission's direction in the DSP V Orders. The Companies are proposing to exclude CAP customers from the TOU Riders in order to avoid the risk of higher generation charges on those customers' electric bills that could jeopardize affordability and impose an unreasonable cost burden on all residential customers that pay for the CAPs.

15 Q. Are there any other eligibility provisions associated with the TOU Riders?

A. Yes. If a customer is participating in the TOU Rider and decides to leave the rider for any reason, the customer is not eligible to re-enroll in the TOU rate for twelve months. This provision will discourage customers from joining the TOU Rider only in certain months when they do not have to shift usage to save money, thereby reducing the ability to game the riders.

Q. Will net metering generation customers be eligible for the TOU Riders?

- 2 A. Yes. Residential and small commercial customers who take service under the Companies'
- Net Metering Riders will be eligible for the TOU Riders, consistent with the April 2017
- 4 Secretarial Letter. Customer generators who have virtual net metering will not be eligible
- 5 due to the administrative and billing complexity of offering a TOU rate to these customers.

6 Q. How did the Companies determine the number and time periods of the price

differentiated TOU multipliers?

- A. The Companies examined their zonal load data and energy prices over a five-year historic
- 9 period 2016-2020 as shown on Met-Ed/Penelec/Penn Power/West Penn Exhibit PML-25.
- The system peak usage generally occurred during the hours between 2 p.m. to 9 p.m. over
- the summer months (June September). Additionally, the Companies examined the
- average five-year residential zonal load data, which indicated that residential peaks for
- 13 Met-Ed, Penn Power and West Penn occurred during the same 2 p.m. to 9 p.m. period,
- while Penelec's residential peak occurred during the winter period of November through
- February.

1

7

8

16

- Based on this data, the Companies defined the on-peak period as 2 p.m. to 9 p.m. on
- 17 weekdays. The proposed on-peak period also allows for material price differentials that
- will be more likely to motivate customers to shift consumption to lower-priced (off-peak)
- hours. Consistent with the January 2020 Secretarial Letter, the Companies' proposed TOU
- Riders include a super off-peak pricing window that features discounted rates which would
- be attractive for EV charging during the designated hours. Typical charging for an EV at
- a customer's residence can range from five to seven hours to reach a full charge, and the

- proposed super off-peak period encompasses 11 p.m. to 6 a.m. based on the Companies'
 load and energy price data.
- Q. Why are the Companies proposing year-round price differentiated time periods even
 though the April 2017 Secretarial Letter recommends seasonal variation?
- 5 A. The Companies are proposing to apply the TOU rates year-round because the proposed on6 peak period generally includes the system peak for each Company during both summer and
 7 winter months. This design is also easier for customers to understand and reduces the
 8 number of variables for customers to consider in changing their usage patterns. I note that
 9 the Commission recently approved year-round TOU pricing periods in PECO Energy
 10 Company's default service proceeding that had a similar design.¹³
 - Q. How did the Companies derive the price ratios for the on-peak, off-peak and superoff peak usage periods for the residential and small commercial classes?
 - In the April 2017 Secretarial Letter, the Commission recommended that EDCs develop price multipliers to appropriately motivate shifting of consumption from on-peak to offpeak periods. To that end, the Companies examined five years (2016-2020) of historical PJM day-ahead spot market pricing data and load data for their respective zones to calculate the load-weighted LMP for each TOU pricing period.
 - In addition to wholesale energy prices, the calculation of TOU rates depends on the cost of capacity, which varies by customer class. The Companies are proposing to allocate the cost of capacity to peak hours only. This approach will send cost-based price signals and create larger on/off peak price differentials more likely to motivate customers to adjust the

11

12

13

14

15

16

17

18

19

20

21

A.

¹³ PECO DSP V Order at 18-19, 30-31.

time of day they use electricity. For each class, the Companies determined the cost of capacity (in dollars per megawatt hour ("MWh")) based on the annual PJM zonal capacity costs during delivery years 2015/2016 to 2020/2021 and the class load obligation during the proposed TOU on-peak pricing period (2 p.m.-9 p.m.) over the same five-year period. This cost of capacity was added to the on-peak pricing multiplier.

Based on these analyses, the Companies are proposing the TOU price multipliers shown in the table below. These pricing multipliers will remain constant throughout the DSP VI term. The proposed multipliers reflect the ratios calculated from average PJM spot market prices as well as the additional cost of capacity during on-peak hours. Detailed calculations of the Companies' proposed TOU pricing multipliers are provided in Met-Ed/Penelec/Penn Power/West Penn Exhibits PML-23 through PML-26.

			Super Off-	
		On-Peak	Peak	Off-Peak
Met-Ed	Commercial	2.0558	0.5298	0.7277
Met-Ed	Residential	2.0180	0.5438	0.7285
Penelec	Commercial	1.9532	0.5582	0.7686
	Residential	1.9367	0.5669	0.7633
Penn Power	Commercial	2.0271	0.5202	0.7409
	Residential	2.0140	0.5331	0.7377
W D	Commercial	1.9416	0.5663	0.7870
West Penn	Residential	1.8632	0.5749	0.7821

12 Q. How will the TOU rates be set for the residential and small commercial classes using 13 the multipliers proposed for the pricing differentials?

A. Wholesale suppliers will provide both standard and TOU default service from the same supply portfolio based upon their tranche responsibilities awarded in the Companies' auctions. The Companies will use the standard default service price as calculated in the

PTC Riders as the reference price by class for their TOU rate calculations. As shown in Met-Ed/Penelec/Penn Power/West Penn Exhibits PML-27 to PML-30, the revised TOU Riders for each Company, the TOU default service rates for each Company will be determined by multiplying the PTC Rider rate by the multiplier for the applicable customer class and TOU pricing period.

6 Q. How will default service rates be adjusted for customers enrolled in the Companies'

TOU rates?

A.

TOU rates will be adjusted on a semi-annual basis, synchronized with the PTC Rider adjustment periods for the residential and commercial classes, using the Companies' proposed pricing methodology. TOU customer kWh usage and costs will be included in the semi-annual reconciliation of the over/undercollection component of the PTC Riders by class (i.e., residential or commercial). The Companies' proposed reconciliation process using a single E-Factor for each customer class will help mitigate potential large swings in the PTC Rider over/under collections that could arise if customers switch between the Companies' standard default service and TOU default service rates. In addition, the Commission has previously authorized other EDCs to recover TOU over/undercollection amounts from all default service customers based on its finding that the TOU rates mandated by Act 129 are a "form of default service."

[.]

¹⁴ See Pa. P.U.C. v. PPL Elec. Utils. Corp., Docket No. R-2011-2264771 (Opinion and Order entered Aug. 30, 2012) at 22-23.

- 1 Q. Please explain the monthly accounting and annual cash out process for net metering
- 2 **TOU customers.**
- 3 A. The Companies will separately track net metering TOU customers' net excess generation
- 4 within the TOU on-peak, off-peak and super-off peak pricing periods by month. Any
- 5 excess generation will be banked for use by the customer in the next billing period at the
- TOU rate for the banked excess generation MWhs. On an annual basis, a TOU net metering
- 7 customer's accumulated excess generation will be cashed out at the full retail rate by each
- 8 of the on-peak, off-peak and super-off peak pricing periods, as applicable, in accordance
- 9 with the Commission's guidance in the April 2017 Secretarial Letter.

10 Q. How can customers enroll in the Companies' TOU offerings?

- 11 A. Eligible default service customers may enroll in the TOU Riders online or by contacting
- the Companies' Customer Care Service Center. Customers will not be charged any fees to
- sign up for the TOU rates and can cancel the TOU service at any time. Participating
- customers will remain on the TOU Rider until they elect to return to the standard default
- service rate or switch to an EGS.
- 16 Q. How will the Companies notify existing TOU customers about the changes to the TOU
- 17 Riders that will take effect in DSP VI if approved by the Commission?
- 18 A. The Companies will notify current TOU customers of the changes that will take effect on
- June 1, 2023 in a letter allowing them the option to opt in or out of the new TOU Riders.
- Those customers will remain on TOU rates unless they contact the Companies to return to
- standard default service rates. In addition, the Companies will provide educational
- 22 materials regarding TOU rates on their websites summarizing the TOU rate structure and
- 23 tips on how customers can shift their electricity usage.

- 1 Q. How will the Companies recover the costs to implement their proposed TOU Riders?
- 2 A. The Companies anticipate they will incur approximately \$300,000 to implement the
- 3 proposed TOU rates related to training and information technology changes to the
- 4 Companies' billing and customer information systems to support TOU enrollment, billing,
- 5 meter data management, customer service scripting, and net metering excess generation
- 6 tracking. The Companies will recover the actual costs from customers through the PTC
- 7 Riders.

8 IV. OTHER RELATED MATTERS

- 9 Q. What are the proposed effective dates of the tariff changes described in your
- 10 **testimony?**
- A. All changes to the Companies' tariffs are proposed to be effective on June 1, 2023, which
- is the start of the delivery period for the proposed default service term.
- 13 Q. Are there administrative or general expenses associated with the proposed DSPs that
- the Companies intend to recover in their PTC and HP Riders?
- 15 A. Yes. Met-Ed/Penelec/Penn Power/West Penn Exhibit PML-31 lists the estimated expenses
- by category for the proposed DSP VI. The total estimated expenses were allocated to each
- 17 Company using forecasted kWh for the October 2021 through September 2022 period.
- Each Company's estimated expenses were then allocated by customer class using the kWh
- for the same period to determine the estimated amount to be recovered in the PTC and HP
- Riders.

21 V. <u>CONCLUSION</u>

- 22 Q. Does this complete your direct testimony?
- 23 A. Yes, it does.

Witness: P.M. Larkin

Appendix A

Page 1 of 2

Appendix A

Resume: Education and Experience of Patricia M. Larkin

Education:

Bachelor of Science Degree in Accounting – DeSales University Master of Business Administration Degree – Alvernia University

Experience:

2000-2007	Accountant – Property Accounting Services – GPU Energy
2007-2008	Accountant – Accounting Research – FirstEnergy Service Company
2008-2012	Accountant – General Accounting Services (Regulatory Accounting
	focus) – FirstEnergy Service Company
2012-Present	Analyst – Rates & Regulatory Affairs – Pennsylvania – FirstEnergy
	Service Company

Prepared and presented testimony in the following rate-related cases:

PA P.U.C. Cases:

Docket Nos.	Case Name
R-2014-2428745	Metropolitan Edison Company – General Base Rate Filing
R-2014-2428743	Pennsylvania Electric Company – General Base Rate Filing
R-2014-2428744	Pennsylvania Power Company – General Base Rate Filing
R-2014-2428742	West Penn Power Company – General Base Rate Filing

Assisted in development and preparation of filings in the following proceedings:

PA P.U.C. Cases:

Docket Nos.	Case Name
P-2017-2637855, P-2017-2637857, P-2017-2637858, P-2017-2637866	Joint Petition of Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company and West Penn Power Company for Approval of their Default Service Programs

Met-Ed/Penelec/Penn Power/West Penn Power Statement No. 5 Witness: P.M. Larkin

Appendix A

Page 2 of 2

R-2016-2537349 R-2016-2537352 R-2016-2537355	Metropolitan Edison Company – General Base Rate Filing Pennsylvania Electric Company – General Base Rate Filing Pennsylvania Power Company – General Base Rate Filing
R-2016-2537359	West Penn Power Company – General Base Rate Filing
P-2015-2511333, P-2015-2511351,	Joint Petition of Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company and West Penn Power Company
P-2015-2511355,	for Approval of their Default Service Programs
P-2015-2511356	
P-2013-2391368, P-2013-2391372,	Joint Petition of Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company and West Penn Power Company
P-2013-2391375,	for Approval of their Default Service Programs
P-2013-2391378	
P-2011-2273650,	Joint Petition of Metropolitan Edison Company, Pennsylvania Electric
P-2011-2273668,	Company, Pennsylvania Power Company and West Penn Power Company
P-2011-2273669,	for Approval of their Default Service Programs
P-2011-2273670	

Metropolitan Edison Company Historical Price to Compare Rates (cents per kWh)

	Residential		Comm	Commercial	
	PTC Rate		PTC Rate	Change	
1/1/2011	8.296		8.187		
3/1/2011	8.690	0.394	8.671	0.484	
6/1/2011	8.239	(0.451)	8.908	0.237	
9/1/2011	9.089	0.850	9.594	0.686	
12/1/2011	9.091	0.002	8.657	(0.937)	
3/1/2012	7.967	(1.124)	7.185	(1.472)	
6/1/2012	6.969	(0.998)	6.613	(0.572)	
9/1/2012	6.321	(0.648)	7.180	0.567	
12/1/2012	8.911	2.590	9.144	1.964	
3/1/2013	8.666	(0.245)	7.868	(1.276)	
6/1/2013	8.817	0.151	8.219	0.351	
9/1/2013	8.198	(0.619)	8.018	(0.201)	
12/1/2013	8.208	0.010	7.874	(0.144)	
3/1/2014	7.776	(0.432)	7.765	(0.109)	
6/1/2014	9.753	1.977	7.833	0.068	
9/1/2014	7.361	(2.392)	6.715	(1.118)	
12/1/2014	7.007	(0.354)	7.767	1.052	
3/1/2015	7.923	0.916	8.003	0.236	
6/1/2015	7.842	(0.081)	8.356	0.353	
9/1/2015	7.246	(0.596)	8.272	(0.084)	
12/1/2015	8.306	1.060	8.123	(0.149)	
3/1/2016	7.071	(1.235)	7.601	(0.522)	
6/1/2016	5.945	(1.126)	6.917	(0.684)	
9/1/2016	6.902	0.957	6.957	0.040	
12/1/2016	7.351	0.449	7.304	0.347	
3/1/2017	6.964	(0.387)	6.842	(0.462)	
6/1/2017	6.018	(0.946)	6.703	(0.139)	
9/1/2017	5.995	(0.023)	5.863	(0.840)	
12/1/2017	6.816	0.821	6.226	0.363	
3/1/2018	6.181	(0.635)	6.523	0.297	
6/1/2018	6.341	0.160	6.128	(0.395)	
9/1/2018	6.068	(0.273)	6.344	0.216	
12/1/2018	6.684	0.616	7.236	0.892	
3/1/2019	6.241	(0.443)	6.483	(0.753)	
6/1/2019	5.540	(0.701)	5.352	(1.131)	
9/1/2019	5.667	0.127	5.295	(0.057)	
12/1/2019	6.510	0.843	6.200	0.905	
3/1/2020	5.390	(1.120)	6.352	0.152	
6/1/2020	5.361	(0.029)	5.044	(1.308)	
9/1/2020	5.757	0.396	5.220	0.176	
12/1/2020	6.174	0.417	5.821	0.601	
3/1/2021	5.418	(0.756)	6.175	0.354	
6/1/2021	6.690	1.272	6.584	0.409	
9/1/2021	7.114	0.424	6.914	0.330	
12/1/2021	7.414	0.300	8.707	1.793	
				_	

Pennsylvania Electric Company Historical Price to Compare Rates (cents per kWh)

	Residential		Comm	Commercial		
	PTC Rate	Change	PTC Rate	Change		
1/1/2011	7.030	0.046	7.244	0.504		
3/1/2011	7.346	0.316	7.778	0.534		
6/1/2011	6.990	(0.356)	7.814	0.036		
9/1/2011	7.624	0.634	7.744	(0.070)		
12/1/2011	8.208	0.584	7.581	(0.163)		
3/1/2012	7.495	(0.713)	6.886	(0.695)		
6/1/2012	6.321	(1.174)	6.417	(0.469)		
9/1/2012	5.960	(0.361)	6.541	0.124		
12/1/2012	7.071	1.111	6.882	0.341		
3/1/2013	6.975	(0.096)	7.012	0.130		
6/1/2013	8.729	1.754	8.058	1.046		
9/1/2013	8.082	(0.647)	7.611	(0.447)		
12/1/2013	7.194	(0.888)	7.665	0.054		
3/1/2014	7.734	0.540	7.361	(0.304)		
6/1/2014	9.284	1.550	8.844	1.483		
9/1/2014	7.053	(2.231)	7.414	(1.430)		
12/1/2014	6.370	(0.683)	7.576	0.162		
3/1/2015	6.943	0.573	8.005	0.429		
6/1/2015	7.343	0.400	8.192	0.187		
9/1/2015	7.341	(0.002)	7.983	(0.209)		
12/1/2015	7.554	0.213	7.763	(0.220)		
3/1/2016	6.516	(1.038)	7.244	(0.519)		
6/1/2016	6.019	(0.497)	6.465	(0.779)		
9/1/2016	7.724	1.705	6.899	0.434		
12/1/2016	7.121	(0.603)	7.238	0.339		
3/1/2017	6.047	(1.074)	7.018	(0.220)		
6/1/2017	6.158	0.111	5.774	(1.244)		
9/1/2017	5.383	(0.775)	5.727	(0.047)		
12/1/2017	6.742	1.359	6.769	1.042		
3/1/2018	5.878	(0.864)	6.754	(0.015)		
6/1/2018	6.223	0.345	5.475	(1.279)		
9/1/2018	5.968	(0.255)	5.842	0.367		
12/1/2018	6.288	0.320	6.654	0.812		
3/1/2019	5.747	(0.541)	6.571	(0.083)		
6/1/2019	5.668	(0.079)	5.465	(1.106)		
9/1/2019	5.198	(0.470)	5.163	(0.302)		
12/1/2019	6.445	1.247	5.998	0.835		
3/1/2020	5.404	(1.041)	6.257	0.259		
6/1/2020	5.532	0.128	5.012	(1.245)		
9/1/2020	5.598	0.066	5.102	0.090		
12/1/2020	5.667	0.069	5.633	0.531		
3/1/2021	4.981	(0.686)	6.049	0.416		
6/1/2021	6.462	1.481	6.374	0.325		
9/1/2021	6.761	0.299	6.585	0.211		
12/1/2021	6.507	(0.254)	8.636	2.051		
		•				

Pennsylvania Power Company Historical Price to Compare Rates (cents per kWh)

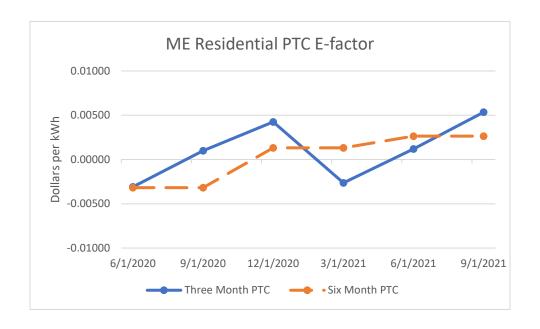
	Reside	ntial	Commercial					
	PTC Rate	Change	PTC Rate	PTC Rate Change				
1/1/2011	6.522		5.317					
3/1/2011	8.119	1.597	6.230	0.913				
6/1/2011	7.200	(0.919)	7.121	0.891				
9/1/2011	7.879	0.679	8.738	1.617				
12/1/2011	7.437	(0.442)	6.987	(1.751)				
3/1/2012	6.161	(1.276)	5.807	(1.180)				
6/1/2012	5.779	(0.382)	4.504	(1.303)				
9/1/2012	5.465	(0.314)	4.441	(0.063)				
12/1/2012	5.842	0.377	4.499	0.058				
3/1/2013	5.806	(0.036)	4.209	(0.290)				
6/1/2013	7.038	1.232	6.114	1.905				
9/1/2013	5.747	(1.291)	5.971	(0.143)				
12/1/2013	5.954	0.207	5.741	(0.230)				
3/1/2014	6.181	0.227	5.651	(0.090)				
6/1/2014	8.094	1.913	7.352	1.701				
9/1/2014	6.347	(1.747)	7.277	(0.075)				
12/1/2014	5.419	(0.928)	7.433	0.156				
3/1/2015	5.754	0.335	7.113	(0.320)				
6/1/2015	8.585	2.831	8.637	1.524				
9/1/2015	9.198	0.613	8.877	0.240				
12/1/2015	8.996	(0.202)	8.867	(0.010)				
3/1/2016	7.878	(1.118)	9.479	0.612				
6/1/2016	6.819	(1.059)	7.498	(1.981)				
9/1/2016	7.978	1.159	7.388	(0.111)				
12/1/2016	7.727	(0.251)	8.410	1.023				
3/1/2017	5.884	(1.843)	7.410	(1.000)				
6/1/2017	6.741	0.857	6.603	(0.807)				
9/1/2017	5.956	(0.785)	7.456	0.853				
12/1/2017	7.202	1.246	6.929	(0.527)				
3/1/2018	6.599	(0.603)	7.724	0.795				
6/1/2018	6.824	0.225	7.625	(0.099)				
9/1/2018	6.626	(0.198)	7.548	(0.077)				
12/1/2018	7.714	1.088	7.807	0.259				
3/1/2019	6.414	(1.300)	8.066	0.259				
6/1/2019	6.256	(0.158)	6.949	(1.117)				
9/1/2019	6.231	(0.025)	6.427	(0.522)				
12/1/2019	7.572	1.341	7.325	0.898				
3/1/2020	6.267	(1.305)	7.608	0.283				
6/1/2020	6.684	0.417	6.529	(1.079)				
9/1/2020	6.447	(0.237)	6.762	0.233				
12/1/2020	6.435	(0.012)	6.616	(0.146)				
3/1/2021	5.721	(0.714)	7.564	0.948				
6/1/2021	7.195	1.474	8.033	0.469				
9/1/2021	7.657	0.462	8.411	0.378				
12/1/2021	7.593	(0.064)	10.065	1.654				
, ,		/	==::00					

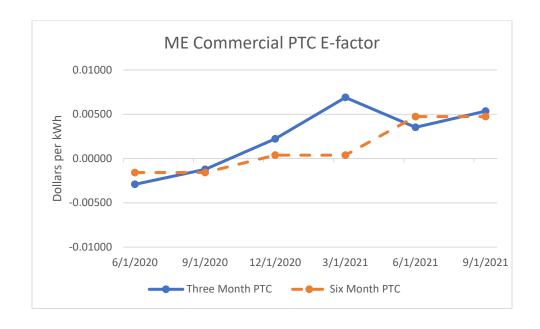
West Penn Power Company Historical Price to Compare Rates (cents per kWh)

	Reside	ntial	Commercial					
	PTC Rate	PTC Rate Change		Change				
1/1/2011	7.118		7.195					
3/1/2011	7.026	(0.092)	7.153	(0.042)				
6/1/2011	7.052	0.026	7.453	0.300				
9/1/2011	7.141	0.089	6.275	(1.178)				
12/1/2011	7.054	(0.087)	7.010	0.735				
3/1/2012	6.858	(0.196)	7.718	0.708				
6/1/2012	5.205	(1.653)	5.409	(2.309)				
9/1/2012	5.240	0.035	5.183	(0.226)				
12/1/2012	5.434	0.194	5.720	0.537				
3/1/2013	5.288	(0.146)	5.587	(0.133)				
6/1/2013	6.261	0.973	5.957	0.370				
9/1/2013	6.075	(0.186)	5.501	(0.456)				
12/1/2013	5.643	(0.432)	6.233	0.732				
3/1/2014	4.961	(0.682)	5.780	(0.453)				
6/1/2014	7.514	2.553	7.058	1.278				
9/1/2014	6.253	(1.261)	6.016	(1.042)				
12/1/2014	6.312	0.059	7.947	1.931				
3/1/2015	5.330	(0.982)	6.714	(1.233)				
6/1/2015	7.312	1.982	6.926	0.212				
9/1/2015	6.917	(0.395)	7.947	1.021				
12/1/2015	7.011	0.094	7.547	(0.400)				
3/1/2016	6.983	(0.028)	7.504	(0.043)				
6/1/2016	6.411	(0.572)	7.338	(0.166)				
9/1/2016	6.061	(0.350)	7.986	0.648				
12/1/2016	6.574	0.513	8.014	0.028				
3/1/2017	5.975	(0.599)	7.670	(0.344)				
6/1/2017	6.597	0.622	7.709	0.039				
9/1/2017	6.289	(0.308)	4.787	(2.922)				
12/1/2017	6.149	(0.140)	4.858	0.071				
3/1/2018	6.085	(0.064)	5.416	0.558				
6/1/2018	6.560	0.475	5.619	0.203				
9/1/2018	5.595	(0.965)	4.249	(1.370)				
12/1/2018	6.354	0.759	6.962	2.713				
3/1/2019	6.092	(0.262)	6.344	(0.618)				
6/1/2019	5.517	(0.575)	5.535	(0.809)				
9/1/2019	5.338	(0.179)	5.720	0.185				
12/1/2019	5.760	0.422	5.722	0.002				
3/1/2020	5.637	(0.123)	5.849	0.127				
6/1/2020	5.125	(0.512)	5.602	(0.247)				
9/1/2020	4.891	(0.234)	5.244	(0.358)				
12/1/2020	5.198	0.307	5.703	0.459				
3/1/2021	5.154	(0.044)	4.844	(0.859)				
6/1/2021	5.707	0.553	6.128	1.284				
9/1/2021	5.447	(0.260)	5.660	(0.468)				
12/1/2021	5.698	0.251	7.609	1.949				
		-		-				

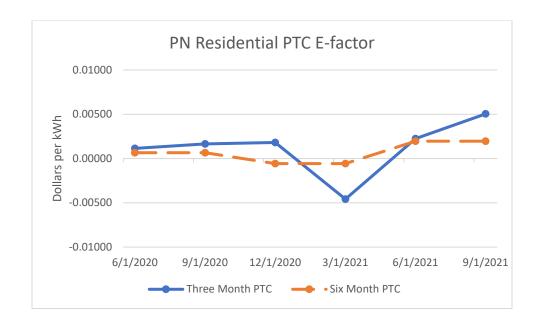
Metropolitan Edison Company

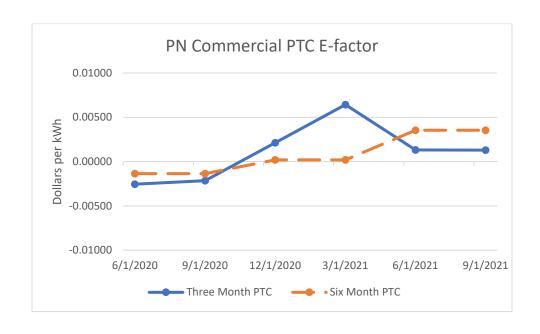
Comparison of Three-Month and Six-Month PTC E-factors



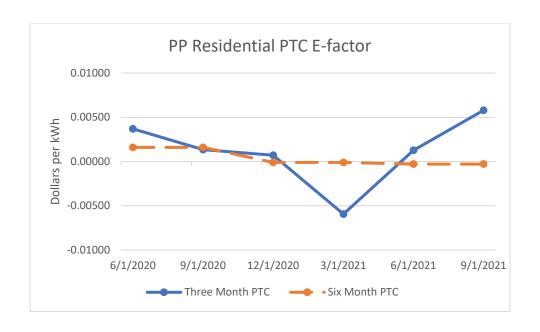


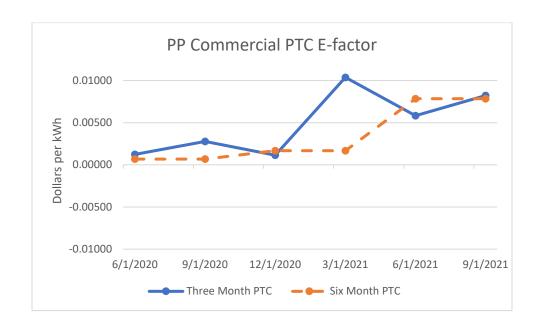
Pennsylvania Electric Company Comparison of Three-Month and Six-Month PTC E-factors



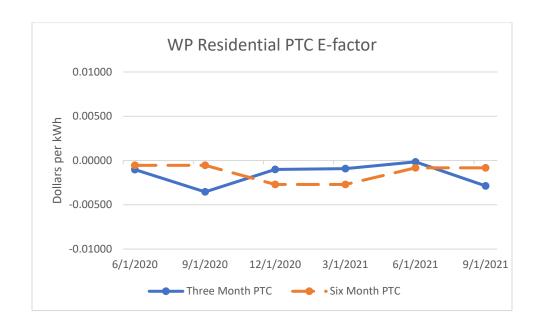


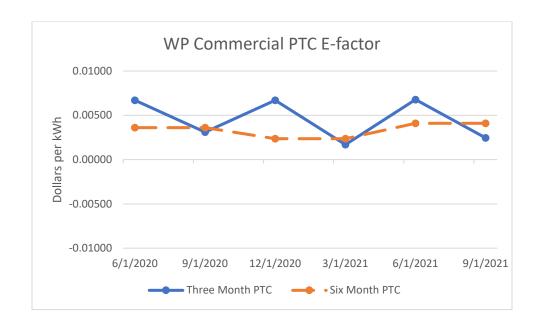
Pennsylvania Power Company Comparison of Three-Month and Six-Month PTC E-factors





West Penn Power Company Comparison of Three-Month and Six-Month PTC E-factors





MF	TRO)PC	TI. I	AN	ED	ISO	N (O^{r}	MP	A	N	Y
IVIL	1 1/	\mathcal{I}	ונעי	יובח.		11.)()		~ U .	LVII	Δ	LN.	L

Electric Pa. P.U.C. No. 52 (Supp. XX)

___ Revised Page 16

Superseding __ Revised Page 16

(C)

GENERAL RULES AND REGULATIONS

Definition of Terms (continued)

Electric Generation Supplier (EGS) - EGS shall have the meaning as set forth in the Customer Choice and Competition Act.

Energy Charge - A charge based upon kilowatt-hours of use.

Energy Efficiency and Conservation Charge - A reconcilable, non-by-passable charge applied to each Billing Unit during a billing month to Delivery Service Customers, with the exception of those served under Borderline Service, pursuant to the terms of the Phase II Energy Efficiency and Conservation Rider.

FERC - The Federal Energy Regulatory Commission

Generating Facility - Any equipment and/or facility that is electrically interconnected to the Company and is (i) capable of generating electrical energy for delivery into the PJM control area and (ii) is located on a single site within the Company's service territory. A single site with multiple generating units, each owned by a single entity, shall constitute one Generating Facility. The Company shall have the sole and exclusive right to determine if any particular equipment qualifies as a Generating Facility if the operating characteristics and/or circumstances relating to such equipment are different than described in this definition.

Hertz - A unit of frequency, equal to one cycle per second.

Horsepower (HP) - Unit of mechanical power representing rate of consumption of power and equivalent to 746 watts. As used herein, horsepower is computed as the equivalent of 750 watts.

Hourly Pricing Service Charges - For Customers served under Rate Schedules GS-Medium (HP), GS-Large, GP, TP, as well as GS-Small and GS-Medium (PTC) Customers that elect this rate, the charges representing the Company's costs for providing energy, capacity, including the cost of complying with non-solar AEPS, market based transmission, and ancillaryservices for Default Service Customers.

(C) Change

Issued: Effective: June 1, 2023

METROPOLITAN EDISON COMPANY

Electric Pa. P.U.C. No. 52 (Supp. XX)

Revised Page 19

Superseding Revised Page 19

GENERAL RULES AND REGULATIONS

Definition of Terms (continued)

Non-Summer - The calendar months of October through May.

<u>(C)</u>

Non-Utility Generation Charge or NUG Charge - A reconcilable, non-by-passable charge or credit applied to each kWh delivered during a billing month to Delivery Service Customers pursuant to the terms of the Non-Utility Generation Charge Rider.

<u>(C)</u>

NUG - Non Utility Electric Generating Facility

On-Peak Hours - The On-peak hours shall be from 6 a.m. to 6 p.m., 7 a.m. to 7 p.m., 8 a.m. to 8 p.m., 9 a.m. to 9 p.m., or 10 a.m. to 10 p.m. prevailing time, at the option of the Customer, Mondays to Fridays excluding holidays. If Customer does not select the On-Peak hours within 30 days of the receipt of notice to do so, the On-Peak hours will default to 8 a.m. to 8 p.m. All other hours shall be Off-Peak. The Off-Peak holidays are New Year's Day, President's Day, Good Friday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day. On-Peak hours are subject to change from time to time by the Company after giving notice of such changes to Customers.

Permanent Residential Customer - A Customer occupying a dwelling or mobile home ona permanent foundation which is the Customer's primary residence occupied year-round for normal living purposes and including: (i) electrical wiring conforming with the National Electrical Code and the Company's service installation policies; (ii) a permanently installed heating system; and (iii) permanently installed plumbing and sewage systems.

PJM - PJM Interconnection, L.L.C. or any successor organization/entity thereto.

Point of Delivery - The location at which the Company service connection terminates and the Customer's wiring and installation begins.

Power Factor - The ratio of the watts to the volt-amperes.

(C)

Price to Compare Default Service Charge - The cents per kWh rates representing the Company's costs for providing energy, capacity, including the cost of complying with non-solar-AEPS, market based transmission and ancillary services for Customers who take Default Service.

Primary Voltage - Voltage greater than 600 volts.

Private Right-of-Way - The right-of-way or easement for electric facilities on, over, under, across and/or through real or other property owned by an individual or entity which is not a governmental, municipal or other public body to provide service.

(C) Change

Issued: Effective: June 1, 2023

(C)

PENNSYLVANIA ELECTRIC COMPANY

Electric Pa. P.U.C. No. 81 (Supp. XX)

Revised Page 21

Superseding Revised Page 21

GENERAL RULES AND REGULATIONS

Definition of Terms (continued)

Electric Generation Supplier (EGS) - EGS shall have the meaning as set forth in the Customer Choice and Competition Act.

Energy Charge – A charge based upon kilowatt-hours of use.

Energy Efficiency and Conservation Charge – A reconcilable, non-by-passable charge applied to each Billing Unit during a billing month to Delivery Service Customers, with the exception of those served under Borderline Service, pursuant to the terms of the Phase III Energy Efficiency and Conservation Rider.

FERC – The Federal Energy Regulatory Commission

Generating Facility - Any equipment and/or facility that is electrically interconnected to the Company and is (i) capable of generating electrical energy for delivery into the PJM control area and (ii) is located on a single site within the Company's service territory. A single site with multiple generating units, each owned by a single entity, shall constitute one Generating Facility. The Company shall have the sole and exclusive right to determine if any particular equipment qualifies as a Generating Facility if the operating characteristics and/or circumstances relating to such equipment are different than described in this definition.

Hertz – A unit of frequency, equal to one cycle per second.

Horsepower (**HP**) – Unit of mechanical power representing rate of consumption of power and equivalent to 746 watts. As used herein, horsepower is computed as the equivalent of 750 watts.

Hourly Pricing Service Charges – For Customers served under Rate Schedules GS-Medium (HP), GS-Large, GP, LP, as well as GS-Small and GS-Medium (PTC) Customers that elect this rate, the charges representing the Company's costs for providing energy, capacity, including the cost of complying with non-solar AEPS, market based transmission, and ancillary services for Default Service Customers.

(C) Change

PENNSYI	VANIA	ELECTRIC	COMPAN	Y

Electric Pa. P.U.C. No. 81 (Supp. XX)

___ Revised Page 24

Superseding __ Revised Page 24

GENERAL RULES AND REGULATIONS

Definition of Terms (continued)

Non-Summer – The calendar months of October through May.

(C)

Non-Utility Generation Charge or NUG Charge — A reconcilable, non-by-passable charge or credit applied to each kWh delivered during a billing month to Delivery ServiceCustomers pursuant to the terms of the Non-Utility Generation Charge Rider.

<u>(C)</u>

NUG - Non Utility Electric Generating Facility.

On-Peak Hours - The On-Peak Hours shall be from 8:00 a.m. to 8:00 p.m., prevailing times, Monday through Friday excluding holidays. All other hours shall be Off-Peak. The Off-Peak holidays are New Year's Day, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day. On-Peak Hours are subject to change from time to time by the Company after giving notice of such changes to Customers.

Permanent Residential Customer - A Customer occupying a dwelling or mobile home on a permanent foundation which is the Customer's primary residence occupied year-round for normal living purposes and including: (i) electrical wiring conforming with the National Electrical Code and the Company's service installation policies; (ii) a permanently installed heating system; and (iii) permanently installed plumbing and sewage systems.

PJM - PJM Interconnection, L.L.C. or any successor organization/entity thereto.

Point of Delivery - The location at which the Company service connection terminates and the Customer's wiring and installation begins.

Power Factor - The ratio of the watts to the volt-amperes.

(C)

Price to Compare Default Service Charge – The cents per kWh rates representing the Company's costs for providing energy, capacity, including the cost of complying with non-solar AEPS, market based transmission and ancillary services for Customers who take Default Service.

Primary Voltage - Voltage greater than 600 volts.

Private Right-of-Way - The right-of-way or easement for electric facilities on, over, under, across and/or through real or other property owned by an individual or entity which is not a governmental, municipal or other public body to provide service.

(C) Change

Electric Pa. P.U.C. No. 36 (Supp. XX)

___ Revised Page 15

Superseding __ Revised Page 15

(C)

GENERAL RULES AND REGULATIONS

Definition of Terms (continued)

Electric Generation Supplier (EGS) – EGS shall have the meaning as set forth in the Customer Choice and Competition Act.

Energy Charge – A charge based upon kilowatt-hours of use.

Energy Efficiency and Conservation Charge – A reconcilable, non-by-passable charge applied to each Billing Unit during a billing month to Delivery Service Customers, pursuant to the terms of the Phase III Energy Efficiency and Conservation Rider.

FERC – The Federal Energy Regulatory Commission.

Generating Facility – Any equipment and/or facility that is electrically interconnected to the Company and is (i) capable of generating electrical energy for delivery into the PJM control area and (ii) is located on a single site within the Company's service territory. A single site with multiple generating units, each owned by a single entity, shall constitute one Generating Facility. The Company shall have the sole and exclusive right to determine if any particular equipment qualifies as a Generating Facility if the operating characteristics and/or circumstances relating to such equipment are different than described in this definition.

Hertz – A unit of frequency, equal to one cycle per second.

Horsepower (HP) – Unit of mechanical power representing rate of consumption of power and equivalent to 746 watts. As used herein, horsepower is computed as the equivalent of 750 watts.

Hourly Pricing Service Charges – For Customers served under Rate Schedules GM (HP), GS-Large, GP, GT, GS-Special Rule GSDS, GS-Small (on a voluntary basis), and GM (PTC) (on a voluntary basis). Customers that elect this rate, the charges representing the Company's costs for providing energy, capacity, including the cost of complying with non-solar AEPS, market based transmission, and ancillary services for Default Service Customers.

(C) Change

Electric Pa. P.U.C. No. 36 (Supp. XX)

Revised Page 18

Superseding Revised Page 18

GENERAL RULES AND REGULATIONS

Definition of Terms (continued)

Non-Summer – The calendar months of October through May.

On-Peak Hours – The On-Peak hours shall be from 8:00 a.m. to 9:00 p.m., prevailing times, Monday through Friday excluding holidays. All other hours shall be Off-Peak. The Off-Peak holidays are New Year's Day, Good Friday, Memorial Day, Independence Day, Labor Day, Thanksgiving Day, and Christmas Day. On-Peak hours are subject to change from time to time by the Company after giving notice of such changes to Customers.

Permanent Residential Customer – A Customer occupying a dwelling or mobile home on a permanent foundation which is the Customer's primary residence occupied year-round for normal living purposes and including: (i) electrical wiring conforming with the National Electrical Code and the Company's service installation policies; (ii) a permanently installed heating system; and (iii) permanently installed plumbing and sewage systems.

PJM – PJM Interconnection, L.L.C. or any successor organization/entity thereto.

Point of Delivery – The location at which the Company service connection terminates and the Customer's wiring and installation begins.

Power Factor – The ratio of the watts to the volt-amperes.

(C)

Price to Compare Default Service Charge – The cents per kWh rates representing the Company's costs for providing energy, capacity, including the cost of complying with non-solar AEPS, market based transmission and ancillary services for Customers who take Default Service.

Primary Voltage – Voltage greater than 600 volts but less than 23,000 volts.

Private Right-of-Way – The right-of-way or easement for electric facilities on, over, under, across and/or through real or other property owned by an individual or entity which is not a governmental, municipal or other public body to provide service.

Electric Pa. P.U.C. No. 40 (Supp. XX)

___ Revised Page 20
Superseding __ Revised Page 20

GENERAL RULES AND REGULATIONS

Definition of Terms (continued)

Electric Generation Supplier (EGS) – EGS shall have the meaning as set forth in theCustomer Choice and Competition Act.

Energy Charge – A charge based upon kilowatt-hours of use.

Energy Efficiency and Conservation Charge – A reconcilable, non-by-passable charge applied to each Billing Unit during a billing month to Delivery Service Customers, pursuant tothe terms of the Rider F - Phase III Energy Efficiency and Conservation Rider.

FERC – The Federal Energy Regulatory Commission.

Generating Facility – Any equipment and/or facility that is electrically interconnected to the Company and is (i) capable of generating electrical energy for delivery into the PJM control area and (ii) is located on a single site within the Company's service territory. A single site with multiple generating units, each owned by a single entity, shall constitute one Generating Facility. The Company shall have the sole and exclusive right to determine if any particular equipment qualifies as a Generating Facility if the operating characteristics and/or circumstances relating to such equipment are different than described in this definition.

Hertz – A unit of frequency, equal to one cycle per second.

Horsepower (HP) – Unit of mechanical power representing rate of consumption of power and equivalent to 746 watts. As used herein, horsepower is computed as the equivalent of 750 watts.

<u>(C)</u>

Hourly Pricing Service Charges – For Customers served under Rate Schedules 30 (HP), 35, 40, 44, 46 and Tariff No.38 (PSU) as well as 20 and 30 (PTC) on a voluntary basis. Customers that elect this rate, the charges representing the Company's costs for providing energy, capacity, including the cost of complying with AEPS, market based transmission, and ancillary services for Default Service Customers.

(C) Change

Electric Pa. P.U.C. No. 52 (Supp. XX)

___ Revised Page 129
Superseding __ Revised Page 129

RIDERS

RIDER H PRICE TO COMPARE DEFAULT SERVICE RATE RIDER

A Price to Compare Default Service Rate ("PTC_{Default}") shall be applied to each kWh of Default Service that Met-Ed delivers to Customers under this rider as determined to the nearest one-thousandth of a cent per kWh. The PTC_{Default} rate shall be billed to Customers receiving Default Service from the Company under this rider. The rates shall be calculated according to the provisions of this rider.

For service rendered <u>JuneSeptember</u> 1, <u>20212023</u> through November 30, <u>20212023</u> the PTC_{Default} rates billed by Customer Class are as follows:

Commercial Customer Class (Rate GS-Small, Rate GS-Medium (PTC), Rate MS, Borderline Service, Street Lighting Service, Ornamental Street Lighting, LED Street Lighting Service and Outdoor Lighting Service):

\$X.XXXXX per kWh

<u>Residential Customer Class (Rate RS and Rate GS – Volunteer Fire Company,</u> Non-Profit Ambulance Service, Rescue Squad and Senior Center Service Rate):

\$X.XXXXX per kWh

(C) Change

Electric Pa. P.U.C. No. 52 (Supp. XX)

___ Revised Page 130

Superseding __ Revised Page 130

RIDERS

Rider H (continued)

<u>(C)</u>

The PTC_{Default} rates by Commercial or Residential Customer Class will be calculated <u>semi-annually</u> for the six-month period ending March 31st to be effective for the six-month period <u>beginning June 1st</u>; and for the six month period ending September 30th to be effective for the six month period beginning December 1st. at the end of each Default Service Quarter (three monthsending March 31st, June 30th, September 30th, and December 31st) to be effective for the three monthperiod beginning on the first day of the third calendar month following the end of that Default Service Quarter (June 1st, September 1st, December 1st, and March 1st). The PTC_{Default} rate shall be calculated by Customer Class in accordance with the formula set forth below:

$$\begin{split} PTC_{Default} &= \left[(PTC_{Current} + E) \right] X \left[1 \: / \: (1 \: - \: T) \right] \\ PTC_{Current} &= \left(PTC_{Current \: Cost \: Component} \: X \: PTC \: Loss_{Current} \right) + PTC_{Adm} + PTC_{NITS} \\ E &= \left[\left((DS_{Exp1} + DS_{Exp2}) \: - \: PTC_{Rev} + \: DS_{Int} \: \right) / DS_{Sales} \right] \end{split}$$

Where:

PTC_{Current} = The current cost component of the PTC_{Default} rate grossed up for line losses calculated by Commercial or Residential Customer Class determined to the nearest one-thousandth of a cent per kWh to be applied to each kWh of Default Service delivered to Retail Customers under this rider.

The computation of the PTC_{Current} component of the PTC_{Default} rate by Commercial or Residential Customer Class will use the following procedures:

(C)

PTC_{Current Cost Component} = The current cost component of the PTC_{Default} rate calculated by Customer Class determined to the nearest one-thousandth of a cent per kWh to be applied to each kWh of Default Service delivered to Retail Customers under this rider. This rate will be determined, by Customer Class, using the projected weighted cost of Default Service supply acquired by the Company to serve Default Service load and will include any AEPS expenses that may be incurred by the Company related to amendments to the AEPS Act that may occur subsequent to the effective date of the Supplier Master Agreement for the Default Service Supply Plan, and any PJM charges related to the provision of Default Service.

(C) Change

(C)

METROPOLITAN EDISON COMPANY

Electric Pa. P.U.C. No. 52 (Supp. XX)

___ Revised Page 131
Superseding __ Revised Page 131

RIDERS

Rider H (continued)

PTC Loss_{Current} = Distribution line losses for energy that are determined by the applicable Loss Factors specified below:

Customer Class	Loss Factor
Commercial Customer Class	1.0515
Residential Customer Class	1.0515

 $PTC_{Adm} =$

An administrative fee for applicable administration costs by Customer Class determined to the nearest one-thousandth of a cent per kWh to be applied to each kWh of Default Service delivered to Retail Customers under this rider.

 $PTC_{NITS} =$

When the Company purchases Network Integration Transmission Service from PJM on behalf of customers, a Network Integration Transmission Service Charge for Default Service, determined to the nearest one-thousandth of a cent per kWh to be applied to each kWh of Default Service delivered to Retail Customers under this rider.

E =

The Price to Compare Default Service Reconciliation Rate component by Customer Class. The rate determined to the nearest one-thousandth of a cent per kWh by Customer Class shall be applied to each kWh of Default Service delivered to retail Customers by Customer Class under this rider.

(C) Change

Electric Pa. P.U.C. No. 52 (Supp. XX)

___ Revised Page 132
Superseding __ Revised Page 132

RIDERS

Rider H (continued)

(C)

 DS_{Exp1} = An allocated portion of the incremental start-up costs incurred by the Company through May 31, $\frac{2019-2023}{2023}$ in connection with the Company's Default Service Supply Plan to provide Default Service amortized over the forty-eight (48) month period ending May 31, $\frac{2023-2027}{2023}$, including but not limited to:

<u>(C)</u>

- Incremental start-up administrative costs including metering and billing costs incurred and other costs as necessary to provide service to retail Default Service Customers
- Other start-up costs incurred to develop and implement the competitive bid process for the retail Default Service Supply Plan for retail Default Service including legal, customer notice, and consultant fees
- The incremental administrative start-up costs incurred to implement the Time-of-Use Rider
- The incremental administrative start-up costs associated with the portfolio procurements of the supply needed from block and spot

Interest shall be computed monthly for the over or under collection at the prime rate of interest for commercial banking, not to exceed the legal rate of interest, in effect on the last day of the month that the over and under collection occurs, as reported in the *Wall Street Journal*, to the effective month that the over collection is refunded or the under collection is collected and included in the determination of the monthly amortized amount.

<u>(C)</u>

DS_{Exp2} = The cumulative costs to provide Default Service incurred by the Company for the respective Customer Class <u>for the six-month period ending two months prior to the effective date</u>through the end of the previous Default Service Quarter, including but not limited to the following:

Effective: June 1, 2023

Electric Pa. P.U.C. No. 52 (Supp. XX)

___ Revised Page 133
Superseding __ Revised Page 133

RIDERS

Rider H (continued)

(C)

- Payments made to winning bidders
- Any net energy costs associated with the portfolio procurements of the supply needed from block and spot purchases. (These net energy costs will reflect the net proceeds from sales in the wholesale energy market of any excess energy purchased by the Company to provide Default Service that exceeds actual energy used).
- Any PJM related charges including capacity, operating reserve, transmission-related costs other than Non-Market Based Services Transmission Charges identified in Rider J, and ancillary services associated with the acquisition of default service supply
- An allocated portion of administrative costs associated with the portfolio procurements of the supply needed from block and spot purchases.
- An allocated portion of incremental administrative costs including metering and billing costs incurred and other costs as necessary to provide service to retail Default Service Customers.
- All contingency plan implementation costs incurred during the supply period, including any PJM charges to implement the Company's contingency plans
- An allocated portion of other costs incurred to develop and implement the competitive bid process for Retail Default Service including legal, customer notice, and consultant fees.
- AEPS expenses incurred by the Company related to amendments to the AEPS Act occurring subsequent to the effective date of the Supplier Master Agreement for the Default Service Supply Planexcluding such costs that are recovered through the Company's Solar Photovoltaic Requirements Charge Rider.

(C) Change

Electric Pa. P.U.C. No. 52 (Supp. XX)

___ Revised Page 134
Superseding __ Revised Page 134

RIDERS

Rider H (continued)

<u>(C)</u>

- The net AEPS expenses incurred by the Company associated with the portfolio procurements of the supply needed from block and spot purchases. These net AEPS expenses will reflect the net proceeds of sales of AEPS credits purchased that exceed the AEPS credits needed to meet AEPS requirements.
- The cost of credit when the Company is considered by PJM to be the load serving entity
- Any cost incurred by the Company associated with any
 Commission-approved solar power purchase agreements and the
 administration of the Company's long-term solar procurement,
 including the costs associated with spot purchases to satisfy a
 fixed quantity of default service load. These costs will be
 recovered from the customers in the applicable procurement
 classes receiving an allocation of the solar energy and/or the
 SPAECs procured
- Any reconciliation balance associated with GS Medium customers with demand equal to or greater than 100 kW
- migrating from Rider H Price to Compare Default Service Rate Rider to Rider I Hourly Pricing Default Service Rider asof June 1, 2019.

(C)

PTC_{Rev} = The cumulative revenues billed to Retail Customers by Customer Class for Default Service under the Default Service Supply Plan, excluding applicable Pennsylvania gross receipts tax, for the six-month period ending two months prior to the effective date through the end of the most recent Default Service Quarter billed under the respective Customer Class PTC_{Default} rates.

(C)

DS_{Int} = The cumulative amount of carrying charges calculated on a monthly basis for the six-month period ending two months prior to the effective date through the end of the most recent Default Service Quarter by Customer Class. Interest shall be computed monthly for the over or under collection at the prime rate of interest for commercial banking, not to exceed the legal rate of interest, in effect on the last day of the month that the over and under collection occurs, as reported in the *Wall Street Journal*, to the effective month that the over collection is refunded or the under collection is collected.

(C) Change

Electric Pa. P.U.C. No. 52 (Supp. XX)

___ Revised Page 135

Superseding __ Revised Page 135

RIDERS

Rider H (continued) (C)

DS_{Sales} = The Company's projected Default Service kWh sales to Retail Customers by Customer Class for the <u>sixthree</u>-month billing period that the E rate component of the PTC_{Default} rate will be in effect.

T = The Pennsylvania gross receipts tax rate in effect during the billing month expressed in decimal form as reflected in the Company's base rates.

Each change in the PTC_{Default} rates will be filed with the Commission by the later of: (a) forty-five (45) days prior to the effective date of the rate changes; or (b) seven (7) days after the last supply auction. The Company shall file details in support of the revised PTC_{Default} rates.

At the conclusion of the duration of this reconciliation rider, the Company is authorized to recover or refund any remaining amounts not reconciled at that time under such mechanism as approved by the Commission.

Application of the PTC_{Default} rates shall be subject to annual review and audit by the Commission.

(C) Change

Electric Pa. P.U.C. No. 81 (Supp. XX)

Revised Page 136

Superseding Revised Page 136

RIDERS

RIDER H PRICE TO COMPARE DEFAULT SERVICE RATE RIDER

A Price to Compare Default Service Rate ("PTC_{Default}") shall be applied to each kWh of Default Service that Penelec delivers to Customers under this rider as determined to the nearest one-thousandth of a cent per kWh. The PTC_{Default} rate shall be billed to Customers receiving Default Service from the Company under this rider. The rates shall be calculated according to the provisions of this rider.

For service rendered September June 1, 2021 2023 through November 30, 2021 2023 (C) the PTC_{Default} rates billed by Customer Class are as follows:

Commercial Customer Class (Rate GS-Small, Rate GS-Medium (PTC), Rate H, Borderline Service, Street Lighting Service, Ornamental Street Lighting, LED Street Lighting Service, and Outdoor Lighting Service):

\$X.XXXXX per kWh.

<u>Residential Customer Class (Rate RS and Rate GS – Volunteer Fire Company, Non-Profit Ambulance Service, Rescue Squad and Senior Center Service Rate):</u>

\$X.XXXXX per kWh

(C) Change

Electric Pa. P.U.C. No. 81 (Supp. XX)

Revised Page 137

Superseding Revised Page 137

RIDERS

Rider H (continued)

<u>(C)</u>

The PTC_{Default} rates by Commercial or Residential Customer Class will be calculated <u>semi-annually</u> for the six-month period ending March 31st to be effective for the six-month period beginning. June 1st, and for the six month period ending September 30th to be effective for the six month period beginning December 1st, at the end of each Default Service Quarter (three months ending March 31st, June 30th, September 30th, and December 31st) to be effective for the three month period beginning on the first day of the third calendar month following the end of that Default Service Quarter (June 1st, September 1st, December 1st, and March 1st). The PTC_{Default} rate shall be calculated by Customer Class in accordance with the formula set forth below:

$$\begin{split} PTC_{Default} &= \left[\left(PTC_{Current} + E \right) \right] X \left[1 \ / \left(1 - T \right) \right] \\ PTC_{Current} &= \left(PTC_{Current \ Cost \ Component} X \ PTC \ Loss_{Current} \right) + PTC_{Adm} + PTC_{NITS} \\ E &= \left[\left(\left(DS_{Exp1} + DS_{Exp2} \right) - PTC_{Rev} + DS_{Int} \right) / DS_{Sales} \right] \end{split}$$

Where:

PTC_{Current} = The current cost component of the PTC_{Default} rate grossed up for line losses calculated by Commercial or Residential Customer Class determined to the nearest one-thousandth of a cent per kWh to be applied to each kWh of Default Service delivered to Retail Customers under this rider.

The computation of the PTC_{Current} component of the PTC_{Default} rate by Commercial or Residential Customer Class will use the following procedures:

(C)

PTC_{Current Cost Component} = The current cost component of the PTC_{Default} rate calculated by Customer Class determined to the nearest one-thousandth of a cent per kWh to be applied to each kWh of Default Service delivered to Retail Customers under this rider. This rate will be determined, by Customer Class, using the projected weighted cost of Default Service supply acquired by the Company to serve Default Service load and will include any AEPS expenses that may be incurred by the Company related to amendments to the AEPS Act that may occur subsequent to the effective date of the Supplier Master Agreement for the Default Service Supply Plan, and any PJM charges related to the provision of Default Service.

(C) Change

1	PENNSYL	VANIA	FIFC	Γ RIC (^{C}MPA	NY
ı		- V AINIA			\sim CHVII \sim	

Electric Pa. P.U.C. No. 81 (Supp. XX)

Revised Page 138

Superseding Revised Page 138

RIDERS

Rider H (continued)

PTC Loss_{Current} = Distribution line losses for energy that are determined by the applicable Loss Factors specified below:

Customer Class Loss Factor Commercial Customer Class 1.0573 Residential Customer Class 1.0573

PTC_{Adm} = An administrative fee for applicable administration costs by Customer Class

determined to the nearest one-thousandth of a cent per kWh to be applied to each

kWh of Default Service delivered to Retail Customers under this rider.

(C)

PTC_{NITS} = When the Company purchases Network Integration Transmission Service from PJM on behalf of customers, a Network Integration Transmission Service Charge for

Default Service, a Network Integration Transmission Service, determined to the nearest one-thousandth of a cent per kWh to be applied to each kWh of Default

Service delivered to Retail Customers under this rider.

E = The Price to Compare Default Service Reconciliation Rate component by Customer

Class. The rate determined to the nearest one-thousandth of a cent per kWh by Customer Class shall be applied to each kWh of Default Service delivered to retail

Customers by Customer Class under this rider.

(C) Change

_	 TT	TC	1 T 7 T	•	7 4 '	T T	 $_{\rm FI}$	т.	\sim τ	1 T	\mathbf{r}	\sim	\sim 1	. <i>T</i> T	` •	•	TΨ	7

Electric Pa. P.U.C. No. 81 (Supp. XX)

___ Revised Page 139

Superseding __ Revised Page 139

RIDERS

Rider H (continued)

(C)

 DS_{Exp1} = An allocated portion of the incremental start-up costs incurred by the Company through May 31, $\frac{2019-2023}{2023}$ in connection with the Company's Default Service Supply Plan to provide Default Service amortized over the forty (48) month period endingMay 31, $\frac{20232027}{20232027}$, including but not limited to:

(C)

- Incremental start-up administrative costs including metering and billing costs incurred and other costs as necessary to provide service to retail Default Service Customers
- Other start-up costs incurred to develop and implement the competitive bid process for the retail-Default Service Supply Plan for retail-Default Service including legal, customer notice, and consultant fees
- The incremental administrative start-up costs incurred to implement the Time-of-Use Rider
- The incremental administrative start-up costs associated with the portfolio procurements of the supply needed from block and spot purchases

Interest shall be computed monthly for the over or under collection at the prime rate of interest for commercial banking, not to exceed the legal rate of interest, in effect on the last day of the month that the over and under collection occurs, as reported in the *Wall Street Journal*, to the effective month that the over collection is refunded or the under collection is collected and included in the determination of the monthly amortized amount.

<u>(C)</u>

DS_{Exp2} = The cumulative costs to provide Default Service incurred by the Company for the respective Customer Class for the six-month period ending two months prior to the effective date through the end of the previous Default Service Quarter, including but not limited to the following:

(C) Change

Electric Pa. P.U.C. No. 81 (Supp. XX)

Revised Page 140

Superseding Revised Page 140

RIDERS

Rider H (continued)

(C)

- Payments made to winning bidders
- Any net energy costs associated with the portfolio procurements of the supply needed from block and spot purchases. These net energy costs will reflect the net proceeds from sales in the wholesale energy market of any excess energy purchased by the Company to provide Default Service that exceeds actual energy used.
- Any PJM related charges including capacity, operating reserve, transmission-related costs other than Non-Market Based Services Transmission Charges identified in Rider J and ancillary services associated with the acquisition of default service supply-
- An allocated portion of administrative costs associated with the portfolio procurements of the supply needed from block and spot purchases.
- An allocated portion of incremental administrative costs including metering and billing costs incurred and other costs as necessary to provide service to retail Default Service Customers.
- All contingency plan implementation costs incurred during the supply period, including any PJM charges to implement the Company's contingency plans-
- An allocated portion of other costs incurred to develop and implement the competitive bid process for Retail Default Service including legal, customer notice, and consultant fees.
- AEPS expenses incurred by the Company related to amendments to the AEPS Act occurring subsequent to the effective date of the Supplier-Master Agreement for the Default Service Supply Plan excluding such costs that are recovered through the Company's Solar Photovoltaic Requirements Charge Rider.

(C) Change

Electric Pa. P.U.C. No. 81 (Supp. XX)

___ Revised Page 141
Superseding __ Revised Page 141

RIDERS

Rider H (continued)

<u>(C)</u>

- The net AEPS expenses incurred by the Company associated with the portfolio procurements of the supply needed from block and spot purchases. These net AEPS expenses will reflect the net proceeds of sales of AEPS credits purchased that exceed the AEPS credits needed to meet AEPS requirements.
- The cost of credit when the Company is considered by PJM to be the load serving entity
- Any cost incurred by the Company associated with any
 Commission-approved solar power purchase agreements and
 the administration of the Company's long-term solar
 procurement, including the costs associated with spot
 purchases to satisfy a fixed quantity of default service load.
 These costs will be recovered from the customers in the
 applicable procurement classes receiving an allocation of the
 solar energy and/or the SPAECs procured
- Any reconciliation balance associated with GS Medium
 customers with demand equal to or greater than 100 kW
 migrating from Rider H Price to Compare Default Service
 Rate Rider to Rider I Hourly Pricing Default Service Rider as of June 1, 2019.

(C)

PTC_{Rev =} The cumulative revenues billed to Retail Customers by Customer Class for Default Service under the Default Service Supply Plan, excluding applicable Pennsylvania gross receipts tax, for the six-month period ending two months prior to the effective datethrough the end of the most recent Default Service Quarter billed under the respective Customer Class PTC_{Default} rates.

(C)

DS_{Int} = The cumulative amount of carrying charges calculated on a monthly basis for the six-month period ending two months prior to the effective date through the end of the most recent Default Service Quarter by Customer Class. Interest shall be computed monthly for the over or under collection at the prime rate of interest for commercial banking, not to exceed the legal rate of interest, in effect on the last day of the month that the over and under collection occurs, as reported in the *Wall Street Journal*, to the effective month that the over collection is refunded or the under collection is collected.

(C) Change

Electric Pa. P.U.C. No. 81 (Supp. XX)

Revised Page 142

Superseding Revised Page 142

RIDERS

Rider H (continued)

(C)e

DS_{Sales} = The Company's projected Default Service kWh sales to Retail Customers by Customer Class for the threesix-month billing period that the E rate component of the PTC_{Default} rate will be in effect.

T = The Pennsylvania gross receipts tax rate in effect during the billing month expressed in decimal form as reflected in the Company's base rates.

Each change in the PTC_{Default} rates will be filed with the Commission by the later: (a) forty-five (45) days prior to the effective date of the rate changes, or (b) seven (7) days after last supply auction. The Company shall file details in support of the revised PTC_{Default} rates.

At the conclusion of the duration of this reconciliation rider, the Company is authorized to recover or refund any remaining amounts not reconciled at that time under such mechanism as approved by the Commission.

Application of the PTC_{Default} rates shall be subject to annual review and audit by the Commission.

(C) Change

Electric Pa. P.U.C. No. 36 (Supp. XX)

___ Revised Page 123
Superseding __ Revised Page 123

RIDERS

RIDER H PRICE TO COMPARE DEFAULT SERVICE RATE RIDER

A Price to Compare Default Service Rate ("PTC_{Default}") shall be applied to each kWh of Default Service that Penn Power delivers to Customers under this rider as determined to the nearest one-thousandth of a cent per kWh. The PTC_{Default} rate shall be billed to Customers receiving Default Service from the Company under this rider. The rates shall be calculated according to the provisions of this rider.

For service rendered September June 1, 2021 2023 through November 30, 2021 2023 the PTC_{Default} rates billed by Customer Class are as follows:

Commercial Customer Class (Rate GS (excluding Special Rate GSDS), Rate GM (PTC), Rate PNP, PLS, SV, SVD, SM and LED):

\$X.XXXXX per kWh.

<u>Residential Customer Class (Rate RS, and Rate GS – Volunteer Fire Company,</u> Non-Profit Ambulance Service, Rescue Squad and Senior Center Service Rate):

\$X.XXXXX per kWh

(C) Change

Electric Pa. P.U.C. No. 36 (Supp. XX)

___ Revised Page 124
Superseding __ Revised Page 124

RIDERS

Rider H (continued)

<u>(C)</u>

The PTC_{Default} rates by Commercial or Residential Customer Class will be calculated <u>semi-annually</u> for the six-month period ending March 31st to be effective for the six-month period <u>beginning June 1st</u>; and for the six month period ending September 30th to be effective for the six month period beginning December 1st. at the end of each Default Service Quarter (three months ending March 31st, June 30th, September 30th, andDecember 31st) to be effective for the three monthperiod beginning on the first day of the third calendar month following the end of that Default Service Quarter (June 1st, September 1st, December 1st, and March 1st). The PTC_{Default} rate shall be calculated by Customer Class in accordance with the formula set forth below:

$$PTC_{Default} = [(PTC_{Current} + E)] X [1 / (1 - T)]$$

PTC_{Current} = (PTC_{Current Cost Component} X PTC Loss_{Current}) + PTC_{Adm} + PTC_{NITS}

$$E = [((DS_{Exp1} + DS_{Exp2}) - PTC_{Rev} + DS_{Int})/DS_{Sales}]$$

Where:

PTC_{Current} = The current cost component of the PTC_{Default} rate grossed up for line losses calculated by Commercial or Residential Customer Class determined to the nearest one-thousandth of a cent per kWh to be applied to each kWh of Default Service delivered to Retail Customers under this rider.

The computation of the PTC_{Current} component of the PTC_{Default} rate by Commercial or Residential Customer Class will use the following procedures:

(C)

PTC_{Current Cost Component} = The current cost component of the PTC_{Default} rate calculated by Customer Class determined to the nearest one-thousandth of a cent per kWh to be applied to each kWh of Default Service delivered to Retail Customers under this rider. This rate will be determined, by Customer Class, using the projected weighted cost of Default Service supply acquired by the Company to serve Default Service load and will include any AEPS expenses that may be incurred by the Company related to amendments to the AEPS Act that may occur subsequent to the effective date of the Supplier Master Agreement for the Default Service Supply Plan, and any PJM charges related to the provision of Default Service.

(C) Change

Electric Pa. P.U.C. No. 36 (Supp. XX)

___ Revised Page 125
Superseding __ Revised Page 125

RIDERS

Rider H (continued)

PTC Loss_{Current} = Distribution line losses for energy that are determined by the applicable Loss Factors specified below:

Customer Class	Loss Factor
Commercial Customer Class	1.0661
Residential Customer Class	1.0661

PTC_{Adm} = An administrative fee for applicable administration costs by Customer Class

determined to the nearest one-thousandth of a cent per kWh to be applied to each

kWh of Default Service delivered to Retail Customers under this rider.

PTC_{NITS} = When the Company purchases Network Integration Transmission from PJM on

behalf of customers, a Network Integration Transmission Service charge for Default Service, determined to the nearest one-thousandth of a cent per kWh to be applied to each kWh of Default Service delivered to Retail Customers under this

rider.

E = The Price to Compare Default Service Reconciliation Rate component by

Customer Class. The rate determined to the nearest one-thousandth of a cent per

kWh by Customer Class shall be applied to each kWh of Default Service delivered to retail Customers by Customer Class under this rider.

(C) Change

Electric Pa. P.U.C. No. 36 (Supp. XX)

___ Revised Page 126
Superseding __ Revised Page 126

RIDERS

Rider H (continued)

(C)

 DS_{Exp1} = An allocated portion of the incremental start-up costs incurred by the Company through May 31, $\frac{2019}{2023}$ in connection with the Company's Default Service Supply Plan to provide Default Service amortized over the forty-eight (48) month period ending May 31, $\frac{2023}{2023}$ 2027, including but not limited to:

<u>(C)</u>

- Incremental start-up administrative costs including metering and billing costs incurred and other costs as necessary to provide service to retail-Default Service Customers
- Other start-up costs incurred to develop and implement the competitive bid process for the retail Default Service Supply Plan for retail Default Service including legal, customer notice, and consultant fees

The incremental administrative start-up costs incurred to implement the Time-of-Use Rider

 The incremental administrative start-up costs associated with the portfolio procurements of the supply needed from blockand spot purchases

Interest shall be computed monthly for the over or under collection at the prime rate of interest for commercial banking, not to exceed the legal rate of interest, in effect on the last day of the month that the over and under collection occurs, as reported in the *Wall Street Journal*, to the effective month that the over collection is refunded or the under collection is collected and included in the determination of the monthly amortized amount.

(C)

DS_{Exp2} = The cumulative costs to provide Default Service incurred by the Company for the respective Customer Class for the six-month period ending two months prior to the effective datethrough the end of the previous Default Service Quarter, including but not limited to the following:

(C) Change

Electric Pa. P.U.C. No. 36 (Supp. XX)

Revised Page 127

Superseding Revised Page 127

RIDERS

Rider H (continued)

<u>(C)</u>

- Payments made to winning bidders
- Any net energy costs associated with the portfolioprocurements of the supply needed from block and spotpurchases. These net energy costs will reflect the net proceeds from sales in the wholesale energy market of any excess energy purchased by the Company to provide Default Service that exceeds actual energy used
- Any PJM related charges including capacity, operating reserve, transmission-related costs other than Non-Market Based Services Transmission Charges identified in Rider J, and ancillary services associated with the acquisition of default service supply
- An allocated portion of administrative costs associated with the portfolio procurements of the supply needed from block and spot purchases
- An allocated portion of incremental administrative costsincluding metering and billing costs incurred and other costs as necessary to provide service to retail Default Service-Customers
- All contingency plan implementation costs incurred during the supply period, including any PJM charges to implement the Company's contingency plans.
- An allocated portion of other costs incurred to develop and implement the competitive bid process for Retail Default Service including legal, customer notice, and consultant fees
- AEPS expenses incurred by the Company related to amendments to the AEPS Act occurring subsequent to the effective date of the Supplier Master Agreement for the Default Service Supply Plan excluding such costs that are recovered through the Company's Solar Photovoltaic Requirements Charge Rider

(C) Change

Electric Pa. P.U.C. No. 36 (Supp. XX)

___ Revised Page 128
Superseding __ Revised Page 128

RIDERS

Rider H (continued)

<u>(C)</u>

- The net AEPS expenses incurred by the Company associated with the portfolio procurements of the supply needed from block and spot purchases. These net AEPS expenses will reflect the net proceeds of sales of AEPS credits purchased that exceed the AEPS credits needed to meet AEPS requirements.
- The cost of credit when the Company is considered by PJM to be the load serving entity-
- Any cost incurred by the Company associated with any Commission-approved solar power purchase agreements and the administration of the Company's long-term solar procurement, including the costs associated with spot purchases to satisfy a fixed quantity of default service load. These costs will be recovered from the customers in the applicable procurement classes receiving an allocation of the solar energy and/or the SPAECs procured
- Any reconciliation balance associated with GM customers with demand equal to or greater than 100 kW migrating from Rider H Price to Compare Default Service Rate Rider to Rider I Hourly Pricing Default Service Rider as of June 1, 2019.

(C)

 $PTC_{Rev} =$

The cumulative revenues billed to Retail Customers by Customer Class for Default Service under the Default Service Supply Plan, excluding applicable Pennsylvania gross receipts tax, for the six-month period ending two months prior to the effective datethrough the end of the most recent Default Service Quarter billed under the respective Customer Class PTC_{Default} rates.

<u>(C)</u>

 $DS_{Int} =$

The cumulative amount of carrying charges calculated on a monthly basis for the six-month period ending two months prior to the effective datethrough the end of the most recent Default Service Quarter by Customer Class. Interest shall be computed monthly for the over or under collection at the prime rate of interest for commercial banking, not to exceed the legal rate of interest, in effect on the last day of the month that the over and under collection occurs, as reported in the *Wall Street Journal*, to the effective month that the over collection is refunded or the under collection is collected.

(C) Change

Electric Pa. P.U.C. No. 36 (Supp. XX)

Revised Page 129

Superseding Revised Page 129

RIDERS

Rider H (continued)

(C)

 $DS_{Sales} = \begin{tabular}{ll} The Company's projected Default Service kWh sales to Retail Customers by \\ Customer Class for the $\frac{three_{six}}{}$-month billing period that the E rate component of the PTC_{Default} rate will be in effect. \\ \end{tabular}$

T = The Pennsylvania gross receipts tax rate in effect during the billing month expressed in decimal form as reflected in the Company's base rates.

Each change in the PTC_{Default} rates will be filed with the Commission by the later of (a) forty-five (45) days prior to the effective date of the rate changes; or (b) seven (7) days after the last supply auction. The Company shall file details in support of the revised PTC_{Default} rates.

At the conclusion of the duration of this reconciliation rider, the Company is authorized to recover or refund any remaining amounts not reconciled at that time under such mechanism as approved by the Commission.

Application of the PTC_{Default} rates shall be subject to annual review and audit by the Commission.

(C) Change

Electric Pa. P.U.C. No. 40 (Supp. XX)

Revised Page 173

Superseding Revised Page 173

RIDERS

RIDER H PRICE TO COMPARE DEFAULT SERVICE RATE RIDER

A Price to Compare Default Service Rate ("PTC_{Default}") shall be applied to each kWh of Default Service that West Penn Power delivers to Customers under this rider as determined to the nearest one-thousandth of a cent per kWh. The PTC_{Default} rate shall be billed to Customers receiving Default Service from the Company under this rider. The rates shall be calculated according to the provisions of this rider.

<u>(C)</u>

For service rendered September June 1, 2021 2023 through November 30, 2021 2023 the PTC_{Default} rates billed by Customer Class are as follows:

Commercial Customer Class (Rate Schedules 20, 30 (PTC), 51 - 58, 71 and 72):

\$X.XXXXX per kWh

(C)

Residential Customer Class (Rate Schedule 10 and 20 (Special Provision)):

\$X.XXXXX per kWh

(C) Change

Electric Pa. P.U.C. No. 40 (Supp. XX)

___ Revised Page 174

Superseding __ Revised Page 174

RIDERS

Rider H (continued)

<u>(C)</u>

The PTC_{Default} rates by Commercial or Residential Customer Class will be <u>calculated</u> semi-annually for the six-month period ending March 31st to be effective for the six-month period beginning June 1st; and for the six month period ending September 30th to be effective for the six month period beginning December 1st. ealculated at the end of each Default Service-Quarter (three months ending March 31st, June 30th, September30th, and December 31st) to be effective for the three month period beginning on the first day ofthe third calendar month-following the end of that Default Service Quarter (June 1st, September1st, December 1st, and March 1st). The PTC_{Default} rate shall be calculated by Customer Class in accordance with the formula set forth below:

$$\begin{split} PTC_{Default} &= \left[(PTC_{Current} + E) \right] X \left[1 \, / \, (1 - T) \right] \\ \\ PTC_{Current} &= (PTC_{Current \, Cost \, Component} X \, PTC \, Loss_{Current}) + PTC_{Adm} + PTC_{NITS} \\ \\ E &= \left[((DS_{Exp1} + DS_{Exp2}) - PTC_{Rev} + DS_{Int} \,) / DS_{Sales} \right] \end{split}$$

Where:

PTC_{Current} = The current cost component of the PTC_{Default} rate grossed up for line losses calculated by Commercial or Residential Customer Class determined to the nearest one-thousandth of a cent per kWh to be applied to each kWh of Default Service delivered to Retail Customers under this rider.

The computation of the PTC_{Current} component of the PTC_{Default} rate by Commercial or Residential Customer Class will use the following procedures:

(C)

PTC_{Current Cost Component} = The current cost component of the PTC_{Default} rate calculated by Customer Class determined to the nearest one-thousandth of a cent per kWh to be applied to each kWh of Default Service delivered to Retail Customers under this rider. This rate will be determined, by Customer Class, using the projected weighted cost of Default Service supply acquired by the Company to serve Default Service load and will include any AEPS expenses that may be incurred by the Company related to amendments to the AEPS Act that may occur subsequent to the effective date of the Supplier Master Agreement for the Default Service Supply Plan, and any PJM charges related to the provision of Default Service.

(C) Change

Electric Pa. P.U.C. No. 40 (Supp. XX)

___ Revised Page 175
Superseding __ Revised Page 175

RIDERS

Rider H (continued)

PTC Loss_{Current} = Distribution line losses for energy that are determined by the applicable Loss Factors specified below:

Customer Class Loss Factor

Commercial Customer Class 1.0899

Residential Customer Class 1.0910

PTC_{Adm} = An administrative fee for applicable administration costs by Customer

Class determined to the nearest one-thousandth of a cent per kWh to be applied to each kWh of Default Service delivered to Retail Customers

under this rider.

PTC_{NITS} = For the Residential Customer Class only, a Network Integration

Transmission Service charge for block energy purchases, determined to the nearest one-thousandth of a cent per kWh to be applied to each kWh of

Default Service delivered to Retail Customers under this rider.

E = The Price to Compare Default Service Reconciliation Rate component by

Customer Class. The rate determined to the nearest one-thousandth of a cent per kWh by Customer Class shall be applied to each kWh of Default Service delivered to retail Customers by Customer Class under this rider.

(C) Change

Electric Pa. P.U.C. No. 40 (Supp. XX)

___ Revised Page 176
Superseding __ Revised Page 176

RIDERS

Rider H (continued)

(C)

 DS_{Exp1} = An allocated portion of the incremental start-up costs incurred by the Company through May 31, $\frac{2019-2023}{2019-2023}$ in connection with the Company's Default Service SupplyPlan to provide Default Service amortized over the forty-eight (48) month periodending May 31, $\frac{2023}{2027}$, including but not limited to:

- Incremental start-up administrative costs including metering and billing costs incurred and other costs as necessary to provide service to retail-Default Service Customers
- Other start-up costs incurred to develop and implement the competitive bid process for the retail Default Service Supply Plan for retail Default Service including legal, customer notice, and consultant fees
- The incremental administrative start-up costs incurred to implement the Time-of-Use Rider
- The incremental administrative start up costs associated with the portfolio procurements of the supply needed from block and spot purchases

Interest shall be computed monthly for the over or under collection at the prime rate of interest for commercial banking, not to exceed the legal rate of interest, in effect on the last day of the month that the over and under collection occurs, as reported in the *Wall Street Journal*, to the effective month that the over collection is refunded or the under collection is collected and included in the determination of the monthly amortized amount.

<u>(C)</u>

DS_{Exp2} = The cumulative costs to provide Default Service incurred by the Company for the respective Customer Class for the six-month period ending two months prior to the effective datethrough the end of the previous Default Service Quarter, including but not limited to the following:

Effective: June 1, 2023

Electric Pa. P.U.C. No. 40 (Supp. XX)

___ Revised Page 177

Superseding __ Revised Page 177

RIDERS

Rider H (continued)

<u>(C)</u>

- Payments made to winning bidders
- An allocated portion of incremental administrative costsincluding metering and billing costs incurred and other costs as necessary to provide service to retail Default Service Customers
- Any PJM related charges including capacity, operating reserve, transmission-related costs other than Non-Market Based Services Transmission Charges, identified in Rider J and ancillary services associated with the acquisition of default service supply
- All contingency plan implementation costs incurred during the supply period, including any PJM charges related to the implementation of the Company's contingency plans
- An allocated portion of other costs incurred to develop and implement the competitive bid process for Retail Default Service including legal, customer notice, and consultant fees
- The net AEPS expenses incurred by the Company associated with the portfolio procurements of the supply needed from block and spot purchases. These net AEPS expenses will reflect the net proceeds of sales of AEPS credits purchased that exceed the AEPS credits needed to meet AEPS requirements
- The cost of credit when the Company is considered by PJM to be the load serving entity
- Any cost incurred by the Company associated with any
 Commission-approved solar power purchase agreements and the
 administration of the Company's long-term solar procurement,
 including the costs associated with spot purchases to satisfy a
 fixed quantity of default service load. These costs will be
 recovered from the customers in the applicable procurement
 classes receiving an allocation of the solar energy and/or the
 SPAECs procured
- Net AEPS Expense and AEPS expenses incurred by the Company related to amendments to the AEPS Act occurring subsequent to the effective date of the Supplier Master-Agreement for the Default Service Supply Plan
- Any reconciliation balance associated with Rate Schedule 30customers with demand equal to or greater than 100 kW migratingfrom Rider H - Price to Compare Default Service Rate Rider to Rider I Hourly Pricing Default Service Rider as of June 1,2019

(C) Change

Electric Pa. P.U.C. No. 40 (Supp. XX)

___ Revised Page 178

Superseding __ Revised Page 178

RIDERS

Rider H (continued)

<u>(C)</u>

PTC_{Rev} = The cumulative revenues billed to Retail Customers by Customer Class for Default Service under the Default Service Supply Plan, excluding applicable Pennsylvania gross receipts tax, for the six-month period ending two months prior to the effective datethrough the end of the most recent Default Service Quarter billed under the respective Customer Class PTC_{Default} rates.

<u>(C)</u>

 $DS_{Int} =$

The cumulative amount of carrying charges calculated on a monthly basis for the six-month period ending two months prior to the effective datethrough the end of the most recent Default Service Quarter by Customer Class. Interest shall be computed monthly for the over or under collection at the prime rate of interest for commercial banking, not to exceed the legalrate of interest, in effect on the last day of the month that the over and under collection occurs, as reported in the *Wall Street Journal*, to the effective month that the over collection is refunded or the under collection is collected.

(C) Change

Electric Pa. P.U.C. No. 40 (Supp. XX)

___ Revised Page 179

Superseding __ Revised Page 179

RIDERS

Rider H (continued)

(C)

DS_{Sales} = The Company's projected Default Service kWh sales to Retail Customers by Customer Class for the threesix-month billing period that the E rate component of the PTC_{Default} rate will be in effect.

T = The Pennsylvania gross receipts tax rate in effect during the billing month expressed in decimal form as reflected in the Company's base rates.

Each change in the PTC_{Default} rates will be filed with the Commission by the later of: (a) Forty-five (45) days prior to the effective date of the rate changes; or (b) seven (7) days after the last supply auction. The Company shall file details in support of the revised PTC_{Default} rates.

At the conclusion of the duration of this reconciliation rider, the Company is authorized to recover or refund any remaining amounts not reconciled at that time under such mechanism as approved by the Commission.

Application of the $PTC_{Default}$ rates shall be subject to annual review and audit by the Commission.

(C) Change

Electric Pa. P.U.C. No. 52 (Supp. XX)

___ Revised Page 136

Superseding __ Revised Page 136

RIDERS

RIDER I HOURLY PRICING DEFAULT SERVICE RIDER

AVAILABILITY:

The charges billed under this rider are applicable to all Customers on Rate Schedules GS-Medium (HP), GS-Large, GP, and TP who elect to take Default Service from the Company. These charges are also applicable to Customers on Rate Schedules GS-Small and GS-Medium (PTC) on a voluntary basis who meet the metering requirements of this rider. Rates shall be billed under this rider on the next scheduled meter reading date after electing Default Service.

All GS-Small and GS-Medium (PTC) Customers electing service under this rider must have Smart Meter technology installed as part of the Company's Smart Meter Plan filed with and approved by the Commission.

Hourly Pricing Service Charges:

Customers participating in the Hourly Pricing Default Service Rider will be billed for usage based on the following calculation:

Hourly Pricing Service Charges = $(HP_{Energy Charge} + HP_{Cap-AEPS-Other Charge} + HP_{Administrative})$ $Charge + HP_{Unc} + HP_{Reconciliation Charge}) X [1 / (1-T)]$

HP Energy Charge per kWh:

$$HP_{Energy\,Charge} = \sum_{t=1}^{n} \; \left(kWh_t \; x \; (LMP_t + HP_{Oth}) \; x \; HP_{Loss\;Multiplier} \right)$$

Where:

n = Total number of hours in the billing period

t = An hour in the billing period

LMP = the "Real Time" PJM load-weighted average Locational Marginal Price for the ME Transmission Zone.

HP_{Oth} = \$X.XXXXX per kWh for estimate of capacity, ancillary services, NITS, AEPScompliance and other supply components.

(C) Change

Page 2 of 6

METROPOLITAN EDISON COMPANY

Electric Pa. P.U.C. No. 52 (Supp. XX)

___ Revised Page 137

Superseding ___ Revised Page 137

RIDERS

Rider I (continued)

HP Loss Multipliers:	GS-Small	1.0515
	GS-Medium	1.0515
	GS-Large	1.0515
	GP	1.0171
	TP	1.0007

These HP Loss Multipliers exclude transmission losses.

HP Cap-AEPS-Other Charge:

\$X.XXXXX per kWh representing the costs paid by the Company to the Supplier for Capacity, AEPS costs, and any other costs incurred by the Supplier multiplied by the HP Loss Multipliers. This charge is subject to quarterly adjustments.

HP Administrative Charge:

\$X.XXXXX per kWh representing the administrative costs incurred by the Company associated with providing Hourly Pricing Service.

HP Uncollectibles Charge:

\$X.XXXXX per kWh representing the default service-related uncollectible accounts expense associated with Hourly Pricing Default Service. This charge is subject to annual adjustment on June 1 of each year.

Electric Pa. P.U.C. No. 52 (Supp. XX) _ Revised Page 138 Superseding __ Revised Page 138

RIDERS

Rider I (continued)

HP Reconciliation Charge:

The HP Reconciliation Charge Rate ("E_{HP}") shall be applied to each kWh of Default Service that Met-Ed delivers to Customers under this rider as determined to the nearest onethousandth of a cent per kWh. The E_{HP} rate shall be included as a non-bypassable component billed to Customers receiving Default Service from the Company under this rider. The rate shall be calculated according to the provisions of this rider.

For service rendered JuneSeptember 1, 20212023 through November 30, 20212023 the E_{HP}

(C)

rate is as follows: HP Reconciliation Charge Rate = \$X.XXXXX per kWh

(C)

(C)

The E_{HP} rate will be calculated semi-annually for the six-month period ending March 31st to be effective for the six-month period beginning June 1st; and for the six month period ending September 30th to be effective for the six month period beginning December 1st.at the end of each Default Service Quarter (three monthsending March 31st, June 30th, September-30th, and December 31st) to be effective for the three-month period beginning on the first day of the third calendar month following the end of that Default Service Quarter (June 1st, September 1st, December 1st, and March 1st). The E_{HP} rate shall be calculated in accordance with the formula set forth below:

 $E_{HP} = ((DS_{HPExp1} + DS_{HPExp2}) - PTC_{HPRev} + DS_{HPInt})/DS_{HPSales}$

Where:

 $E_{HP} =$ The rate determined to the nearest one-thousandth of a cent per kWh to be

applied to each kWh of Default Service delivered to Customers under this rider.

An allocated portion of the incremental start-up costs incurred by the Company $DS_{HPExp1} =$

through May 31, 20192023 in connection with the Company's Default Service Supply Plan to provide Default Service amortized over the forty-eight (48)

month period ending May 31, 20232027 including but not limited to:

(C) Change

Electric Pa. P.U.C. No. 52 (Supp. XX)

Revised Page 139

Superseding Revised Page 139

RIDERS

Rider I (continued)

- Incremental start-up administrative costs including meteringand billing costs incurred and other costs as necessary to provide service to Retail Default Service Customers
- Other start-up costs incurred to develop and implement the competitive bid process for the Retail-Default Service SupplyPlan including legal, customer notice, and consultant fees.

Interest shall be computed monthly for the over or under collection at the prime rate of interest for commercial banking, not to exceed the legal rate of interest, in effect on the last day of the month that the over and under collection occurs, as reported in the *Wall Street Journal*, to the effective month that the over collection is refunded or the under collection is collected included in the determination of the monthly amortized amount.

<u>(C)</u>

DSHPExp2 =

The cumulative costs to provide Hourly Pricing Default Service incurred by the Company for the six-month period ending two months prior to the effective date, through the end of the previous Default Service Quarter-including but not limited to the following:

- Payments made to winning bidders
- Any PJM related charges other than Non-Market Based Services
 Transmission charges identified in Rider J associated_with the procurement
 of Hourly Pricing Default Service
- AEPS expenses incurred by Met Ed related to amendments to the AEPS Act and/or related laws or regulations occurring subsequent to the effective date of the Supplier Master Agreement for the Default Service Supply Planexcluding suchcosts recovered through the Company's Solar Photovoltaic-Requirements Charge Rider
- An allocated portion of incremental administrative costs including metering and billing costs incurred and other costs as necessary to provide service to retail Default Service Customers
- All contingency plan implementation costs incurred during the supply period
- An allocated portion of other costs incurred to develop and implement the competitive bid process for retail Default Service including legal, customer notice, and consultant fees.
- The cost of credit when the Company is considered by PJM to be the load serving entity
- Any reconciliation balance associated with GS Medium
 customers with demand equal to or greater than 100 kW migrating from
 Rider H Price to Compare Default Service Rate Rider to Rider I Hourly
 Pricing Default Service Rider as of June 1, 2019.

(C) Change

rates.

Electric Pa. P.U.C. No. 52 (Supp. XX)

___ Revised Page 140

Superseding __ Revised Page 140

RIDERS

Rider I (continued)

<u>(C)</u>

PTC_{HPRev} = The cumulative revenues, excluding any revenues associated with the HP Uncollectibles Charge and applicable Pennsylvania gross receipts tax, <u>for the six-month period ending two months prior to the effective datethrough the end of the most recent_Default Service Quarter billed to HourlyPricing Default Service Customers under this rider including the applicableEHP</u>

(C)

DS_{HPInt} = The cumulative amount of carrying charges calculated on a monthly basis for the six-month period ending two months prior to the effective datethrough the end of the most recent Default Service Quarter. Interest shall be computed monthly for the over or under collection at the prime rate of interest for commercial banking, not to exceed the legal rate of interest, ineffect on the last day of the month that the over and under collection occurs, as reported in the *Wall Street Journal*, to the effective month that the over collection is refunded or the under collection is collected.

DS_{HPSales} = The Company's projected Hourly Pricing Default Service kWh sales to Retail Customers for the threesix-month billing period that the E_{HP} rate will bein effect.

Gross Receipts Tax:

T = The Pennsylvania gross receipts tax rate in effect during the billing month expressed in decimal form as reflected in the Company's base rates.

(C) Change

Page 6 of 6

METROPOLITAN EDISON COMPANY

Electric Pa. P.U.C. No. 52 (Supp. XX)

Revised Page 141

Superseding Revised Page 141

RIDERS

Rider I (continued)

General:

Each change in the E_{HP} rate as well as other rates within this rider will be filed with the Commission by the later of: (a) forty-five (45) days prior to the effective date of the rate changes; or (b) seven (7) days after the last supply auction. The Company shall file details in support of the revised rates.

At the conclusion of the duration of this reconciliation rider, the Company is authorized to recover or refund any remaining amounts not reconciled at that time under such mechanism as approved by the Commission.

Application of the E_{HP} rate shall be subject to annual review and audit by the Commission.

Adjustment for Meter Location:

Where the Company meters distribution secondary voltage service on the primary side of the transformers, the demand and energy registrations shall each be reduced by two and one-half percent (2.5%). Where the Company meters service supplied at voltages higher than the distribution secondary voltage on the secondary side of the transformers, either compensating - metering equipment will be used to correct for transformer losses or the demand and energy meter registration shall each be increased by two and one-half percent (2.5%).

Metering:

The Customer is responsible for providing a working dedicated telephone line for metering purposes at each metering point or shall pay the Company any and all expenses for providing communications to the interval equipment at the Customer's location(s). Maintenance of the meter(s) will be the responsibility of the Company, which will own the meter(s).

Electric Pa. P.U.C. No. 81 (Supp. XX)

Revised Page 143

Superseding Revised Page 143

RIDERS

RIDER I HOURLY PRICING DEFAULT SERVICE RIDER

AVAILABILITY:

The charges billed under this rider are applicable to all Customers on Rate Schedules GS-Medium (HP), GS-Large, GP, and LP who elect to take Default Service from the Company. These charges are also applicable to Customers on Rate Schedules GS-Small and GS-Medium (PTC) on a voluntary basis who meet the metering requirements of this rider. Rates shall be billed under this rider on the next scheduled meter reading date after electing Default Service

All GS-Small and GS-Medium (PTC) Customers electing service under this rider must have Smart Meter technology installed as part of the Company's Smart Meter Plan filed with and approved by the Commission.

Hourly Pricing Service Charges:

Customers participating in the Hourly Pricing Default Service Rider will be billed for usage based on the following calculation:

Hourly Pricing Service Charges = (HP
$$_{Energy\ Charge}$$
 + HP $_{Cap\text{-}AEPS\text{-}Other\ Charge}$ + HP $_{Administrative\ Charge}$ + HP $_{Unc}$ + HP $_{Reconciliation\ Charge}$) X [1 / (1-T)]

HP Energy Charge per kWh:

$$HP_{Energy\ Charge} = \sum_{t=1}^{n} \left(kWh_t\ x\ (LMP_t + HP_{Oth})\ x\ HP_{Loss\ Multiplier} \right)$$

Where:

n = Total number of hours in the billing period

t = An hour in the billing period

LMP = the "Real Time" PJM load-weighted average Locational Marginal Price for the PN Transmission Zone

HP_{Oth} = \$X.XXXXX per kWh for estimate of capacity, ancillary services, NITS, AEPS Compliance and other supply components.

Electric Pa. P.U.C. No. 81 (Supp. XX)

___ Revised Page 144

Superseding __ Revised Page 144

RIDERS

Rider I (continued)

HP Loss Multipliers:	GS-Small	1.0573
-	GS-Medium	1.0573
	GS-Large	1.0573
	GP	1.0234
	LP	1.0035

These HP Loss Multipliers exclude transmission losses.

HP Cap-AEPS-Other Charge:

\$ X.XXXXX per kWh representing the costs paid by the Company to the Supplier for Capacity, AEPS costs, and any other costs incurred by the Supplier multiplied by the HP Loss Multipliers. This charge is subject to quarterly adjustments.

HP Administrative Charge:

\$ X.XXXXX per kWh representing the administrative costs incurred by the Companyassociated with providing Hourly Pricing Service.

HP Uncollectibles Charge:

\$ X.XXXXX per kWh representing the default service_-related uncollectible accounts expense_associated with Hourly Pricing Default Service. This charge is subject to annual adjustment on June 1 of each year.

(C)

(C)

<u>(C)</u>

PENNSYLVANIA ELECTRIC COMPANY

Electric Pa. P.U.C. No. 81 (Supp. XX)

Revised Page 145

Superseding Revised Page 145

RIDERS

Rider I (continued)

Where:

HP Reconciliation Charge:

The HP Reconciliation Charge Rate (" E_{HP} ") shall be applied to each kWh of Default Service that Penelec delivers to customers under this rider as determined to the nearest one-thousandth of a cent per kWh. The E_{HP} rate shall be included as a non-bypassable component billed to Customers receiving Default Service from the Company under this rider. The rate shall be calculated according to the provisions of this rider.

For service rendered September June 1, 2021 2023 through November 30, 2021 2023 the E_{HP} rate is as follows:

HP Reconciliation Charge Rate = \$X.XXXXX per kWh

The E_{HP} rate will be calculated <u>semi-annually for the six-month period ending March 31st to be effective for the six-month period beginning June 1st; and for the six month period ending <u>September 30th to be effective for the six month period beginning December 1st at the end of each <u>Default Service Quarter (three months ending January 31st, April 30th July 31st, and October 31st) to be effective for the three month periodbeginning on the first day of the second calendar month following the end of that Default Service Quarter (March 1st, June 1st, September 1st and December 1st). The E_{HP} rate shall be calculated in accordance with the formula set forth below:</u></u></u>

 $Ehp = \left[((DShpexp1 + DShpexp2 + \frac{DShpexp3}{DShpexp3}) - PTChprev + DShpexp1 / DShpexp3 \right] \\ \frac{X \left[1 / (1 - \frac{DShpexp3}{DShpexp3}) - \frac{DShpexp3}{DShpexp3} \right] \\ \frac{X \left[1 / (1 - \frac{DShpexp3}{DShpexp3}) - \frac{DShpexp3}{DShpexp3} \right] \\ \frac{X \left[1 / (1 - \frac{DShpexp3}{DShpexp3}) - \frac{DShpexp3}{DShpexp3} \right] \\ \frac{X \left[1 / (1 - \frac{DShpexp3}{DShpexp3}) - \frac{DShpexp3}{DShpexp3} \right] \\ \frac{X \left[1 / (1 - \frac{DShpexp3}{DShpexp3}) - \frac{DShpexp3}{DShpexp3} \right] \\ \frac{X \left[1 / (1 - \frac{DShpexp3}{DShpexp3}) - \frac{DShpexp3}{DShpexp3} \right] \\ \frac{X \left[1 / (1 - \frac{DShpexp3}{DShpexp3}) - \frac{DShpexp3}{DShpexp3} \right] \\ \frac{X \left[1 / (1 - \frac{DShpexp3}{DShpexp3}) - \frac{DShpexp3}{DShpexp3} \right] \\ \frac{X \left[1 / (1 - \frac{DShpexp3}{DShpexp3}) - \frac{DShpexp3}{DShpexp3} \right] \\ \frac{X \left[1 / (1 - \frac{DShpexp3}{DShpexp3}) - \frac{DShpexp3}{DShpexp3} \right] \\ \frac{X \left[1 / (1 - \frac{DShpexp3}{DShpexp3}) - \frac{DShpexp3}{DShpexp3} \right] \\ \frac{X \left[1 / (1 - \frac{DShpexp3}{DShpexp3}) - \frac{DShpexp3}{DShpexp3} \right] \\ \frac{X \left[1 / (1 - \frac{DShpexp3}{DShpexp3}) - \frac{DShpexp3}{DShpexp3} \right] \\ \frac{X \left[1 / (1 - \frac{DShpexp3}{DShpexp3}) - \frac{DShpexp3}{DShpexp3} \right] \\ \frac{X \left[1 / (1 - \frac{DShpexp3}{DShpexp3}) - \frac{DShpexp3}{DShpexp3} \right] \\ \frac{X \left[1 / (1 - \frac{DShpexp3}{DShpexp3}) - \frac{DShpexp3}{DShpexp3} \right] \\ \frac{X \left[1 / (1 - \frac{DShpexp3}{DShpexp3}) - \frac{DShpexp3}{DShpexp3} \right] \\ \frac{X \left[1 / (1 - \frac{DShpexp3}{DShpexp3}) - \frac{DShpexp3}{DShpexp3} \right] \\ \frac{X \left[1 / (1 - \frac{DShpexp3}{DShpexp3}) - \frac{DShpexp3}{DShpexp3} \right] \\ \frac{X \left[1 / (1 - \frac{DShpexp3}{DShpexp3}) - \frac{DShpexp3}{DShpexp3} \right] \\ \frac{X \left[1 / (1 - \frac{DShpexp3}{DShpexp3}) - \frac{DShpexp3}{DShpexp3} \right] \\ \frac{X \left[1 / (1 - \frac{DShpexp3}{DShpexp3}) - \frac{DShpexp3}{DShpexp3} \right] \\ \frac{X \left[1 / (1 - \frac{DShpexp3}{DShpexp3}) - \frac{DShpexp3}{DShpexp3} \right] \\ \frac{X \left[1 / (1 - \frac{DShpexp3}{DShpexp3}) - \frac{DShpexp3}{DShpexp3} \right] \\ \frac{X \left[1 / (1 - \frac{DShpexp3}{DShpexp3}) - \frac{DShpexp3}{DShpexp3} \right] \\ \frac{X \left[1 / (1 - \frac{DShpexp3}{DShpexp3}) - \frac{DShpexp3}{DShpexp3} \right] \\ \frac{X \left[1 / (1 - \frac{DShpexp3}{DShpexp3}) - \frac{DShpexp3}{DShpexp3} \right] \\ \frac{X \left[1 / (1 - \frac{DShpexp3}{DShpexp3}) - \frac{DShpexp3}{DShpexp3} \right] \\ \frac{X \left[1 / (1 - \frac{DShpexp3}{DShpexp3}) - \frac{DSh$

 E_{HP} = The rate determined to the nearest one-thousandth of a cent per kWh to be applied to each kWh of Default Service delivered to Customers under this rider.

 DS_{HPExp1} = An allocated portion of the incremental start-up costs incurred by the Company through May 31, $\frac{2019-2023}{2023}$ in connection with the Company's Default Service Supply Plan to provide Default Service amortized over the forty-eight (48) month period ending May 31, $\frac{2023-2027}{2027}$ including but not limited to:

- Incremental start-up administrative costs including metering and billing costs incurred and other costs as necessary to provide service to Retail Default Service Customers
- Other start-up costs incurred to develop and implement the competitive bid process for the Retail Default Service Supply Plan including legal, customer notice, and consultant fees.

(C) Change

(C)

PENNSYLVANIA ELECTRIC COMPANY

Electric Pa. P.U.C. No. 81 (Supp. XX) _ Revised Page 146 Superseding __ Revised Page 146

RIDERS

Rider I (continued)

Interest shall be computed monthly for the over or under collection at the prime rate of interest for commercial banking, not to exceed the legal rate of interest, in effect on the last day of the month that the over and under collectionoccurs, as reported in the Wall Street Journal, to the effective month that the over collection is refunded or the under collection is collected and included in the determination of the monthly amortized amount.

DSHPExp2 =

The cumulative costs to provide Hourly Pricing Default Service incurred bythe Company for the six-month period ending two months prior to the effective date, through the end of the previous Default Service Quarter including but not limited to the following:

- Payments made to winning bidders
- Any PJM related charges other than Non-Market Based Services Transmission Charges identified in Rider J associated with the procurement of Hourly Pricing Default Service
- AEPS expenses incurred by Penelec related to amendments to the AEPS Act and/or related laws or regulations occurring subsequentto the effective date of the Supplier Master Agreement for the Default Service Supply Planexcluding such costs recovered through the Company's Solar Photovoltaic-Requirements Charge Rider
- An allocated portion of incremental administrative costs including metering and billing costs incurred and other costs as necessary to provide service to retail Default Service Customers
- All contingency plan implementation costs incurred during thesupply
- An allocated portion of other costs incurred to develop and implement the competitive bid process for retail-Default Serviceincluding legal, customer notice, and consultant fees.
- The cost of credit when the Company is considered by PJM to bethe load serving entity
- Any reconciliation balance associated with GS-Medium customers with demand equal to or greater than 100 kW migratingfrom Rider H - Price to Compare Default Service Rate Rider to Rider I - Hourly Pricing Default Service Rider as of June 1, 2019.

PTCHPRev = The cumulative revenues, excluding any revenues associated with the HP Uncollectibles Charge and applicable Pennsylvania gross receipts tax, for the sixmonth period ending two months prior to the effective datethroughthe end of the most recent Default Service Quarter billed to Hourly Pricing Default Service Customers under this rider including the applicable EHP rates.

(C)

(C) Change

Page 5 of 6

PENNSYLVANIA ELECTRIC COMPANY

Electric Pa. P.U.C. No. 81 (Supp. XX)

___ Revised Page 147

Superseding __ Revised Page 147

RIDERS

Rider I (continued)

(C)

DS_{HPInt} = The cumulative amount of carrying charges calculated on a monthly basis for the six-month period ending two months prior to the effective datethrough the end of the most recent Default Service Quarter. Interest shall be computed monthly for the over or under collection at the prime rate of interest for commercial banking, not to exceed the legal rate of interest, ineffect on the last day of the month that the over and under collection occurs, as reported in the *Wall Street Journal*, to the effective

month that the over collection is refunded or the under collection is

collected.

(C)

 $DS_{HPSales}$ = The Company's projected Hourly Pricing Default Service kWh sales to Retail Customers for the threesix-month billing period that the E_{HP} rate

willbe in effect.

Gross Receipts Tax:

The Pennsylvania gross receipts tax rate in effect during the billing month expressed in decimal form as reflected in the Company's base rates.

General:

Each change in the E_{HP} rate as well as other rates within this rider will be filed with the Commission by the later of: (a) forty-five (45) days prior to the effective date of the rate changes; or (b) seven (7) days after the last supply auction. The Company shall file details in support of the revised rates.

At the conclusion of the duration of this reconciliation rider, the Company is authorized to recover or refund any remaining amounts not reconciled at that time under such mechanism as approved by the Commission.

Application of the E_{HP} rate shall be subject to annual review and audit by the Commission.

(C) Change

Electric Pa. P.U.C. No. 81 (Supp. XX)

Revised Page 148

Superseding Revised Page 148

RIDERS

Rider I (continued)

Adjustment for Meter Location:

Where the Company meters distribution secondary voltage service on the primary side of the transformers, the demand and energy registrations shall each be reduced by two and one-half percent (2.5%). Where the Company meters service supplied at voltages higher than the distribution secondary voltage on the secondary side of the transformers, either compensating - metering equipment will be used to correct for transformer losses or the demand and energy meter registration shall each be increased by two and one-half percent (2.5%).

Metering:

The Customer is responsible for providing a working dedicated telephone line for metering purposes at each metering point or shall pay the Company any and all expenses for providing communications to the interval equipment at the Customer's location(s). Maintenance of the meter(s) will be the responsibility of the Company, which will own the meter(s).

Electric Pa. P.U.C. No. 36 (Supp. XX)

Revised Page 130

Superseding Revised Page 130

RIDERS

RIDER I HOURLY PRICING DEFAULT SERVICE RIDER

Availability:

The charges billed under this rider are applicable to all Customers who elect to take Default Service from the Company and are receiving service under Rate Schedules GM (HP), GS-Large, GP, GT, or GS if such GS Customers also are under Special Rule GSDS. These charges are also applicable to Customers on Rate Schedules GS and GM (PTC) on a voluntary basis who meet the metering requirements of this rider. Rates shall be billed under this rider on the next scheduled meter reading date after electing Default Service.

All GS and GM (PTC) Customers electing service under this rider must have Smart Meter technology installed as part of the Company's Smart Meter Plan filed with and approved by the Commission.

Hourly Pricing Service Charges:

Customers participating in the Hourly Pricing Default Service Rider will be billed for usage based on the following calculation:

Hourly Pricing Service Charges = (HP $_{Energy\ Charge}$ + HP $_{Cap\text{-}AEPS\text{-}Other\ Charge}$ + HP $_{Administrative\ Charge}$ + HP $_{Unc}$ + HP $_{Reconciliation\ Charge}$) X [1 / (1-T)]

HP Energy Charge per kWh:

$$HP_{Energy\ Charge} = \sum_{t=1}^{n} (kWh_t\ x\ (LMP_t + HP_{Oth})\ x\ HP_{Loss\ Multiplier})$$

Where:

n = Total number of hours in the billing period

t = An hour in the billing period

LMP = the "Real Time" PJM load-weighted average Locational Marginal Price for the Penn Power Transmission Zone.

HP_{Oth} = \$X.XXXXX per kWh for estimate of capacity, ancillary services, NITS, AEPS compliance and other supply components.

HP _{Loss Multipliers}: GS-Small 1.0515 GS-Medium 1.0515 GS-Large 1.0515 GP 1.0171 GT 1.0007

These HP Loss Multipliers exclude transmission losses.

(C) Change

(C)

PENNSYLVANIA POWER COMPANY

Electric Pa. P.U.C. No. 36 (Supp. XX)

Revised Page 131

Superseding Revised Page 131

RIDERS

Rider I (continued)

HP Cap-AEPS-Other Charge:

\$X.XXXXX per kWh representing the costs paid by the Company to the Supplier for Capacity, AEPS costs, and any other costs incurred by the Supplier multiplied by the HP Loss Multipliers. This charge is subject to quarterly adjustments.

HP Administrative Charge:

\$X.XXXXX per kWh representing the administrative costs incurred bythe Company associated with providing Hourly Pricing Service.

HP Uncollectibles Charge:

\$X.XXXXX per kWh representing the default service-related uncollectible accounts expense associated with Hourly Pricing Default Service. This charge is subject to annual adjustment on June 1 of each year.

HP Reconciliation Charge:

The HP Reconciliation Charge Rate ("E_{HP}") shall be applied to each kWh of Default Service that Penn Power delivers to Customers under this rider as determined to the nearest one-thousandth of a cent per kWh. The E_{HP} rate shall be included as a non-bypassable component billed to Customers receiving Default Service from the Company under this rider. The rate shall be calculated according to the provisions of this rider

For service rendered September June 1, 2021–2023 through November 30, 2021-2023, the E_{HP} rate is as follows:

HP Reconciliation Charge Rate = \$X.XXXXX per kWh

(C) Change

Issued: Effective: September 1, 2023

Electric Pa. P.U.C. No. 36 (Supp. XX)

___ Revised Page 132
Superseding __ Revised Page 132

RIDERS

Rider I (continued)

(C)

The E_{HP} rate will be calculated <u>semi-annually for the six-month period ending March 31st to be effective for the six-month period beginning June 1st; and for the six month period ending September 30th to be effective for the six month period beginning December 1st at the end of each Default Service Quarter (three months ending March 31st, June 30th, September 30th, and December 31st) to be effective for the three-month period beginning on the first day of the third calendar month following the end of that Default Service Quarter (June 1st, September 1st, December 1st, and March 1st). The E_{HP} rate shall be calculated in accordance with the formula set forth below:</u>

 $E_{HP} = [((DS_{HPExp1} + DS_{HPExp2}) - PTC_{HPRev} + DS_{HPInt})/DS_{HPSales}] \times [1/(1 - T)]$

Where:

 $E_{HP} =$ The rate determined to the nearest one-thousandth of a cent per kWh to be applied to each kWh of Default Service delivered to Customers under this rider.

(C)

DS_{HPExp1} = An allocated portion of the incremental start-up costs incurred by the Company through May 31, 2019-2023 in connection with the Company's Default Service Supply Plan to provide Default Service amortized over the forty-eight (48) month period ending May 31, 2023-2027 including but not limited to:

<u>(C)</u>

- Incremental start-up administrative costs including metering and billing costs incurred and other costs as necessary to provide service to Retail Default Service Customers
- Other start-up costs incurred to develop and implement the competitive bid process for the Retail-Default Service Supply Plan including legal, customer notice, and consultant fees.

Interest shall be computed monthly for the over or under collection at the prime rate of interest for commercial banking, not to exceed the legal rate of interest, in effect on the last day of the month that the over and under collection occurs, as reported in the *Wall Street Journal*, to the effective month that the over collection is refunded or the under collection is collected and included in the determination of the monthly amortized amount.

(C) Change

Electric Pa. P.U.C. No. 36 (Supp. XX)

Revised Page 133

Superseding Revised Page 133

RIDERS

Rider I (continued)

 $DS_{HPExp2} =$

The cumulative costs to provide Hourly Pricing Default Service incurred by the Company for the six-month period ending two months prior to the effective date, through the end of the previous DefaultService Quarter including but not limited to the following:

<u>(C)</u>

- Payments made to winning bidders
- Any PJM related charges other than Non-Market Based Services
 Transmission Charges identified in Rider J associated with the procurement of Hourly Pricing Default Service
- AEPS expenses incurred by Penn Power related to amendments to the AEPS
 Act and/or related laws or regulations occurring subsequent to the effective
 date of the Supplier Master Agreement for the Default Service Supply Plan excluding suchcosts recovered through the Company's Solar Photovoltaic
 Requirements Charge Rider
- An allocated portion of incremental administrative costs including metering and billing costs incurred and other costs asnecessary to provide service to retail Default Service Customers
- All contingency plan implementation costs incurred during thesupply period
- An allocated portion of other costs incurred to develop and implement the competitive bid process for retail-Default Service including legal, customer notice, and consultant fees
- The cost of credit when the Company is considered by PJM tobe the load serving entity
- Any reconciliation balance associated with GM customers withdemand equal to or greater than 100 kW migrating from Rider H Price to Compare Default Service Rate Rider to Rider I Hourly Pricing Default Service Rider as of June 1, 2019.

(C)

PTC_{HPRev} =

The cumulative revenues, excluding any revenues associated with the HP Uncollectibles Charge and applicable Pennsylvania gross receipts tax, for the six-month period ending two months prior to the effective date through the end of the most recent Default Service Quarter billed to Hourly Pricing Default Service Customers under this rider including the applicable E_{HP} rates.

(C) Change

Electric Pa. P.U.C. No. 36 (Supp. XX)

___ Revised Page 134

Superseding __ Revised Page 134

RIDERS

Rider I (continued)

<u>(C)</u>

DS_{HPInt} = The cumulative amount of carrying charges calculated on a monthly basis <u>for the six-month period ending two months prior to the effective date</u>throughthe end of the most recent Default Service Quarter. Interest shall be computed monthly for the over or under collection at the prime rate of interest for commercial banking, not to exceed the legal rate of interest, in effect on the last day of the month that the over and under collection occurs, as reported in the *Wall Street Journal*, to the effective month that the over collection is refunded or the under collection is collected.

<u>(C)</u>

DS_{HPSales} = The Company's projected Hourly Pricing Default Service kWh sales to Retail Customers for the threesix month billing period that the E_{HP} rate willbe in effect.

Gross Receipts Tax:

T = The Pennsylvania gross receipts tax rate in effect during the billing month expressed in decimal form as reflected in the Company's base rates.

General:

Each change in the E_{HP} rate as well as other rates within this rider will be filed with the Commission by the later of: (a) forty-five (45) days prior to the effective date of the rate changes; or (b) seven (7) days after the last supply auction. The Company shall file details in support of the revised rates.

At the conclusion of the duration of this reconciliation rider, the Company is authorized to recover or refund any remaining amounts not reconciled at that time under such mechanism as approved by the Commission.

Application of the E_{HP} rate shall be subject to annual review and audit by the Commission.

(C) Change

Electric Pa. P.U.C. No. 40 (Supp. XX)

Revised Page 180

Superseding Revised Page 180

RIDERS

RIDER I HOURLY PRICING DEFAULT SERVICE RIDER

AVAILABILITY:

The charges billed under this rider are applicable to all Customers on Rate Schedules 30 (HP), 35, 40, 44 and 46 who elect to take Default Service from the Company. These charges are also applicable to Customers on Rate Schedules 20, and 30 (PTC) on a voluntary basis who meet the metering requirements of this rider. Rates shall be billed under this rider on the next scheduled meter reading date after electing Default Service.

All Rate Schedules 20 and 30 (PTC) Customers electing service under this rider must have smart meter technology installed as part of the Company's smart meter plan filed with and approved by the Commission.

Hourly Pricing Service Charges:

Customers participating in the Hourly Pricing Default Service Rider will be billed for usage based on the following calculation:

Hourly Pricing Service Charges =
$$(HP_{Energy\ Charge} + HP_{Cap-AEPS-Other\ Charge} + HP_{Administrative\ Charge} + HP_{Unc} + HP_{Reconciliation\ Charge}) X [1/(1-T)]$$

HP Energy Charge per kWh:

$$HP_{Energy Charge} = \sum_{t=1}^{n} [kWh_t x (LMP_t + HP_{Oth}) x HP_{Loss Multipliers}]$$

Where:

n = Total number of hours in the billing period

t = An hour in the billing period

LMP = the "Real Time" PJM load-weighted average Locational Marginal Price for the

APS Transmission Zone

HP_{Oth} = \$X.XXXXX per kWh for estimate of capacity, ancillary services, NITS, AEPS_compliance and other supply components.

(C) Change

Page 2 of 5

WEST PENN POWER COMPANY

Electric Pa. P.U.C. No. 40 (Supp. XX)

___ Revised Page 181

Superseding __ Revised Page 181

RIDERS

Rider I (continued)

HP_{Loss Multipliers}: Rates 20 and 30 1.0899

Rate 35 1.0678 Rates 40, 44 and 46 1.0356

HP Cap-AEPS-Other Charge:

XXXXXX per kWh representing the costs paid by the Company to the supplier for capacity, AEPS costs, and any other costs incurred by the supplier multiplied by the HP_{Loss} Multipliers. This charge is subject to quarterly adjustments.

HP Administrative Charge:

\$X.XXXXX per kWh representing the administrative costs incurred by the Company associated with providing Hourly Pricing Service.

HP Uncollectibles Charge:

\$X.XXXXX per kWh representing the default service-related uncollectible accounts expense associated with Hourly Pricing Default Service. This charge is subject to annual adjustment on June 1 of each year.

HP Reconciliation Charge:

The HP Reconciliation Charge Rate ("E_{HP}") shall be applied to each kWh of Default Service that the Company delivers to Customers under this rider as determined to the nearest one-thousandth of a cent per kWh. The E_{HP} rate shall be included as a non-bypassable component billed to Customers receiving Default Service from the Company under this rider. The rate shall be calculated according to the provisions of this rider and shall be calculated and applied equally to Customers under this rider.

For service rendered September June 1, $\frac{2021-2023}{2023}$ through November 30, $\frac{20212023}{2023}$, the E_{HP} rate is as follows:

HP Reconciliation Charge Rate = \$X.XXXXX per kWh

(C) Change

Electric Pa. P.U.C. No. 40 (Supp. XX)

Revised Page 182

Superseding Revised Page 182

RIDERS

Rider I (continued)

<u>(C)</u>

The E_{HP} rate will be calculated <u>semi-annually</u> for the six-month period ending March 31st to be effective for the six-month period beginning June 1st; and for the six month period ending <u>September 30th</u> to be effective for the six month period beginning <u>December 1st</u> at the end of each <u>Default Service Quarter</u> (three months ending March 31st, June 30th, September 30th, and <u>December 31st</u>) to be effective for the three month period beginning on the first day of the third calendar month following the end of that <u>Default Service Quarter</u> (June 1st, September 1st, <u>December 1st</u>, and <u>March 1st</u>). The E_{HP} rate shall be calculated in accordance with the formula set forth below:

$$E_{HP} = ((DS_{HPExp1} + DS_{HPExp2}) - PTC_{HPRev} + DS_{HPInt}) / DS_{HPSales}$$

Where:

E_{HP} = ____The rate determined to the nearest one-thousandth of a cent per kWh to be applied to each kWh of Default Service delivered to Customers under this rider.

DS_{HPExp1} = An allocated portion of the incremental start-up costs incurred by the Company through May 31, 2019-2023 in connection with the Company's DefaultService Supply Plan to provide Default Service amortized over the forty-eight (48) month period ending May 31, 2023-2027 including but not limited to:

<u>(C)</u>

- Incremental start-up administrative costs including metering and billing costs incurred and other costs as necessary to provide service to retail-Default Service Customers
- Other start-up costs incurred to develop and implement the competitive bid process for the retail Default Service Supply Plan including legal, customer notice, and consultant fees

Interest shall be computed monthly for the over or under collection at the prime rate of interest for commercial banking, not to exceed the legal rate of interest, in effect on the last day of the month that the over and under collection occurs, as reported in the *Wall Street Journal*, to the effective month that the over collection is refunded or the under collection is collected and included in the determination of the monthly amortizedamount.

DS_{HPExp2} = The cumulative costs to provide Hourly Pricing Default Service incurred by the Company for the six-month period ending two months prior to the effective date, through the end of the previous Default Service Quarter including but not limited to the following:

(C) Change

Electric Pa. P.U.C. No. 40 (Supp. XX)

Revised Page 183

Superseding Revised Page 183

RIDERS

Rider I (continued) (C)

- Payments made to winning bidders
- Any PJM related charges other than Non-Market Based services Transmission charges identified in Rider J associated with the procurement of Hourly Pricing Default Service.
- Net AEPS expenses and AEPS expenses incurred by the Company related to amendments to the AEPS Act and/or related laws or regulations occurring subsequent to the effective date of the Supplier Master Agreement for the Default Service Supply Plan.
- An allocated portion of incremental administrative costs including metering and billing costs incurred and other costsas necessary to provide service to retail Default Service Customers
- All contingency plan implementation costs incurred during the supply period
- An allocated portion of other costs incurred to develop and implement the competitive bid process for retail—Default Service including legal, customer notice, and consultant fees
- The cost of credit when the Company is considered by PJMto be the load serving entity
- Incremental costs including but not limited to metering costs and billing expenses, incurred by the Company to expand Rate Schedule 35 to include Customers with a Kilowatt demand greater than or equal to 400 Kilowatts.
- Any reconciliation balance associated with Rate Schedule 30 (HP) customers with demand equal to or greater than 100 kW migrating from Rider H Price to Compare Default Service Rate Rider to Rider I Hourly Pricing Default Service Rider as of June 1, 2019.

PTC_{HPRev} =

The cumulative revenues, excluding any revenues associated with the HP Uncollectibles Charge and applicable Pennsylvania gross receipts tax, for the sixmonth period ending two months prior to the effective datethrough the end of the most recent Default Service Quarter_billed to Hourly Pricing Default Service Customers under this rider including the applicable EHP rates.

(C)

 $DS_{HPInt} =$

The cumulative amount of carrying charges calculated on a monthly basis for the six-month period ending two months prior to the effective datethrough the end of the most recent Default Service Quarter. Interest shall be computed monthly for the over or under collection at the prime rate of interest for commercial banking, not to exceed the legal rate of interest, in effect on the last day of the month that the over and under collection occurs, as reported in the *Wall Street Journal*, to the effective month that the over collection is refunded or the under collection is collected.

(C) Change

Electric Pa. P.U.C. No. 40 (Supp. XX)

___ Revised Page 184
Superseding __ Revised Page 184

RIDERS

Rider I (continued)

<u>(C)</u>

 $DS_{HPSales} =$ The Company's projected Hourly Pricing Default Service kWh sales to retail Customers for the <u>threesix</u>-month billing period that the E_{HP} rate will bein effect.

Gross Receipts Tax:

T = The Pennsylvania gross receipts tax rate in effect during the billing month expressed in decimal form as reflected in the Company's base rates.

General:

Each change in the E_{HP} rate as well as other rates within this rider will be filed with the Commission by the later of: (a) forty-five (45) days prior to the effective date of the rate changes; or (b) seven (7) days after the last supply auction. The Company shall file details in support of the revised rates.

At the conclusion of the duration of this reconciliation rider, the Company is authorized to recover or refund any remaining amounts not reconciled at that time under such mechanism as approved by the Commission.

Application of the E_{HP} rate shall be subject to annual review and audit by the Commission.

(C) Change

Electric Pa. P. U. C. No. 38 (Supp. XX) Revised Page 22 Superseding Revised Page 22

(C)

RIDERS

RIDER I HOURLY PRICING DEFAULT SERVICE RIDER

AVAILABILITY:

The charges billed under this rider are applicable to all Customers on Rate Schedules 30 (HP), 35-(large), 40, 44, and 46 who elect to take Default Service from the Company. These charges are also applicable to Customers on Rate Schedules 20, and 30 (PTC) on a voluntary basis who meet the metering requirements of this rider. Rates shall be billed under this rider on the next scheduled meter reading date after electing Default Service.

Rate Schedules 20 and 30 (PTC) Customers electing service under this rider must have smart meter technology installed as part of the Company's smart meter plan filed with and approved by the Commission.

Hourly Pricing Service Charges:

Customers participating in the Hourly Pricing Default Service Rider will be billed for usage based on the following calculation:

> Hourly Pricing Service Charges = (HP_{Energy Charge} + HP_{Cap-AEPS-Other Charge} + HP_{Administrative Charge} + $HP_{Unc} + HP_{Reconciliation Charge}$ X [1 / (1-T)]

HP Energy Charge per kWh:

 $HP_{Energy\ Charge} = \sum_{t=1}^{n} \ [kWh_t\ x\ (LMP_t + HP_{Oth})\ x\ HP_{Loss\ Multipliers}]$

= Total number of hours in the billing period

= An hour in the billing period

LMP = the "Real Time" PJM load-weighted average Locational Marginal Price for the APS

Transmission Zone

= \$X.XXXXX per kWh for estimate of capacity, ancillary services, NITS, AEPS HP_{Oth}

compliance and other supply components.

1.0356 HP_{Loss Multipliers}:

(C) Change

Effective: June 1, 2023 Issued:

Electric Pa. P. U. C. No. 38 (Supp. XX)

Revised Page 23

Superseding Revised Page 23

RIDERS

Rider I (continued)

HP Cap-AEPS-Other Charge:

\$ X.XXXXX per kWh representing the costs paid by the Company to the supplier for capacity, AEPS costs, and any other costs incurred by the supplier multiplied by the HP_{Loss Multipliers}. This charge is subject to quarterly adjustments.

HP Administrative Charge:

\$ X.XXXXX per kWh representing the administrative costs incurred by the Company associated with providing Hourly Pricing Service.

HP Uncollectibles Charge:

\$ X.XXXXX per kWh representing the default service-related uncollectible accounts expense associated with Hourly Pricing Default Service. This charge is subject to annual adjustment on June 1 of each year.

HP Reconciliation Charge:

The HP Reconciliation Charge Rate (" E_{HP} ") shall be applied to each kWh of Default Service that the Company delivers to Customers under this rider as determined to the nearest one-thousandth of a cent per kWh. The E_{HP} rate shall be included as a non-bypassable component billed to Customers receiving Default Service from the Company under this rider. The rate shall be calculated according to the provisions of this rider, and shall be calculated and applied equally to Customers under this rider.

For service rendered <u>September-June</u> 1, <u>2021-2023</u> through November 30, <u>2021-2023</u>, the E_{HP} rate is as follows:

HP Reconciliation Charge Rate = X.XXXXX per kWh

(C)

The E_{HP} rate will be calculated <u>semi-annually</u> for the six-month period ending March 31st to be effective for the six-month period beginning June 1st; and for the six month period ending September 30th to be effective for the six month period beginning December 1st at the end of each Default Service Quarter (three months ending March 31st, June 30th, September 30th, and December 31st) to be effective for the three-month period beginning on the first day of the third calendar month following the end of that Default Service Quarter (June 1st, September 1st, December 1st, and March 1st). The E_{HP} rate shall be calculated in accordance with the formula set forth below:

$$E_{HP} = ((DS_{HPExp1} + DS_{HPExp2}) - PTC_{HPRev} + DS_{HPInt}) / DS_{HPSales}$$

Where:

E_{HP} = The rate determined to the nearest one-thousandth of a cent per kWh to be applied to each kWh of Default Service delivered to Customers under this rider.

(C) Change

Electric Pa. P. U. C. No. 38 (Supp. XX)

Revised Page 24

Superseding Revised Page 24

RIDERS

Rider I (continued)

 DS_{HPExp1}

= An allocated portion of the incremental start-up costs incurred by the Company through May 31, 2019-2023 in connection with the Company's Default Service Supply Plan to provide Default Service amortized over the forty-eight (48) month period ending May 31, 2023-2027 including but not limited to:

- Incremental start-up administrative costs including metering and billing costs incurred and other costs as necessary to provide service to retail Default Service Customers
- Other start-up costs incurred to develop and implement the competitive bid process for the retail-Default Service Supply Plan including legal, customer notice, and consultant fees

Interest shall be computed monthly for the over or under collection at the prime rate of interest for commercial banking, not to exceed the legal rate of interest, in effect on the last day of the month that the over and under collection occurs, as reported in the *Wall Street Journal*, to the effective month that the over collection is refunded or the under collection is collected and included in the determination of the monthly amortized amount.

 DS_{HPExp2}

= The cumulative costs to provide Hourly Pricing Default Service incurred by the Company for the six-month period ending two months prior to the effective date, through the end of the previous Default Service Quarter including but not limited to the following:

Payments made to winning bidders

- Any PJM related charges other than Non-Market Based Services Transmission Charges identified in Rider J associated with the procurement of Hourly Pricing Default Service.
- Net AEPS expenses and AEPS expenses incurred by the Company related to amendments to the AEPS Act and/or related laws or regulations occurring subsequent to the effective date of the Supplier Master Agreement for the Default Service Supply Plan.
- An allocated portion of incremental administrative costs including metering and billing costs incurred and other costs as necessary to provide service to retail Default Service Customers
- All contingency plan implementation costs incurred during the supply period
- An allocated portion of other costs incurred to develop and implement the competitive bid process for retail Default Service including legal, customer notice, and consultant fees

(C)

(C)

(C)

(C)

Electric Pa. P. U. C. No. 38 (Supp. XX)

Revised Page 25

Superseding Revised Page 25

(C)

(C)

(C)

RIDERS

Rider I (continued)

- The cost of credit when the Company is considered by PJM to be the load serving entity
- Incremental costs, including but not limited to metering costs and billing expenses, incurred by the Company to expand Rate Schedule 35 to include Customers with a Kilowatt demand greater than or equal to 400 Kilowatts.
- Any reconciliation balance associated with Rate Schedule 30 customers with demand equal to or greater than 100 kW migrating from Rider H - Price to Compare Default Service Rate Rider to Rider I - Hourly Pricing Default Service Rider as of June 1, 2019.

PTC_{HPRev}

= The cumulative revenues, excluding any revenues associated with the HP Uncollectibles Charge and applicable Pennsylvania gross receipts tax, for the sixmonth period ending two months prior to the effective datethrough the end of the most recent Default Service Quarter billed to Hourly Pricing Default Service Customers under this rider including the applicable E_{HP} rates.

 $DS_{HPInt} =$

The cumulative amount of carrying charges calculated on a monthly basis for the sixmonth period ending two months prior to the effective datethrough the end of the most recent Default Service Quarter. Interest shall be computed monthly for the over or under collection at the prime rate of interest for commercial banking, not to exceed the legal rate of interest, in effect on the last day of the month that the over and under collection occurs, as reported in the *Wall Street Journal*, to the effective month that the over collection is refunded or the under collection is collected.

DS_{HPSales}

= The Company's projected Hourly Pricing Default Service kWh sales to retail Customers for the $\frac{\text{three}_{\text{Six}}}{\text{three}_{\text{Six}}}$ -month billing period that the E_{HP} rate will be in effect.

Gross Receipts Tax:

T = The Pennsylvania gross receipts tax rate in effect during the billing month expressed in decimal form as reflected in the Company's base rates.

General:

Each change in the E_{HP} rate as well as other rates within this rider will be filed with the Commission by the later of: (a) forty-five (45) days prior to the effective date of the rate changes; or (b) seven (7) days after the last supply auction. The Company shall file details in support of the revised rates.

At the conclusion of the duration of this reconciliation rider, the Company is authorized to recover or refund any remaining amounts not reconciled at that time under such mechanism as approved by the Commission.

Application of the E_{HP} rate shall be subject to annual review and audit by the Commission.

(C) Change Effective: June 1, 2023

Issued:

Electric Pa. P.U.C. No. 52 (Supp. XX)

Revised Page 142

Superseding Revised Page 142

RIDERS

RIDER J

DEFAULT SERVICE SUPPORT RIDER

A Default Service Support ("DSS") rate shall be applied to DSS Sales delivered by the Company to Delivery Service Customers under this rider as determined to the nearest one-thousandth of a cent per kWh or dollar per kW NSPL, as applicable. The DSS rate shall be billed to Customers receiving Delivery Service from the Company under this rider. The DSS rates shall be calculated according to the provisions of this rider. The DSS Rider shall be non-bypassable.

For service rendered during the DSS Initial Computational Period and thereafter, the DSS Computational Year, the DSS rates billed by Rate Schedule are as follows:

	DSS
Rate Schedule	<u>Rates</u>
Rate Schedule RS	X.XXX cents per kWh
Rate Schedule GS Volunteer Fire	
Company and Non-Profit Ambulance	
Service, Rescue Squad and Senior	
Center Service Rate	X.XXX cents per kWh
Rate Schedule GS - Small	X.XXX cents per kWh
Rate Schedule GS - Medium	X.XXX cents per kWh
Rate Schedule GS - Large	\$ X.XXX per kW NSPL
Rate Schedule GP	\$ X.XXX per kW NSPL
Rate Schedule TP	\$ X.XXX per kW NSPL
Rate Schedule MS	X.XXX cents per kWh
Rate Schedule OAL	X.XXX cents per kWh
Rate Schedule STLT	X.XXX cents per kWh
Rate Schedule LED	X.XXX cents per kWh
Rate Schedule BRD	X.XXX cents per kWh

Electric Pa. P.U.C. No. 52 (Supp. XX)

Revised Page 143

Superseding Revised Page 143

(C)

RIDERS

Rider J (continued)

The DSS rates by rate schedule shall be calculated annually in accordance with the formula set forth below:

DSS rate = $[UE + \frac{NUG}{V} + NMB + RE + CEC + CB] \times [1 / (1-T)]$

The components of the formula are defined below:

Default Service Related Uncollectibles

UE = A default service-related unbundled uncollectible accounts expense charge, determined by Customer Class and stated to the nearest one-thousandth of a cent per kWh, to be applied to DSS Sales delivered by the Company to residential and commercial Delivery Service Customers under this rider. The UE reflects the default service-related portion of the uncollectible account expense based on revenues in the Company's distribution base rate case and the additional uncollectible accounts expense incurred by the Company as a result of providing Default Service under this tariff. This component of the DSS rate in this non-bypassable rider is non-reconcilable.

The unbundled uncollectible accounts expense associated with Default Service and a purchase of receivables program allocated to Delivery Service Customers on a non-bypassable, non-reconcilable basis will be Customer Class specific and will be adjusted annually on June 1 of each year based on the projected price of Default Service. Adjustments, if necessary, will be made to the uncollectible percentage in a future distribution base rate case or the start of the next Default Service Program, whichever occurs earlier.

(C) Change

1	٨	1	\mathbf{F}'	Т	Ţ	2 (\cap	P	\overline{C}	L	ľ	Г	Δ	N	J	F	Γ	T	S	(N	J	\boldsymbol{C}	\cap	M	/	P	Δ	N	$\mathbf{J}\mathbf{V}$	7
ı	ıv		1		-1	١,	. ,		•	"			~	. 1	N	1 7		, ,		•	,,,	N	ι,	•	,	VΙ		$\overline{}$	17		

Electric Pa. P.U.C. No. 52 (Supp. XX)

___ Revised Page 144 Superseding

__ Revised Page 144

RIDERS

Rider J (continued)

The UE charges by Customer Class to be included in DSS rates are as follows:

Commercial Customer Class (Rate GS-Small, Rate GS-Medium, Rate MS, Borderline Service, Street Lighting Service, Ornamental Street Lighting, LED Street Lighting, and Outdoor Lighting Service):

X.XXX cents per kWh

Residential Customer Class (Rate RS and Rate GS - Volunteer Fire Company, Non-Profit Ambulance Service, Rescue Squad and Senior Center Service Rate):

X.XXX cents per kWh

(C)

Non-Utility Generation Charges

NUG = NUGE / S

Where:

(C)

NUG = The charge to be applied to Delivery Service Customers under this rider to recover or refund the balance of the cumulative over or under-collection of the Non-Utility-Generation Charge Rider ("NUGE") which was approved by the Commission in its final order at Docket No. P 2009 2093053. The NUGE is being recovered under this DSS Rider. The NUG rate will be effective on June 1, 2017 and will be amortized over the 12 month period ending May 31, 2018.

NUGE = The balance of the NUG Rider that remains to be recovered from or refunded to customers

S = The Company's total DSS Sales per Customer Class to Delivery Service Customers projected for the DSS Computational Year.

(C) Change

Page 4 of 9

METROPOLITAN EDISON COMPANY

Electric Pa. P.U.C. No. 52 (Supp. XX)

Revised Page 145

Superseding Revised Page 145

RIDERS

Rider J (continued)

<u>(C)</u>

The NUG charges by NUGE Rate Group to be included in DSS rates are as follows:

Rate Schedule	NUG Rates
NUG Rate Group 1 Rate Schedule RS	0.000 cents per kWh
NUG Rate Group 2A - Rate Schedule GS- Volunteer Fire Company and Non-Profit- Ambulance Service, Rescue Squad and Senior- Center Service Rate, GS - Small, GS - Medium, MS, OAL, STLT, LED and BRD	0.000 cents per kWh
NUG Rate Group 2B - Rate Schedule GS - Large	\$0.000 per kW NSPL
NUG Rate Group 3 - Rate Schedule GP	\$0.000 per kW NSPL
NUC Rate Group 4 - Rate Schedule TP	\$0.000 per kW NSPL

Non-Market Based Services Transmission Charges

 $NMB = (NMB_C - E) / S$

Where:

NMB = The charge to be applied to Delivery Service Customers served under this rider for Non-Market Based Services Transmission Charge costs incurred by the Company.

(C)

NMB_C = Forecasted NMB costs applicable to the Company's DSS Sales. Forecasted NMB costs shall include FERC approved costs for (i) PJM Regional Transmission Expansion Plan charges; (ii) PJM Expansion Cost Recovery; (iii) PJM charges for Reliability Must Run generating unit declarations and charges associated with plants deactivated after July 24, 2014, the approval date of the Company's Default Service Program at Docket No. P-2013-2391368; (iv) historical tie line, generation, and retail customer meter adjustments; (v) Unaccounted for Energy; (vi) any FERC-approved reallocation of PJM Regional Transmission Expansion Plan charges related to Docket No. EL05-121-009; and (vii) any other FERC-approved PJM transmission charges billed to the Company by PJM that will not be reconciled through the Company's Price To Compare Default Service Rate Rider and/or Hourly Pricing Default Service Rider. Forecasted NMB costs are allocated to each Customer Class based upon each Customer Class's contribution to the total Company Network Service Peak Load.

(C) Change

Electric Pa. P.U.C. No. 52 (Supp. XX)

___ Revised Page 146

Superseding __ Revised Page 146

RIDERS

Rider J (continued)

- E = The over or under-collection of the NMB_C that results from billing of the NMB during the DSS Reconciliation Year, including applicable interest. An over-collection is denoted by a positive E and an under-collection by a negative E. Interest shall be computed monthly for the over or under collection at the prime rate of interest for commercial banking, not to exceed the legal rate of interest, in effect on the last day of the month the over and under collection occurs, as reported in the *Wall Street Journal*, to the effective month that the over collection is refunded or the under collection is collected.
- S = The Company's total DSS Sales per Customer Class to Delivery Service Customers projected for the DSS Computational Year.

The NMB charges by Customer Class to be included in DSS rates are as follows:

Industrial Customer Class (Rate GS – Large, GP and Rate TP):

\$ X.XXX per kW NSPL

Commercial Customer Class (Rate GS-Small, Rate GS-Medium, Rate MS, Borderline Service, Street Lighting Service, Ornamental Street Lighting, LED Street Lighting Service, and Outdoor Lighting Service):

X.XXX cents per kWh

<u>Residential Customer Class (Rate RS, Rate GS – Volunteer Fire Company, Non-Profit Ambulance Service, Rescue Squad and Senior Center Service Rate):</u>

X.XXX cents per kWh

Electric Pa. P.U.C. No. 52 (Supp. XX)

Revised Page 147

Superseding Revised Page 147

Rider J (continued)

Retail Enhancements

 $RE = [(RE_c - E) / S]$

RIDERS

Where:

RE = The charge to be applied to Delivery Service Customers served under this rider for the Retail Enhancement Costs incurred by the Company.

REc = The Retail Enhancement Costs incurred by the Company to cover programming expenses and implementation costs associated with competitive market enhancements approved by the Commission.

E = The over or under-collection of the RE_C that results from billing of the RE during the DSS Reconciliation Year, including applicable interest. An over-collection is denoted by a positive E and an under-collection by a negative E. Interest shall be computed monthly for the over or under collection at the prime rate of interest for commercial banking, not to exceed the legal rate of interest, in effect on the last day of the month the over and under collection occurs, as reported in the *Wall Street Journal*, to the effective month that the over collection is refunded or the under collection is collected.

S = The Company's total DSS Sales per Customer Class to Delivery Service Customers projected for the DSS Computational Year.

The RE rates by Customer Class to be included in DSS rates are as follows:

Industrial Customer Class (Rate GS - Large, GP and Rate TP):

\$X.XXX per kW NSPL

Commercial Customer Class (Rate GS-Small):

X.XXX cents per kWh

Residential Customer Class (Rate RS and Rate GS - Volunteer Fire Company, Non-Profit Ambulance Service, Rescue Squad and Senior Center Service Rate):

X.XXX cents per kWh

Electric Pa. P.U.C. No. 52 (Supp. XX)

Revised Page 148

Superseding Revised Page 148

RIDERS

Rider J (continued)

Customer Education Charges

 $CEC = (CEC_C - E) / S$

Where:

- CEC = The charge to be applied to Delivery Service Customers served under this rider for Customer Education Charges incurred by the Company.
- CEC_C = Customer Education costs for the specific Customer Class to cover customer education costs associated with competitive market enhancements approved by the Commission.
- E = The over or under-collection of the CEC_C that results from the billing of the CEC during the DSS Reconciliation Year, including applicable interest. An over-collection is denoted by a positive E and an under-collection by a negative E. Interest shall be computed monthly for the over or under collection at the prime rate of interest for commercial banking, not to exceed the legal rate of interest, in effect on the last day of the month the over and under collection occurs, as reported in the *Wall Street Journal*, to the effective month that the over collection is refunded or the under collection is collected.
- S = The Company's total DSS Sales per Customer Class to Delivery Service Customers projected for the DSS Computational Year.

The CEC rates by Customer Class to be included in DSS rates are as follows:

Industrial Customer Class (Rate GS – Large, GP and Rate TP):

\$X.XXX per kW NSPL

Commercial Customer Class (Rate GS - Small):

X.XXX cents per kWh

Residential Customer Class (Rate RS and Rate GS - Volunteer Fire Company, Non-Profit Ambulance Service, Rescue Squad and Senior Center Service Rate):

X.XXX cents per kWh

1	١.	1	F	Т	ľ	2	\cap	P		١	1	Т	' Δ	١	V	1	E,	Г	ì	١ς	1	1	N	T	\cap	(1	٨.	1	p	Δ	. 1	V	7	7
	v	ш					•	,,	•	,,			$\overline{}$	١	N		'.		, ,	L	•	,	17	•	٠,	•	,	IV			$\overline{}$	N I	N		

Electric Pa. P.U.C. No. 52 (Supp. XX)

Revised Page 148A

Superseding Revised Page 148A

RIDERS

Rider J (continued)

Clawback Charge Credit

 $CB = CB_C / S$

Where:

- CB = The credit to be applied to Delivery Service Customers related to the clawback provision, under the Default Service Program, which is collected by the Company from Electric Generation Suppliers. This credit will be amortized for each applicable DSS Computational Year.
- CB_C = Clawback credits applied to each Customer Class eligible for the Company's POR to refund the clawback charges collected from Electric Generation Suppliers. The clawback charges are returned to customers when the Company's actual uncollectible expense was less than the amount of uncollectible expense recovered in base rates and the Default-Service Related Uncollectibles component of this Rider. CB will be applied to each Customer Class eligible for the Company's POR based upon each Customer Class's kWh.
- S = The Company's total DSS Sales per Customer Class to Delivery Service Customers projected for the DSS Computational Year.

The CB rates by Customer Class to be included in DSS rates are as follows:

<u>Residential Customer Class (Rate RS and Rate GS - Volunteer Fire Company,</u> Non-Profit Ambulance Service, Rescue Squad and Senior Center Service Rate):

X.XXX cents per kWh

Commercial Customer Class (Rate GS-Small, Rate GS-Medium, Rate MS, Borderline Service, Street Lighting Service, Ornamental Street Lighting, LED Street Lighting Service, and Outdoor Lighting Service):

X.XXX cents per kWh

Electric Pa. P.U.C. No. 52 (Supp. XX)

Revised Page 149

Superseding Revised Page 149

RIDERS

Rider J (continued)

Gross Receipts Tax

T = The Pennsylvania gross receipts tax rate in effect during the billing month expressed in decimal form as reflected in the Company's base rates.

All capitalized terms not otherwise defined in this Rider shall have the definitions specified in Section 2 of this Tariff. For purposes of this Rider, the following additional definitions shall apply:

- 1. DSS Sales The kWh or kW NSPL delivered during a billing month to all Delivery Service Customers, as applicable to each Rate Schedule billed under the DSS Rider.
- 2. DSS Computational Year The 12-month period from June 1 through the following May 31.
- 3. DSS Reconciliation Year The 12-month period ending March 31 immediately preceding the DSS Computational Year.
- 4. DSS Initial Computational Period the period from May 3, 2015 through May 31, 2015 that the DSS Rider is in effect. Thereafter, the DSS Computational Year will be in effect.

The Company shall recalculate its DSS Rates annually and, based on that recalculation, shall file with the Commission, by May 1st of each year, revised Rates to become effective on June 1st of the same year unless the Commission orders otherwise. The revised DSS rates shall remain in effect for a period of one year, unless revised on an interim basis subject to the approval of the Commission. Upon determining that its DSS rates, if left unchanged, would result in material over or under-collection of all costs incurred, or expected to be incurred, for DSS during the then current DSS Reconciliation Year, the Company may request that the Commission approve one or more interim revisions to its DSS rates to become effective thirty (30) days from the date of filing, unless the Commission orders otherwise.

At the conclusion of the period during which this DSS Rider is in effect, the Company shall be authorized to recover or refund at any time, any remaining differences between recoverable costs and revenues billed under this rider by charges or credits to be applied to customer's bills under such mechanism the Commission may approve, but uncollectibles, which are non-reconcilable under the terms of this rider, shall not be included in the final reconciliation.

Application of the DSS rates shall be subject to annual review and audit by the Commission.

Electric Pa. P.U.C. No. 81 (Supp. XX)

Revised Page 149

Superseding Revised Page 149

RIDERS

RIDER J DEFAULT SERVICE SUPPORT RIDER

A Default Service Support ("DSS") rate shall be applied to DSS Sales delivered by the Company to Delivery Service Customers under this rider as determined to the nearest one-thousandth of a cent per kWh or dollar per kW NSPL, as applicable. The DSS rate shall be billed to Customers receiving Delivery Service from the Company under this rider. The DSS rates shall be calculated according to the provisions of this rider. The DSS Rider shall be non-bypassable.

For service rendered during the DSS Initial Computational Period and thereafter, the DSS Computational Year, the DSS rates billed by Rate Schedule are as follows:

Rate Schedule	DSS Rates
Rate Schedule RS	X.XXX cents per kWh
GS Volunteer Fire Company and Non-	
Profit Ambulance Service, Rescue	
Squad and Senior Center Service Rate	X.XXX cents per kWh
Rate Schedule GS – Small	X.XXX cents per kWh
Rate Schedule GS – Medium	X.XXX cents per kWh
Rate Schedule H	X.XXX cents per kWh
Rate Schedule BRD	X.XXX cents per kWh
Rate Schedule LED	X.XXX cents per kWh
Rate Schedule Street Lighting	X.XXX cents per kWh
Rate Schedule Municipal Street	
Lighting	X.XXX cents per kWh
Rate Schedule OAL	X.XXX cents per kWh
Rate Schedule GS – Large	\$ X.XXX per kW NSPL
Rate Schedule GP	\$ X.XXX per kW NSPL
Rate Schedule LP	\$ X.XXX per kW NSPL

Electric Pa. P.U.C. No. 81 (Supp. XX)

Revised Page 150

Superseding Revised Page 150

RIDERS

Rider J (continued)

The DSS rates by rate schedule shall be calculated annually in accordance with the formula set forth below:

(C)

DSS rate = $[UE + \frac{NUG}{N} + NMB + RE + CEC + CB] \times [1 / (1-T)]$

The components of the formula are defined below:

Default Service Related Uncollectibles

UE = A default service-related unbundled uncollectible accounts expense charge, determined by Customer Class and stated to the nearest one-thousandth of a cent per kWh to be applied to DSS Sales delivered by the Company to residential and commercial Delivery Service Customers under this rider. The UE reflects the default service-related portion of the uncollectible account expense based on revenues in the Company's distribution base rate case and the additional uncollectible accounts expense incurred by the Company as a result of providing Default Service under this tariff. This component of the DSS rate in this non-bypassable rider is non-reconcilable.

The unbundled uncollectible accounts expense associated with Default Service and a purchase of receivables program allocated to Delivery Service Customers on a non-bypassable, non-reconcilable basis will be Customer Class specific and will be adjusted annually on June 1 of each year based on the projected price of Default Service. Adjustments, if necessary, will be made to the uncollectible percentage in a future distribution base rate case or the start of the next Default Service Program, whichever occurs earlier.

The UE charges by Customer Class to be included in DSS rates are as follows:

Commercial Customer Class (Rate GS-Small, Rate GS-Medium, Rate H, Borderline Service, Street Lighting Service, Ornamental Street Lighting, LED Street Lighting Service, and Outdoor Lighting Service):

X.XXX cents per kWh

<u>Residential Customer Class (Rate RS, Rate GS – Volunteer Fire Company, Non-Profit Ambulance Service, Rescue Squad and Senior Center Service Rate):</u>

X.XXX cents per kWh

(C) Change

Electric Pa. P.U.C. No. 81 (Supp. XX)

___ Revised Page 151

Superseding ___ Revised Page 151

Rider J (continued)

<u>(C)</u>

Non-Utility Generation Charges

NUG = NUGE / S

Where:

NUG = The charge to be applied to Delivery Service Customers under this rider to recover or refund the balance of the cumulative over or under collection of the Non-Utility Generation Charge Rider ("NUGE") which was approved by the Commission in its final order at Docket No. P-2009-2093053. The NUGE is being recovered under the DSS Rider. The NUG rate will be effective on June 1, 2021 and will be amortized over the 12 month period ending May 31, 2022.

NUGE = The balance of the NUG Rider that remains to be recovered from or refunded to customers.

S = The Company's total DSS Sales per Customer Class to Delivery Service Customers projected for the DSS Computational Year.

The NUG charges by NUGE Rate Group to be included in DSS rates are as follows:

Rate Schedule	NUG Rates	
NUG Rate Group 1- Rate Schedule RS	0.000 cents per kWh	(D)
NUG Rate Group 2 Rate Schedule GS Volunteer Fire Company Non-Profit Ambulance Service, Rescue Squad and Senior Center Service, GS— Small, GS—Medium, H, OAL, STLT, SLED, and		
BRD	0.000 cents per kWh	(I)
NUG Rate Group 2B - Rate Schedule GS - Large	\$0.000 per kW NSPL	(I)
NUG Rate Group 3 Rate Schedule GP	\$0.000 per kW NSPL	(I)
NUG Rate Group 4 Rate Schedule LP	\$0.000 per kW NSPL	(I)

(C) Change

Electric Pa. P.U.C. No. 81 (Supp. XX)

Revised Page 152

Superseding Revised Page 152

RIDERS

Rider J (continued)

Non-Market Based Services Transmission Charges

 $NMB = (NMB_C - E) / S$

Where:

NMB = The charge to be applied to Delivery Service Customers served under this rider for Non-Market Based Services Transmission Charge costs incurred by the Company.

(C)

- NMB_C= Forecasted NMB costs applicable to the Company's DSS Sales. Forecasted NMB costs shall include FERC approved costs for (i) PJM Regional Transmission Expansion Plan charges; (ii) PJM Expansion Cost Recovery; (iii) PJM charges for Reliability Must Run generating unit declarations and charges associated with plants deactivated after July 24, 2014, the approval date of the Company's Default Service Program at Docket No. P-2013-2391372; (iv) historical tie line, generation, and retail customer meter adjustments; (v) Unaccounted for Energy; (vi) any FERC-approved reallocation of PJM Regional Transmission Expansion Plan charges related to Docket No. EL05-121-009; and (vii) any other FERC-approved PJM transmission charges billed to the Company by PJM that will not be reconciled through the Company's Price To Compare Default Service Rate Rider and/or Hourly Pricing Default Service Rider. Forecasted NMB costs are allocated to each Customer Class based upon each Customer Class's contribution to the total Company Network Service Peak Load.
- E = The over or under-collection of the NMB_C that results from billing of the NMB during the DSS Reconciliation Year, including applicable interest. An over-collection is denoted by a positive E and an under-collection by a negative E. Interest shall be computed monthly for the over or under collection at the prime rate of interest for commercial banking, not to exceed the legal rate of interest, in effect on the last day of the month the over and under collection occurs, as reported in the *Wall Street Journal*, to the effective month that the over collection is refunded or the under collection is collected.
- S = The Company's total DSS Sales per Customer Class to Delivery Service Customers projected for the DSS Computational Year.

(C) Change

Electric Pa. P.U.C. No. 81 (Supp. XX)

Revised Page 153

Superseding Revised Page 153

RIDERS

Rider J (continued)

The NMB charges by Customer Class to be included in DSS rates are as follows:

Industrial Customer Class (Rate GS – Large, GP and Rate LP):

\$ X.XXX per kW NSPL

Commercial Customer Class (Rate GS-Small, Rate GS-Medium, Rate H, Borderline Service, Street Lighting Service, Ornamental Street Lighting, LED Street Lighting Service, and Outdoor Lighting Service):

X.XXX cents per kWh

<u>Residential Customer Class (Rate RS, Rate GS – Volunteer Fire Company,</u> Non-Profit Ambulance Service, Rescue Squad and Senior Center Service Rate):

X.XXX cents per kWh

(I) Increase

Electric Pa. P.U.C. No. 81 (Supp. XX)

Revised Page 154

Superseding Revised Page 154

RIDERS

Rider J (continued)

Retail Enhancements

 $RE = [(RE_c - E)/S]$

Where:

- RE = The charge to be applied to Delivery Service Customers served under this rider for the Retail Enhancement Costs incurred by the Company.
- REc = The Retail Enhancement Costs incurred by the Company to cover programming expenses and implementation costs associated with competitive market enhancements approved by the Commission.
- E = The over or under-collection of the RE_C that results from billing of the RE during the DSS Reconciliation Year, including applicable interest. An over-collection is denoted by a positive E and an under-collection by a negative E. Interest shall be computed monthly for the over or under collection at the prime rate of interest for commercial banking, not to exceed the legal rate of interest, in effect on the last day of the month the over and under collection occurs, as reported in the *Wall Street Journal*, to the effective month that the over collection is refunded or the under collection is collected.
- S = The Company's total DSS Sales per Customer Class to Delivery Service Customers projected for the DSS Computational Year.

The RE rates by Customer Class to be included in DSS rates are as follows:

Industrial Customer Class (Rate GS – Large, GP and Rate LP):

\$ X.XXX per kW NSPL

Commercial Customer Class (Rate GS-Small):

X.XXX cents per kWh

<u>Residential Customer Class (Rate RS and Rate GS – Volunteer Fire Company,</u> Non-Profit Ambulance Service, Rescue Squad and Senior Center Service Rate):

X.XXX cents per kWh

Electric Pa. P.U.C. No. 81 (Supp. XX)

Revised Page 155

Superseding Revised Page 155

RIDERS

Rider J (continued)

Customer Education Charges

 $CEC = (CEC_C - E) / S$

Where:

- CEC = The charge to be applied to Delivery Service Customers served under this rider for Customer Education Charges incurred by the Company.
- CEC_C = Customer Education costs for the specific Customer Class to cover customer education costs associated with competitive market enhancements approved by the Commission.
- E = The over or under-collection of the CEC_C that results from the billing of the CEC during the DSS Reconciliation Year, including applicable interest. An over-collection is denoted by a positive E and an under-collection by a negative E. Interest shall be computed monthly for the over or under collection at the prime rate of interest for commercial banking, not to exceed the legal rate of interest, in effect on the last day of the month the over and under collection occurs, as reported in the *Wall Street Journal*, to the effective month that the over collection is refunded or the under collection is collected.
- S = The Company's total DSS Sales per Customer Class to Delivery Service Customers projected for the DSS Computational Year.

The CEC rates by Customer Class to be included in DSS rates are as follows:

Industrial Customer Class (Rate GS – Large, GP and Rate LP):

\$ X.XXX per kW NSPL

Commercial Customer Class (Rate GS-Small):

X.XXX cents per kWh

<u>Residential Customer Class (Rate RS and Rate GS – Volunteer Fire Company, Non-Profit Ambulance Service, Rescue Squad and Senior Center Service Rate):</u>

X.XXX cents per kWh

1	D	F	N	11	V	C.	V	ľ	V	Δ	N	II	Δ	. '	\mathbf{F}	Ι.	\mathbf{F}	C'	П	R1		١ (\neg	\cap	۸	/	P) [1	N	7	Ž
ı	Г.	Ľ	ľ	١L	N	o	1	ட	٧.	ᄸ	ч	VI	\mathcal{L}	١.	Ľ.	L.	Ľ	L.	ı	\ I	L	∕ \	اب	U	יוע	v	lГ	· /-	N	١N		ı

Electric Pa. P.U.C. No. 81 (Supp. XX)

Revised Page 155A

Superseding Revised Page 155A

RIDERS

Rider J (continued)

Clawback Charge Credit

 $CB = CB_C / S$

Where:

- CB = The credit to be applied to Delivery Service Customers related to the clawback provision, under the Default Service Program, which is collected by the Company from Electric Generation Suppliers. This credit will be amortized for each applicable DSS Computational Year.
- CB_C = Clawback credits applied to each Customer Class eligible for the Company's POR to refund the clawback charges collected from Electric Generation Suppliers. The clawback charges are returned to customers when the Company's actual uncollectible expense was less than the amount of uncollectible expense recovered in base rates and the Default-Service Related Uncollectibles component of this Rider. CB will be applied to each Customer Class eligible for the Company's POR based upon each Customer Class's kWh.
- S = The Company's total DSS Sales per Customer Class to Delivery Service Customers projected for the DSS Computational Year.

The CB rates by Customer Class to be included in DSS rates are as follows:

<u>Residential Customer Class (Rate RS and Rate GS - Volunteer Fire Company,</u> Non-Profit Ambulance Service, Rescue Squad and Senior Center Service Rate):

X.XXX cents per kWh

Commercial Customer Class (Rate GS-Small, Rate GS-Medium, Rate H, Borderline Service, Street Lighting Service, Ornamental Street Lighting, LED Street Lighting Service, and Outdoor Lighting Service):

X.XXX cents per kWh

Electric Pa. P.U.C. No. 81 (Supp. XX)

Revised Page 156

Superseding Revised Page 156

RIDERS

Rider J (continued)

Gross Receipts Tax

T = The Pennsylvania gross receipts tax rate in effect during the billing month expressed in decimal form as reflected in the Company's base rates.

All capitalized terms not otherwise defined in this Rider shall have the definitions specified in Section 2 of this Tariff. For purposes of this Rider, the following additional definitions shall apply:

- 1. DSS Sales The kWh or kW NSPL delivered during a billing month to all Delivery Service Customers, as applicable to each Rate Schedule billed under the DSS Rider.
- 2. DSS Computational Year The 12-month period from June 1 through the following May 31.
- 3. DSS Reconciliation Year The 12-month period ending March 31 immediately preceding the DSS Computational Year.
- 4. DSS Initial Computational Period the period from May 3, 2015 through May 31, 2015 that the DSS Rider is in effect. Thereafter, the DSS Computational Year will be in effect.

The Company shall recalculate its DSS Rates annually and, based on that recalculation, shall file with the Commission, by May 1st of each year, revised Rates to become effective on June 1st of the same year unless the Commission orders otherwise. The revised DSS rates shall remain in effect for a period of one year, unless revised on an interim basis subject to the approval of the Commission. Upon determining that its DSS rates, if left unchanged, would result in material over or under-collection of all costs incurred, or expected to be incurred, for DSS during the then current DSS Reconciliation Year, the Company may request that the Commission approve one or more interim revisions to its DSS rates to become effective thirty (30) days from the date of filing, unless the Commission orders otherwise.

At the conclusion of the period during which this DSS Rider is in effect, the Company shall be authorized to recover or refund at any time, any remaining differences between recoverable costs and revenues billed under this rider by charges or credits to be applied to customer's bills under such mechanism the Commission may approve, but uncollectibles, which are non-reconcilable under the terms of this rider, shall not be included in the final reconciliation.

Application of the DSS rates shall be subject to annual review and audit by the Commission.

Met-Ed/Penelec/Penn Power/West Penn Exhibit PML-18 Page 1 of 2 Electric Pa P.U.C. No. S-1 (Supp. XX) Revised Page No. 28 Metropolitan Edison Company Superseding Revised Page No. 28

8.5.1 Customer PLS and NPLS. The customer specific PLS and NPLS developed in support of the PLS and NPLS submitted to the PJM eRPM tool (or its successor) by the Company, will be provided to each EGS for the EGS's customers of record no later than 10 days following such data being uploaded into the Company's SAP system. Beginning in 2012, the Eligible Customer List ("ECL") and supplier specific "Sync Lists" will contain the new PLS and NPLS values in the first scheduled update of the ECL and Sync Lists after the calculations are uploaded into the SAP system.

9. ALTERNATIVE ENERGY PORTFOLIO STANDARDS

(C)

9.1 Requirements. EGSs supplying retail load in the Company's service territory shall cooperate with the Company to ensure compliance with applicable requirements under the AEPS Act and related regulations. An EGS is required to meet AEPS Act requirements for its metered retail load as measured at the delivery point for each EGS Customer, provided, however, that the Company shall provide solar photovoltaic alternative energy credits to satisfy EGS AEPS solar photovoltaic requirements during the period June 1, 2019 to May 31, 2023. An EGS shall grant the Company permission to transfer solar photovoltaic alternative energy credits into the EGS's GATS account.

(C) Change

	Met-Ed/Penelec/Penn Power/West Penn Exhibit PML-18
	Page 2 of 2
	Electric Pa P.U.C. No. S-1 (Supp. XX)
	Revised Page No. A-5
Metropolitan Edison Company	Superseding Revised Page No. A-5

12.9 Purchase of EGS Receivables ("POR") Program. The Company will purchase the account receivables, associated with EGS sales of retail electricity supply comprised of electric energy, capacity, transmission and ancillary services. The program will be applicable to residential and commercial Customers on Consolidated EDC Billing under the following rate schedules: Residential Service RS, General Service GS-Volunteer Fire Company and Non-Profit Ambulance Service, Rescue Squad and Senior Center Service, General Service GS-Small, General Service GS-Medium, Municipal Service, Borderline Service, Street Lighting Service, Ornamental Street Lighting Service and Outdoor Lighting Service. Provided that the Company is able to bill EGSs for all fees as provided in Section 12.9(f), the POR will be "non-recourse", except as provided for under Section 12.9(g). To the extent the Company has to provide any consumer protections other than those provided for under Chapter 14 of the Public Utility Code and Chapters 55 and 56 of the Commission's regulations, 52 Pa. Code §§ 55.1 and 56.1 et. seq., the costs will be borne by the EGSs. The Company will purchase only those receivables that are associated with basic electric supply services and not receivables associated with charges for other products or services. The Company has the right to withhold from the POR payment to an EGS an amount equal to any undisputed outstanding and unpaid balance in excess of thirty (30) or more days associated with EGS obligations to the Company as provided for in Section 12.2.

Suppliers serving both industrial and commercial/residential Customers on Consolidated EDC Billing would need a separate DUNs number for industrial Customers and a separate DUNs number for commercial/residential Customers. EGSs will not deny service to residential customers whose accounts are included in the POR program for credit-related reasons and will not ask residential customers for deposits separate from any deposit required by the Company pursuant to Chapter 14 and Commission regulations.

- (a) Eligibility: The POR program will be available only for EGSs who employ the Company's Consolidated EDC Billing option. Participation in the Company's POR program will be mandatory for any EGS that does employ the Consolidated EDC Billing option.
- **(b) Timing of Payments:** Payments to EGSs will be made based on the current amount that is billed and owed by the Customers and will be paid 40 days after invoicing the Customer. The POR payments to EGSs will be subject to the Clawback Provision provided for in Section 12.9(g) on a pilot basis through September 30, 2021.

(C)

(C) Change

Met-Ed/Penelec/Penn Power/West Penn Exhibit PML-19
Page 1 of 2
Electric Pa P.U.C. No. S-1 (Supp. XX)
Electric Pa P.U.C. No. S-1 (Supp. XX)
Revised Page No. 28
Pennsylvania Electric Company
Superseding Revised Page No. 28

8.5.1 Customer PLS and NPLS. The customer specific PLS and NPLS developed in support of the PLS and NPLS submitted to the PJM eRPM tool (or its successor) by the Company, will be provided to each EGS for the EGS's customers of record no later than 10 days following such data being uploaded into the Company's SAP system. Beginning in 2012, the Eligible Customer List ("ECL") and supplier specific "Sync Lists" will contain the new PLS and NPLS values in the first scheduled update of the ECL and Sync Lists after the calculations are uploaded into the SAP system.

9. ALTERNATIVE ENERGY PORTFOLIO STANDARDS

9.1 Requirements. EGSs supplying retail load in the Company's service territory shall cooperate with the Company to ensure compliance with applicable requirements under the AEPS Act and related regulations. An EGS is required to meet AEPS Act requirements for its metered retail load as measured at the delivery point for each EGS Customer, provided, however, that the Company shall provide solar photovoltaic alternative energy credits to satisfy EGS AEPS solar photovoltaic requirements during the period June 1, 2019 to May 31, 2023. An EGS shall grant the Company permission to transfer solar photovoltaic alternative energy credits into the EGS's GATS account.

(C)

(C) Change

Met-Ed/Penelec/Penn Power/West Penn Exhibit PML-19
Page 2 of 2
Electric Pa P.U.C. No. S-1 (Supp. XX)
Revised Page No. 38
Pennsylvania Electric Company
Superseding Revised Page No. 38

(C)

(C)

12.9 Purchase of EGS Receivables ("POR") Program. The Company will purchase the account receivables, associated with EGS sales of retail electricity supply comprised of electric energy, capacity, transmission and ancillary services. The program will be applicable to residential and commercial Customers on Consolidated EDC Billing under the following rate schedules: Residential Service RS, General Service GS-Volunteer Fire Company and Non-Profit Ambulance Service, Rescue Squad and Senior Center Service, General Service GS-Small, General Service GS-Medium, Municipal Service, Borderline Service, Street Lighting Service, Ornamental Street Lighting Service and Outdoor Lighting Service. Provided that the Company is able to bill EGSs for all fees as provided in Section 12.9(f), the POR will be "non-recourse", except as provided for under Section 12.9(g). To the extent the Company has to provide any consumer protections other than those provided for under Chapter 14 of the Public Utility Code and Chapters 55 and 56 of the Commission's regulations, 52 Pa. Code §§ 55.1 and 56.1 et. seq., the costs will be borne by the EGSs. The Company will purchase only those receivables that are associated with basic electric supply services and not receivables associated with charges for other products or services. The Company has the right to withhold from the POR payment to an EGS an amount equal to any undisputed outstanding and unpaid balance in excess of thirty (30) or more days associated with EGS obligations to the Company as provided for in Section 12.2.

Suppliers serving both industrial and commercial/residential Customers on Consolidated EDC Billing would need a separate DUNs number for industrial Customers and a separate DUNs number for commercial/residential Customers. EGSs will not deny service to residential customers whose accounts are included in the POR program for credit-related reasons and will not ask residential customers for deposits separate from any deposit required by the Company pursuant to Chapter 14 and Commission regulations.

- (a) Eligibility: The POR program will be available only for EGSs who employ the Company's Consolidated EDC Billing option. Participation in the Company's POR program will be mandatory for any EGS that does employ the Consolidated EDC Billing option.
- **(b) Timing of Payments:** Payments to EGSs will be made based on the current amount that is billed and owed by the Customers and will be paid 40 days after invoicing the Customer. The POR payments to EGSs will be subject to the Clawback Provision provided for in Section 12.9(g) on a pilot basis through September 30, 2021.

(C) Change

Met-Ed/Penelec/Penn Power/West Penn Exhibit PML-20
Page 1 of 2
Electric Pa P.U.C. No. S-3 (Supp. XX)
Revised Page No. 28
Pennsylvania Power Company
Superseding Revised Page No. 28

8.5.1 Customer PLS and NPLS. The customer specific PLS and NPLS developed in support of the PLS and NPLS submitted to the PJM eRPM tool (or its successor) by the Company, will be provided to each EGS for the EGS's customers of record no later than 10 days following such data being uploaded into the Company's SAP system. Beginning in 2012, the eligible customer list ("ECL") and supplier specific "sync lists" will contain the new PLS and NPLS values in the first scheduled update of the ECL and Sync Lists after the calculations are uploaded into the SAP system.

9. ALTERNATIVE ENERGY PORTFOLIO STANDARDS

(C)

9.1 Requirements. EGSs supplying retail load in the Company's service territory shall cooperate with the Company to ensure compliance with applicable requirements under the AEPS Act and/or related regulations. An EGS is required to meet AEPS Act requirements for its metered retail load as measured at the delivery point for each EGS Customer, provided, however, that the Company shall provide solar photovoltaic alternative energy credits to satisfy EGS AEPS solar photovoltaic requirements during the period June 1, 2019 to May 31, 2023. An EGS shall grant the Company permission to transfer solar photovoltaic alternative energy credits into the EGS's GATS account.

(C) Change

	Met-Ed/Penelec/Penn Power/West Penn Exhibit PML-20
	Page 2 of 2
	Electric Pa P.U.C. No. S-3 (Supp. XX)
	Revised Page No. A-5
Pennsylvania Power Company	Superseding Revised Page No. A-5

12.9 12.9 Purchase of EGS Receivables ("POR") Program. The Company will purchase the account receivables, associated with EGS sales of Basic Electric Supply. The program will be applicable to residential and commercial Customers on Consolidated EDC Billing under the following rate schedules: Residential Service RS, General Service GS Special Provision for Volunteer Fire Company and Non-Profit Ambulance Service, Rescue Squad and Senior Center Service, General Service GS, General Service Medium GM, Street Lighting Service SV, Street Lighting Service SVD, Street Lighting Service SM and Private Outdoor Lighting Service PLS. Provided that the Company is able to bill EGSs for all fees as provided in Section 12.9(f), the POR will be "non-recourse" except as provided for under Section 12.9(g). To the extent the Company has to provide any consumer protections other than those provided for under Chapter 14 of the Public Utility Code and Chapters 55 and 56 of the Commission's regulations, 52 Pa. Code §§ 55.1 and 56.1 et. seq., the costs will be borne by the EGSs. The Company will purchase only those receivables that are associated with basic electric supply services and not receivables associated with Basic Electric Supply. The Company has the right to withhold from the POR payment to an EGS an amount equal to any undisputed outstanding and unpaid balance in excess of thirty (30) or more days associated with EGS obligations to the Company as provided for in Section 12.2.

EGSs will not deny service to residential customers whose accounts are included in the POR program for credit-related reasons and will not ask residential customers for deposits separate from any deposit required by the Company pursuant to Chapter 14 and Commission regulations.

The Company will purchase receivables only for service rendered on or after June 1, 2011. Receivables for service rendered before June 1, 2011 cannot be used for termination purposes.

- (a) Eligibility: The POR program will be available only for EGSs who employ the Company's Consolidated EDC Billing option. Participation in the Company's POR program will be mandatory for any EGS that does employ the Consolidated EDC Billing option.
- **(b) Timing of Payments:** Payments to EGSs will be made based on the current amount that is billed and owed by the Customers and will be paid 40 days after invoicing the Customer. The POR payments to EGSs will be subject to the Clawback Provision provided for in Section 12.9(g) on a pilot basis through September 30, 2021.

(C)

(C) Change

	Supplem	ent N		f 2 C to
Elec	tric-PA. P	.U.C.	No.	2S
	Revised	Page	No.	24
Superseding	Revised	Page	No.	24

WEST PENN POWER COMPANY

- **5.14.2** Transfer of Cost Obligations Between Registered EGSs and Customers. Nothing in the EGS Tariff is intended to prevent a Registered EGS and a Customer from agreeing to reallocate between them any charges that the EGS Tariff imposes on the Registered EGS, provided that any such agreement shall not change in any way the Registered EGSs obligation to pay such charges to the Company, and that any such agreement shall not confer upon the Company any right to seek recourse directly from the Registered EGSs Customer for any charges owed to the Company by the Registered EGS.
- **5.14.3 Customer Obligations.** Customers of a Registered EGS remain bound by the rules and requirements of the applicable EDC Tariff under which they receive service from the Company.

6. LOAD FORECASTING

(C)

- 6.1 Customer Load Forecasting. The Registered EGS is responsible for forecasting its Customer load obligations. The Company will post 24-hour next day forecasts respective to each LSE as support information. This information will be available on an on-going basis for a Registered EGS to download from a password secured Company website. These will be provided for informational purposes only.
- **Typical Load Data.** The Company shall provide typical load curve data respective to Monthly metered Customer class types. This data is available on the Company's website.
- **6.3 Updates to Typical Load Curve Data.** The Company shall review annually its methodology, algorithms and Load Forecasting results and shall perform additional load studies to update the load curve data as required.
- **Right to Aggregate.** Registered EGSs may aggregate their Customers' loads when exercising Customer Choice. Customers receiving Competitive Generation Service from a Registered EGS may aggregate multiple EDC accounts or meters for the purpose of energy scheduling and billing of Competitive Generation Service only if the Registered EGS performs the billing of the Competitive Generation Service.
- **6.5 Split Loads.** Partial requirements or split loads are not allowed. Only one Registered EGS will be allowed to provide Competitive Generation Service to a Customer's EDC account.

7. LOAD SCHEDULING

7.1 Day Ahead Energy Schedules. The Registered EGS is responsible for fulfilling its load obligations directly with PJM according to the PJM OATT, as noted in Appendix A- Responsibilities for PJM Billing Line Items as Defined in Applicable PJM Agreement or Manual.

EGSs will no longer be responsible for PJM Regional Transmission Expansion Plan charges ("RTEPs") (PJM OATT Schedule 12) and Expansion Cost Recovery charges (PJM OATT Schedule 13) billed for service rendered by PJM after June 1, 2013.

Beginning June 1, 2015, EGS will no longer be responsible for the following transmission costs; (1) PJM charges associated with reliability must run ("RMR") generating unit declarations and deactivation of plants deactivated after July 24, 2014, the date of the Commission's approval of West Penn Power's Default Service Programs in PaPUC Docket No. P-2013-2391378; (2) historical out of market tie line, generation and retail customer meter adjustments; and (3) unaccounted for energy.

s will not be responsible for any approved reallocation of PJM Regional Transmission nsion Plan charges related to Docket No. EL05-121-009.	
(0) (1)	_
(C) Change	

Supplement No. XX to Electric-Pa. P.U.C. No. 2S

Revised Page No. 35

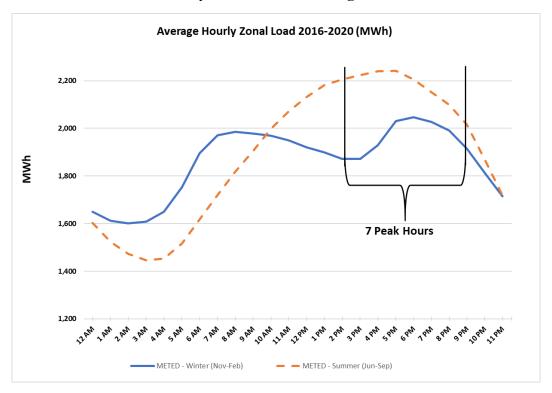
Superseding Revised Page No. 35

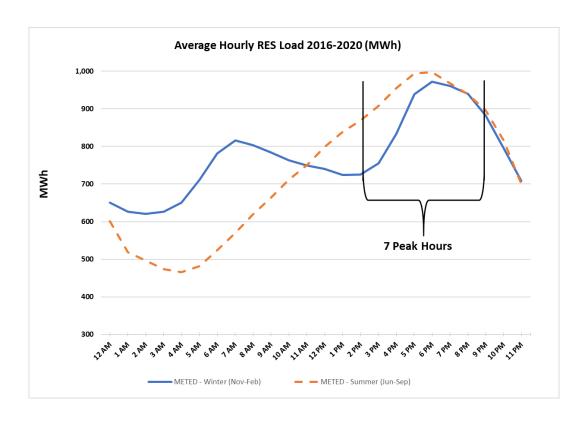
WEST PENN POWER COMPANY

- (a) The Registered EGS must calculate and send its Customer charges to the Company within three (3) Business Days of receipt of the meter read data. If the Registered EGS fails to transmit its Customer charges to the Company in the required timeframe, the Company will not include the Registered EGS's Customer charges on the bill for that period. The Company will place the previous Month Customer charges on a future consolidated bill provided that the Registered EGS: (i) transmits the previous Month Customer charges in accordance with standard EDI practices; and (ii) sends its previous Month Customer charges to the Company within three (3) Business Days of receipt of future meter read data.
- (b) The Company will not be liable for the Registered EGS's charges or losses, damages or consequential damages associated with the Registered EGS's Customers not being billed for the Registered EGS's charges for that period.
- (c) The Registered EGS is responsible for the bill content transmitted to the Company.
- **12.4.2 Purchase of Receivables ("POR") Program.** When a Registered EGS elects to use Company Consolidated Billing, the Company will purchase the Registered EGS's Basic Electric Supply receivables. The POR program will be applicable to residential and small commercial Customers served under the following retail rate schedules of the EDC Tariff: Schedules 10, 20, 30, 51, 52, 53, 54, 55, 56, 57, 58, and 71 and pursuant to the terms and conditions as follows:
 - (a) All Registered EGS Basic Electric Supply charges for residential and small commercial Customers billed using Company Consolidated Billing will be purchased at 100%, and will become the Company's charges on the day the bill is rendered. The Company has the right to withhold from the POR payment to an EGS an amount equal to any undisputed outstanding and unpaid balance in excess of thirty (30) or more days associated with EGS obligations to the Company as provided for in Section 12.7.
 - (b) In the event a Registered EGS converts a Customer from Company Consolidated Billing to Dual Billing, the Registered EGS and Company will each be responsible for its receivables effective as of the start of Dual Billing. EGSs' receivables incurred as a result of a Customer billed under a Dual Billing arrangement will not be included in the POR program.
 - (c) Company payments to EGSs will be made based on current charges applicable for the current month of service that is billed to and owed by the Customers, and will be paid to the Registered EGSs forty (40) days after the issued date of the Company Consolidated Bill. The POR payments to EGSs will be subject to the Clawback Provision provided for in Section 12.4.2(I) on a pilot basis through September 30, 2021.

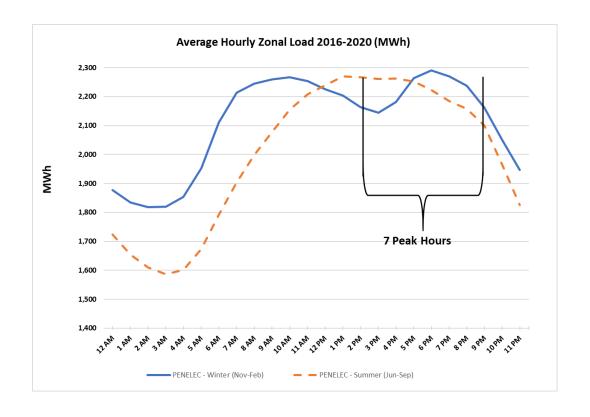
(C) Change

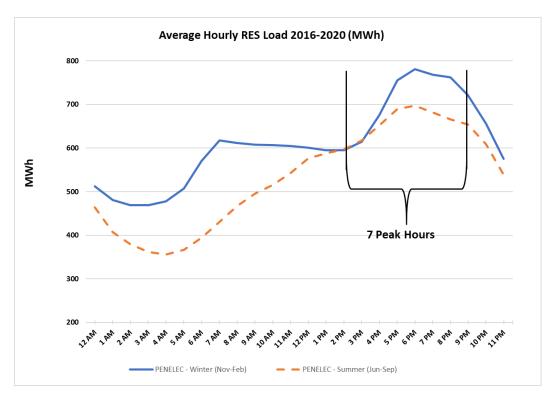
Metropolitan Edison Company System Total Peak Usage



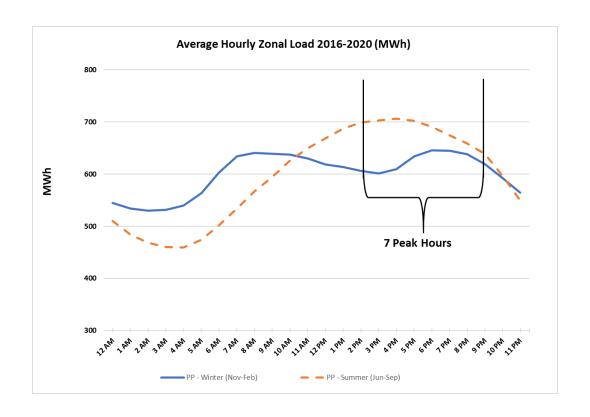


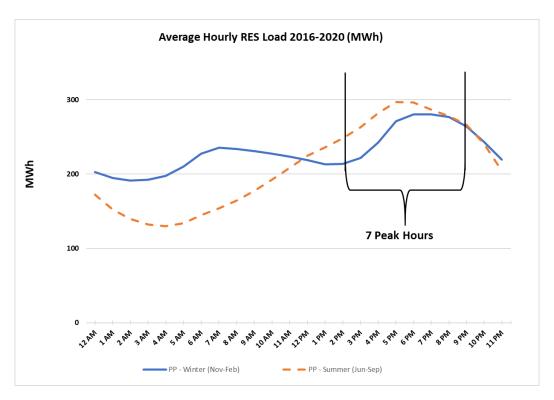
Pennsylvania Electric Company System Total Peak Usage



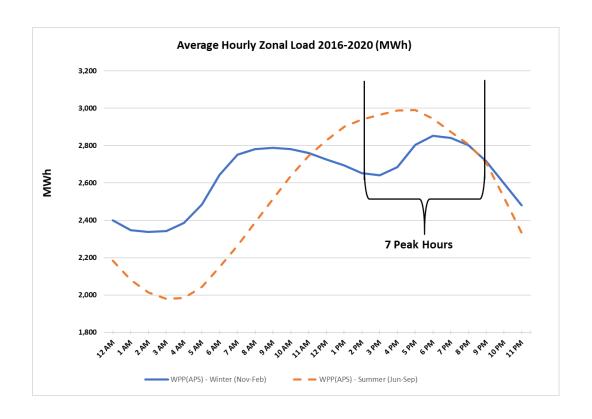


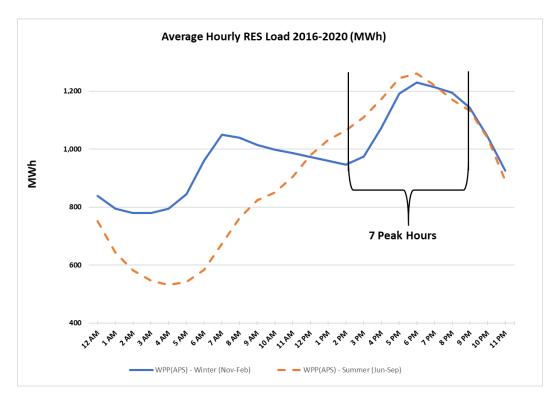
Pennsylvania Power Company System Total Peak Usage





West Penn Power Company System Total Peak Usage





Metropolitan Edison Company Commercial Customer Class Pricing Analysis and Time-of-Use Pricing Analysis

TOU Pricing Period	Days/Hours Included						
Off-Peak	All Other Hours						
On-Peak	2 p.m 9 p.m. Monday through Friday						
Super Off-Peak	11 p.m 6 a.m. Everyday						

			Annu	al C	apacity (\$)				
Years									Total
	2016							\$	41,616,251
	2017							\$	38,662,460
	2018							\$	40,119,669
	2019							\$	28,938,346
	2020							\$	17,803,349
				ner	gy (\$)				
Years			Off-Peak		On-Peak	Su	per Off-Peak		Total
	2016	\$	46,215,993	\$	28,600,020	\$	14,298,546	\$	89,114,560
	2017	\$	52,453,787	\$	30,445,719	\$	16,766,320	\$	99,665,827
	2018	\$	65,119,326	\$	36,135,614	\$	22,286,066	\$	123,541,007
	2019	\$	39,570,595	\$	21,319,813	\$	14,036,627	\$	74,927,035
	2020	\$	25,044,432	\$	14,242,104	\$	8,694,762	\$	47,981,298
				ad	MWH)				
Years			Off-Peak		On-Peak	Su	per Off-Peak		Total
	2016		1,730,770		817,813		799,722		3,348,305
	2017		1,687,046		790,426		774,777		3,252,248
	2018		1,754,197		816,932		802,210		3,373,339
	2019		1,507,599		687,678		685,020		2,880,297
	2020		1,239,877		559,132		581,034		2,380,043
Vacus				ntec	LMP (\$/MWF		Off Daal		Total
Years	2016	Ļ	Off-Peak 26.70	Ļ	On-Peak 34.97		per Off-Peak	Ļ	26.61
	2016		31.09	\$ \$	38.52	\$ \$	17.88 21.64	\$ \$	30.65
	2017	۶ \$	37.12	۶ \$	44.23	۶ \$	27.78	۶ \$	36.62
	2019	\$	26.25	\$	31.00	ب \$	20.49	\$	26.01
	2020		20.20	\$	25.47	\$	14.96	\$	20.01
	2020	7			st (\$/MWH)	,	14.50	,	20.10
Years			Off-Peak	,	On-Peak	Su	per Off-Peak		Total
	2016	Ś	-	\$	50.89	\$	-	\$	12.43
	2017		-	\$	48.91	\$	_	\$	11.89
	2018	\$	_	\$	49.11	\$	-	\$	11.89
	2019	\$	-	\$	42.08	\$	-	\$	10.05
	2020		-	\$	31.84	\$	-	\$	7.48
			Energy + 0	Capa	city (\$/MWH)			
Years			Off-Peak		On-Peak	Su	per Off-Peak		Total
	2016	\$	26.70	\$	85.86	\$	17.88	\$	39.04
	2017	\$	31.09	\$	87.43	\$	21.64	\$	42.53
	2018	\$	37.12	\$	93.34	\$	27.78	\$	48.52
	2019		26.25	\$	73.08	\$	20.49	\$	36.06
	2020		20.20	\$	57.31	\$	14.96	\$	27.64
		R	ate Factor (Pricing	Pe					
Years			Off-Peak		On-Peak	Su	per Off-Peak		
	2016		0.6839		2.1990		0.4579		
	2017		0.7310		2.0556		0.5088		
	2018		0.7652		1.9240		0.5726		
	2019		0.7279		2.0267		0.5682		
	2020		0.7308		2.0735		0.5414		
A	/erage		0.7277		2.0558		0.5298		

Metropolitan Edison Company Residential Customer Class Pricing Analysis and Time-of-Use Pricing Analysis

TOU Pricing Period	Days/Hours Included						
Off-Peak	All Other Hours						
On-Peak	2 p.m 9 p.m. Monday through Friday						
Super Off-Peak	11 p.m 6 a.m. Everyday						

			Annu	al C	apacity (\$)				
Years									Total
	2016							\$	73,742,573
	2017							\$	69,030,743
	2018							\$	73,632,414
	2019							\$	58,828,052
	2020							\$	45,947,834
			E	ner	gy (\$)				
Years			Off-Peak		On-Peak	Su	per Off-Peak		Total
	2016	\$	85,107,342	\$	51,781,707	\$	25,462,331	\$	162,351,380
	2017	\$	97,653,522	\$	55,497,857	\$	30,578,998	\$	183,730,377
	2018	\$	127,634,969	\$	72,319,549	\$	44,288,858	\$	244,243,376
	2019	\$	83,902,679	\$	47,563,268	\$	30,194,491	\$	161,660,438
	2020	\$	66,403,569	\$	40,581,645	\$	22,165,452	\$	129,150,666
				ad	(MWH)				
Years			Off-Peak		On-Peak	Su	per Off-Peak		Total
	2016		3,166,500		1,448,932		1,373,882		5,989,314
	2017		3,086,388		1,411,151		1,349,445		5,846,984
	2018		3,254,199		1,533,823		1,463,951		6,251,973
	2019		3,183,024		1,484,948		1,437,448		6,105,421
	2020		3,240,782		1,539,745		1,436,619		6,217,146
				hte	d LMP (\$/MWF	•			
Years			Off-Peak		On-Peak		per Off-Peak		Total
	2016		26.88	\$	35.74	\$	18.53	\$	27.11
	2017		31.64	\$	39.33	\$	22.66	\$	31.42
	2018	\$	39.22	\$	47.15	\$	30.25	\$	39.07
	2019		26.36	\$	32.03	\$	21.01	\$	26.48
	2020	Ş	20.49	\$	26.36	\$	15.43	\$	20.77
Vacua			Off-Peak	y Co	ost (\$/MWH)	Ç.,	man Off Daals		Total
Years	2016	Ļ	Отт-Реак	\$	On-Peak 50.89		per Off-Peak	۲	Total 12.31
			-			\$ \$	-	\$	
	2017	\$ \$	-	\$ \$	48.92	\$ \$	-	\$ \$	11.81
	2018 2019		-	\$ \$	48.01 39.62	\$	-	\$ \$	11.78 9.64
	2019		-	\$ \$	29.84	\$ \$	-	۶ \$	7.39
	2020	ڔ	Fnergy + (acity (\$/MWH)		-	ڔ	7.33
Years			Off-Peak	ирс	On-Peak		per Off-Peak		Total
	2016	\$	26.88	\$	86.63	\$	18.53	\$	39.42
	2017	\$	31.64	\$	88.25	\$	22.66	\$	43.23
	2018		39.22	\$	95.16	\$	30.25	\$	50.84
	2019		26.36	\$	71.65	\$	21.01	\$	36.11
	2020		20.49	\$	56.20	\$	15.43	\$	28.16
			ate Factor (Pricing						
Years			Off-Peak		On-Peak		per Off-Peak		
	2016		0.6818		2.1977		0.4702		
	2017		0.7319		2.0413		0.5242		
	2018		0.7714		1.8715		0.5950		
	2019		0.7299		1.9839		0.5817		
	2020		0.7275		1.9954		0.5478		
Av	/erage		0.7285		2.0180		0.5438		

Pennsylvania Electric Company Commercial Customer Class Pricing Analysis and Time-of-Use Pricing Analysis

TOU Pricing Period	Days/Hours Included						
Off-Peak	All Other Hours						
On-Peak	2 p.m 9 p.m. Monday through Friday						
Super Off-Peak	11 p.m 6 a.m. Everyday						

			Annu	al C	apacity (\$)				
Years									Total
	2016							\$	43,066,925
	2017							\$	40,405,526
	2018							\$	41,816,167
	2019							\$	29,439,724
	2020							\$	16,959,308
				ner	gy (\$)				
Years			Off-Peak		On-Peak	Su	per Off-Peak		Total
	2016	\$	59,932,745	\$	34,677,975	\$	18,413,940	\$	113,024,660
	2017	-	64,078,958	\$	34,553,107	\$	20,399,356	\$	119,031,421
	2018	\$	80,985,614	\$	43,268,766	\$	26,629,723	\$	150,884,103
	2019	\$	48,578,191	\$	24,779,744	\$	16,723,505	\$	90,081,440
	2020	\$	29,086,015	\$	15,810,237	\$	10,036,941	\$	54,933,193
				ad	MWH)				
Years	2046		Off-Peak		On-Peak	Su	per Off-Peak		Total
	2016		2,077,182		960,009		934,682		3,971,873
	2017		2,064,551		945,178		925,404		3,935,133
	2018		2,119,708		956,992		949,562		4,026,262
	2019		1,759,908		783,680		793,022		3,336,610
	2020		1,376,618	htor	612,694 I LMP (\$/MWF	1/	643,781		2,633,093
Years			Off-Peak	ntec	On-Peak		per Off-Peak		Total
rears	2016	ċ	28.85	\$	36.12	3u \$	19.70	\$	28.46
	2017		31.04	\$	36.56	\$	22.04	\$	30.25
	2017	\$	38.21	\$	45.21	\$	28.04	\$	37.47
	2019	\$	27.60	\$	31.62	\$	21.09	\$	27.00
	2020	\$	21.13	\$	25.80	\$	15.59	\$	20.86
		<u> </u>			st (\$/MWH)	Ť	15.55	Ť	20.00
Years			Off-Peak		On-Peak	Su	per Off-Peak		Total
	2016	\$	-	\$	44.86	\$	-	\$	10.84
	2017	\$	-	\$	42.75	\$	-	\$	10.27
	2018	\$	-	\$	43.70	\$	-	\$	10.39
	2019	\$	-	\$	37.57	\$	-	\$	8.82
	2020	\$		\$	27.68	\$	-	\$	6.44
				Capa	city (\$/MWH))			
Years			Off-Peak		On-Peak	Su	per Off-Peak		Total
	2016		28.85	\$	80.98	\$	19.70	\$	39.30
	2017	\$	31.04	\$	79.31	\$	22.04	\$	40.52
	2018	\$	38.21	\$	88.91	\$	28.04	\$	47.86
	2019		27.60	\$	69.19	\$	21.09	\$	35.82
	2020		21.13	\$	53.48	\$	15.59	\$	27.30
.,		Ra	ate Factor (Pricing	Pe					
Years	2016		Off-Peak		On-Peak	Su	per Off-Peak		
	2016		0.7342		2.0607		0.5013		
	2017		0.7661		1.9574		0.5441		
	2018		0.7983		1.8577		0.5860		
	2019 2020		0.7706 0.7738		1.9314 1.9589		0.5887 0.5710		
Λ,									
A	verage		0.7686		1.9532		0.5582		

Pennsylvania Electric Company Residential Customer Class Pricing Analysis and Time-of-Use Pricing Analysis

TOU Pricing Period	Days/Hours Included						
Off-Peak	All Other Hours						
On-Peak	2 p.m 9 p.m. Monday through Friday						
Super Off-Peak	11 p.m 6 a.m. Everyday						

			Annu	al C	apacity (\$)				
Years									Total
	2016							\$	50,962,468
	2017							\$	47,605,308
	2018							\$	50,495,297
	2019							\$	39,793,119
	2020							\$	30,485,135
			E	ner	gy (\$)				
Years			Off-Peak		On-Peak	Su	per Off-Peak		Total
	2016	\$	71,323,820	\$	41,026,186	\$	21,463,285	\$	133,813,292
	2017	\$	76,143,321	\$	40,918,394	\$	23,973,398	\$	141,035,112
	2018	\$	98,780,254	\$	54,689,539	\$	33,682,149	\$	187,151,943
	2019	\$	66,519,207	\$	35,778,157	\$	23,662,146	\$	125,959,510
	2020	\$	52,182,927	\$	30,449,924	\$	17,690,245	\$	100,323,096
				ad	(MWH)				
Years			Off-Peak		On-Peak	Su	per Off-Peak		Total
	2016		2,498,086		1,136,503		1,068,199		4,702,788
	2017		2,454,558		1,107,588		1,065,089		4,627,235
	2018		2,543,506		1,171,658		1,152,113		4,867,277
	2019		2,441,086		1,113,317		1,116,034		4,670,437
	2020		2,472,672		1,156,733		1,117,118		4,746,523
			Load-Weig	hte	d LMP (\$/MWF	I)			
Years			Off-Peak		On-Peak		per Off-Peak		Total
	2016		28.55	\$	36.10	\$	20.09	\$	28.45
	2017		31.02	\$	36.94	\$	22.51	\$	30.48
	2018	\$	38.84	\$	46.68	\$	29.24	\$	38.45
	2019		27.25	\$	32.14	\$	21.20	\$	26.97
	2020	\$	21.10	\$	26.32	\$	15.84	\$	21.14
				y Co	ost (\$/MWH)	_			-
Years		_	Off-Peak	_	On-Peak		per Off-Peak	_	Total
	2016		-	\$	44.84	\$	-	\$	10.84
	2017		-	\$	42.98	\$	-	\$	10.29
	2018	\$	-	\$	43.10	\$	-	\$	10.37
	2019		-	\$ \$	35.74	\$	-	\$	8.52
	2020	\$	- -		26.35	\$	-	\$	6.42
Vacus				.apa	acity (\$/MWH)		man Off Daals		Total
Years	2016	ċ	Off-Peak 28.55	ċ	On-Peak 80.94		per Off-Peak	\$	Total 39.29
	2016	\$ \$	28.55 31.02	\$ \$	79.92	\$ \$	20.09 22.51	\$ \$	
			31.02	\$ \$	79.92 89.77	\$	22.51	\$ \$	40.77 48.83
	2018	•					29.24		48.83 35.49
	2019 2020		27.25 21.10	\$ \$	52.68	\$ \$	15.84	\$ \$	27.56
	2020		ate Factor (Pricing					ڔ	27.30
Years		- '	Off-Peak		On-Peak		per Off-Peak		
1.50.13	2016		0.7267		2.0600	Ju	0.5114		
	2017		0.7609		1.9605		0.5521		
	2018		0.7954		1.8387		0.5988		
	2019		0.7678		1.9126		0.5974		
	2020		0.7658		1.9115		0.5746		
Av	/erage		0.7633		1.9367		0.5669		
	2.450		0., 000		1.5507		3.5005		

Pennsylvania Power Company Commercial Customer Class Pricing Analysis and Time-of-Use Pricing Analysis

TOU Pricing Period	Days/Hours Included
Off-Peak	All Other Hours
On-Peak	2 p.m 9 p.m. Monday through Friday
Super Off-Peak	11 p.m 6 a.m. Everyday

			Annu	al C	apacity (\$)				
Years									Total
	2016							\$	21,903,807
	2017							\$	15,889,207
	2018							\$	17,778,173
	2019							\$	12,895,797
	2020							\$	7,251,935
				ner	gy (\$)				
Years			Off-Peak		On-Peak		per Off-Peak		Total
	2016	\$	23,778,680	\$	13,512,968	\$	5,881,985	\$	43,173,633
	2017	\$	24,440,204	\$	13,178,087	\$	7,239,634	\$	44,857,925
	2018	\$	31,542,667	\$	18,183,459	\$	9,338,242	\$	59,064,368
	2019	\$	18,793,418	\$	9,919,771	\$	6,185,846	\$	34,899,036
	2020	\$	11,599,267	\$	6,344,349	\$	3,915,087	\$	21,858,703
				ad	MWH)	_	011 - :		
Years	2016		Off-Peak		On-Peak	Su	per Off-Peak		Total
	2016		792,291		359,879		291,284		1,443,454
	2017		761,928		340,178		324,346		1,426,452
	2018		770,084		349,164		338,559		1,457,806
	2019		650,638		294,478		290,665		1,235,781
	2020		532,699	htor	239,149 I LMP (\$/MWF	1/	246,608		1,018,456
Years			Off-Peak	псес	On-Peak		per Off-Peak		Total
rears	2016	ċ	30.01	\$	37.55	3 և	20.19	\$	29.91
	2017		32.08	\$	38.74	\$	22.32	\$	31.45
	2017	\$	40.96	\$	52.08	\$	27.58	\$	40.52
	2019	\$	28.88	\$	33.69	\$	21.28	\$	28.24
	2020		21.77	\$	26.53	\$	15.88	\$	21.46
		_		<u> </u>	st (\$/MWH)			Ť	
Years			Off-Peak		On-Peak	Su	per Off-Peak		Total
	2016	\$	-	\$	60.86	\$	-	\$	15.17
	2017	\$	-	\$	46.71	\$	-	\$	11.14
	2018	\$	-	\$	50.92	\$	-	\$	12.20
	2019	\$	-	\$	43.79	\$	-	\$	10.44
	2020	\$	-	\$	30.32	\$	-	\$	7.12
				Capa	city (\$/MWH				
Years			Off-Peak		On-Peak		per Off-Peak		Total
	2016	1	30.01	\$	98.41	\$	20.19	\$	45.08
	2017	\$	32.08	\$	85.45	\$	22.32	\$	42.59
	2018	\$	40.96	\$	102.99	\$	27.58	\$	52.71
	2019		28.88	\$	77.48	\$	21.28	\$	38.68
	2020		21.77	\$	56.85	\$	15.88	\$	28.58
V		R	ate Factor (Pricing	Pe					
Years	2016		Off-Peak		On-Peak	Su	per Off-Peak		
	2016		0.6657		2.1829		0.4479		
	2017		0.7532		2.0065		0.5241		
	2018		0.7771		1.9539		0.5233		
	2019		0.7468 0.7618		2.0033		0.5503 0.5554		
Α.	2020		0.7618		1.9890				
A	verage		0.7409		2.0271		0.5202		

Pennsylvania Power Company Residential Customer Class Pricing Analysis and Time-of-Use Pricing Analysis

TOU Pricing Period	Days/Hours Included
Off-Peak	All Other Hours
On-Peak	2 p.m 9 p.m. Monday through Friday
Super Off-Peak	11 p.m 6 a.m. Everyday

Annual Capacity (\$)									
Years									Total
	2016							\$	28,454,390
	2017							\$	19,090,386
	2018							\$	22,296,040
	2019							\$	17,621,214
	2020							\$	12,652,104
				ner	gy (\$)				
Years			Off-Peak		On-Peak		per Off-Peak		Total
	2016	\$	27,874,819	\$	16,632,085	\$	9,412,598	\$	53,919,501
	2017	\$	29,001,577	\$	16,572,429	\$	9,370,876	\$	54,944,882
	2018	\$	39,917,579	\$	24,194,222	\$	12,766,911	\$	76,878,712
	2019	\$	26,260,219	\$	14,731,374	\$	9,008,686	\$	50,000,278
	2020	\$	20,411,926	\$	12,227,360	\$	6,728,416	\$	39,367,702
				ad ((MWH)				
Years			Off-Peak		On-Peak	Su	per Off-Peak		Total
	2016		950,270		442,872		455,140		1,848,282
	2017		899,314		417,781		406,674		1,723,769
	2018		954,288		450,873		436,303		1,841,463
	2019		911,973		426,484		415,252		1,753,709
	2020		931,801	l. 4	448,106		415,352		1,795,259
Vacus				nted	d LMP (\$/MWF		man Off Daals		Tatal
Years	2016	۲.	Off-Peak	۲.	On-Peak		per Off-Peak	۲	Total
	2016		29.33	\$	37.56	\$	20.68 23.04	\$	29.17
	2017		32.25	\$ \$	39.67	\$ \$		\$ \$	31.87
	2018	\$ \$	41.83	\$ \$	53.66 34.54	\$ \$	29.26	۶ \$	41.75
	2019 2020	۶ \$	28.79 21.91	۶ \$	27.29	۶ \$	21.69 16.20	۶ \$	28.51 21.93
	2020	ڔ			ost (\$/MWH)	ڔ	10.20	ڔ	21.93
Years			Off-Peak	,	On-Peak	Su	per Off-Peak		Total
icuis	2016	Ś	on reak	\$	64.25	\$	-	\$	15.40
	2017		_	\$	45.69	\$	_	\$	11.07
	2017	\$	_	\$	49.45	\$	_	\$	12.11
	2019	\$	_	\$	41.32	\$	_	\$	10.05
	2020		-	\$	28.23	\$	-	\$	7.05
		Ė	Energy + (acity (\$/MWH				
Years			Off-Peak		On-Peak		per Off-Peak		Total
	2016	\$	29.33	\$	101.80	\$	20.68	\$	44.57
	2017	\$	32.25	\$	85.36	\$	23.04	\$	42.95
	2018	\$	41.83	\$	103.11	\$	29.26	\$	53.86
	2019	\$	28.79	\$	75.86	\$	21.69	\$	38.56
	2020		21.91	\$	55.52	\$	16.20	\$	28.98
		Ra	ate Factor (Pricing	g Pe	riod compared	to	Total)		
Years			Off-Peak		On-Peak	Su	per Off-Peak		
	2016		0.6582		2.2843		0.4640		
	2017		0.7508		1.9875		0.5365		
	2018		0.7767		1.9146		0.5433		
	2019		0.7468		1.9673		0.5626		
	2020		0.7560		1.9161		0.5591		
A	verage		0.7377		2.0140		0.5331		

West Penn Power Company Commercial Customer Class Pricing Analysis and Time-of-Use Pricing Analysis

TOU Pricing Period	Days/Hours Included
Off-Peak	All Other Hours
On-Peak	2 p.m 9 p.m. Monday through Friday
Super Off-Peak	11 p.m 6 a.m. Everyday

			Annu	al C	apacity (\$)				
Years									Total
	2016							\$	41,436,465
	2017							\$	46,023,571
	2018							\$	55,430,454
	2019							\$	40,700,392
	2020							\$	23,049,944
				ner	gy (\$)				
Years			Off-Peak		On-Peak	Su	per Off-Peak		Total
	2016	•	78,596,021	\$	44,228,364	\$	27,353,217	\$	150,177,602
	2017	\$	78,536,628	\$	42,362,669	\$	28,171,436	\$	149,070,733
	2018	\$	101,823,158	\$	55,016,374	\$	36,397,856	\$	193,237,388
	2019	\$	65,251,324	\$	34,198,045	\$	22,850,768	\$	122,300,137
	2020	\$	40,432,552	\$	22,327,800	\$	13,861,650	\$	76,622,001
				ad	(MWH)				
Years			Off-Peak		On-Peak	Su	per Off-Peak		Total
	2016		2,524,214		1,144,120		1,284,854		4,953,188
	2017		2,433,081		1,102,276		1,226,159		4,761,516
	2018		2,519,236		1,141,445		1,238,841		4,899,521
	2019		2,275,650		1,025,792		1,060,862		4,362,304
	2020		1,822,368		814,827		861,286		3,498,482
				hte	d LMP (\$/MWH				_
Years			Off-Peak		On-Peak		per Off-Peak		Total
	2016	•	31.14	\$	38.66	\$	21.29	\$	30.32
	2017	\$	32.28	\$	38.43	\$	22.98	\$	31.31
	2018	\$	40.42	\$	48.20	\$	29.38	\$	39.44
	2019	\$	28.67	\$	33.34	\$	21.54	\$	28.04
	2020	\$	22.19	\$	27.40	\$	16.09	\$	21.90
Years			Off-Peak	y Co	ost (\$/MWH) On-Peak	Sıı	per Off-Peak		Total
Tears	2016	\$	OII-reak	\$	36.22	\$ u	per On-Feak	\$	8.37
	2017	\$		\$	41.75	\$		\$	9.67
	2017	\$	_	\$	48.56	\$	_	\$	11.31
	2019	\$	_	\$	39.68	\$	_	\$	9.33
	2020		_	\$	28.29	\$	_	\$	6.59
		<u> </u>	Energy + C		acity (\$/MWH)			Ť	0.00
Years			Off-Peak	•	On-Peak		per Off-Peak		Total
	2016	\$	31.14	\$	74.87	\$	21.29	\$	38.68
	2017	\$	32.28	\$	80.19	\$	22.98	\$	40.97
	2018	\$	40.42	\$	96.76	\$	29.38	\$	50.75
	2019		28.67	\$	73.02	\$	21.54	\$	37.37
	2020		22.19	\$	55.69	\$	16.09	\$	28.49
			ate Factor (Pricing	_	riod compared	to			
Years			Off-Peak		On-Peak	Su	per Off-Peak		
	2016		0.8049		1.9355		0.5503		
	2017		0.7878		1.9570		0.5607		
	2018		0.7964		1.9065		0.5789		
	2019		0.7674		1.9541		0.5765		
	2020		0.7788		1.9547		0.5649		
Av	verage		0.7870		1.9416		0.5663		

West Penn Power Company Residential Customer Class Pricing Analysis and Time-of-Use Pricing Analysis

TOU Pricing Period	Days/Hours Included
Off-Peak	All Other Hours
On-Peak	2 p.m 9 p.m. Monday through Friday
Super Off-Peak	11 p.m 6 a.m. Everyday

			Annu	al C	apacity (\$)				
Years					. , , , , ,				Total
	2016							\$	63,343,307
	2017							\$	69,795,985
	2018							\$	88,395,910
	2019							\$	68,669,134
	2020							\$	49,665,637
			E	ner	gy (\$)				
Years			Off-Peak		On-Peak	Su	per Off-Peak		Total
	2016	\$	127,730,991	\$	73,211,649	\$	37,254,576	\$	238,197,216
	2017	\$	127,989,459	\$	68,799,665	\$	38,829,452	\$	235,618,576
	2018	\$	171,378,863	\$	94,854,776	\$	55,627,392	\$	321,861,032
	2019	\$	114,811,346	\$	63,920,847	\$	39,165,177	\$	217,897,370
	2020	\$	89,828,498	\$	54,881,700	\$	29,363,258	\$	174,073,456
				ad ((MWH)				
Years			Off-Peak		On-Peak	Su	per Off-Peak		Total
	2016		4,121,126		1,893,975		1,713,250		7,728,350
	2017		3,956,930		1,789,385		1,650,816		7,397,130
	2018		4,182,020		1,937,320		1,811,919		7,931,258
	2019		3,995,952		1,874,223		1,783,194		7,653,369
	2020		4,006,136		1,923,003		1,783,848		7,712,988
				hte	LMP (\$/MWF				-
Years			Off-Peak		On-Peak		per Off-Peak		Total
	2016		30.99	\$	38.66	\$	21.74	\$	30.82
	2017		32.35	\$	38.45	\$	23.52	\$	31.85
	2018		40.98	\$	48.96	\$	30.70	\$	40.58
	2019	\$	28.73	\$	34.11	\$	21.96	\$	28.47
	2020	Ş	22.42	\$	28.54	\$	16.46	\$	22.57
.,				y Co	st (\$/MWH)	_	011.0		
Years	2046	_	Off-Peak		On-Peak		per Off-Peak		Total
	2016		-	\$	33.44	\$	-	\$	8.20
	2017		-	\$	39.01	\$	-	\$	9.44
	2018		-	\$	45.63	\$	-	\$	11.15
	2019	\$ \$	-	\$ \$	36.64	\$ \$	-	\$ \$	8.97 6.44
	2020	ې	Energy + C	<u> </u>	25.83 acity (\$/MWH)	<u> </u>	-	ې	0.44
Years			Off-Peak	apo	On-Peak		per Off-Peak		Total
lears	2016	\$	30.99	\$	72.10	\$ u	21.74	\$	39.02
	2017		32.35	\$	77.45	\$	23.52	\$	41.29
	2018	\$	40.98	\$	94.59	\$	30.70	\$	51.73
	2019		28.73	\$	70.74	\$	21.96	\$	37.44
	2020		22.42	\$	54.37	\$	16.46	\$	29.01
			te Factor (Pricing					_	
Years			Off-Peak		On-Peak		per Off-Peak		
	2016		0.7944		1.8479		0.5573		
	2017		0.7834		1.8759		0.5697		
	2018		0.7922		1.8286		0.5935		
	2019		0.7673		1.8894		0.5866		
	2020		0.7730		1.8742		0.5674		
Δ	/erage		0.7821		1.8632		0.5749		

METROPOLITAN EDISON COMPANY

Electric Pa. P.U.C. No. 52 (Supp. XX)

Revised Page 150

Superseding Revised Page 150

RIDERS

(C)

RIDER K TIME-OF-USE DEFAULT SERVICE RIDER

Availability

Time-Of-Use ("TOU") default service ("TOU_{Default}") is available under this Rider for Residential Customers, and Commercial Customers with demand less than 100 kW, including those served under Rider D, the Net Metering Rider, and are receiving Default Service from the Company, upon the terms and conditions set forth herein, that: (1) have had smart meters installed pursuant to the Company's Smart Meter Technology Procurement and Installation Plan; (2) are not enrolled in the Company's Customer Assistance Program, (3) are not enrolled in budget billing; (4) are not involved in virtual net metering; (5) have not elected to terminate service under Rider K, for any reason, within the last 12 months; and (6) affirmatively elect to receive service under this Rider and comply with its enrollment procedures.

Rates

Commercial TOU $_{Default\ On\text{-}Peak} = Commercial\ Customer\ Class\ PTC_{Default}\ Rate\ x\ 2.0558$ Commercial TOU $_{Default\ Off\text{-}Peak} = Commercial\ Customer\ Class\ PTC_{Default}\ Rate\ x\ 0.5298$ Commercial TOU $_{Default\ Off\text{-}Peak} = Commercial\ Customer\ Class\ PTC_{Default}\ Rate\ x\ 0.7277$

Residential TOU $_{Default\ On\ Peak}$ = Residential Customer Class $PTC_{Default}$ Rate x 2.0180 Residential TOU $_{Default\ Super\ Off\ Peak}$ = Residential Customer Class $PTC_{Default}$ Rate x 0.5438 Residential TOU $_{Default\ Off\ Peak}$ = Residential Customer Class $PTC_{Default}$ Rate x 0.7285

On-Peak, Super Off-Peak, and Off-Peak Hours

The rates for TOU default service are different for On-Peak, Super Off-Peak and Off-Peak hours during the year, and are billed on a service rendered basis, as shown below. All times listed below are prevailing time.

TOU Pricing	Included Time	Commercial	Residential
Period	Periods	Rate Factor	Rate Factor
	2 PM - 9 PM		
On-Peak	Monday - Friday	2.0558	2.0180
	11 PM - 6 AM		
Super Off-Peak	Monday - Friday	0.5298	0.5438
Off Peak	All Other Hours	0.7277	0.7285

(C) Change

Met-Ed/Penelec/Penn Power/West Penn Exhibit PML-27
Page 2 of 3

METROPOLITAN EDISON COMPANY

Electric Pa. P.U.C. No. 52 (Supp. XX)

___ Revised Page 151

Superseding __ Revised Page 151

RIDERS

Rider K (continued) (C)

TOU Default

The $TOU_{Default}$ rates by Commercial or Residential Customer Class are based on the $PTC_{Default}$ rates, which will be calculated semi-annually for the six-month period ending March 31st to be effective for the six-month period beginning June 1st; and for the six-month period ending September 30th to be effective for the six-month period beginning December 1st.

Customer Switching

A Customer that has enrolled in the TOU default service program remains eligible to return to standard Default Service. A Customer that has enrolled in the TOU default service program may, at any time, elect to receive another product from any EGS. Customers may leave Rider K at any time without incurring fees or penalties. If a Customer elects to terminate service under Rider K for any reason, the Customer cannot re-enroll in Rider K for twelve billing months.

Annual Review and Audit

The application of TOU Default rates under this Rider shall be subject to annual review and audit by the Commission.

(C) Change

Met-Ed/Penelec/Penn Power/West Penn Exhibit PML-27

Page 3 of 3

METROPOLITAN EDISON COMPANY

Electric Pa. P.U.C. No. 52 (Supp. XX)
___ Revised Page 152

Superseding Revised Page 152

(C)

THIS PAGE INTENTIONALLY LEFT BLANK

(C) Change

Electric Pa. P.U.C. No. 81 (Supp. XX)

___ Revised Page 157

Superseding __ Revised Page 157

RIDERS

(C)

RIDER K TIME-OF-USE DEFAULT SERVICE RIDER

Availability

Time-Of-Use ("TOU") default service ("TOU_{Default}") is available under this Rider for Residential Customers, and Commercial Customers with demand less than 100 kW, including those served under Rider D, the Net Metering Rider, and are receiving Default Service from the Company, upon the terms and conditions set forth herein, that: (1) have had smart meters installed pursuant to the Company's Smart Meter Technology Procurement and Installation Plan; (2) are not enrolled in the Company's Customer Assistance Program, (3) are not enrolled in budget billing; (4) are not involved in virtual net metering; (5) have not elected to terminate service under Rider K, for any reason, within the last 12 months; and (6) affirmatively elect to receive service under this Rider and comply with its enrollment procedures.

Rates

Commercial TOU $_{Default\ On-Peak} = Commercial\ Customer\ Class\ PTC_{Default}\ Rate\ x\ 1.9352$ Commercial TOU $_{Default\ Super\ Off-Peak} = Commercial\ Customer\ Class\ PTC_{Default}\ Rate\ x\ 0.5582$ Commercial TOU $_{Default\ Off-Peak} = Commercial\ Customer\ Class\ PTC_{Default}\ Rate\ x\ 0.7686$

Residential TOU _{Default On-Peak} = Residential Customer Class PTC_{Default} Rate x 1.9367 Residential TOU _{Default Super Off-Peak} = Residential Customer Class PTC_{Default} Rate x 0.5669 Residential TOU _{Default Off-Peak} = Residential Customer Class PTC_{Default} Rate x 0.7633

On-Peak, Super Off-Peak, and Off- Peak Hours

The rates for TOU default service are different for On-Peak, Super Off-Peak and Off-Peak hours during the year, and are billed on a service rendered basis, as shown below. All times listed below are prevailing time.

TOU Pricing	Included Time	Commercial	Residential
Period	Periods	Rate Factor	Rate Factor
	2 PM - 9 PM		
On-Peak	Monday - Friday	1.9532	1.9367
	11 PM - 6 AM		
Super Off-Peak	Monday - Friday	0.5582	0.5669
Off Peak	All Other Hours	0.7686	0.7633

(C) Change

Met-Ed/Penelec/Penn Power/West Penn Exhibit PML-28
Page 2 of 3

PENNSYLVANIA ELECTRIC COMPANY

Electric Pa. P.U.C. No. 81 (Supp. XX)

___ Revised Page 158

Superseding __ Revised Page 158

RIDERS

(C)

Rider K (continued)

TOU Default

The $TOU_{Default}$ rates by Commercial or Residential Customer Class are based on the $PTC_{Default}$ rates, which will be calculated semi-annually for the six-month period ending March 31st to be effective for the six-month period beginning June 1st; and for the six-month period ending September 30th to be effective for the six-month period beginning December 1st.

Customer Switching

A Customer that has enrolled in the TOU default service program remains eligible to return to standard Default Service. A Customer that has enrolled in the TOU default service program may, at any time, elect to receive another product from any EGS. Customers may leave Rider K at any time without incurring fees or penalties. If a Customer elects to terminate service under Rider K for any reason, the Customer cannot re-enroll in Rider K for twelve billing months.

Annual Review and Audit

The application of TOU Default rates under this Rider shall be subject to annual review and audit by the Commission.

(C) Change

Met-Ed/Penelec/Penn Power/West Penn Exhibit PML-28

Page 3 of 3

PENNSYLVANIA ELECTRIC COMPANY Electr

Electric Pa. P.U.C. No. 81 (Supp. XX)
___ Revised Page 159

Superseding __ Revised Page 159

(C)

THIS PAGE INTENTIONALLY LEFT BLANK

(C) Change

PENNSYLVANIA POWER COMPANY

Electric Pa. P.U.C. No. 36 (Supp. XX)

Revised Page 143

Superseding Revised Page 143

RIDERS

(C)

RIDER K TIME-OF-USE DEFAULT SERVICE RIDER

Availability

Time-Of-Use ("TOU") default service ("TOU_{Default}") is available under this Rider for Residential Customers, and Commercial Customers with demand less than 100 kW, including those served under Rider D, the Net Metering Rider, and are receiving Default Service from the Company, upon the terms and conditions set forth herein, that: (1) have had smart meters installed pursuant to the Company's Smart Meter Technology Procurement and Installation Plan; (2) are not enrolled in the Company's Customer Assistance Program, (3) are not enrolled in budget billing; (4) are not involved in virtual net metering; (5) have not elected to terminate service under Rider K, for any reason, within the last 12 months; and (6) affirmatively elect to receive service under this Rider and comply with its enrollment procedures.

Rates

Commercial TOU $_{Default\ On-Peak} = Commercial\ Customer\ Class\ PTC_{Default}\ Rate\ x\ 2.0271$ Commercial TOU $_{Default\ Super\ Off-Peak} = Commercial\ Customer\ Class\ PTC_{Default}\ Rate\ x\ 0.5202$ Commercial TOU $_{Default\ Off-Peak} = Commercial\ Customer\ Class\ PTC_{Default}\ Rate\ x\ 0.7409$

Residential TOU _{Default On-Peak} = Residential Customer Class PTC_{Default} Rate x 2.0140 Residential TOU _{Default Super Off-Peak} = Residential Customer Class PTC_{Default} Rate x 0.5331 Residential TOU _{Default Off-Peak} = Residential Customer Class PTC_{Default} Rate x 0.7377

On-Peak, Super Off-Peak, and Off- Peak Hours

The rates for TOU default service are different for On-Peak, Super Off-Peak and Off-Peak hours during the year, and are billed on a service rendered basis, as shown below. All times listed below are prevailing time.

TOU Pricing	Included Time	Commercial	Residential
Period	Periods	Rate Factor	Rate Factor
	2 PM - 9 PM		
On-Peak	Monday - Friday	2.0271	2.0140
	11 PM - 6 AM		
Super Off-Peak	Monday - Friday	0.5202	0.5331
Off Peak	All Other Hours	0.7409	0.7377

(C) Change

Met-Ed/Penelec/Penn Power/West Penn Exhibit PML-29
Page 2 of 3

PENNSYLVANIA POWER COMPANY

Electric Pa. P.U.C. No. 36 (Supp. XX)

Revised Page 144

Superseding Revised Page 144

RIDERS

Rider K (continued) (C)

TOU Default

The $TOU_{Default}$ rates by Commercial or Residential Customer Class are based on the $PTC_{Default}$ rates, which will be calculated semi-annually for the six-month period ending March 31st to be effective for the six-month period beginning June 1st; and for the six-month period ending September 30th to be effective for the six-month period beginning December 1st.

Customer Switching

A Customer that has enrolled in the TOU default service program remains eligible to return to standard Default Service. A Customer that has enrolled in the TOU default service program may, at any time, elect to receive another product from any EGS. Customers may leave Rider K at any time without incurring fees or penalties. If a Customer elects to terminate service under Rider K for any reason, the Customer cannot re-enroll in Rider K for twelve billing months.

Annual Review and Audit

The application of TOU Default rates under this Rider shall be subject to annual review and audit by the Commission.

(C) Change

Met-Ed/Penelec/Penn Power/West Penn Exhibit PML-29

Page 3 of 3

PENNSYLVANIA POWER COMPANY Electric Pa. P.U.C. No. 36 (Supp. XX)

___ Revised Page 145

Superseding __ Revised Page 145

(C)

THIS PAGE INTENTIONALLY LEFT BLANK

(C) Change

WEST PENN POWER COMPANY

Electric Pa. P.U.C. No. 40 (Supp. XX)

___ Revised Page 192

Superseding __ Revised Page 192

RIDERS

(C)

RIDER K TIME-OF-USE DEFAULT SERVICE RIDER

Availability

Time-Of-Use ("TOU") default service ("TOU_{Default}") is available under this Rider for Residential Customers, and Commercial Customers with demand less than 100 kW, including those served under Rider D, the Net Metering Rider, and are receiving Default Service from the Company, upon the terms and conditions set forth herein, that: (1) have had smart meters installed pursuant to the Company's Smart Meter Technology Procurement and Installation Plan; (2) are not enrolled in the Company's Customer Assistance Program, (3) are not enrolled in budget billing; (4) are not involved in virtual net metering; (5) have not elected to terminate service under Rider K, for any reason, within the last 12 months; and (6) affirmatively elect to receive service under this Rider and comply with its enrollment procedures.

Rates

Commercial TOU $_{Default\ On\ Peak} = Commercial\ Customer\ Class\ PTC_{Default}\ Rate\ x\ 1.9416$ Commercial TOU $_{Default\ Onf\ Peak} = Commercial\ Customer\ Class\ PTC_{Default}\ Rate\ x\ 0.5663$ Commercial TOU $_{Default\ Off\ Peak} = Commercial\ Customer\ Class\ PTC_{Default}\ Rate\ x\ 0.7870$

Residential TOU _{Default On-Peak} = Residential Customer Class PTC_{Default} Rate x 1.8632 Residential TOU _{Default Super Off-Peak} = Residential Customer Class PTC_{Default} Rate x 0.5749 Residential TOU _{Default Off-Peak} = Residential Customer Class PTC_{Default} Rate x 0.7821

On-Peak, Super Off-Peak, and Off- Peak Hours

The rates for TOU default service are different for On-Peak, Super Off-Peak and Off-Peak hours during the year, and are billed on a service rendered basis, as shown below. All times listed below are prevailing time.

TOU Pricing	Included Time	Commercial	Residential
Period	Periods	Rate Factor	Rate Factor
	2 PM - 9 PM		
On-Peak	Monday - Friday	1.9416	1.8632
	11 PM - 6 AM		
Super Off-Peak	Monday - Friday	0.5663	0.5749
Off Peak	All Other Hours	0.7870	0.7821

(C) Change

Met-Ed/Penelec/Penn Power/West Penn Exhibit PML-30 Page 2 of 3

WEST PENN POWER COMPANY

Electric Pa. P.U.C. No. 40 (Supp. XX)

___ Revised Page 193

Superseding __ Revised Page 193

RIDERS

Rider K (continued) (C)

TOU Default

The $TOU_{Default}$ rates by Commercial or Residential Customer Class are based on the $PTC_{Default}$ rates, which will be calculated semi-annually for the six-month period ending March 31st to be effective for the six-month period beginning June 1st; and for the six-month period ending September 30th to be effective for the six-month period beginning December 1st.

Customer Switching

A Customer that has enrolled in the TOU default service program remains eligible to return to standard Default Service. A Customer that has enrolled in the TOU default service program may, at any time, elect to receive another product from any EGS. Customers may leave Rider K at any time without incurring fees or penalties. If a Customer elects to terminate service under Rider K for any reason, the Customer cannot re-enroll in Rider K for twelve billing months.

Annual Review and Audit

The application of TOU Default rates under this Rider shall be subject to annual review and audit by the Commission.

(C) Change

Met-Ed/Penelec/Penn Power/West Penn Exhibit PML-30

Page 3 of 3

WEST PENN POWER COMPANY

Electric Pa. P.U.C. No. 40 (Supp. XX) ___ Revised Page 194 Superseding Revised Page 194

(C)

THIS PAGE INTENTIONALLY LEFT BLANK

(C) Change

Metropolitan Edison Company Estimated Administrative Costs

Line No.	Description of Administrative Costs	Residential	Commercial	Industrial	Total
1	Customer Notification	\$7,673	\$1,128	\$548	\$9,349
2	Legal and Regulatory Expenses for Default Service Program Proceeding	198,587	29,195	14,194	241,976
3	Consultant Costs for Default Service Program Proceeding and Administration of				
	Descending Clock Auction Process	804,778	118,312	57,521	980,611
4	TOU and IT Related Expenses	<u>74,262</u>	10,917	<u>0</u>	<u>85,179</u>
5	Total (Lines 1 through 4)	\$1,085,300	\$159,552	\$72,263	\$1,317,115

Pennsylvania Electric Company Estimated Administrative Costs

Line No.	Description of Administrative Costs	Residential	Commercial	Industrial	Total
1	Customer Notification	\$11,723	\$2,850	\$727	\$15,300
2	Legal and Regulatory Expenses for Default Service Program Proceeding	156,106	37,951	9,679	203,736
3	Consultant Costs for Default Service Program Proceeding and Administration of				
	Descending Clock Auction Process	632,622	153,798	39,225	825,645
4	TOU and IT Related Expenses	<u>58,376</u>	<u>14,192</u>	<u>0</u>	<u>72,568</u>
5	Total (Lines 1 through 4)	\$858,827	\$208,791	\$49,631	\$1,117,249

Pennsylvania Power Company Estimated Administrative Costs

Line No.	Description of Administrative Costs	Residential	Commercial	Industrial	Total
1	Customer Notification	\$2,751	\$526	\$123	\$3,400
2	Legal and Regulatory Expenses for Default Service Program Proceeding	61,876	11,831	2,771	76,478
3	Consultant Costs for Default Service Program Proceeding and Administration of				
	Descending Clock Auction Process	250,752	47,946	11,230	309,928
4	TOU and IT Related Expenses	<u>23,138</u>	<u>4,424</u>	<u>0</u>	<u>27,562</u>
5	Total (Lines 1 through 4)	\$338,517	\$64,727	\$14,124	\$417,368

West Penn Power Company Estimated Administrative Costs

Line No.	Description of Administrative Costs	Residential	Commercial	Industrial	Total
1	Customer Notification	\$6,327	\$1,041	\$1,132	\$8,500
2	Legal and Regulatory Expenses for Default Service Program Proceeding	263,367	43,335	47,108	353,810
3	Consultant Costs for Default Service Program Proceeding and Administration of				
	Descending Clock Auction Process	1,067,296	175,618	190,904	1,433,818
4	TOU and IT Related Expenses	<u>98,486</u>	<u> 16,205</u>	<u>0</u>	<u>114,691</u>
5	Total (Lines 1 through 4)	\$1,435,476	\$236,199	\$239,144	\$1,910,819

BEFORE THE PENNSYLVANIA PUBLIC UTILITY COMMISSION

METROPOLITAN EDISON COMPANY DOCKET NO. P-2021-

PENNSYLVANIA ELECTRIC COMPANY DOCKET NO. P-2021-

PENNSYLVANIA POWER COMPANY DOCKET NO. P-2021-

WEST PENN POWER COMPANY DOCKET NO. P-2021-

DEFAULT SERVICE PROGRAMS June 1, 2023 – May 31, 2027

> Direct Testimony Of Tiffanne L. Cowan

List of Topics Addressed

Peak Load Contribution and Network Service Peak Load Third-Party Data Access Tariff

TABLE OF CONTENTS

		Page
I.	INTRODUCTION AND BACKGROUND	1
II.	PEAK LOAD CONTRIBUTION AND NETWORK SERVICE PEAK LOAD.	2
III.	THIRD-PARTY DATA ACCESS TARIFF	5
IV.	CONCLUSION	10

1	DIRECT TESTIMONY
2	\mathbf{OF}
3	TIFFANNE L. COWAN

4 I. INTRODUCTION AND BACKGROUND

- 5 Q. Please state your name and business address.
- A. My name is Tiffanne L. Cowan, and my business address is 76 South Main Street, Akron,
 Ohio 44308.

8 Q. By whom are you employed and in what capacity?

9 A. I am employed by FirstEnergy Service Company as the Manager, Regulated Settlements. 10 Regulated Settlements is responsible for the daily creation and submittal of aggregate customer load information, including retail- and default-service-supplier load, 11 municipality/cooperative load, and other utility interconnection load, to PJM 12 13 Interconnection, LLC ("PJM") for all of FirstEnergy Corp.'s ("FirstEnergy") regulated 14 utilities. These utilities include FirstEnergy's wholly owned Pennsylvania distribution 15 operating companies: Metropolitan Edison Company ("Met-Ed"), Pennsylvania Electric 16 Company ("Penelec"), Pennsylvania Power Company ("Penn Power"), and West Penn Power Company ("West Penn") (individually, a "Company", and, in any combination, the 17 "Companies"). 18

Q. What is your educational and professional background?

19

A. I earned a Bachelor of Science in Business, Liberal Arts, and Science from the
Pennsylvania State University in 1992. I have over twenty-two years of experience with
FirstEnergy. I began as a Business Analyst for FirstEnergy Service Company and then
became a Supervisor in Supplier Services. Before taking my current position, I spent time

- as Manager in Policy and Process Development and then in Regulatory Compliance and
- 2 Reporting.
- 3 Q. On whose behalf are you testifying in this proceeding?
- 4 A. I am testifying on behalf of Met-Ed, Penelec, Penn Power, and West Penn. My testimony
- 5 equally applies to all of the Companies, unless otherwise stated.
- 6 Q. What is the purpose of your direct testimony?
- 7 A. The purpose of my testimony is to describe: (i) the Companies' peak load contribution
- 8 ("PLC") and network service peak load ("NSPL") cost allocation calculations and why the
- 9 cost allocation is used; and (ii) the Companies' proposed Third-Party Data Access Tariffs
- 10 ("Tariffs").
- 11 Q. Have you prepared any exhibits to accompany your testimony?
- 12 A. Yes. Met-Ed/Penelec/Penn Power/West Penn Exhibits TLC-1 through TLC-4 were
- prepared by me or under my supervision and are described in detail later in my testimony.
- 14 II. PEAK LOAD CONTRIBUTION AND NETWORK SERVICE PEAK LOAD
- 15 Q. In response to the Commission's request in its January 2020 Secretarial Letter,¹
- please explain the Companies' PLC and NSPL cost allocation calculations.
- 17 A. The cost allocation calculations used by the Companies to determine PLC and NSPL tickets
- are defined in PJM's Open Access Transmission Tariff ("OATT"), Attachment M-2
- 19 (FirstEnergy Zones). The calculations are based on several components, including
- information provided by PJM and actual customer usage data.

¹ *Investigation into Default Serv. and PJM Interconnection, LLC Settlement Reforms*, Secretarial Letter, Docket No. M-2019-3007101, at 10 (issued Jan. 23, 2020) ("January 2020 Secretarial Letter").

Each Fall, PJM publishes the five coincident peaks ("5 CPs") to aid the Companies in the calculation of PLC for retail customer accounts. The 5 CPs represent the five highest peaking hours occurring during the previous summer, defined as June 1 through September 30 (the "summer season"), for the corresponding PJM zone. PJM also publishes a single coincident peak ("Single Peak") to aid in the calculation of NSPL for retail customer accounts. The Single Peak represents the highest peaking hour occurring during the period of November 1 through October 31 (the "winter season") for the corresponding PJM zone. Using the 5 CPs and the Single Peak provided by PJM, the Companies calculate a PLC and NSPL ticket, respectively, for each customer premise on an annual basis. The PLC represents the individual customer's average peak load contribution to the 5 CPs. The NSPL represents the individual customer's calculated load contribution to the Single Peak. To create a customer's PLC ticket, the Companies identify each customer's actual hourly usage during the 5 CPs. Distribution and transmission losses and a reconciliation factor² are applied to each of the 5 CPs. The values for each of the 5 CPs are averaged to create the customer's PLC. When calculating the customer's NSPL, the Companies will first determine if the Single Peak is summer or winter peaking. If summer peaking, the Companies will identify the five highest electric distribution company ("EDC") peaks ("5 EDC CPs") occurring during the summer season. Conversely, if winter peaking, the Companies will identify the 5 EDC CPs occurring during the winter season. The Single Peak will always correspond with one of the 5 EDC CPs. To create a customer's NSPL ticket, the Companies identify each customer's actual hourly load during the 5 EDC CPs. Like the PLC calculation,

1

2

3

4

5

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

² The reconciliation factor is used to scale the "as-metered" customer data to the zonal PLC assigned by PJM.

distribution and transmission losses and a reconciliation factor are applied to the 5	EDC
---	-----

2 CPs, and the values for each of the 5 EDC CPs are averaged to create the customer's NSPL.

- 3 Q. In the January 2020 Secretarial Letter, the Commission directed EDCs to discuss
- 4 whether the EDC is using monthly summary usage data instead of actual customer
- 5 usage data. Do the Companies use monthly summary usage data instead of actual
- 6 customer usage data when calculating PLC and NSPL tickets?

12

13

14

A. No, monthly summary usage data are not used to calculate PLC and NSPL tickets. The
only time a customer's actual usage is not used is if the customer's premise is new (i.e., a
new home or building) and has no existing load. In that situation, the Companies use a
default PLC and NSPL value based on the average PLC and NSPL for the applicable
customer load profile. Actual customer usage data will be used when calculating the

customer's PLC and NSPL values during the next annual calculation.

- Q. Do the Companies plan to make any changes to their PLC and NSPL calculation process?
- 15 A. No. Actual customer usage data is used for all customers in the calculation of PLC and
 16 NSPL tickets, except for the previously mentioned exception, and the calculation is
 17 performed in accordance with PJM's OATT, Attachment M-2 (FirstEnergy Zones) and
 18 each Company's Supplier Capacity Manual.³ Given that this is the most accurate means of
 19 calculating these tickets, no change to the Companies' methodology is necessary.

³ The Supplier Capacity Manual for each Company can be found at the following URLs of FirstEnergy's external website—Metropolitan Edison Company Determination of Capacity Peak Load Contributions and Network Service Peak Loads, http://firstenergycorp.com/content/dam/supplierservices/files/supplier-registration/PJMCapacityManualME.pdf; Pennsylvania Electric Company Determination of Capacity Peak Load Contributions and Network Service Peak Loads, http://firstenergycorp.com/content/dam/supplierservices/files/supplier-registration/PJMCapacityManualPN.pdf; Pennsylvania Power Company Determination of Capacity Peak Load Contributions and Network Service

1 III. THIRD-PARTY DATA ACCESS TARIFFS

- 2 Q. What is the purpose of the proposed Third-Party Data Access Tariffs?
- 3 A. The new Third-Party Data Access Tariffs will establish policies and procedures governing
- 4 access by eligible third parties to customer data maintained by the Companies.

5 Q. Who will be subject to the Third-Party Data Access Tariffs?

- 6 The new Third-Party Data Access Tariffs apply to any unlicensed non-EGS entity that A. 7 requests customer data maintained by the Companies. These entities may include (but are 8 not limited to) energy consultants, conservation service providers, curtailment service 9 providers, local government, state and federal agencies, and academic researchers. Most 10 often, third parties requesting such data seek to provide energy management services to 11 customers. Other third parties, such as academic researchers, may request aggregated or 12 anonymized, or both, types of data for the purpose of benchmarking or other academic 13 projects.
- Q. What is the Companies' current process for providing customer data to non-EGSthird parties?
- A. Today, the process is largely manual in nature and handled on an ad hoc basis. Third parties provide a request for customer data along with a customer authorization form to various departments within FirstEnergy, and the applicable Company provides data in an electronic format (e.g., an Excel spreadsheet) to the third party.

Peak Loads, http://firstenergycorp.com/content/dam/supplierservices/files/supplier-registration/PJMCapacityManual_PP.pdf; and West Penn Power Company Determination of Capacity Peak Load Contributions and Network Service Peak Loads, http://firstenergycorp.com/content/dam/supplierservices/files/supplier-registration/PJMCapacityManual_WP.pdf.

- Q. Why is the Companies' current process for the provision of customer data to third parties deficient?
- A. The Companies believe that the current process should be standardized to provide clear definitions and compliance requirements for providing customer energy usage and related data to third parties. All parties will benefit from transparent, established rules that are specifically calibrated for non-EGS third parties and that maintain the necessary customer protections to ensure the confidentiality of customer data.

8 Q. How would the process change under the Companies' proposed Tariffs?

9

10

11

12

13

14

15

16

- A. The Tariffs would establish a registration process for a non-EGS entity seeking electronic access to customer data. As part of that registration process, the entity would be required to accept all terms and conditions outlined in the proposed tariff, including a representation that by sending an electronic request for individual customer data to a Company, the entity has obtained valid and appropriate customer authorization to access or retrieve, or both, data specific to such customer. The Companies plan to adopt existing software infrastructure and processes to facilitate the provision of electronic access to customer data and minimize costs recovered from customers.
- Would customer consent continue to be required under the proposed Tariffs before
 the Companies would grant a requesting non-EGS electronic access to customer
 data?
- A. Yes. Customer authorization will be required for customer-specific requests. However, the Companies propose that the third party requesting the data be responsible for securing this authorization and maintaining records demonstrating proof thereof. The third party will be required, through the registration process with the Companies, to attest that the

- applicable customer authorizations will be obtained and maintained by the third party. This
 process is similar to how customer authorizations are handled by EGSs today.
- 3 Q. How will eligible third parties make a request to gain electronic access to customer
 4 usage data?
- 5 A. The Companies will provide automated solutions for the third party to register and request 6 customer-specific data and for the Companies to deliver the data securely in electronic 7 form. These automated solutions will adopt the self-service tools that exist on the supplier 8 portal today for EGSs, as well as electronic data interchange protocols. After completing 9 the necessary registration requirements, the third party would be provided with a username 10 and password to access the supplier portal. The Companies will also test EDI for those 11 third parties who choose to use this option. For requests that are not customer specific (i.e., 12 aggregated customer data), the third party would also submit a data request via the portal. 13 Depending on the request, prepared data files may be placed at a secure location for the 14 third party to obtain.
- 15 Q. What customer data would third parties be eligible to receive under the proposed

 16 Tariffs if those entities satisfy the prescriptions therein?
- 17 A. The customer data that a third party is eligible to receive is dependent on the request and
 18 the third party making the request. Third parties working on behalf of a customer, such as
 19 a consultant, conservation service provider, or curtailment service provider can request and
 20 be eligible to receive customer-specific usage data and other usage-related data such as
 21 PLC, NSPL, load profile, or rate class. This type of data allows the third party to assist the
 22 customer in analyzing their energy usage and capabilities.

- Q. Are there any categories of data that may be released to eligible third parties under the Tariffs without customer consent?
- A. Yes. Requests from third-party entities, such as a local government, state and federal agency, and academic researchers, are typically not customer specific and are presented as aggregated, anonymized data (i.e., summarized usage by geographic area). Customer consent would not be necessary in this situation.
- Q. Will eligible third parties have any continuing obligations after they access or retrievecustomer data?
- 9 A. Yes. Eligible third parties will be obligated to maintain authorization forms received from customers providing access to their customer data on record. They will also be required to keep any customer data received secure and confidential.
- Q. Do the Companies anticipate that they will incur any cost associated with the new Tariffs? If so, how will these costs be recovered?

A. No, given that the Companies propose adopting processes that exist today for electronic access to customer data by EGSs, the costs for technology are expected to be nominal. As such, recovery of costs would not be necessary. For customer requests that require manual intervention (i.e., querying of aggregated customer data), the Companies propose to apply a charge of \$53 per hour and to bill in one-minute intervals. This charge aligns with the Technical Support and Assistance Charge defined in the Companies' Commission-approved Electric Generation Supplier Coordination Tariffs. Although the third parties that will be governed by the proposed Tariffs are not EGSs, the Companies would have to employ the same processes and procedures used to extract aggregated or anonymous data

- in response to requests from EGSs as they will in relation to such requests from non-EGSs.
- 2 As such, both should reflect equal pricing.

A.

- Q. In the *Enerwise* Order,⁴ the Commission directed the Commission's Law Bureau, Bureau of Technical Utility Services, and Office of Competitive Market Oversight to initiate a new proceeding to determine if a safe, acceptable path exists for registered conservation service providers and other third parties to potentially gain access to customer data electronically from EDC data systems, with customer consent. Why do the Companies believe they should propose these Tariffs as part of a default service proceeding in light of the Commission's direction?
 - The Companies appreciate and support the Commission's recent Order and intend to fully participate in future proceedings or working groups as initiated by the Law Bureau, Bureau of Technical Utility Services, Office of Competitive Market Oversight, and Electronic Data Exchange Working Group. However, in light of the increasing number and variety of requests the Companies are receiving⁵ and the time that is likely to be required to complete such proceedings, the Companies believe that a structured framework governing electronic access to the Companies' customer usage and usage-related data by eligible third parties is appropriate to create now. The proposed Tariff will allow the Companies to protect customers' data and more efficiently manage what must be done today, while also preparing for future requirements that may be established by the Commission through additional proceedings.

⁴ License Application of Enerwise Global Techs., LLC d/b/a CPower for Approval to Offer, Render, Furnish, or Supply Elec. or Elec. Generation Servs., Final Order, Docket No. A-2019-3009271 (entered Oct. 7, 2021).

⁵ For example, when compared to the period of 2018-2019, requests from curtailment service providers increased eighty-one percent for the period of 2020-2021 (year to date October 31).

- 1 IV. <u>CONCLUSION</u>
- 2 Q. Does this conclude your direct testimony?
- 3 A. Yes, it does.

METROPOLITAN EDISON COMPANY

Third Party Data Access Tariff

Company Office Location

2800 Pottsville Pike P. O. Box 16001 Reading, Pennsylvania 19612

Issued: Effective: June 1, 2023

Samuel L. Belcher, President

NOTICE

	Electric Pa P.U.C. No
Metropolitan Edison Company	Original Page No. 2

[THIS PAGE INTENTIONALLY LEFT BLANK]

TABLE OF CONTENTS

	Page
Table of Contents	3
How to Use Loose-Leaf Tariff	4
Definition of Terms and Explanation of Abbreviations	5
RULES AND REGULATIONS:	
1. The Tariff	8
2. Scope and Purpose of Tariff	9
3. Commencement of Service	11
4. Terms of Service	
5. Data Request and Release Process	14
6. Confidentiality of Information	16
7. Payment and Billing	
8. Liability	
9. Termination of Service	
10. Alternative Dispute Resolution	20
11. Miscellaneous	
APPENDIX	
Data Access Registration Form	23

Metro	nolitan	Edison	Company
Meno	Doman	Edison	Company

HOW TO USE LOOSE-LEAF TARIFF

- 1. This Tariff is issued on the loose-leaf plan. Each page will be issued as "original page," consecutively numbered, commencing with the title page, which in all cases will be considered as Page No. 1—for example: "Original Page No. 2," "Original Page No. 3," etc.
- 2. All changes in, additions to, or eliminations from, original pages, will be made by the issue of consecutively numbered supplements to this Tariff and by reprinting the page or pages affected by such change, addition, or elimination. Such supplements will indicate the changes which they effect and will carry a statement of the make-up of the Tariff, as revised. The Table of Contents will be reissued with each supplement.
- 3. When a page is reprinted the first time, it will be designated under the P.U.C. number as "First Revised Page No....," the second time as "Second Revised Page No....," etc. First revised pages will supersede original pages; second revised pages will supersede first revised pages, etc.
- 4. When changes or additions to be made require more space than is available, one or more pages will be added to the Tariff, to which the same number will be given with letter affix. For example, if changes were to be made in Original Page No. 2 and, to show the changed matter, more than one page should be required, the new page would be issued as "First Revised Page No. 2, superseding Original Page No. 2"; and the added page would be issued as "Original Page No. 2A." If a second added page should be required, it would be issued as "Original Page No. 2B." Subsequent reprints will be consecutively designated as "First Revised...," "Second Revised...," etc.
- 5. On receipt of a revised page it will be placed in the Tariff immediately following the page which it supersedes, and the page which is to be superseded thereby plainly marked "See following page for pending revision." On the date when such revised page becomes effective, the page superseded should be removed from the Tariff.

DEFINITION OF TERMS AND EXPLANATION OF ABBREVIATIONS

Aggregated Customer Data – information pertaining to retail customers that has been (a) assembled with specific retail customer identifiers—including, but not limited to, name, address, and electric service account number—omitted from the assembled information and (b) subjected to analysis functions to develop summation average or other analytical statistics, or both, for specific groups of retail customers in a manner that precludes the determination of the individual identities of the retail customer to which such information pertains.

Anonymous Customer Data – information pertaining to retail customers that has been assembled with specific retail customer identifiers—including, but not limited to, name, address, and electric service account number—omitted from the assembled information.

AMI Interval Data – electric demand and energy usage that are measured over specific consistent incremental time periods by advanced metering infrastructure ("AMI") metering facilities provided by the Company at a retail customer's premises and that may or may not be subject to the Company's validation, editing, and estimation ("VEE") processes or directly used for the purposes of determining the amounts owed by such retail customer for electric services.

Charges - all charges stated in the "Charges" section of this Tariff that are billed by the Company (on behalf of itself or any FirstEnergy affiliate or subsidiary) for service performed hereunder.

Company – Metropolitan Edison Company ("Met-Ed").

Competition Act - the Electricity Generation Customer Choice and Competition Act, 66 Pa.C.S. § 2801, et seq.

Conservation Service Provider – an entity that provides information and technical assistance on measures to enable a person to increase energy efficiency or reduce energy consumption and that has no direct or indirect ownership, partnership, or other affiliated interest with an electric distribution company (66 Pa.C.S. § 2806.1.(m)).

Curtailment Service Provider - a PJM member or a special member, which action on behalf of itself or one or more other members or non-members, participates in the PJM Interchange Energy Market, Ancillary Services markets, Reliability Pricing Model, or any combination thereof by causing a reduction in demand.

Customer - a retail electric customer as defined in the Competition Act.

Metropolitan Edison Company

Electric Pa P.U.C. No. _____ Original Page No. 6

Definitions (Continued)

Customer Data – information pertaining to retail customers, including AMI Interval Data and customer account information, such as customer address, contact information, payment history, account number, and amount billed.

Electric Distribution Company (or "EDC") - shall have the meaning set forth in the Competition Act.

EDC Tariff - the Company's current PaPUC approved Electric Service Tariff, Pa. P.U.C. No. 52 (Metropolitan Edison Company).

Electric Generation Supplier – any person, corporation, or other entity that has received a certification from the Commission that it is eligible and licensed to supply electric energy, capacity, transmission, and ancillary services to Customers in the Company's service territory under and pursuant to the Competition Act.

Electronic Data Interchange ("EDI") – guidelines that represent the standard electronic communication method for exchanging data between an EDC and an EGS.

FERC - the Federal Energy Regulatory Commission.

FirstEnergy Corp. ("**FirstEnergy**") – the parent company of Cleveland Electric Illuminating Company, Jersey Central Power and Light Company, Metropolitan Edison Company, Monongahela Power Company, Ohio Edison Company (and its wholly owned subsidiary, Pennsylvania Power Company), Pennsylvania Electric Company, Potomac Edison Company, Toledo Edison Company, and West Penn Power Company.

Market Participant – has the same meaning as set forth in the PJM Tariff.

PaPUC (or "Commission") - the Pennsylvania Public Utility Commission.

PJM - the regional transmission organization operated by PJM Interconnection, L.L.C., or its successor.

PJM Tariff – the PJM Open Access Transmission Tariff, including schedules and exhibits.

Metropol	litan I	Edison	Company

Definitions (Continued)

Tariff – this Third-Party Data Access Tariff.

Third Party – any person or entity seeking to obtain Customer Data from the Company that is not an Electric Generation Supplier, including a Conservation Service Provider, a Curtailment Service Provider, or other Market Participant.

Metro	politan	Edison	Company	Ì

RULES AND REGULATIONS

1. THE TARIFF

- **1.1 Filing and Posting.** A copy of this Tariff is on file with the Commission and is posted and open to inspection at the offices of the Company during regular business hours. A copy of this Tariff is available at the Company's website www.firstenergycorp.com.
- **1.2 Revisions.** Subject to Section 2.3, this Tariff may be revised, amended, supplemented, or otherwise changed from time to time in accordance with the Pennsylvania Public Utility Code, and such changes, when effective, shall have the same force as the present Tariff.
- **1.3 Application.** The Tariff provisions apply to all Third Parties seeking to obtain Customer Data pertaining to Customers located in the Company's service territory. The obligations and charges herein shall apply to anyone providing or receiving service unlawfully or to any unauthorized or fraudulent provision or receipt of service in addition to any other remedies available to the Company.
- **1.4 Statement by Agents.** No Company representative has authority to modify a Tariff rule or provision, or to bind the Company by any promise or representation contrary thereto or inconsistent therewith.

2. SCOPE AND PURPOSE OF TARIFF

- **2.1 Scope and Purpose of Tariff.** This Tariff defines the circumstances and terms and conditions under which the Company provides or makes available retail Customer Data to a Third Party.
- **2.2** Relationship of the Company, Customer, and Third Party. The Company provides electric service to a Customer in accordance with the EDC Tariff. Through the course of providing this service the Company obtains, compiles, and stores Customer Data.
 - **2.2.1** A Third Party must be authorized by a Customer to obtain data specific to such Customer from the Company. The Company must provide or make available, or both, such data to such Third Party subject to the terms, conditions, and limitations set forth in this Tariff.
 - 2.2.2 The Company is not a party to the manner in which data are utilized by a Third Party and is not bound by any term, condition, or provision of any program or process employed by a Third Party in its utilization of such data. Any contractual arrangement to which a Third Party and Customer are parties is not part of this Tariff or the EDC Tariff. The Company is not a party to any such contractual arrangement between a Third Party and a Customer and is not bound by any term, condition, or provision of such an agreement.
 - **2.2.3** A Third Party is not an agent of the Company. A Third Party has no authority to enter into any agreement on behalf of the Company; to amend, modify, or alter any of the Company's tariffs, contracts, or procedures; or to bind the Company by making any promises, representations, or omissions.
 - 2.2.4 A Third Party is not an agent of the Customer. A Third Party has no authority to enter into any agreement pertaining to a Customer's electric service on behalf of such Customer or to modify or alter any such agreement on behalf of the Customer, or to bind the Customer by making any promises, representations, or omissions pertaining to such agreement.
- **2.3 FERC Jurisdictional Matters.** The inclusion of FERC-jurisdictional matters within the scope of the Tariff is intended solely for informational purposes and is not intended to accord any jurisdictional authority over such matters to the PaPUC. Furthermore, to the extent that anything stated herein is found by FERC to conflict with or to be inconsistent with any provision of the Federal Power Act ("FPA"), as amended, or any rule, regulation, order, or determination of FERC under the FPA, then such FERC rule, regulation, order, or determination of the FERC shall control. To the extent required under any provision of the FPA, or any rule, regulation, order, or determination of FERC

	Electric Pa P.U.C. No
Metropolitan Edison Company	Original Page No. 10

under the FPA, the Company shall endeavor to secure, from time to time, all necessary orders, approvals, and determinations from FERC necessary to implement this Tariff.

3. COMMENCEMENT OF SERVICE

- **3.1 Prerequisites of Service.** Before commencing service hereunder, a Third Party must comply with the following prerequisites of service.
- **3.1.1** A Third Party must submit a completed registration form to the Company that acknowledges and accepts the Terms of Service set forth in Section 4 of this Tariff.
 - **3.1.2** A Third Party must demonstrate that it can meet all applicable continuing obligations described in Section 4 of this Tariff.
 - **3.1.3** A Third Party must have and demonstrate through the completion of any applicable Company testing program the ability to electronically access or retrieve, or both, data the Company provides or makes available, or both, in accordance with the Company's practices, procedures, and systems employed to provide or make available, or both, such data.
- **3.2 Incomplete Registrations.** In the event the Third Party submits an incomplete registration, the Company shall provide written notice to the Third Party of the registration's deficiencies within five (5) business days after the date of service of the registration. The Company will not process an incomplete application until the Third Party corrects the deficiencies and delivers a completed registration to the Company.
- **3.3** Commencement of Service. Service hereunder shall commence within five (5) business days after the Company's acceptance of Third Party's complete registration provided that all of the information necessary for the Company to provide service hereunder has been submitted to the Company and any conditions established under Section 3.6 have been satisfied by the Third Party.

4. TERMS OF SERVICE

- **4.1 Third Party Continuing Obligations.** The Third Party must continue to abide by the prerequisites of service of this Tariff, as applicable. In order to access or retrieve, or both, data specific to a Customer, the Third Party must accept the following terms of service:
 - (a) The Third Party must obtain and maintain appropriate authorization from the Customer to access or retrieve, or both, data specific to the Customer, with such authorization documented in writing, electronically, or through recording of an oral communication. If an authorization obtained by a Third Party from a Customer that allows such Third Party to access or retrieve, or both, data specific to such Customer expires or is revoked for any reason, the Third Party must no longer request access to or retrieve, or both, such data.
 - (b) The Third Party will treat data specific to a Customer that it accesses or retrieves, or both, as confidential information and ensure the confidentiality of such data specific to such Customer in accordance with all applicable statutes and regulatory orders or rules.
 - (c) The Third Party acknowledges that any data specific to a Customer that it accesses or retrieves, or both, have no warranties with respect to accuracy, completeness, or fitness for any purposes.
 - (d) The Third Party agrees that data specific to a Customer must not be sold or licensed to any other entity for any purpose.
 - (e) The Third Party agrees to indemnify, defend, and hold harmless the Company from any losses, claims, or liabilities arising out of any claim alleging or arising from (i) any act or omission of such Third Party in connection with the performance of its obligations under this Tariff, (ii) such Third Party's use of data specific to a Customer that it accesses or retrieves, or both, or (iii) any breach by a Third Party of its representations and promises.
- **4.2 Disclosure of Information Without Customer Authorization.** Customer authorization is not required for a Third Party to access or retrieve, or both, Aggregated Customer Data or Anonymous Customer Data, or both, as described in Section 5 of this Tariff.
- **4.3 Company Continuing Obligations.** For a situation in which the Company must provide or make available, or both, to a Third Party data specific to a Customer as described in Section 5.1 of this Tariff, such data must be provided or made available, or both, within one business day after the Company determines the data are available for the Customer,

Metropol	litan I	Edison	Company

provided the Third Party is in compliance with applicable provisions in Section 3.1 of this Tariff and submits a request for such data prior to 5:00 p.m. Eastern Prevailing Time on the previous business day. The Company is not required to provide or make available, or both, revisions to data after such data are provided or made available, or both, to a Third Party in accordance with the provisions of this Tariff. In the event a Customer notifies the Company that a Third Party's authorization to access data specific to such Customer is terminated or revoked, the Company must terminate such Third Party's further access to Customer Data under this Tariff within 5 business days after receiving such notification from the Customer.

4.4 Charges. As applicable, charges are assessed by the Company for data provided or made available, or both, to such Third Party in accordance with the provisions of Section 5.2 of this Tariff. With respect to each request to access or retrieve, or both, Customer Data that is not available through standard automated processes, the Company will assess the requesting Third Party a charge of \$53 per hour, which will be billed by the Company in one-minute intervals.

5. DATA REQUEST AND RELEASE PROCESS

- **5.1 Data Options.** A Third Party may access Customer Data in accordance with one or more of the following options, as applicable, provided such Third Party complies with applicable provisions in Section 4.1 (Third Party Continuing Obligations).
 - **5.1.1 Individual Customer Data**. As authorized by a Customer, a Third Party may access the data that are available for such Customer, including, but not limited to, usage for up to twelve consecutive months, load profile, rate class, peak load contribution, and network system peak load, via EDI or through a secure portion of the Company's website.
 - **5.1.2** Aggregated and Anonymous Customer Data. A Third Party may request access to Aggregated Customer Data and Anonymous Customer Data as described in Section 5.2.
- **Requests for Aggregated and Anonymous Customer Data.** A Third Party requesting Aggregated or Anonymous, or both, Customer Data will do so by submitting to the Company a data request through a secure portion of the Company's website that contains fields for the following information:
 - (a) Name, address, phone, and email address of the Third Party requesting the data;
 - (b) A description of the data requested and to be released;
 - (c) A statement of the purpose for which the data will be used by the Third Party; and
 - (d) A description of the time period for the data to be disclosed (e.g., twelve months of historical data).
- **5.3** Company Response to Requests for Aggregated and Anonymous Customer Data. Following the submission of a request for data by a Third Party in accordance with Section 5.2 of this Tariff, the Company will:
 - (a) Confirm receipt of the request within three business days of receiving a request for data from a Third Party;
 - (b) Respond within three business days of receiving a request for data from a Third Party as to whether any additional information is required for the Company to process the request;

Metropolitan Edison Company	
Metropolitan Edison Company	7

- (c) Inform Third Party within ten business days of receiving a completed request for data as to whether it is able to grant the request and provide a proposed schedule for providing the requested data. If the Company responds that it cannot grant access to the requested data, it will provide specific reasons for why it cannot provide the data or offer other options for providing data access; and
- (d) Notify the requesting Third Party of the data transmission and security requirements.
- **5.4 Standardized Data Output and Delivery**. All data outputs will be in standard formats. Data will be accessible in specified formats such as XML or other agreed-upon formats. The Company will provide data through EDI or on a secure server on the Company's website where the requestor will retrieve it.

Metropo	olitan	Edison	Company

6. CONFIDENTIALITY OF INFORMATION

- 6.1 Generally. All confidential or proprietary information made available by one party to the other in connection with the registration by a Third Party with the Company or the subsequent provision and receipt of Customer Data under this Tariff, or both, including, but not limited to, information regarding the business processes of a party and the computer and communication systems owned or leased by a party, shall be used only for purposes of registration with the Company receiving or providing Customer Data hereunder. Other than disclosures to representatives of the Company or Third Party for the purposes of enabling that party to fulfill its obligations under this Tariff, a party may not disclose confidential or proprietary information without the prior authorization or consent, or both, of the other party.
- **Customer Information.** The Third Party shall keep all Customer-specific information supplied by the Company confidential unless the Third Party has the Customer's written authorization to do otherwise.

Metropo	olitan	Edison	Company

Electric Pa P.U.C. No	
Original Page No.	17

7. PAYMENT AND BILLING

- **7.1 Third Party Payment of Obligations to the Company.** A Third Party shall pay all Charges it incurs hereunder in accordance with the following provisions:
 - **7.1.1 Billing Procedure.** Each month, the Company shall submit an invoice to the Third Party reflecting all of the Charges assessed to it by the Company for all of the services provided to Third Party under this Tariff during the applicable billing period. The invoice may be transmitted to the Third Party by any reasonable method requested by the Third Party. A Third Party shall make payment for Charges incurred on or before the due date shown on the bill. The due date shall be determined by the Company and shall not be less than fifteen (15) banking days from the date of transmittal of the bill.
 - **7.1.2 Manner of Payment.** The Third Party shall remit payment to the Company by wire transfer to a bank designated in Section 7.1.3 of this Tariff. If disputes arise regarding a Third Party bill, the Third Party must pay the undisputed portion of disputed bills under investigation.
 - **7.1.3 Wire Transfer.** Payment to the Company by the Third Party must be made by electronic wire transfer or such other means as will cause payment to be available for use by the Company on the due date. All payments shall be wire transferred to:

Bank: JP Morgan Chase

ABA No.: 021000021

Account Name: FirstEnergy Service Company

Account No.: 323396364

7.1.4 Late Fee for Unpaid Balances. If payment is made to the Company after the due date shown on the bill, a late fee will be added to the unpaid balance until the entire bill is paid. This late fee will be two percent (2%) per month of the unpaid balance.

Metropo	olitan	Edison	Company

8. LIABILITY

8.1 Limitations on Liability. The Company is not liable for any act, omission, promise, or representation of any Third Party. To the extent that the Company receives a properly submitted request for applicable Customer Data and acts in accordance with the provisions of this Tariff, the Company is not liable for any conflict such actions may cause between a Third Party and a Customer. Although data provided or made available, or both, in accordance with the provision of this Tariff and produced and processed via Company systems and sources is considered to be reliable by the Company, no warranty expressed or implied is made regarding the accuracy adequacy, completeness, legality, reliability, or usefulness of any such data and applies to both the isolated and aggregated use of such data. The Company provides or makes available, or both, such data on an "as is" basis. All warranties of any kind expressed or implied, including, but not limited to, the implied warranties of merchantability, fitness for a particular purpose, freedom from contamination or corruption of any kind, and noninfringement of proprietary rights are disclaimed.

Metro	politan	Edison	Company	Ì

Electric Pa P.U.C. No	
Original Page No.	19

9. TERMINATION OF SERVICE

- **9.1 Termination.** A Third Party has the right to terminate service hereunder at any time, upon notification to the Company. The Company has the right to terminate service hereunder to a Third Party if:
 - (a) The Third Party fails to abide by the provisions set forth in the Third Party Continuing Obligations section of this Tariff (i.e., Section 4.1), as applicable;
 - (b) The Third Party fails to make timely payments to the Company, as required by Section 7 of this Tariff, to access or retrieve, or both, data provided to or made available to, or both, such Third Party in accordance with the provisions of this Tariff; or
 - (c) The Third Party is determined by the PaPUC or applicable court of law to be responsible for fraudulent representation or activity in association with this Tariff, which includes, but is not limited to, the unauthorized access or retrieval, or both, of Customer Data;
- **9.2 Survival of Obligations.** Termination of service hereunder for any reason shall not relieve the Company or a Third Party of any obligation accrued or accruing prior to such termination.

10. ALTERNATIVE DISPUTE RESOLUTION

- **10.1 Informal Resolution of Disputes.** The Company and Third Party shall use good faith and commercially reasonable efforts to informally resolve all disputes arising out of the implementation of this Tariff or the conduct of activities, or both, hereunder. The Third Party's point of contact for all information, operations, questions, and problems under this Tariff shall be the Company's Customer Data Access Group.
- 10.2 Internal Dispute Resolution Procedures. Any dispute between the Company and a Third Party under this Tariff shall be referred to a designated senior representative of each of the parties for resolution on an informal basis as promptly as practicable. In the event the designated representatives are unable to resolve the dispute within thirty (30) days (or such other period as the parties may agree upon), such dispute, by mutual agreement, may be referred to mediation or may be submitted to arbitration and resolved in accordance with the arbitration procedures set forth below.
- 10.3 External Arbitration Procedures. The arbitration initiated under the Tariff shall be conducted before a single neutral arbitrator appointed by the parties. If the parties fail to agree upon a single arbitrator within twenty (20) days of the referral of the dispute to arbitration the parties shall request the American Arbitration Association to appoint a single neutral arbitrator. The arbitrator(s) chosen shall not have any current or past substantial business or financial relationships with any party to the arbitration (except prior arbitration). The arbitrator(s) shall provide each of the parties an opportunity to be heard and, except as otherwise provided herein, shall generally conduct the arbitration in accordance with the then current Commercial Arbitration Rules of the American Arbitration Association.
- **10.4 Arbitration Decisions**. Unless otherwise agreed, the arbitrator(s) shall render a decision within ninety (90) days of their appointment and shall notify the parties in writing of such decision and the reasons therefore. The arbitrator(s) shall be authorized only to interpret and apply the provisions of the Tariff and shall have no power to modify or change any provisions in any manner. The decision of the arbitrator(s) shall be final and binding upon the Parties, and judgment on the award may be entered in any court of competent jurisdiction. The decision of the arbitrator(s) may be appealed solely on the grounds that the conduct of the arbitrator(s), or the decision itself, violated the standards set forth in 42 Pa. C.S.A. § 7341. The final decision of the arbitrator must also be filed with FERC and PaPUC, if it affects their respective jurisdictional rates, terms, and conditions of service or facilities.

	Electric Pa P.U.C. No
Metropolitan Edison Company	Original Page No. 21

- **10.5 Costs**. Each Party shall be responsible for its own costs incurred during the arbitration process and for the following costs, if applicable:
 - (a) the cost of the arbitrator chosen by the party to sit on the three-member panel and a proportionate share of the cost of the third arbitrator chosen; or
 - (b) the proportionate share of the cost of the single arbitrator jointly chosen by the parties.
- **10.6 Rights Under the FPA.** Nothing in this Section shall restrict the rights of any party to file a complaint with FERC under relevant provisions of the FPA.
- **10.7 Rights Under the Pennsylvania Public Utility Code**. Nothing in this Section shall restrict the rights of any party to file a complaint with the PaPUC under relevant provisions of the Pennsylvania Public Utility Code.

11. MISCELLANEOUS

- 11.1 Notices. Unless otherwise stated herein, any notice contemplated by this Tariff shall be in writing and shall be given to the Third Party at the address or email provided to the Company in its completed registration form and to the Company at the address on the first page of this Tariff or the email stated on the secure portion of the Company's website dedicated to requests for Customer Data. If given by electronic transmission, notice shall be deemed given on the date sent and shall be confirmed by a written copy sent by first class mail. If sent in writing by first class mail, notice shall be deemed given on the fifth business day following deposit in the United States mail (as noted by the postmark), properly addressed, with postage prepaid. If sent by same-day or overnight delivery service, notice shall be deemed given on the day of delivery. The Company and a Third Party may change their representative for receiving notices contemplated by this Tariff by delivering written notice of their new representatives to the other.
- **11.2 No Prejudice of Rights.** The failure by either the Company or the Third Party to enforce any of the terms of this Tariff shall not be deemed a waiver of the right of either to do so.
- **11.3 Governing Law.** To the extent not subject to the exclusive jurisdiction of FERC, the formation, validity, interpretation, execution, amendment, and termination of this Tariff shall be governed by the laws of the Commonwealth of Pennsylvania.

The Tariff, and the performance of the parties' obligations hereunder, are subject to and contingent upon (i) present and future local, state, and federal laws and (ii) present and future regulations or orders of any local, state, or federal regulating authority having jurisdiction over the matter set forth herein.

If at any time during the term of the Tariff, FERC, the PaPUC, or a court of competent jurisdiction issues an order under which a party hereto believes that its rights or interests, or both, under the Tariff are materially affected by said order, the party so affected shall within thirty (30) days of said final order provide the other party with notice setting forth in reasonable detail how said order has materially affected its rights or interests. Within thirty (30) days from the receiving party's receipt of said notice the parties agree to attempt through good faith negotiations to resolve the issue.

Matropoliton	Edison	Commons	. ,
Metropolitan	Eaison	Company	y

Issued:

Electric Pa P.U.C. No	
Original Page No.	23

Effective: June 1, 2023

Appendix A **DATA ACCESS REGISTRATION FORM**

Please state whether Registrant is a consultant, conservation service provider, academic institution, etc.: Contact Name: E-mail: Address: City: Co obtain or retrieve, or both, Customer Data maintait (Company"), Registrant must submit electronic reque	Years in Business: URL for Registran Title: Phone: State:	
Contact Name: E-mail: Address: City: Co obtain or retrieve, or both, Customer Data maintain	Title: Phone:	t's Website:
Contact Name: E-mail: Address: City: To obtain or retrieve, or both, Customer Data maintain	Title: Phone:	t's Website:
E-mail: Address: City: To obtain or retrieve, or both, Customer Data maintai	Phone:	
Address: City: To obtain or retrieve, or both, Customer Data maintai		
Γο obtain or retrieve, or both, Customer Data maintai	State:	
		Zip Code:
vww.firstenergy.com/ provide Registrant a username and password to access The submission of this Registration Form to Met-Ed shall Il the terms, conditions, and requirements of the Third-Pa	s the portal. constitute the Registrant	's acknowledgement and acceptance of
Jtility Commission (the "Commission" or "PUC") at Doc		
 Sy sending an electronic request for Customer Data to Me Registrant has obtained valid and appropriate cuto such customer. 		
Registrant will treat data specific to a Customer and ensure the confidentiality of such data spec and regulatory orders or rules.		
3. Any customer-specific data that Registrant acce accuracy, completeness, or fitness for any purpo		, have no warranties with respect to
4. Any data specific to a Customer must not be so	ld or licensed to any othe	r entity for any purpose.
 Registrant agrees to indemnify, defend, and hol arising out of any claim alleging or arising from performance of its obligations under the Tariff, accesses or retrieves, or both, or (iii) any breach 	i (i) any act or omission of (ii) Registrant's use of da	of Registrant in connection with the ata specific to a Customer that it
The undersigned represents and warrants that they have the terms and conditions set forth herein.	e authority to act on beha	alf of and to bind Registrant to perform
Signature of Authorized Representative:	Date:	
Name:	Title:	

PENNSYLVANIA ELECTRIC COMPANY

Third Party Data Access Tariff

Company Office Location

2800 Pottsville Pike P. O. Box 16001 Reading, Pennsylvania 19612

Issued: Effective: June 1, 2023

Samuel L. Belcher, President

NOTICE

	Electric Pa P.U.C. No
Pennsylvania Electric Company	Original Page No. 2

[THIS PAGE INTENTIONALLY LEFT BLANK]

TABLE OF CONTENTS

	<u>Page</u>
Table of Contents	3
How to Use Loose-Leaf Tariff	4
Definition of Terms and Explanation of Abbreviations	5
RULES AND REGULATIONS:	
1. The Tariff	8
2. Scope and Purpose of Tariff	9
3. Commencement of Service	.11
4. Terms of Service	
5. Data Request and Release Process	.14
6. Confidentiality of Information	16
7. Payment and Billing	.17
8. Liability	.18
9. Termination of Service	.19
10. Alternative Dispute Resolution	20
11. Miscellaneous	22
APPENDIX	
Data Access Registration Form	23

Pennsylvar	nia Electi	ric Con	nany

HOW TO USE LOOSE-LEAF TARIFF

- 1. This Tariff is issued on the loose-leaf plan. Each page will be issued as "original page," consecutively numbered, commencing with the title page, which in all cases will be considered as Page No. 1—for example: "Original Page No. 2," "Original Page No. 3," etc.
- 2. All changes in, additions to, or eliminations from, original pages, will be made by the issue of consecutively numbered supplements to this Tariff and by reprinting the page or pages affected by such change, addition, or elimination. Such supplements will indicate the changes which they effect and will carry a statement of the make-up of the Tariff, as revised. The Table of Contents will be reissued with each supplement.
- 3. When a page is reprinted the first time, it will be designated under the P.U.C. number as "First Revised Page No....," the second time as "Second Revised Page No....," etc. First revised pages will supersede original pages; second revised pages will supersede first revised pages, etc.
- 4. When changes or additions to be made require more space than is available, one or more pages will be added to the Tariff, to which the same number will be given with letter affix. For example, if changes were to be made in Original Page No. 2 and, to show the changed matter, more than one page should be required, the new page would be issued as "First Revised Page No. 2, superseding Original Page No. 2"; and the added page would be issued as "Original Page No. 2A." If a second added page should be required, it would be issued as "Original Page No. 2B." Subsequent reprints will be consecutively designated as "First Revised...," "Second Revised...," etc.
- 5. On receipt of a revised page it will be placed in the Tariff immediately following the page which it supersedes, and the page which is to be superseded thereby plainly marked "See following page for pending revision." On the date when such revised page becomes effective, the page superseded should be removed from the Tariff.

DEFINITION OF TERMS AND EXPLANATION OF ABBREVIATIONS

Aggregated Customer Data – information pertaining to retail customers that has been (a) assembled with specific retail customer identifiers—including, but not limited to, name, address, and electric service account number—omitted from the assembled information and (b) subjected to analysis functions to develop summation average or other analytical statistics, or both, for specific groups of retail customers in a manner that precludes the determination of the individual identities of the retail customer to which such information pertains.

Anonymous Customer Data – information pertaining to retail customers that has been assembled with specific retail customer identifiers—including, but not limited to, name, address, and electric service account number—omitted from the assembled information.

AMI Interval Data – electric demand and energy usage that are measured over specific consistent incremental time periods by advanced metering infrastructure ("AMI") metering facilities provided by the Company at a retail customer's premises and that may or may not be subject to the Company's validation, editing, and estimation ("VEE") processes or directly used for the purposes of determining the amounts owed by such retail customer for electric services.

Charges - all charges stated in the "Charges" section of this Tariff that are billed by the Company (on behalf of itself or any FirstEnergy affiliate or subsidiary) for service performed hereunder.

Company – Pennsylvania Electric Company ("Penelec").

Competition Act - the Electricity Generation Customer Choice and Competition Act, 66 Pa.C.S. § 2801, et seq.

Conservation Service Provider – an entity that provides information and technical assistance on measures to enable a person to increase energy efficiency or reduce energy consumption and that has no direct or indirect ownership, partnership, or other affiliated interest with an electric distribution company (66 Pa.C.S. § 2806.1.(m)).

Curtailment Service Provider - a PJM member or a special member, which action on behalf of itself or one or more other members or non-members, participates in the PJM Interchange Energy Market, Ancillary Services markets, Reliability Pricing Model, or any combination thereof by causing a reduction in demand.

Customer - a retail electric customer as defined in the Competition Act.

Pennsylvania Electric Company

Electric Pa P.U.C. No. _____ Original Page No. 6

Definitions (Continued)

Customer Data – information pertaining to retail customers, including AMI Interval Data and customer account information, such as customer address, contact information, payment history, account number, and amount billed.

Electric Distribution Company (or "EDC") - shall have the meaning set forth in the Competition Act.

EDC Tariff - the Company's current PaPUC approved Electric Service Tariff, Pa. P.U.C. No. 52 (Pennsylvania Electric Company).

Electric Generation Supplier – any person, corporation, or other entity that has received a certification from the Commission that it is eligible and licensed to supply electric energy, capacity, transmission, and ancillary services to Customers in the Company's service territory under and pursuant to the Competition Act.

Electronic Data Interchange ("EDI") – guidelines that represent the standard electronic communication method for exchanging data between an EDC and an EGS.

FERC - the Federal Energy Regulatory Commission.

FirstEnergy Corp. ("**FirstEnergy**") – the parent company of Cleveland Electric Illuminating Company, Jersey Central Power and Light Company, Metropolitan Edison Company, Monongahela Power Company, Ohio Edison Company (and its wholly owned subsidiary, Pennsylvania Power Company), Pennsylvania Electric Company, Potomac Edison Company, Toledo Edison Company, and West Penn Power Company.

Market Participant – has the same meaning as set forth in the PJM Tariff.

PaPUC (or "Commission") - the Pennsylvania Public Utility Commission.

PJM - the regional transmission organization operated by PJM Interconnection, L.L.C., or its successor.

PJM Tariff – the PJM Open Access Transmission Tariff, including schedules and exhibits.

	Electric Pa P.U.C. No
Pennsylvania Electric Company	Original Page No. 7

Definitions (Continued)

Tariff – this Third-Party Data Access Tariff.

Third Party – any person or entity seeking to obtain Customer Data from the Company that is not an Electric Generation Supplier, including a Conservation Service Provider, a Curtailment Service Provider, or other Market Participant.

RULES AND REGULATIONS

1. THE TARIFF

- **1.1 Filing and Posting.** A copy of this Tariff is on file with the Commission and is posted and open to inspection at the offices of the Company during regular business hours. A copy of this Tariff is available at the Company's website www.firstenergycorp.com.
- **1.2 Revisions.** Subject to Section 2.3, this Tariff may be revised, amended, supplemented, or otherwise changed from time to time in accordance with the Pennsylvania Public Utility Code, and such changes, when effective, shall have the same force as the present Tariff.
- **1.3 Application.** The Tariff provisions apply to all Third Parties seeking to obtain Customer Data pertaining to Customers located in the Company's service territory. The obligations and charges herein shall apply to anyone providing or receiving service unlawfully or to any unauthorized or fraudulent provision or receipt of service in addition to any other remedies available to the Company.
- **1.4 Statement by Agents.** No Company representative has authority to modify a Tariff rule or provision, or to bind the Company by any promise or representation contrary thereto or inconsistent therewith.

2. SCOPE AND PURPOSE OF TARIFF

- **2.1 Scope and Purpose of Tariff.** This Tariff defines the circumstances and terms and conditions under which the Company provides or makes available retail Customer Data to a Third Party.
- **2.2** Relationship of the Company, Customer, and Third Party. The Company provides electric service to a Customer in accordance with the EDC Tariff. Through the course of providing this service the Company obtains, compiles, and stores Customer Data.
 - **2.2.1** A Third Party must be authorized by a Customer to obtain data specific to such Customer from the Company. The Company must provide or make available, or both, such data to such Third Party subject to the terms, conditions, and limitations set forth in this Tariff.
 - 2.2.2 The Company is not a party to the manner in which data are utilized by a Third Party and is not bound by any term, condition, or provision of any program or process employed by a Third Party in its utilization of such data. Any contractual arrangement to which a Third Party and Customer are parties is not part of this Tariff or the EDC Tariff. The Company is not a party to any such contractual arrangement between a Third Party and a Customer and is not bound by any term, condition, or provision of such an agreement.
 - **2.2.3** A Third Party is not an agent of the Company. A Third Party has no authority to enter into any agreement on behalf of the Company; to amend, modify, or alter any of the Company's tariffs, contracts, or procedures; or to bind the Company by making any promises, representations, or omissions.
 - 2.2.4 A Third Party is not an agent of the Customer. A Third Party has no authority to enter into any agreement pertaining to a Customer's electric service on behalf of such Customer or to modify or alter any such agreement on behalf of the Customer, or to bind the Customer by making any promises, representations, or omissions pertaining to such agreement.
- **2.3 FERC Jurisdictional Matters.** The inclusion of FERC-jurisdictional matters within the scope of the Tariff is intended solely for informational purposes and is not intended to accord any jurisdictional authority over such matters to the PaPUC. Furthermore, to the extent that anything stated herein is found by FERC to conflict with or to be inconsistent with any provision of the Federal Power Act ("FPA"), as amended, or any rule, regulation, order, or determination of FERC under the FPA, then such FERC rule, regulation, order, or determination of the FERC shall control. To the extent required under any provision of the FPA, or any rule, regulation, order, or determination of FERC

	Electric Pa P.U.C. No
Pennsylvania Electric Company	Original Page No. 10

under the FPA, the Company shall endeavor to secure, from time to time, all necessary orders, approvals, and determinations from FERC necessary to implement this Tariff.

3. COMMENCEMENT OF SERVICE

- **3.1 Prerequisites of Service.** Before commencing service hereunder, a Third Party must comply with the following prerequisites of service.
- **3.1.1** A Third Party must submit a completed registration form to the Company that acknowledges and accepts the Terms of Service set forth in Section 4 of this Tariff.
 - **3.1.2** A Third Party must demonstrate that it can meet all applicable continuing obligations described in Section 4 of this Tariff.
 - **3.1.3** A Third Party must have and demonstrate through the completion of any applicable Company testing program the ability to electronically access or retrieve, or both, data the Company provides or makes available, or both, in accordance with the Company's practices, procedures, and systems employed to provide or make available, or both, such data.
- **3.2 Incomplete Registrations.** In the event the Third Party submits an incomplete registration, the Company shall provide written notice to the Third Party of the registration's deficiencies within five (5) business days after the date of service of the registration. The Company will not process an incomplete application until the Third Party corrects the deficiencies and delivers a completed registration to the Company.
- **3.3** Commencement of Service. Service hereunder shall commence within five (5) business days after the Company's acceptance of Third Party's complete registration provided that all of the information necessary for the Company to provide service hereunder has been submitted to the Company and any conditions established under Section 3.6 have been satisfied by the Third Party.

4. TERMS OF SERVICE

- **4.1 Third Party Continuing Obligations.** The Third Party must continue to abide by the prerequisites of service of this Tariff, as applicable. In order to access or retrieve, or both, data specific to a Customer, the Third Party must accept the following terms of service:
 - (a) The Third Party must obtain and maintain appropriate authorization from the Customer to access or retrieve, or both, data specific to the Customer, with such authorization documented in writing, electronically, or through recording of an oral communication. If an authorization obtained by a Third Party from a Customer that allows such Third Party to access or retrieve, or both, data specific to such Customer expires or is revoked for any reason, the Third Party must no longer request access to or retrieve, or both, such data.
 - (b) The Third Party will treat data specific to a Customer that it accesses or retrieves, or both, as confidential information and ensure the confidentiality of such data specific to such Customer in accordance with all applicable statutes and regulatory orders or rules.
 - (c) The Third Party acknowledges that any data specific to a Customer that it accesses or retrieves, or both, have no warranties with respect to accuracy, completeness, or fitness for any purposes.
 - (d) The Third Party agrees that data specific to a Customer must not be sold or licensed to any other entity for any purpose.
 - (e) The Third Party agrees to indemnify, defend, and hold harmless the Company from any losses, claims, or liabilities arising out of any claim alleging or arising from (i) any act or omission of such Third Party in connection with the performance of its obligations under this Tariff, (ii) such Third Party's use of data specific to a Customer that it accesses or retrieves, or both, or (iii) any breach by a Third Party of its representations and promises.
- **4.2 Disclosure of Information Without Customer Authorization.** Customer authorization is not required for a Third Party to access or retrieve, or both, Aggregated Customer Data or Anonymous Customer Data, or both, as described in Section 5 of this Tariff.
- **4.3 Company Continuing Obligations.** For a situation in which the Company must provide or make available, or both, to a Third Party data specific to a Customer as described in Section 5.1 of this Tariff, such data must be provided or made available, or both, within one business day after the Company determines the data are available for the Customer,

Pennsylvan	ia Electric	c Company

provided the Third Party is in compliance with applicable provisions in Section 3.1 of this Tariff and submits a request for such data prior to 5:00 p.m. Eastern Prevailing Time on the previous business day. The Company is not required to provide or make available, or both, revisions to data after such data are provided or made available, or both, to a Third Party in accordance with the provisions of this Tariff. In the event a Customer notifies the Company that a Third Party's authorization to access data specific to such Customer is terminated or revoked, the Company must terminate such Third Party's further access to Customer Data under this Tariff within 5 business days after receiving such notification from the Customer.

4.4 Charges. As applicable, charges are assessed by the Company for data provided or made available, or both, to such Third Party in accordance with the provisions of Section 5.2 of this Tariff. With respect to each request to access or retrieve, or both, Customer Data that is not available through standard automated processes, the Company will assess the requesting Third Party a charge of \$53 per hour, which will be billed by the Company in one-minute intervals.

5. DATA REQUEST AND RELEASE PROCESS

- **5.1 Data Options.** A Third Party may access Customer Data in accordance with one or more of the following options, as applicable, provided such Third Party complies with applicable provisions in Section 4.1 (Third Party Continuing Obligations).
 - **5.1.1 Individual Customer Data**. As authorized by a Customer, a Third Party may access the data that are available for such Customer, including, but not limited to, usage for up to twelve consecutive months, load profile, rate class, peak load contribution, and network system peak load, via EDI or through a secure portion of the Company's website.
 - **5.1.2** Aggregated and Anonymous Customer Data. A Third Party may request access to Aggregated Customer Data and Anonymous Customer Data as described in Section 5.2.
- **Requests for Aggregated and Anonymous Customer Data.** A Third Party requesting Aggregated or Anonymous, or both, Customer Data will do so by submitting to the Company a data request through a secure portion of the Company's website that contains fields for the following information:
 - (a) Name, address, phone, and email address of the Third Party requesting the data;
 - (b) A description of the data requested and to be released;
 - (c) A statement of the purpose for which the data will be used by the Third Party; and
 - (d) A description of the time period for the data to be disclosed (e.g., twelve months of historical data).
- **5.3** Company Response to Requests for Aggregated and Anonymous Customer Data. Following the submission of a request for data by a Third Party in accordance with Section 5.2 of this Tariff, the Company will:
 - (a) Confirm receipt of the request within three business days of receiving a request for data from a Third Party;
 - (b) Respond within three business days of receiving a request for data from a Third Party as to whether any additional information is required for the Company to process the request;

Pennsylvania	Electric	Company	

- (c) Inform Third Party within ten business days of receiving a completed request for data as to whether it is able to grant the request and provide a proposed schedule for providing the requested data. If the Company responds that it cannot grant access to the requested data, it will provide specific reasons for why it cannot provide the data or offer other options for providing data access; and
- (d) Notify the requesting Third Party of the data transmission and security requirements.
- **5.4 Standardized Data Output and Delivery**. All data outputs will be in standard formats. Data will be accessible in specified formats such as XML or other agreed-upon formats. The Company will provide data through EDI or on a secure server on the Company's website where the requestor will retrieve it.

Pennsy	vlvania	Electric	Company

Electric Pa P.U.C. No	
Original Page No.	16

6. CONFIDENTIALITY OF INFORMATION

- 6.1 Generally. All confidential or proprietary information made available by one party to the other in connection with the registration by a Third Party with the Company or the subsequent provision and receipt of Customer Data under this Tariff, or both, including, but not limited to, information regarding the business processes of a party and the computer and communication systems owned or leased by a party, shall be used only for purposes of registration with the Company receiving or providing Customer Data hereunder. Other than disclosures to representatives of the Company or Third Party for the purposes of enabling that party to fulfill its obligations under this Tariff, a party may not disclose confidential or proprietary information without the prior authorization or consent, or both, of the other party.
- **Customer Information.** The Third Party shall keep all Customer-specific information supplied by the Company confidential unless the Third Party has the Customer's written authorization to do otherwise.

Pennsy	vlvania	Electric	Compan	v
I CIIIIS	y i v aiiia	Liccuic	Compan	y

Electric Pa P.U.C. No	
Original Page No. 1	7

7. PAYMENT AND BILLING

- **7.1 Third Party Payment of Obligations to the Company.** A Third Party shall pay all Charges it incurs hereunder in accordance with the following provisions:
 - **7.1.1 Billing Procedure.** Each month, the Company shall submit an invoice to the Third Party reflecting all of the Charges assessed to it by the Company for all of the services provided to Third Party under this Tariff during the applicable billing period. The invoice may be transmitted to the Third Party by any reasonable method requested by the Third Party. A Third Party shall make payment for Charges incurred on or before the due date shown on the bill. The due date shall be determined by the Company and shall not be less than fifteen (15) banking days from the date of transmittal of the bill.
 - **7.1.2 Manner of Payment.** The Third Party shall remit payment to the Company by wire transfer to a bank designated in Section 7.1.3 of this Tariff. If disputes arise regarding a Third Party bill, the Third Party must pay the undisputed portion of disputed bills under investigation.
 - **7.1.3 Wire Transfer.** Payment to the Company by the Third Party must be made by electronic wire transfer or such other means as will cause payment to be available for use by the Company on the due date. All payments shall be wire transferred to:

Bank: JP Morgan Chase

ABA No.: 021000021

Account Name: FirstEnergy Service Company

Account No.: 323396364

7.1.4 Late Fee for Unpaid Balances. If payment is made to the Company after the due date shown on the bill, a late fee will be added to the unpaid balance until the entire bill is paid. This late fee will be two percent (2%) per month of the unpaid balance.

Pennsylvania Electric Company

Electric Pa P.U.C. No. ____ Original Page No. 18

8. LIABILITY

8.1 Limitations on Liability. The Company is not liable for any act, omission, promise, or representation of any Third Party. To the extent that the Company receives a properly submitted request for applicable Customer Data and acts in accordance with the provisions of this Tariff, the Company is not liable for any conflict such actions may cause between a Third Party and a Customer. Although data provided or made available, or both, in accordance with the provision of this Tariff and produced and processed via Company systems and sources is considered to be reliable by the Company, no warranty expressed or implied is made regarding the accuracy adequacy, completeness, legality, reliability, or usefulness of any such data and applies to both the isolated and aggregated use of such data. The Company provides or makes available, or both, such data on an "as is" basis. All warranties of any kind expressed or implied, including, but not limited to, the implied warranties of merchantability, fitness for a particular purpose, freedom from contamination or corruption of any kind, and noninfringement of proprietary rights are disclaimed.

Pennsylvan	ia Electric	c Company

Electric Pa P.U.C. No	
Original Page No.	19

9. TERMINATION OF SERVICE

- **9.1 Termination.** A Third Party has the right to terminate service hereunder at any time, upon notification to the Company. The Company has the right to terminate service hereunder to a Third Party if:
 - (a) The Third Party fails to abide by the provisions set forth in the Third Party Continuing Obligations section of this Tariff (i.e., Section 4.1), as applicable;
 - (b) The Third Party fails to make timely payments to the Company, as required by Section 7 of this Tariff, to access or retrieve, or both, data provided to or made available to, or both, such Third Party in accordance with the provisions of this Tariff; or
 - (c) The Third Party is determined by the PaPUC or applicable court of law to be responsible for fraudulent representation or activity in association with this Tariff, which includes, but is not limited to, the unauthorized access or retrieval, or both, of Customer Data;
- **9.2 Survival of Obligations.** Termination of service hereunder for any reason shall not relieve the Company or a Third Party of any obligation accrued or accruing prior to such termination.

10. ALTERNATIVE DISPUTE RESOLUTION

- **10.1 Informal Resolution of Disputes.** The Company and Third Party shall use good faith and commercially reasonable efforts to informally resolve all disputes arising out of the implementation of this Tariff or the conduct of activities, or both, hereunder. The Third Party's point of contact for all information, operations, questions, and problems under this Tariff shall be the Company's Customer Data Access Group.
- 10.2 Internal Dispute Resolution Procedures. Any dispute between the Company and a Third Party under this Tariff shall be referred to a designated senior representative of each of the parties for resolution on an informal basis as promptly as practicable. In the event the designated representatives are unable to resolve the dispute within thirty (30) days (or such other period as the parties may agree upon), such dispute, by mutual agreement, may be referred to mediation or may be submitted to arbitration and resolved in accordance with the arbitration procedures set forth below.
- 10.3 External Arbitration Procedures. The arbitration initiated under the Tariff shall be conducted before a single neutral arbitrator appointed by the parties. If the parties fail to agree upon a single arbitrator within twenty (20) days of the referral of the dispute to arbitration the parties shall request the American Arbitration Association to appoint a single neutral arbitrator. The arbitrator(s) chosen shall not have any current or past substantial business or financial relationships with any party to the arbitration (except prior arbitration). The arbitrator(s) shall provide each of the parties an opportunity to be heard and, except as otherwise provided herein, shall generally conduct the arbitration in accordance with the then current Commercial Arbitration Rules of the American Arbitration Association.
- 4.4 Arbitration Decisions. Unless otherwise agreed, the arbitrator(s) shall render a decision within ninety (90) days of their appointment and shall notify the parties in writing of such decision and the reasons therefore. The arbitrator(s) shall be authorized only to interpret and apply the provisions of the Tariff and shall have no power to modify or change any provisions in any manner. The decision of the arbitrator(s) shall be final and binding upon the Parties, and judgment on the award may be entered in any court of competent jurisdiction. The decision of the arbitrator(s) may be appealed solely on the grounds that the conduct of the arbitrator(s), or the decision itself, violated the standards set forth in 42 Pa. C.S.A. § 7341. The final decision of the arbitrator must also be filed with FERC and PaPUC, if it affects their respective jurisdictional rates, terms, and conditions of service or facilities.
- **10.5 Costs**. Each Party shall be responsible for its own costs incurred during the arbitration process and for the following costs, if applicable:

Pennsy	vlvania	Electric	Company

- (a) the cost of the arbitrator chosen by the party to sit on the three-member panel and a proportionate share of the cost of the third arbitrator chosen; or
- (b) the proportionate share of the cost of the single arbitrator jointly chosen by the parties.
- **10.6 Rights Under the FPA.** Nothing in this Section shall restrict the rights of any party to file a complaint with FERC under relevant provisions of the FPA.
- **10.7 Rights Under the Pennsylvania Public Utility Code.** Nothing in this Section shall restrict the rights of any party to file a complaint with the PaPUC under relevant provisions of the Pennsylvania Public Utility Code.

11. MISCELLANEOUS

- 11.1 Notices. Unless otherwise stated herein, any notice contemplated by this Tariff shall be in writing and shall be given to the Third Party at the address or email provided to the Company in its completed registration form and to the Company at the address on the first page of this Tariff or the email stated on the secure portion of the Company's website dedicated to requests for Customer Data. If given by electronic transmission, notice shall be deemed given on the date sent and shall be confirmed by a written copy sent by first class mail. If sent in writing by first class mail, notice shall be deemed given on the fifth business day following deposit in the United States mail (as noted by the postmark), properly addressed, with postage prepaid. If sent by same-day or overnight delivery service, notice shall be deemed given on the day of delivery. The Company and a Third Party may change their representative for receiving notices contemplated by this Tariff by delivering written notice of their new representatives to the other.
- **11.2 No Prejudice of Rights.** The failure by either the Company or the Third Party to enforce any of the terms of this Tariff shall not be deemed a waiver of the right of either to do so.
- **11.3 Governing Law.** To the extent not subject to the exclusive jurisdiction of FERC, the formation, validity, interpretation, execution, amendment, and termination of this Tariff shall be governed by the laws of the Commonwealth of Pennsylvania.

The Tariff, and the performance of the parties' obligations hereunder, are subject to and contingent upon (i) present and future local, state, and federal laws and (ii) present and future regulations or orders of any local, state, or federal regulating authority having jurisdiction over the matter set forth herein.

If at any time during the term of the Tariff, FERC, the PaPUC, or a court of competent jurisdiction issues an order under which a party hereto believes that its rights or interests, or both, under the Tariff are materially affected by said order, the party so affected shall within thirty (30) days of said final order provide the other party with notice setting forth in reasonable detail how said order has materially affected its rights or interests. Within thirty (30) days from the receiving party's receipt of said notice the parties agree to attempt through good faith negotiations to resolve the issue.

Danner	dvania	Flactric	Company	7
Pennsy	yıvama	Electric	Company	¥

Electric Pa P.U.C. No	
Original Page No.	23

Appendix A **DATA ACCESS REGISTRATION FORM**

Name of Registrant:		D&B DUNS Number:		
	state whether Registrant is a		Years in Busines	s:
	ant, conservation service			
provide	er, academic institution, etc.:		URL for Registra	ant's Website:
Contac	t Name:		Title:	
E-mail:			Phone:	
Addres	s:	City:	State:	Zip Code:
all the t Utility (By send	erms, conditions, and requirent Commission (the "Commission ding an electronic request for Commission Commissi	nents of the Third-I n" or "PUC") at Do Customer Data to Po	Party Data Access Tariff ocket Nos. P-2021enelec, Registrant repres	
	to such customer. Registrant will treat data sp	pecific to a Custome ity of such data spe	er that it accesses or retri	eves, or both, as confidential information accordance with all applicable statutes
4 5	 Any customer-specific data that Registrant accesses or retrieves, or both, have no warranties with respect to accuracy, completeness, or fitness for any purposes. Any data specific to a Customer must not be sold or licensed to any other entity for any purpose. Registrant agrees to indemnify, defend, and hold the Company harmless from any losses, claims, or liabilities arising out of any claim alleging or arising from (i) any act or omission of Registrant in connection with the performance of its obligations under the Tariff, (ii) Registrant's use of data specific to a Customer that it accesses or retrieves, or both, or (iii) any breach by Registrant of its representations and promises. 			
the tern	ns and conditions set forth here	ein.	the authority to act on be	half of and to bind Registrant to perform
Signatu	re of Authorized Representati	ve:	Date:	
Name:		Title:		

PENNSYLVANIA POWER COMPANY

Third Party Data Access Tariff

Company Office Location

2800 Pottsville Pike P. O. Box 16001 Reading, Pennsylvania 19612

Issued: Effective: June 1, 2023

Samuel L. Belcher, President

NOTICE

	Electric Pa P.U.C. No
Pennsylvania Power Company	Original Page No. 2

[THIS PAGE INTENTIONALLY LEFT BLANK]

TABLE OF CONTENTS

	Page	:
Table of Contents	3	
How to Use Loose-Leaf Tariff	4	
Definition of Terms and Explanation of Abbreviations	5	
RULES AND REGULATIONS:		
1. The Tariff	8	
2. Scope and Purpose of Tariff	9	
3. Commencement of Service	11	
4. Terms of Service		
5. Data Request and Release Process	14	
6. Confidentiality of Information	16	
7. Payment and Billing		
8. Liability		
9. Termination of Service		
10. Alternative Dispute Resolution	20	
11. Miscellaneous	22	
APPENDIX		
Data Access Registration Form	23	

Pennsy	lvania	Power	Company

Electric Pa P.U.C. No
Original Page No. 4

HOW TO USE LOOSE-LEAF TARIFF

- 1. This Tariff is issued on the loose-leaf plan. Each page will be issued as "original page," consecutively numbered, commencing with the title page, which in all cases will be considered as Page No. 1—for example: "Original Page No. 2," "Original Page No. 3," etc.
- 2. All changes in, additions to, or eliminations from, original pages, will be made by the issue of consecutively numbered supplements to this Tariff and by reprinting the page or pages affected by such change, addition, or elimination. Such supplements will indicate the changes which they effect and will carry a statement of the make-up of the Tariff, as revised. The Table of Contents will be reissued with each supplement.
- 3. When a page is reprinted the first time, it will be designated under the P.U.C. number as "First Revised Page No....," the second time as "Second Revised Page No....," etc. First revised pages will supersede original pages; second revised pages will supersede first revised pages, etc.
- 4. When changes or additions to be made require more space than is available, one or more pages will be added to the Tariff, to which the same number will be given with letter affix. For example, if changes were to be made in Original Page No. 2 and, to show the changed matter, more than one page should be required, the new page would be issued as "First Revised Page No. 2, superseding Original Page No. 2"; and the added page would be issued as "Original Page No. 2A." If a second added page should be required, it would be issued as "Original Page No. 2B." Subsequent reprints will be consecutively designated as "First Revised...," "Second Revised...," etc.
- 5. On receipt of a revised page it will be placed in the Tariff immediately following the page which it supersedes, and the page which is to be superseded thereby plainly marked "See following page for pending revision." On the date when such revised page becomes effective, the page superseded should be removed from the Tariff.

Pennsy	zlvania	Power	Com	nany
Lemin	/ I V allla	LOWEI	Com	Dany

DEFINITION OF TERMS AND EXPLANATION OF ABBREVIATIONS

Aggregated Customer Data – information pertaining to retail customers that has been (a) assembled with specific retail customer identifiers—including, but not limited to, name, address, and electric service account number—omitted from the assembled information and (b) subjected to analysis functions to develop summation average or other analytical statistics, or both, for specific groups of retail customers in a manner that precludes the determination of the individual identities of the retail customer to which such information pertains.

Anonymous Customer Data – information pertaining to retail customers that has been assembled with specific retail customer identifiers—including, but not limited to, name, address, and electric service account number—omitted from the assembled information.

AMI Interval Data – electric demand and energy usage that are measured over specific consistent incremental time periods by advanced metering infrastructure ("AMI") metering facilities provided by the Company at a retail customer's premises and that may or may not be subject to the Company's validation, editing, and estimation ("VEE") processes or directly used for the purposes of determining the amounts owed by such retail customer for electric services.

Charges - all charges stated in the "Charges" section of this Tariff that are billed by the Company (on behalf of itself or any FirstEnergy affiliate or subsidiary) for service performed hereunder.

Company – Pennsylvania Power Company ("Penn Power").

Competition Act - the Electricity Generation Customer Choice and Competition Act, 66 Pa.C.S. § 2801, et seq.

Conservation Service Provider – an entity that provides information and technical assistance on measures to enable a person to increase energy efficiency or reduce energy consumption and that has no direct or indirect ownership, partnership, or other affiliated interest with an electric distribution company (66 Pa.C.S. § 2806.1.(m)).

Curtailment Service Provider - a PJM member or a special member, which action on behalf of itself or one or more other members or non-members, participates in the PJM Interchange Energy Market, Ancillary Services markets, Reliability Pricing Model, or any combination thereof by causing a reduction in demand.

Customer - a retail electric customer as defined in the Competition Act.

Pennsylvania Power Company

Electric Pa P.U.C. No. _____ Original Page No. 6

Definitions (Continued)

Customer Data – information pertaining to retail customers, including AMI Interval Data and customer account information, such as customer address, contact information, payment history, account number, and amount billed.

Electric Distribution Company (or "EDC") - shall have the meaning set forth in the Competition Act.

EDC Tariff - the Company's current PaPUC approved Electric Service Tariff, Pa. P.U.C. No. 52 (Pennsylvania Power Company).

Electric Generation Supplier – any person, corporation, or other entity that has received a certification from the Commission that it is eligible and licensed to supply electric energy, capacity, transmission, and ancillary services to Customers in the Company's service territory under and pursuant to the Competition Act.

Electronic Data Interchange ("EDI") – guidelines that represent the standard electronic communication method for exchanging data between an EDC and an EGS.

FERC - the Federal Energy Regulatory Commission.

FirstEnergy Corp. ("**FirstEnergy**") – the parent company of Cleveland Electric Illuminating Company, Jersey Central Power and Light Company, Metropolitan Edison Company, Monongahela Power Company, Ohio Edison Company (and its wholly owned subsidiary, Pennsylvania Power Company), Pennsylvania Electric Company, Potomac Edison Company, Toledo Edison Company, and West Penn Power Company.

Market Participant – has the same meaning as set forth in the PJM Tariff.

PaPUC (or "Commission") - the Pennsylvania Public Utility Commission.

PJM - the regional transmission organization operated by PJM Interconnection, L.L.C., or its successor.

PJM Tariff – the PJM Open Access Transmission Tariff, including schedules and exhibits.

Pennsylvania	Power	Company

Definitions (Continued)

Tariff – this Third-Party Data Access Tariff.

Third Party – any person or entity seeking to obtain Customer Data from the Company that is not an Electric Generation Supplier, including a Conservation Service Provider, a Curtailment Service Provider, or other Market Participant.

Pennsy	lvania	Power	Company

RULES AND REGULATIONS

1. THE TARIFF

- **1.1 Filing and Posting.** A copy of this Tariff is on file with the Commission and is posted and open to inspection at the offices of the Company during regular business hours. A copy of this Tariff is available at the Company's website www.firstenergycorp.com.
- **1.2 Revisions.** Subject to Section 2.3, this Tariff may be revised, amended, supplemented, or otherwise changed from time to time in accordance with the Pennsylvania Public Utility Code, and such changes, when effective, shall have the same force as the present Tariff.
- **1.3 Application.** The Tariff provisions apply to all Third Parties seeking to obtain Customer Data pertaining to Customers located in the Company's service territory. The obligations and charges herein shall apply to anyone providing or receiving service unlawfully or to any unauthorized or fraudulent provision or receipt of service in addition to any other remedies available to the Company.
- **1.4 Statement by Agents.** No Company representative has authority to modify a Tariff rule or provision, or to bind the Company by any promise or representation contrary thereto or inconsistent therewith.

2. SCOPE AND PURPOSE OF TARIFF

- **2.1 Scope and Purpose of Tariff.** This Tariff defines the circumstances and terms and conditions under which the Company provides or makes available retail Customer Data to a Third Party.
- **2.2** Relationship of the Company, Customer, and Third Party. The Company provides electric service to a Customer in accordance with the EDC Tariff. Through the course of providing this service the Company obtains, compiles, and stores Customer Data.
 - **2.2.1** A Third Party must be authorized by a Customer to obtain data specific to such Customer from the Company. The Company must provide or make available, or both, such data to such Third Party subject to the terms, conditions, and limitations set forth in this Tariff.
 - 2.2.2 The Company is not a party to the manner in which data are utilized by a Third Party and is not bound by any term, condition, or provision of any program or process employed by a Third Party in its utilization of such data. Any contractual arrangement to which a Third Party and Customer are parties is not part of this Tariff or the EDC Tariff. The Company is not a party to any such contractual arrangement between a Third Party and a Customer and is not bound by any term, condition, or provision of such an agreement.
 - **2.2.3** A Third Party is not an agent of the Company. A Third Party has no authority to enter into any agreement on behalf of the Company; to amend, modify, or alter any of the Company's tariffs, contracts, or procedures; or to bind the Company by making any promises, representations, or omissions.
 - **2.2.4** A Third Party is not an agent of the Customer. A Third Party has no authority to enter into any agreement pertaining to a Customer's electric service on behalf of such Customer or to modify or alter any such agreement on behalf of the Customer, or to bind the Customer by making any promises, representations, or omissions pertaining to such agreement.
- **2.3 FERC Jurisdictional Matters.** The inclusion of FERC-jurisdictional matters within the scope of the Tariff is intended solely for informational purposes and is not intended to accord any jurisdictional authority over such matters to the PaPUC. Furthermore, to the extent that anything stated herein is found by FERC to conflict with or to be inconsistent with any provision of the Federal Power Act ("FPA"), as amended, or any rule, regulation, order, or determination of FERC under the FPA, then such FERC rule, regulation, order, or determination of the FERC shall control. To the extent required under any provision of the FPA, or any rule, regulation, order, or determination of FERC

	Electric Pa P.U.C. No
Pennsylvania Power Company	Original Page No. 10

under the FPA, the Company shall endeavor to secure, from time to time, all necessary orders, approvals, and determinations from FERC necessary to implement this Tariff.

3. COMMENCEMENT OF SERVICE

- **3.1 Prerequisites of Service.** Before commencing service hereunder, a Third Party must comply with the following prerequisites of service.
- **3.1.1** A Third Party must submit a completed registration form to the Company that acknowledges and accepts the Terms of Service set forth in Section 4 of this Tariff.
 - **3.1.2** A Third Party must demonstrate that it can meet all applicable continuing obligations described in Section 4 of this Tariff.
 - **3.1.3** A Third Party must have and demonstrate through the completion of any applicable Company testing program the ability to electronically access or retrieve, or both, data the Company provides or makes available, or both, in accordance with the Company's practices, procedures, and systems employed to provide or make available, or both, such data.
- **3.2 Incomplete Registrations.** In the event the Third Party submits an incomplete registration, the Company shall provide written notice to the Third Party of the registration's deficiencies within five (5) business days after the date of service of the registration. The Company will not process an incomplete application until the Third Party corrects the deficiencies and delivers a completed registration to the Company.
- **3.3** Commencement of Service. Service hereunder shall commence within five (5) business days after the Company's acceptance of Third Party's complete registration provided that all of the information necessary for the Company to provide service hereunder has been submitted to the Company and any conditions established under Section 3.6 have been satisfied by the Third Party.

4. TERMS OF SERVICE

- **4.1 Third Party Continuing Obligations.** The Third Party must continue to abide by the prerequisites of service of this Tariff, as applicable. In order to access or retrieve, or both, data specific to a Customer, the Third Party must accept the following terms of service:
 - (a) The Third Party must obtain and maintain appropriate authorization from the Customer to access or retrieve, or both, data specific to the Customer, with such authorization documented in writing, electronically, or through recording of an oral communication. If an authorization obtained by a Third Party from a Customer that allows such Third Party to access or retrieve, or both, data specific to such Customer expires or is revoked for any reason, the Third Party must no longer request access to or retrieve, or both, such data.
 - (b) The Third Party will treat data specific to a Customer that it accesses or retrieves, or both, as confidential information and ensure the confidentiality of such data specific to such Customer in accordance with all applicable statutes and regulatory orders or rules.
 - (c) The Third Party acknowledges that any data specific to a Customer that it accesses or retrieves, or both, have no warranties with respect to accuracy, completeness, or fitness for any purposes.
 - (d) The Third Party agrees that data specific to a Customer must not be sold or licensed to any other entity for any purpose.
 - (e) The Third Party agrees to indemnify, defend, and hold harmless the Company from any losses, claims, or liabilities arising out of any claim alleging or arising from (i) any act or omission of such Third Party in connection with the performance of its obligations under this Tariff, (ii) such Third Party's use of data specific to a Customer that it accesses or retrieves, or both, or (iii) any breach by a Third Party of its representations and promises.
- **4.2 Disclosure of Information Without Customer Authorization.** Customer authorization is not required for a Third Party to access or retrieve, or both, Aggregated Customer Data or Anonymous Customer Data, or both, as described in Section 5 of this Tariff.
- **4.3 Company Continuing Obligations.** For a situation in which the Company must provide or make available, or both, to a Third Party data specific to a Customer as described in Section 5.1 of this Tariff, such data must be provided or made available, or both, within one business day after the Company determines the data are available for the Customer,

Pennsy	lvania	Power	Company

provided the Third Party is in compliance with applicable provisions in Section 3.1 of this Tariff and submits a request for such data prior to 5:00 p.m. Eastern Prevailing Time on the previous business day. The Company is not required to provide or make available, or both, revisions to data after such data are provided or made available, or both, to a Third Party in accordance with the provisions of this Tariff. In the event a Customer notifies the Company that a Third Party's authorization to access data specific to such Customer is terminated or revoked, the Company must terminate such Third Party's further access to Customer Data under this Tariff within 5 business days after receiving such notification from the Customer.

4.4 Charges. As applicable, charges are assessed by the Company for data provided or made available, or both, to such Third Party in accordance with the provisions of Section 5.2 of this Tariff. With respect to each request to access or retrieve, or both, Customer Data that is not available through standard automated processes, the Company will assess the requesting Third Party a charge of \$53 per hour, which will be billed by the Company in one-minute intervals.

5. DATA REQUEST AND RELEASE PROCESS

- **Data Options.** A Third Party may access Customer Data in accordance with one or more of the following options, as applicable, provided such Third Party complies with applicable provisions in Section 4.1 (Third Party Continuing Obligations).
 - **5.1.1 Individual Customer Data**. As authorized by a Customer, a Third Party may access the data that are available for such Customer, including, but not limited to, usage for up to twelve consecutive months, load profile, rate class, peak load contribution, and network system peak load, via EDI or through a secure portion of the Company's website.
 - **5.1.2** Aggregated and Anonymous Customer Data. A Third Party may request access to Aggregated Customer Data and Anonymous Customer Data as described in Section 5.2.
- **Requests for Aggregated and Anonymous Customer Data.** A Third Party requesting Aggregated or Anonymous, or both, Customer Data will do so by submitting to the Company a data request through a secure portion of the Company's website that contains fields for the following information:
 - (a) Name, address, phone, and email address of the Third Party requesting the data;
 - (b) A description of the data requested and to be released;
 - (c) A statement of the purpose for which the data will be used by the Third Party; and
 - (d) A description of the time period for the data to be disclosed (e.g., twelve months of historical data).
- **5.3** Company Response to Requests for Aggregated and Anonymous Customer Data. Following the submission of a request for data by a Third Party in accordance with Section 5.2 of this Tariff, the Company will:
 - (a) Confirm receipt of the request within three business days of receiving a request for data from a Third Party;
 - (b) Respond within three business days of receiving a request for data from a Third Party as to whether any additional information is required for the Company to process the request;

Pennsy	/lvania	Power	Company	V

- (c) Inform Third Party within ten business days of receiving a completed request for data as to whether it is able to grant the request and provide a proposed schedule for providing the requested data. If the Company responds that it cannot grant access to the requested data, it will provide specific reasons for why it cannot provide the data or offer other options for providing data access; and
- (d) Notify the requesting Third Party of the data transmission and security requirements.
- **5.4 Standardized Data Output and Delivery**. All data outputs will be in standard formats. Data will be accessible in specified formats such as XML or other agreed-upon formats. The Company will provide data through EDI or on a secure server on the Company's website where the requestor will retrieve it.

Pennsy	vlvania	Power	Company	V

6. CONFIDENTIALITY OF INFORMATION

- 6.1 Generally. All confidential or proprietary information made available by one party to the other in connection with the registration by a Third Party with the Company or the subsequent provision and receipt of Customer Data under this Tariff, or both, including, but not limited to, information regarding the business processes of a party and the computer and communication systems owned or leased by a party, shall be used only for purposes of registration with the Company receiving or providing Customer Data hereunder. Other than disclosures to representatives of the Company or Third Party for the purposes of enabling that party to fulfill its obligations under this Tariff, a party may not disclose confidential or proprietary information without the prior authorization or consent, or both, of the other party.
- **Customer Information.** The Third Party shall keep all Customer-specific information supplied by the Company confidential unless the Third Party has the Customer's written authorization to do otherwise.

ъ	1 .	ъ		
Pennsy	ylvanıa	Power	Comp	oany

7. PAYMENT AND BILLING

- **7.1 Third Party Payment of Obligations to the Company.** A Third Party shall pay all Charges it incurs hereunder in accordance with the following provisions:
 - **7.1.1 Billing Procedure.** Each month, the Company shall submit an invoice to the Third Party reflecting all of the Charges assessed to it by the Company for all of the services provided to Third Party under this Tariff during the applicable billing period. The invoice may be transmitted to the Third Party by any reasonable method requested by the Third Party. A Third Party shall make payment for Charges incurred on or before the due date shown on the bill. The due date shall be determined by the Company and shall not be less than fifteen (15) banking days from the date of transmittal of the bill.
 - **7.1.2 Manner of Payment.** The Third Party shall remit payment to the Company by wire transfer to a bank designated in Section 7.1.3 of this Tariff. If disputes arise regarding a Third Party bill, the Third Party must pay the undisputed portion of disputed bills under investigation.
 - **7.1.3 Wire Transfer.** Payment to the Company by the Third Party must be made by electronic wire transfer or such other means as will cause payment to be available for use by the Company on the due date. All payments shall be wire transferred to:

Bank: JP Morgan Chase

ABA No.: 021000021

Account Name: FirstEnergy Service Company

Account No.: 323396364

7.1.4 Late Fee for Unpaid Balances. If payment is made to the Company after the due date shown on the bill, a late fee will be added to the unpaid balance until the entire bill is paid. This late fee will be two percent (2%) per month of the unpaid balance.

Pennsylvania Power Company

Electric Pa P.U.C. No. ____ Original Page No. 18

8. LIABILITY

8.1 Limitations on Liability. The Company is not liable for any act, omission, promise, or representation of any Third Party. To the extent that the Company receives a properly submitted request for applicable Customer Data and acts in accordance with the provisions of this Tariff, the Company is not liable for any conflict such actions may cause between a Third Party and a Customer. Although data provided or made available, or both, in accordance with the provision of this Tariff and produced and processed via Company systems and sources is considered to be reliable by the Company, no warranty expressed or implied is made regarding the accuracy adequacy, completeness, legality, reliability, or usefulness of any such data and applies to both the isolated and aggregated use of such data. The Company provides or makes available, or both, such data on an "as is" basis. All warranties of any kind expressed or implied, including, but not limited to, the implied warranties of merchantability, fitness for a particular purpose, freedom from contamination or corruption of any kind, and noninfringement of proprietary rights are disclaimed.

Pennsy	vlvania	Power	Com	oany

Electric Pa P.U.C. No	
Original Page No.	19

9. TERMINATION OF SERVICE

- **9.1 Termination.** A Third Party has the right to terminate service hereunder at any time, upon notification to the Company. The Company has the right to terminate service hereunder to a Third Party if:
 - (a) The Third Party fails to abide by the provisions set forth in the Third Party Continuing Obligations section of this Tariff (i.e., Section 4.1), as applicable;
 - (b) The Third Party fails to make timely payments to the Company, as required by Section 7 of this Tariff, to access or retrieve, or both, data provided to or made available to, or both, such Third Party in accordance with the provisions of this Tariff; or
 - (c) The Third Party is determined by the PaPUC or applicable court of law to be responsible for fraudulent representation or activity in association with this Tariff, which includes, but is not limited to, the unauthorized access or retrieval, or both, of Customer Data;
- **9.2 Survival of Obligations.** Termination of service hereunder for any reason shall not relieve the Company or a Third Party of any obligation accrued or accruing prior to such termination.

10. ALTERNATIVE DISPUTE RESOLUTION

- **10.1 Informal Resolution of Disputes.** The Company and Third Party shall use good faith and commercially reasonable efforts to informally resolve all disputes arising out of the implementation of this Tariff or the conduct of activities, or both, hereunder. The Third Party's point of contact for all information, operations, questions, and problems under this Tariff shall be the Company's Customer Data Access Group.
- 10.2 Internal Dispute Resolution Procedures. Any dispute between the Company and a Third Party under this Tariff shall be referred to a designated senior representative of each of the parties for resolution on an informal basis as promptly as practicable. In the event the designated representatives are unable to resolve the dispute within thirty (30) days (or such other period as the parties may agree upon), such dispute, by mutual agreement, may be referred to mediation or may be submitted to arbitration and resolved in accordance with the arbitration procedures set forth below.
- 10.3 External Arbitration Procedures. The arbitration initiated under the Tariff shall be conducted before a single neutral arbitrator appointed by the parties. If the parties fail to agree upon a single arbitrator within twenty (20) days of the referral of the dispute to arbitration the parties shall request the American Arbitration Association to appoint a single neutral arbitrator. The arbitrator(s) chosen shall not have any current or past substantial business or financial relationships with any party to the arbitration (except prior arbitration). The arbitrator(s) shall provide each of the parties an opportunity to be heard and, except as otherwise provided herein, shall generally conduct the arbitration in accordance with the then current Commercial Arbitration Rules of the American Arbitration Association.
- **Arbitration Decisions**. Unless otherwise agreed, the arbitrator(s) shall render a decision within ninety (90) days of their appointment and shall notify the parties in writing of such decision and the reasons therefore. The arbitrator(s) shall be authorized only to interpret and apply the provisions of the Tariff and shall have no power to modify or change any provisions in any manner. The decision of the arbitrator(s) shall be final and binding upon the Parties, and judgment on the award may be entered in any court of competent jurisdiction. The decision of the arbitrator(s) may be appealed solely on the grounds that the conduct of the arbitrator(s), or the decision itself, violated the standards set forth in 42 Pa. C.S.A. § 7341. The final decision of the arbitrator must also be filed with FERC and PaPUC, if it affects their respective jurisdictional rates, terms, and conditions of service or facilities.
- **10.5 Costs**. Each Party shall be responsible for its own costs incurred during the arbitration process and for the following costs, if applicable:

Pennsy	vlvania	Power	Company

- (a) the cost of the arbitrator chosen by the party to sit on the three-member panel and a proportionate share of the cost of the third arbitrator chosen; or
- (b) the proportionate share of the cost of the single arbitrator jointly chosen by the parties.
- **10.6 Rights Under the FPA.** Nothing in this Section shall restrict the rights of any party to file a complaint with FERC under relevant provisions of the FPA.
- **10.7 Rights Under the Pennsylvania Public Utility Code.** Nothing in this Section shall restrict the rights of any party to file a complaint with the PaPUC under relevant provisions of the Pennsylvania Public Utility Code.

11. MISCELLANEOUS

- 11.1 Notices. Unless otherwise stated herein, any notice contemplated by this Tariff shall be in writing and shall be given to the Third Party at the address or email provided to the Company in its completed registration form and to the Company at the address on the first page of this Tariff or the email stated on the secure portion of the Company's website dedicated to requests for Customer Data. If given by electronic transmission, notice shall be deemed given on the date sent and shall be confirmed by a written copy sent by first class mail. If sent in writing by first class mail, notice shall be deemed given on the fifth business day following deposit in the United States mail (as noted by the postmark), properly addressed, with postage prepaid. If sent by same-day or overnight delivery service, notice shall be deemed given on the day of delivery. The Company and a Third Party may change their representative for receiving notices contemplated by this Tariff by delivering written notice of their new representatives to the other.
- **11.2 No Prejudice of Rights.** The failure by either the Company or the Third Party to enforce any of the terms of this Tariff shall not be deemed a waiver of the right of either to do so.
- **11.3 Governing Law.** To the extent not subject to the exclusive jurisdiction of FERC, the formation, validity, interpretation, execution, amendment, and termination of this Tariff shall be governed by the laws of the Commonwealth of Pennsylvania.

The Tariff, and the performance of the parties' obligations hereunder, are subject to and contingent upon (i) present and future local, state, and federal laws and (ii) present and future regulations or orders of any local, state, or federal regulating authority having jurisdiction over the matter set forth herein.

If at any time during the term of the Tariff, FERC, the PaPUC, or a court of competent jurisdiction issues an order under which a party hereto believes that its rights or interests, or both, under the Tariff are materially affected by said order, the party so affected shall within thirty (30) days of said final order provide the other party with notice setting forth in reasonable detail how said order has materially affected its rights or interests. Within thirty (30) days from the receiving party's receipt of said notice the parties agree to attempt through good faith negotiations to resolve the issue.

Electric Pa P.U.C. No	
Original Page No.	23

Appendix A **DATA ACCESS REGISTRATION FORM**

Name of	f Registrant:	D&B	DUNS Number:
	tate whether Registrant is a	Years	in Business:
	r, academic institution, etc.:	URL f	for Registrant's Website:
Contact	Name:	Title:	
E-mail:		Phone	:
Address	: City:	State:	Zip Code:
provide The subracceptan	Registrant a username and password to mission of this Registration Form to Penn I ace of all the terms, conditions, and require vania Public Utility Commission (the "Con	Power shall constitute ments of the Third-	
	o. ing an electronic request for Customer Data	a to Penn Power Re	egistrant represents and warrants that:
			orization to access or retrieve, or both, data specific
2.			ses or retrieves, or both, as confidential information Customer in accordance with all applicable statutes
3.	•		eves, or both, have no warranties with respect to
4. 5.	Registrant agrees to indemnify, defend, a arising out of any claim alleging or arising	and hold the Compa ng from (i) any act o Tariff, (ii) Registra	ny harmless from any losses, claims, or liabilities or omission of Registrant in connection with the nt's use of data specific to a Customer that it
	ersigned represents and warrants that they s and conditions set forth herein.	have the authority t	o act on behalf of and to bind Registrant to perform
Signatur	re of Authorized Representative:		Date:
Name:			Title:

Electric Pa P.U.C. No.

WEST PENN POWER COMPANY

Third Party Data Access Tariff

Company Office Location

2800 Pottsville Pike P. O. Box 16001 Reading, Pennsylvania 19612

Issued: Effective: June 1, 2023

Samuel L. Belcher, President

NOTICE

	Electric Pa P.U.C. No
West Penn Power Company	Original Page No. 2

[THIS PAGE INTENTIONALLY LEFT BLANK]

TABLE OF CONTENTS

	<u>Page</u>
Table of Contents	3
How to Use Loose-Leaf Tariff	4
Definition of Terms and Explanation of Abbreviations	5
RULES AND REGULATIONS:	
1. The Tariff	8
2. Scope and Purpose of Tariff	9
3. Commencement of Service	.11
4. Terms of Service	
5. Data Request and Release Process	.14
6. Confidentiality of Information	16
7. Payment and Billing	.17
8. Liability	.18
9. Termination of Service	.19
10. Alternative Dispute Resolution	20
11. Miscellaneous	22
APPENDIX	
Data Access Registration Form	23

West Penn	Power	Company
W CSt I CIIII	I OWEI	Company

HOW TO USE LOOSE-LEAF TARIFF

- 1. This Tariff is issued on the loose-leaf plan. Each page will be issued as "original page," consecutively numbered, commencing with the title page, which in all cases will be considered as Page No. 1—for example: "Original Page No. 2," "Original Page No. 3," etc.
- 2. All changes in, additions to, or eliminations from, original pages, will be made by the issue of consecutively numbered supplements to this Tariff and by reprinting the page or pages affected by such change, addition, or elimination. Such supplements will indicate the changes which they effect and will carry a statement of the make-up of the Tariff, as revised. The Table of Contents will be reissued with each supplement.
- 3. When a page is reprinted the first time, it will be designated under the P.U.C. number as "First Revised Page No....," the second time as "Second Revised Page No....," etc. First revised pages will supersede original pages; second revised pages will supersede first revised pages, etc.
- 4. When changes or additions to be made require more space than is available, one or more pages will be added to the Tariff, to which the same number will be given with letter affix. For example, if changes were to be made in Original Page No. 2 and, to show the changed matter, more than one page should be required, the new page would be issued as "First Revised Page No. 2, superseding Original Page No. 2"; and the added page would be issued as "Original Page No. 2A." If a second added page should be required, it would be issued as "Original Page No. 2B." Subsequent reprints will be consecutively designated as "First Revised...," "Second Revised...," etc.
- 5. On receipt of a revised page it will be placed in the Tariff immediately following the page which it supersedes, and the page which is to be superseded thereby plainly marked "See following page for pending revision." On the date when such revised page becomes effective, the page superseded should be removed from the Tariff.

DEFINITION OF TERMS AND EXPLANATION OF ABBREVIATIONS

Aggregated Customer Data – information pertaining to retail customers that has been (a) assembled with specific retail customer identifiers—including, but not limited to, name, address, and electric service account number—omitted from the assembled information and (b) subjected to analysis functions to develop summation average or other analytical statistics, or both, for specific groups of retail customers in a manner that precludes the determination of the individual identities of the retail customer to which such information pertains.

Anonymous Customer Data – information pertaining to retail customers that has been assembled with specific retail customer identifiers—including, but not limited to, name, address, and electric service account number—omitted from the assembled information.

AMI Interval Data – electric demand and energy usage that are measured over specific consistent incremental time periods by advanced metering infrastructure ("AMI") metering facilities provided by the Company at a retail customer's premises and that may or may not be subject to the Company's validation, editing, and estimation ("VEE") processes or directly used for the purposes of determining the amounts owed by such retail customer for electric services.

Charges - all charges stated in the "Charges" section of this Tariff that are billed by the Company (on behalf of itself or any FirstEnergy affiliate or subsidiary) for service performed hereunder.

Company – West Penn Power Company ("West Penn").

Competition Act - the Electricity Generation Customer Choice and Competition Act, 66 Pa.C.S. § 2801, et seq.

Conservation Service Provider – an entity that provides information and technical assistance on measures to enable a person to increase energy efficiency or reduce energy consumption and that has no direct or indirect ownership, partnership, or other affiliated interest with an electric distribution company (66 Pa.C.S. § 2806.1.(m)).

Curtailment Service Provider - a PJM member or a special member, which action on behalf of itself or one or more other members or non-members, participates in the PJM Interchange Energy Market, Ancillary Services markets, Reliability Pricing Model, or any combination thereof by causing a reduction in demand.

Customer - a retail electric customer as defined in the Competition Act.

West Penn Power Company

Electric Pa P.U.C. No. _____ Original Page No. 6

Definitions (Continued)

Customer Data – information pertaining to retail customers, including AMI Interval Data and customer account information, such as customer address, contact information, payment history, account number, and amount billed.

Electric Distribution Company (or "EDC") - shall have the meaning set forth in the Competition Act.

EDC Tariff - the Company's current PaPUC approved Electric Service Tariff, Pa. P.U.C. No. 52 (West Penn Power Company).

Electric Generation Supplier – any person, corporation, or other entity that has received a certification from the Commission that it is eligible and licensed to supply electric energy, capacity, transmission, and ancillary services to Customers in the Company's service territory under and pursuant to the Competition Act.

Electronic Data Interchange ("EDI") – guidelines that represent the standard electronic communication method for exchanging data between an EDC and an EGS.

FERC - the Federal Energy Regulatory Commission.

FirstEnergy Corp. ("**FirstEnergy**") – the parent company of Cleveland Electric Illuminating Company, Jersey Central Power and Light Company, Metropolitan Edison Company, Monongahela Power Company, Ohio Edison Company (and its wholly owned subsidiary, Pennsylvania Power Company), Pennsylvania Electric Company, Potomac Edison Company, Toledo Edison Company, and West Penn Power Company.

Market Participant – has the same meaning as set forth in the PJM Tariff.

PaPUC (or "Commission") - the Pennsylvania Public Utility Commission.

PJM - the regional transmission organization operated by PJM Interconnection, L.L.C., or its successor.

PJM Tariff – the PJM Open Access Transmission Tariff, including schedules and exhibits.

West	Penn	Power	Company

Definitions (Continued)

Tariff – this Third-Party Data Access Tariff.

Third Party – any person or entity seeking to obtain Customer Data from the Company that is not an Electric Generation Supplier, including a Conservation Service Provider, a Curtailment Service Provider, or other Market Participant.

RULES AND REGULATIONS

1. THE TARIFF

- **1.1 Filing and Posting.** A copy of this Tariff is on file with the Commission and is posted and open to inspection at the offices of the Company during regular business hours. A copy of this Tariff is available at the Company's website www.firstenergycorp.com.
- **1.2 Revisions.** Subject to Section 2.3, this Tariff may be revised, amended, supplemented, or otherwise changed from time to time in accordance with the Pennsylvania Public Utility Code, and such changes, when effective, shall have the same force as the present Tariff.
- **1.3 Application.** The Tariff provisions apply to all Third Parties seeking to obtain Customer Data pertaining to Customers located in the Company's service territory. The obligations and charges herein shall apply to anyone providing or receiving service unlawfully or to any unauthorized or fraudulent provision or receipt of service in addition to any other remedies available to the Company.
- **1.4 Statement by Agents.** No Company representative has authority to modify a Tariff rule or provision, or to bind the Company by any promise or representation contrary thereto or inconsistent therewith.

2. SCOPE AND PURPOSE OF TARIFF

- **2.1 Scope and Purpose of Tariff.** This Tariff defines the circumstances and terms and conditions under which the Company provides or makes available retail Customer Data to a Third Party.
- **2.2** Relationship of the Company, Customer, and Third Party. The Company provides electric service to a Customer in accordance with the EDC Tariff. Through the course of providing this service the Company obtains, compiles, and stores Customer Data.
 - **2.2.1** A Third Party must be authorized by a Customer to obtain data specific to such Customer from the Company. The Company must provide or make available, or both, such data to such Third Party subject to the terms, conditions, and limitations set forth in this Tariff.
 - 2.2.2 The Company is not a party to the manner in which data are utilized by a Third Party and is not bound by any term, condition, or provision of any program or process employed by a Third Party in its utilization of such data. Any contractual arrangement to which a Third Party and Customer are parties is not part of this Tariff or the EDC Tariff. The Company is not a party to any such contractual arrangement between a Third Party and a Customer and is not bound by any term, condition, or provision of such an agreement.
 - **2.2.3** A Third Party is not an agent of the Company. A Third Party has no authority to enter into any agreement on behalf of the Company; to amend, modify, or alter any of the Company's tariffs, contracts, or procedures; or to bind the Company by making any promises, representations, or omissions.
 - **2.2.4** A Third Party is not an agent of the Customer. A Third Party has no authority to enter into any agreement pertaining to a Customer's electric service on behalf of such Customer or to modify or alter any such agreement on behalf of the Customer, or to bind the Customer by making any promises, representations, or omissions pertaining to such agreement.
- **2.3 FERC Jurisdictional Matters.** The inclusion of FERC-jurisdictional matters within the scope of the Tariff is intended solely for informational purposes and is not intended to accord any jurisdictional authority over such matters to the PaPUC. Furthermore, to the extent that anything stated herein is found by FERC to conflict with or to be inconsistent with any provision of the Federal Power Act ("FPA"), as amended, or any rule, regulation, order, or determination of FERC under the FPA, then such FERC rule, regulation, order, or determination of the FERC shall control. To the extent required under any provision of the FPA, or any rule, regulation, order, or determination of FERC

	C. No
West Penn Power Company Original Page N	Page No. 10

under the FPA, the Company shall endeavor to secure, from time to time, all necessary orders, approvals, and determinations from FERC necessary to implement this Tariff.

3. COMMENCEMENT OF SERVICE

- **3.1 Prerequisites of Service.** Before commencing service hereunder, a Third Party must comply with the following prerequisites of service.
- **3.1.1** A Third Party must submit a completed registration form to the Company that acknowledges and accepts the Terms of Service set forth in Section 4 of this Tariff.
 - **3.1.2** A Third Party must demonstrate that it can meet all applicable continuing obligations described in Section 4 of this Tariff.
 - **3.1.3** A Third Party must have and demonstrate through the completion of any applicable Company testing program the ability to electronically access or retrieve, or both, data the Company provides or makes available, or both, in accordance with the Company's practices, procedures, and systems employed to provide or make available, or both, such data.
- **3.2 Incomplete Registrations.** In the event the Third Party submits an incomplete registration, the Company shall provide written notice to the Third Party of the registration's deficiencies within five (5) business days after the date of service of the registration. The Company will not process an incomplete application until the Third Party corrects the deficiencies and delivers a completed registration to the Company.
- **3.3** Commencement of Service. Service hereunder shall commence within five (5) business days after the Company's acceptance of Third Party's complete registration provided that all of the information necessary for the Company to provide service hereunder has been submitted to the Company and any conditions established under Section 3.6 have been satisfied by the Third Party.

4. TERMS OF SERVICE

- **4.1 Third Party Continuing Obligations.** The Third Party must continue to abide by the prerequisites of service of this Tariff, as applicable. In order to access or retrieve, or both, data specific to a Customer, the Third Party must accept the following terms of service:
 - (a) The Third Party must obtain and maintain appropriate authorization from the Customer to access or retrieve, or both, data specific to the Customer, with such authorization documented in writing, electronically, or through recording of an oral communication. If an authorization obtained by a Third Party from a Customer that allows such Third Party to access or retrieve, or both, data specific to such Customer expires or is revoked for any reason, the Third Party must no longer request access to or retrieve, or both, such data.
 - (b) The Third Party will treat data specific to a Customer that it accesses or retrieves, or both, as confidential information and ensure the confidentiality of such data specific to such Customer in accordance with all applicable statutes and regulatory orders or rules.
 - (c) The Third Party acknowledges that any data specific to a Customer that it accesses or retrieves, or both, have no warranties with respect to accuracy, completeness, or fitness for any purposes.
 - (d) The Third Party agrees that data specific to a Customer must not be sold or licensed to any other entity for any purpose.
 - (e) The Third Party agrees to indemnify, defend, and hold harmless the Company from any losses, claims, or liabilities arising out of any claim alleging or arising from (i) any act or omission of such Third Party in connection with the performance of its obligations under this Tariff, (ii) such Third Party's use of data specific to a Customer that it accesses or retrieves, or both, or (iii) any breach by a Third Party of its representations and promises.
- **4.2 Disclosure of Information Without Customer Authorization.** Customer authorization is not required for a Third Party to access or retrieve, or both, Aggregated Customer Data or Anonymous Customer Data, or both, as described in Section 5 of this Tariff.
- **4.3 Company Continuing Obligations.** For a situation in which the Company must provide or make available, or both, to a Third Party data specific to a Customer as described in Section 5.1 of this Tariff, such data must be provided or made available, or both, within

West Penn Power Company

Electric Pa P.U.C. No. _____ Original Page No. 13

one business day after the Company determines the data are available for the Customer, provided the Third Party is in compliance with applicable provisions in Section 3.1 of this Tariff and submits a request for such data prior to 5:00 p.m. Eastern Prevailing Time on the previous business day. The Company is not required to provide or make available, or both, revisions to data after such data are provided or made available, or both, to a Third Party in accordance with the provisions of this Tariff. In the event a Customer notifies the Company that a Third Party's authorization to access data specific to such Customer is terminated or revoked, the Company must terminate such Third Party's further access to Customer Data under this Tariff within 5 business days after receiving such notification from the Customer.

4.4 Charges. As applicable, charges are assessed by the Company for data provided or made available, or both, to such Third Party in accordance with the provisions of Section 5.2 of this Tariff. With respect to each request to access or retrieve, or both, Customer Data that is not available through standard automated processes, the Company will assess the requesting Third Party a charge of \$53 per hour, which will be billed by the Company in one-minute intervals.

5. DATA REQUEST AND RELEASE PROCESS

- **5.1 Data Options.** A Third Party may access Customer Data in accordance with one or more of the following options, as applicable, provided such Third Party complies with applicable provisions in Section 4.1 (Third Party Continuing Obligations).
 - **5.1.1 Individual Customer Data**. As authorized by a Customer, a Third Party may access the data that are available for such Customer, including, but not limited to, usage for up to twelve consecutive months, load profile, rate class, peak load contribution, and network system peak load, via EDI or through a secure portion of the Company's website.
 - **5.1.2** Aggregated and Anonymous Customer Data. A Third Party may request access to Aggregated Customer Data and Anonymous Customer Data as described in Section 5.2.
- **Requests for Aggregated and Anonymous Customer Data.** A Third Party requesting Aggregated or Anonymous, or both, Customer Data will do so by submitting to the Company a data request through a secure portion of the Company's website that contains fields for the following information:
 - (a) Name, address, phone, and email address of the Third Party requesting the data;
 - (b) A description of the data requested and to be released;
 - (c) A statement of the purpose for which the data will be used by the Third Party; and
 - (d) A description of the time period for the data to be disclosed (e.g., twelve months of historical data).
- **5.3** Company Response to Requests for Aggregated and Anonymous Customer Data. Following the submission of a request for data by a Third Party in accordance with Section 5.2 of this Tariff, the Company will:
 - (a) Confirm receipt of the request within three business days of receiving a request for data from a Third Party;
 - (b) Respond within three business days of receiving a request for data from a Third Party as to whether any additional information is required for the Company to process the request;

West	Penn	Power	Com	nany
W CSt	1 CIIII	1 0 W C1	COIII	pany

- (c) Inform Third Party within ten business days of receiving a completed request for data as to whether it is able to grant the request and provide a proposed schedule for providing the requested data. If the Company responds that it cannot grant access to the requested data, it will provide specific reasons for why it cannot provide the data or offer other options for providing data access; and
- (d) Notify the requesting Third Party of the data transmission and security requirements.
- **5.4 Standardized Data Output and Delivery**. All data outputs will be in standard formats. Data will be accessible in specified formats such as XML or other agreed-upon formats. The Company will provide data through EDI or on a secure server on the Company's website where the requestor will retrieve it.

West	Penn	Power	Company
** CSL	I CIIII	LOWEL	Combany

6. CONFIDENTIALITY OF INFORMATION

- 6.1 Generally. All confidential or proprietary information made available by one party to the other in connection with the registration by a Third Party with the Company or the subsequent provision and receipt of Customer Data under this Tariff, or both, including, but not limited to, information regarding the business processes of a party and the computer and communication systems owned or leased by a party, shall be used only for purposes of registration with the Company receiving or providing Customer Data hereunder. Other than disclosures to representatives of the Company or Third Party for the purposes of enabling that party to fulfill its obligations under this Tariff, a party may not disclose confidential or proprietary information without the prior authorization or consent, or both, of the other party.
- **Customer Information.** The Third Party shall keep all Customer-specific information supplied by the Company confidential unless the Third Party has the Customer's written authorization to do otherwise.

West Penn	Power	Company
W CSt I CIIII	I OWCI	Company

Electric Pa P.U.C. No	
Original Page No.	17

7. PAYMENT AND BILLING

- **7.1 Third Party Payment of Obligations to the Company.** A Third Party shall pay all Charges it incurs hereunder in accordance with the following provisions:
 - **7.1.1 Billing Procedure.** Each month, the Company shall submit an invoice to the Third Party reflecting all of the Charges assessed to it by the Company for all of the services provided to Third Party under this Tariff during the applicable billing period. The invoice may be transmitted to the Third Party by any reasonable method requested by the Third Party. A Third Party shall make payment for Charges incurred on or before the due date shown on the bill. The due date shall be determined by the Company and shall not be less than fifteen (15) banking days from the date of transmittal of the bill.
 - **7.1.2 Manner of Payment.** The Third Party shall remit payment to the Company by wire transfer to a bank designated in Section 7.1.3 of this Tariff. If disputes arise regarding a Third Party bill, the Third Party must pay the undisputed portion of disputed bills under investigation.
 - **7.1.3 Wire Transfer.** Payment to the Company by the Third Party must be made by electronic wire transfer or such other means as will cause payment to be available for use by the Company on the due date. All payments shall be wire transferred to:

Bank: JP Morgan Chase

ABA No.: 021000021

Account Name: FirstEnergy Service Company

Account No.: 323396364

7.1.4 Late Fee for Unpaid Balances. If payment is made to the Company after the due date shown on the bill, a late fee will be added to the unpaid balance until the entire bill is paid. This late fee will be two percent (2%) per month of the unpaid balance.

West Penn Power Company

Electric Pa P.U.C. No. ____ Original Page No. 18

8. LIABILITY

8.1 Limitations on Liability. The Company is not liable for any act, omission, promise, or representation of any Third Party. To the extent that the Company receives a properly submitted request for applicable Customer Data and acts in accordance with the provisions of this Tariff, the Company is not liable for any conflict such actions may cause between a Third Party and a Customer. Although data provided or made available, or both, in accordance with the provision of this Tariff and produced and processed via Company systems and sources is considered to be reliable by the Company, no warranty expressed or implied is made regarding the accuracy adequacy, completeness, legality, reliability, or usefulness of any such data and applies to both the isolated and aggregated use of such data. The Company provides or makes available, or both, such data on an "as is" basis. All warranties of any kind expressed or implied, including, but not limited to, the implied warranties of merchantability, fitness for a particular purpose, freedom from contamination or corruption of any kind, and noninfringement of proprietary rights are disclaimed.

9. TERMINATION OF SERVICE

- **9.1 Termination.** A Third Party has the right to terminate service hereunder at any time, upon notification to the Company. The Company has the right to terminate service hereunder to a Third Party if:
 - (a) The Third Party fails to abide by the provisions set forth in the Third Party Continuing Obligations section of this Tariff (i.e., Section 4.1), as applicable;
 - (b) The Third Party fails to make timely payments to the Company, as required by Section 7 of this Tariff, to access or retrieve, or both, data provided to or made available to, or both, such Third Party in accordance with the provisions of this Tariff; or
 - (c) The Third Party is determined by the PaPUC or applicable court of law to be responsible for fraudulent representation or activity in association with this Tariff, which includes, but is not limited to, the unauthorized access or retrieval, or both, of Customer Data;
- **9.2 Survival of Obligations.** Termination of service hereunder for any reason shall not relieve the Company or a Third Party of any obligation accrued or accruing prior to such termination.

10. ALTERNATIVE DISPUTE RESOLUTION

- **10.1 Informal Resolution of Disputes.** The Company and Third Party shall use good faith and commercially reasonable efforts to informally resolve all disputes arising out of the implementation of this Tariff or the conduct of activities, or both, hereunder. The Third Party's point of contact for all information, operations, questions, and problems under this Tariff shall be the Company's Customer Data Access Group.
- 10.2 Internal Dispute Resolution Procedures. Any dispute between the Company and a Third Party under this Tariff shall be referred to a designated senior representative of each of the parties for resolution on an informal basis as promptly as practicable. In the event the designated representatives are unable to resolve the dispute within thirty (30) days (or such other period as the parties may agree upon), such dispute, by mutual agreement, may be referred to mediation or may be submitted to arbitration and resolved in accordance with the arbitration procedures set forth below.
- 10.3 External Arbitration Procedures. The arbitration initiated under the Tariff shall be conducted before a single neutral arbitrator appointed by the parties. If the parties fail to agree upon a single arbitrator within twenty (20) days of the referral of the dispute to arbitration the parties shall request the American Arbitration Association to appoint a single neutral arbitrator. The arbitrator(s) chosen shall not have any current or past substantial business or financial relationships with any party to the arbitration (except prior arbitration). The arbitrator(s) shall provide each of the parties an opportunity to be heard and, except as otherwise provided herein, shall generally conduct the arbitration in accordance with the then current Commercial Arbitration Rules of the American Arbitration Association.
- 4.4 Arbitration Decisions. Unless otherwise agreed, the arbitrator(s) shall render a decision within ninety (90) days of their appointment and shall notify the parties in writing of such decision and the reasons therefore. The arbitrator(s) shall be authorized only to interpret and apply the provisions of the Tariff and shall have no power to modify or change any provisions in any manner. The decision of the arbitrator(s) shall be final and binding upon the Parties, and judgment on the award may be entered in any court of competent jurisdiction. The decision of the arbitrator(s) may be appealed solely on the grounds that the conduct of the arbitrator(s), or the decision itself, violated the standards set forth in 42 Pa. C.S.A. § 7341. The final decision of the arbitrator must also be filed with FERC and PaPUC, if it affects their respective jurisdictional rates, terms, and conditions of service or facilities.

	Electric Pa P.U.C. No
West Penn Power Company	Original Page No. 21

- **10.5 Costs**. Each Party shall be responsible for its own costs incurred during the arbitration process and for the following costs, if applicable:
 - (a) the cost of the arbitrator chosen by the party to sit on the three-member panel and a proportionate share of the cost of the third arbitrator chosen; or
 - (b) the proportionate share of the cost of the single arbitrator jointly chosen by the parties.
- **10.6 Rights Under the FPA.** Nothing in this Section shall restrict the rights of any party to file a complaint with FERC under relevant provisions of the FPA.
- **10.7 Rights Under the Pennsylvania Public Utility Code.** Nothing in this Section shall restrict the rights of any party to file a complaint with the PaPUC under relevant provisions of the Pennsylvania Public Utility Code.

11. MISCELLANEOUS

- 11.1 Notices. Unless otherwise stated herein, any notice contemplated by this Tariff shall be in writing and shall be given to the Third Party at the address or email provided to the Company in its completed registration form and to the Company at the address on the first page of this Tariff or the email stated on the secure portion of the Company's website dedicated to requests for Customer Data. If given by electronic transmission, notice shall be deemed given on the date sent and shall be confirmed by a written copy sent by first class mail. If sent in writing by first class mail, notice shall be deemed given on the fifth business day following deposit in the United States mail (as noted by the postmark), properly addressed, with postage prepaid. If sent by same-day or overnight delivery service, notice shall be deemed given on the day of delivery. The Company and a Third Party may change their representative for receiving notices contemplated by this Tariff by delivering written notice of their new representatives to the other.
- **11.2 No Prejudice of Rights.** The failure by either the Company or the Third Party to enforce any of the terms of this Tariff shall not be deemed a waiver of the right of either to do so.
- **11.3 Governing Law.** To the extent not subject to the exclusive jurisdiction of FERC, the formation, validity, interpretation, execution, amendment, and termination of this Tariff shall be governed by the laws of the Commonwealth of Pennsylvania.

The Tariff, and the performance of the parties' obligations hereunder, are subject to and contingent upon (i) present and future local, state, and federal laws and (ii) present and future regulations or orders of any local, state, or federal regulating authority having jurisdiction over the matter set forth herein.

If at any time during the term of the Tariff, FERC, the PaPUC, or a court of competent jurisdiction issues an order under which a party hereto believes that its rights or interests, or both, under the Tariff are materially affected by said order, the party so affected shall within thirty (30) days of said final order provide the other party with notice setting forth in reasonable detail how said order has materially affected its rights or interests. Within thirty (30) days from the receiving party's receipt of said notice the parties agree to attempt through good faith negotiations to resolve the issue.

West P	enn Po	wer Co	mpany

Issued:

Electric Pa P.U.C. No	
Original Page No.	23

Effective: June 1, 2023

Appendix A **DATA ACCESS REGISTRATION FORM**

Name of Registrant:		D&B DUNS Number:	
Please state whether Registra consultant, conservation servitation, academic institution	ice	Years in Business: URL for Registrant's Website	
	., etc		•
Contact Name:		Title:	
E-mail:		Phone:	
Address:	City:	State:	Zip Code:
provide Registrant a userna	me and password to acco	hall constitute the Registrant's ackno	wledgement and acceptance
of all the terms, conditions, ar	nd requirements of the Thir		
of all the terms, conditions, ar Utility Commission (the "Cor	nd requirements of the Thin mmission" or "PUC") at D	cket Nos. P-2021et al. (th	e "Tariff").
of all the terms, conditions, an Utility Commission (the "Cor By sending an electronic requ	nd requirements of the Thir numission" or "PUC") at D est for Customer Data to V		e "Tariff"). varrants that:
of all the terms, conditions, ar Utility Commission (the "Cor By sending an electronic requ 1. Registrant has obta to such customer. 2. Registrant will trea	nd requirements of the Thir mmission" or "PUC") at D est for Customer Data to V ined valid and appropriate t data specific to a Custom identiality of such data specific	cket Nos. P-2021et al. (the sest Penn, Registrant represents and w	e "Tariff"). varrants that: trieve, or both, data specific , as confidential information
of all the terms, conditions, ar Utility Commission (the "Cor By sending an electronic requ 1. Registrant has obta to such customer. 2. Registrant will trea and ensure the conf and regulatory orde 3. Any customer-spec	nd requirements of the Thir mmission" or "PUC") at D est for Customer Data to V ined valid and appropriate t data specific to a Custom identiality of such data species or rules.	cket Nos. P-2021et al. (the sest Penn, Registrant represents and we sustomer authorization to access or retrieves, or both cific to such Customer in accordance sesses or retrieves, or both, have no we	e "Tariff"). varrants that: trieve, or both, data specific , as confidential information with all applicable statutes
of all the terms, conditions, ar Utility Commission (the "Cor By sending an electronic requ 1. Registrant has obta to such customer. 2. Registrant will trea and ensure the conf and regulatory orde 3. Any customer-spec accuracy, complete 4. Any data specific to 5. Registrant agrees to arising out of any c performance of its o	est for Customer Data to Vined valid and appropriate that	cket Nos. P-2021et al. (the sest Penn, Registrant represents and we sustomer authorization to access or retrieves, or both cific to such Customer in accordance sesses or retrieves, or both, have no we	e "Tariff"). varrants that: trieve, or both, data specific , as confidential information with all applicable statutes arranties with respect to any purpose. osses, claims, or liabilities at in connection with the to a Customer that it
of all the terms, conditions, ar Utility Commission (the "Cor By sending an electronic requ 1. Registrant has obtato such customer. 2. Registrant will treat and ensure the confunction and regulatory orders. 3. Any customer-spectocuracy, complete 4. Any data specific to 5. Registrant agrees to arising out of any customer of its caccesses or retrieve	est for Customer Data to Vined valid and appropriate that	cket Nos. P-2021et al. (the sest Penn, Registrant represents and wastomer authorization to access or retrieves, or both effic to such Customer in accordance esses or retrieves, or both, have no woses. It is also any other entity for light of the Company harmless from any left in (i) any act or omission of Registrant, (ii) Registrant's use of data specific	e "Tariff"). varrants that: trieve, or both, data specific , as confidential information with all applicable statutes arranties with respect to any purpose. osses, claims, or liabilities at in connection with the to a Customer that it and promises.
of all the terms, conditions, ar Utility Commission (the "Cor By sending an electronic requipation 1. Registrant has obtain to such customer. 2. Registrant will treat and ensure the configuratory orders. 3. Any customer-spect accuracy, completers. 4. Any data specific to arising out of any comperformance of its configuration.	est for Customer Data to Vined valid and appropriate that specific to a Customer data specific data specific data that Registrant across, or fitness for any pure a Customer must not be so indemnify, defend, and halaim alleging or arising frobbligations under the Tariffs, or both, or (iii) any breamd warrants that they have both herein.	cket Nos. P-2021 et al. (the sest Penn, Registrant represents and volustomer authorization to access or reserved that it accesses or retrieves, or both cific to such Customer in accordance esses or retrieves, or both, have no wooses. Old or licensed to any other entity for ld the Company harmless from any lon (i) any act or omission of Registrant, (ii) Registrant's use of data specific h by Registrant of its representations	e "Tariff"). varrants that: trieve, or both, data specific , as confidential information with all applicable statutes arranties with respect to any purpose. osses, claims, or liabilities at in connection with the to a Customer that it and promises.