

Bidder Information Session

December 4, 2019

Auction Process for FirstEnergy's Pennsylvania Default Service Program DSP-V

Auction Date: Monday, January 27, 2020

Delivery Periods Include: March 1, 2020 – May 31, 2022

**Customer Classes: Residential, Commercial, and
Industrial**

Introduction

Welcome to this bidder information session for FirstEnergy's Pennsylvania Default Service Program

- FirstEnergy's Pennsylvania Companies: Metropolitan Edison Company (“Met-Ed”), Pennsylvania Electric Company (“Penelec”), Pennsylvania Power Company (“Penn Power”) and West Penn Power Company (“West Penn Power”)
- The Companies are seeking to procure full requirements Default Supply generation service for their Default Service Customers
 - Default Service = Load not being served by an Electric Generation Supplier (“EGS”)
 - Products in the auctions (customer class and delivery period):

Residential Class		Commercial Class		Industrial Class	
Residential 12-month:	Jun 2020 – May 2021	Commercial 3-month:	Mar – May 2020	Industrial 12-month:	Jun 2020 – May 2021
Residential 24-month:	Jun 2020 – May 2022	Commercial 12-month:	Jun 2020 – May 2021		

- Winning bidders will assume all responsibilities of a PJM Load Serving Entity (“LSE”), with the exception of certain solar and non-solar AEPS requirements
- Date of Auctions: Monday, January 27, 2020

Presentation is being made by representatives from

- CRA International, the Independent Evaluator
- This presentation will be posted to the Auction Information Website

Introduction

Questions

2 ways to submit questions during the presentation – questions will be answered only after the prepared presentation

- Send an email to fepaauction@crai.com or
- Use operator-assisted call-in number – **800-593-8994** – and audio passcode – **FEPA**
 - Inform the operator you have a question by pressing *1 at any time
 - Operator will place you into queue
 - Your position in queue will be noted, but you will be on mute and unable to ask your questions until prompted later following the prepared presentation

Following the prepared presentation

- Questions will be queued in the order above and answered
- After questions sent via email are answered, the phone line will be opened for callers who use the call-in number
- Callers will be introduced using an assigned port number
- When asking a question, callers should NOT identify themselves

Introduction

Disclaimer

The information contained in this presentation material is intended to provide only generally descriptive and summary information. The information and material provided on the Auction Information Website and filed with the PA PUC are controlling. Any conflict with the information conveyed during the bidder information session, or with information or material other than what is provided on the Auction Information Website, is unintentional.

Certain information may be subject to modification and approval by the PA PUC.

Neither the Companies, nor the Independent Evaluator, either individually or as corporations, nor any of their representatives shall be liable to an interested party or any of its representatives for any consequences relating to or arising from the use of the information in this presentation.

Introduction

Background: DSP-V

On December 11, 2017, Metropolitan Edison Company, Pennsylvania Electric Company, Pennsylvania Power Company, and West Penn Power Company filed a petition for approval of their DSP-V Default Service Program with the Pennsylvania Public Utility Commission – Docket Nos. P-2017-2637855 , P-2017-2637857, P-2017-2637858 and P-2017-2637866.

The Default Service Program was approved per the August 23, 2018 Pennsylvania Public Utility Commission Opinion and Order, subject to a Rehearing period that ended on September 22, 2018.

Under the Default Service Program DSP-V, which covers the delivery period of June 1, 2019 through May 31, 2023, an auction process is used to procure full requirements Default Supply generation service for the Companies' Default Service Customers.

Overview

Communications

Product overview

Qualification process

Credit provisions

PJM settlement

Bidding format

Timeline for auction process

Q&As

Communications

Central source of information is the Auction Information Website:
www.fepaauction.com

- Documents – Supplier documents, load data, etc.
- Calendar
- Results – from completed Default Service auctions under the current DS Program(s)
- News
- Frequently asked questions (FAQs)
- Ask – submit a question
- About – links to background information
- Registration – register to receive future notifications

Product Overview

DSP-V Auctions

Products are distinguished by company, customer class, and period of delivery

Four companies

- Met-Ed
- Penelec
- Penn Power
- West Penn Power

Products in the auctions (customer class and period of delivery)

Fixed-Price Auction (Residential and Commercial products):

- Residential 12-month: June 2020 – May 2021
- Residential 24-month: June 2020 – May 2022
- Commercial 3-month: March – May 2020
- Commercial 12-month: June 2020 – May 2021

Hourly-Priced Auction (Industrial products):

- Industrial 12-month: June 2020 – May 2021

Product Overview

DSP-V Auctions (*continued*)

Default Service Suppliers are paid the following

- For the Residential products
 - Fixed price component: 95% of the Supplier's delivered Default Service supply each hour multiplied by the DS fixed price (determined in the auction), plus
 - Variable price component: 5% of the Supplier's delivered Default Service supply each hour multiplied by the DS "spot price", with the spot price equal to the sum of:
 - Real-time hourly total locational marginal price (LMP) for the company zone, plus
 - Fixed adder of \$20.00/MWh
- For the Commercial products
 - Fixed price component: 100% of the Supplier's delivered Default Service supply each hour multiplied by the DS fixed price (determined in the auction)
- For the Industrial products
 - Fixed price component: 100% of the Supplier's delivered Default Service supply each hour multiplied by the DS fixed price (determined in the auction), plus
 - Variable price component: 100% of the Supplier's delivered Default Service supply each hour multiplied by the DS "spot price", with the spot price equal to the sum of:
 - Real-time hourly total locational marginal price (LMP) for the company zone, plus
 - Fixed adder of \$4.00/MWh

Product Overview

Obligations of Default Service Suppliers

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")
- Provide certain alternative energy requirements (explained later)

Obligations of Default Service Suppliers exclude 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 began after July 24, 2014. All Suppliers will continue to be responsible for RMR charges associated with generating plants that began before July 24, 2014, as those charges may change over time.

Product Overview

Obligations of Default Service Suppliers (*continued*)

Under the Supplier Master Agreement, Default Service Suppliers will have the following alternative energy requirements

- For Met-Ed, Penelec, and Penn Power: Alternative Energy Portfolio Standards Act (AEPS) Alternative Energy Credits (AECs) needed to meet the non-solar requirements of the Companies' Default Service Load as more specifically described in the SMAs (solar AEPS requirements will be provided by the Companies)
- For West Penn Power: All solar and non-solar AECs (however, West Penn Power will allocate to DS Suppliers on an annual basis and an AEC per-tranche basis, a portion of the 1,000 solar and 75,000 Tier I AECs received by West Penn Power under their current long term contracts)
 - West Penn Power's solar and non-solar AECs contracts expire on May 31, 2021. Beginning June 1, 2021, West Penn will no longer have solar or non-solar AECs to allocate to DS Suppliers

Product Overview

Obligations of Default Service Suppliers (*continued*)

Winning bidders will be responsible at their sole cost and expense for:

- Any changes in PJM products and pricing during the contract term
- Any congestion costs incurred to supply its DS share
- Remaining a member in good standing of PJM

Each Default Service Supplier shall be responsible and liable to PJM for the performance of its LSE obligations associated with the provisions of Default Service Supply

Default Service Load will be divided into identical units called tranches

- Each tranche represents a defined percentage of the actual hourly energy required for the relevant delivery period as well as of the PJM capacity requirement for the relevant delivery period
- Intent is to procure 100% of the DS Load for each delivery period over multiple DS auctions

Product Overview

Tranches

For DSP-V, 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 $1/25 = 0.04 = 4\%$, 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 relevant delivery period as well as four percent (4%) of the PJM capacity requirement for the relevant delivery period.

The nominal MW quantity associated with the energy and the capacity for each tranche will depend upon many factors, including but not limited to customer migration to alternative competitive suppliers and weather conditions.

Bidders are responsible for evaluating the uncertainty associated with supplying a wholesale energy tranche which could vary each hour.

Product Overview

January 2020 DSP-V Procurement Auction

Auction Schedule for FirstEnergy's Pennsylvania Default Service Program DSP-V
Delivery Periods Covering June 2019 - May 2023

Auction Date	FP or HP Auction	Customer Class	# Mos to Delivery	Delivery Duration	Company	# Tranches	% of DS Load	2018												2019												2020												2021												2022												2023											
								10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9	10	11	12	1	2	3	4	5	6	7	8	9
June 2019	FP Auction TT = 16 LC = 12	Commercial	3	3 Mos	Met-Ed	4	30.77%													J													Sep - Nov																																														
					Penelec	5	35.71%	U													Sep - Nov																																																										
					Penn Power	2	33.33%	N													Sep - Nov																																																										
					West Penn Power	5	29.41%													Sep - Nov																																																											
Oct 20 to Nov 20 2019	FP Auction TT = 31 LC = 23	Residential	8	12 Mos	Met-Ed	4	16.00%													O C T													Jun 2020 - May 2021																																														
					Penelec	2	11.76%														Jun 2020 - May 2021																																																										
					Penn Power	1	14.29%														Jun 2020 - May 2021																																																										
					West Penn Power	4	13.33%														Jun 2020 - May 2021																																																										
		Met-Ed	0	0.00%													Jun 2020 - May 2022																																																														
		Penelec	0	0.00%													Jun 2020 - May 2022																																																														
		Penn Power	0	0.00%													Jun 2020 - May 2022																																																														
		West Penn Power	0	0.00%													Jun 2020 - May 2022																																																														
	Commercial	2	3 Mos	Met-Ed	4	30.77%													O C T	Dec - Feb																																																											
	Penelec			5	35.71%	Dec - Feb																																																																									
	Penn Power			2	33.33%	Dec - Feb																																																																									
	West Penn Power			5	29.41%	Dec - Feb																																																																									
	Commercial	8	12 Mos	Met-Ed	1	7.69%													O C T													Jun 2020 - May 2021																																															
	Penelec			1	7.14%													Jun 2020 - May 2021																																																													
	Penn Power			0	0.00%													Jun 2020 - May 2021																																																													
	West Penn Power			2	11.76%													Jun 2020 - May 2021																																																													
Commercial	8	24 Mos	Met-Ed	0	0.00%													O C T													Jun 2020 - May 2022																																																
Penelec			0	0.00%													Jun 2020 - May 2022																																																														
Penn Power			0	0.00%													Jun 2020 - May 2022																																																														
West Penn Power			0	0.00%													Jun 2020 - May 2022																																																														
January 2020	FP Auction TT = 34 LC = 25	Residential	5	12 Mos	Met-Ed	4	16.00%													J A N													Jun 2020 - May 2021																																														
					Penelec	3	17.65%														Jun 2020 - May 2021																																																										
					Penn Power	1	14.29%														Jun 2020 - May 2021																																																										
					West Penn Power	4	13.33%														Jun 2020 - May 2021																																																										
		Met-Ed	0	0.00%													Jun 2020 - May 2022																																																														
		Penelec	0	0.00%													Jun 2020 - May 2022																																																														
		Penn Power	0	0.00%													Jun 2020 - May 2022																																																														
		West Penn Power	2	6.67%													Jun 2020 - May 2022																																																														
	Commercial	2	3 Mos	Met-Ed	4	30.77%													J A N	Mar - May																																																											
	Penelec			5	35.71%	Mar - May																																																																									
	Penn Power			2	33.33%	Mar - May																																																																									
	West Penn Power			5	29.41%	Mar - May																																																																									
	Commercial	5	12 Mos	Met-Ed	1	7.69%													J A N													Jun 2020 - May 2021																																															
	Penelec			1	7.14%													Jun 2020 - May 2021																																																													
	Penn Power			0	0.00%													Jun 2020 - May 2021																																																													
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Commercial	5	24 Mos	Met-Ed	0	0.00%													J A N													Jun 2020 - May 2022																																																
Penelec			0	0.00%													Jun 2020 - May 2022																																																														
Penn Power			0	0.00%													Jun 2020 - May 2022																																																														
West Penn Power			0	0.00%													Jun 2020 - May 2022																																																														
HP Auction TT = 31 LC = 23	Industrial	5	12 Mos	Met-Ed	9	100.00%													J A N													Jun 2020 - May 2021																																															
				Penelec	8	100.00%														Jun 2020 - May 2021																																																											
				Penn Power	2	100.00%														Jun 2020 - May 2021																																																											
				West Penn Power	12	100.00%														Jun 2020 - May 2021																																																											

Product Overview

Minimum and Maximum Starting Prices

Prior to the auctions, the Independent Evaluator will announce a minimum and maximum starting price range for each auctioned product

- As part of the application process, a Qualified Bidder submits an indicative offer based on the product-specific minimum and maximum starting prices which will be used to determine the Bidder's initial eligibility in each auction

The Independent Evaluator may determine that due to extraordinary events, the minimum or maximum starting prices require revision

- If 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 has not been completed) modify their indicative offers on the basis of the revised minimum starting prices and the revised maximum starting prices
- Such an event also may require a revision to the schedule for the Default Service Program

No later than three (3) business days before bidding starts, the Independent Evaluator will inform Registered Bidders of the starting prices for round 1

Qualification Process

Overview

Part 1 Applications: Prospective bidders apply to become Qualified Bidders

- Start Date: Thursday, December 5, 2019
- Due Date: Friday, December 20, 2019 at 12:00 noon ET

Part 2 Applications: Each Qualified Bidder provides certifications, its indicative offer, and pre-bid security in order to become a Registered Bidder

- Start Date: Thursday, January 2, 2020
- Due Date: Tuesday, January 14, 2020 at 12:00 noon ET

Only Registered Bidders can participate in the bidding

Prospective bidders will be able to fill out, submit, and upload their supporting documentation for the Part 1 and Part 2 Applications online through the secure Online Application process

Qualification Process

Part 1 Application – Due Friday, December 20, 2019 at 12:00 noon ET

Submit an application from a person with the power to bind the bidder and agree to:

- Comply with all rules of the auction(s)
- If they become winning bidders, execute the Supplier Master Agreement with the Company

Show that they either satisfy the three requirements below, or have no existing impediments to them satisfying all the requirements by the start of the supply period

- Transmission Customer of PJM and have executed the relevant PJM Agreements
- Have PJM E-Accounts necessary to provide Default Service Supply
- PJM Market Participant and a Load Serving Entity in PJM

Agree that if they become winning bidders, they will comply with the creditworthiness requirements set forth in the Supplier Master Agreement

Certify that if they qualify to participate, they will not:

- Disclose information regarding the list of Qualified Bidders
- Disclose confidential information about Qualified Bidders obtained during the bidding process
- Substitute another entity in their place
- Transfer their rights to another entity
- Otherwise assign their status as Qualified Bidders to another entity

Qualification Process

Part 1 Application *(continued)*

A prospective bidder that has qualified during the Part 1 Application process becomes a Qualified Bidder

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 – relevant parties that will receive this list of Qualified Bidders are:

- Each Qualified Bidder
- Representatives from the Companies

All parties receiving a list of Qualified Bidders will be subject to the confidentiality requirements as specified in the Bidding Rules

Part 1 Applicant also must submit financial information and may choose to submit a Draft Pre-Bid Letter of Credit (described later)

Prospective bidders will be notified by the Independent Evaluator no later than three (3) business days after the Part 1 Application Due Date whether they succeeded in becoming a Qualified Bidder

Qualification Process

Part 1 Application *(continued)*

Part 1 Applications are submitted online

- The Part 1 Online Application process opens on Thursday, December 5, 2019
- Due Date: Friday, December 20, 2019 at 12:00 noon ET

A prospective bidder is required to:

- Submit a Part 1 Application to participate in FirstEnergy's Pennsylvania Default Service Program auction(s)

All prospective bidders for the DSP-V January 2020 auctions must complete a new Part 1 Application to become a Qualified Bidder for the DSP-V auction process

Qualification Process

Part 1 Application – Submitting an Account Request Form

You **will** need to submit an Account Request Form for the DSP-V auction process (see next slide)

Account Request Form – shown on next slide – is available on the Home page of the Information Website (www.fepaauction.com) under “Forms”

Email the completed Account Request Form to fepaauction@crai.com

Qualification Process

Part 1 Application – Account Request Form

FirstEnergy's Pennsylvania Default Service Program Auction Process

Account Request Form: Request for Part 1 and Part 2 Application Online Account

With access to an Online Account for the Part 1 Application and Part 2 Application process, a prospective bidder will be able to submit and check the status of their Part 1 Application and Part 2 Application as well as upload supporting documentation.

To open an Online Account please fill in the following information:

Company Name:

Date:

MM/DD/YYYY

Please provide the First Name, Last Name, and E-mail Address for every person that you request to be given access to your online Application. Each person listed below will receive a unique username and password combination that they will be able to use to login to the online application of the Company named above.

	<i>First Name</i>	<i>Last Name</i>	<i>E-mail Address</i>
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			

***Please email this form to the Independent Evaluator at fepaauction@crai.com

Qualification Process

Part 2 Application – Due Tuesday, January 14, 2020 at 12:00 noon ET

Qualified Bidders from the Part 1 Application process submit Part 2 Applications to become Registered Bidders.

The Part 2 Application process opens on Thursday, January 2, 2020

Due Date: Tuesday, January 14, 2020 at 12:00 noon ET

In the Part 2 Application, each Qualified Bidder will make a number of certifications regarding associations to ensure that they are participating independently of other Qualified Bidders and to ensure the confidentiality of information regarding the auction(s)

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

Qualification Process

Part 2 Application *(continued)*

With its Part 2 Application, a Qualified Bidder will be required to submit an indicative offer – comprising a set of two (2) numbers of tranches for each product in each auction – and to post pre-bid security sufficient for this indicative offer

- For each product, the first number is the number of tranches that the Qualified Bidder is willing to serve at the minimum starting price for the product in the auction(s)
- For each product, the second number is the number of tranches that the Qualified Bidder is willing to serve at the maximum starting price for the product in the auction(s)
- At the minimum and the maximum starting prices, the number of tranches across all products indicated by the Qualified Bidder cannot exceed the Qualified Bidder's load tranche cap (described later)

Bidder's initial eligibility

- This is the maximum total number of tranches the Qualified Bidder can bid across all products in round 1 of each auction and may be subject to a load cap
- Determined by the number of tranches in the Qualified Bidder's indicative offer at the maximum starting prices
- Thus, the indicative offer at the maximum starting prices needs to state the maximum possible number of tranches that the bidder would be ready, willing, and able to serve

Qualified Bidders will be notified by the Independent Evaluator no later than three (3) business days after the Part 2 Application Due Date whether they succeeded in becoming a Registered Bidder

Credit Provisions

Required Credit and Financial Information

For bidder or bidder's Guarantor:

- **Financial statements** (most recently issued SEC Form 10-K, 10-Q, 8-K)
- **A statement of rulings or judgments** relating to financial status that have had a material impact on financial status
- **A debt rating** from at least two of the following rating agencies: S&P, Fitch, or Moody's (with supporting documentation)
- **Contact information** for the Bidder's/Guarantor's credit representative to answer questions on the documentation provided

Credit Provisions

Pre-Bid Security – 2 Options

1) Use Pre-Bid Letter of Credit

- Part 1: Submit a Draft Pre-Bid Letter of Credit (LOC) (optional)
- Part 2: Submit an executed Pre-Bid LOC (**\$250,000**/tranche)

2) Make a cash deposit

- Part 1: Request wiring instructions
- Part 2:
 - Submit cash deposit (**\$250,000**/tranche)
 - Attach a copy of W9 (tax ID) and a copy of banking information on company's letterhead, signed and dated
 - Provide wiring instructions for returning your cash deposit

Credit Provisions

Supplier Master Agreement – Key Elements of Credit Provisions

Security posted during the term of the Default Supply delivery period will depend upon a creditworthiness evaluation

- Unsecured credit may be granted based on the Supplier's (or its Guarantor's) Tangible Net Worth and credit rating (see Sections 6.4 and Appendix A of Supplier Master Agreement)
- Total Exposure Amount less any unsecured credit (Margin) must be met with cash or Letter of Credit (Appendix F of Supplier Master Agreement)

The credit exposure methodology is explained in Section 6.3 of Supplier Master Agreement

Letter of Credit (Appendix F of Supplier Master Agreement)

Guaranty (Appendix G of the Supplier Master Agreement)

Information Website

Information Website for the Default Service Program auction process is www.fepaauction.com

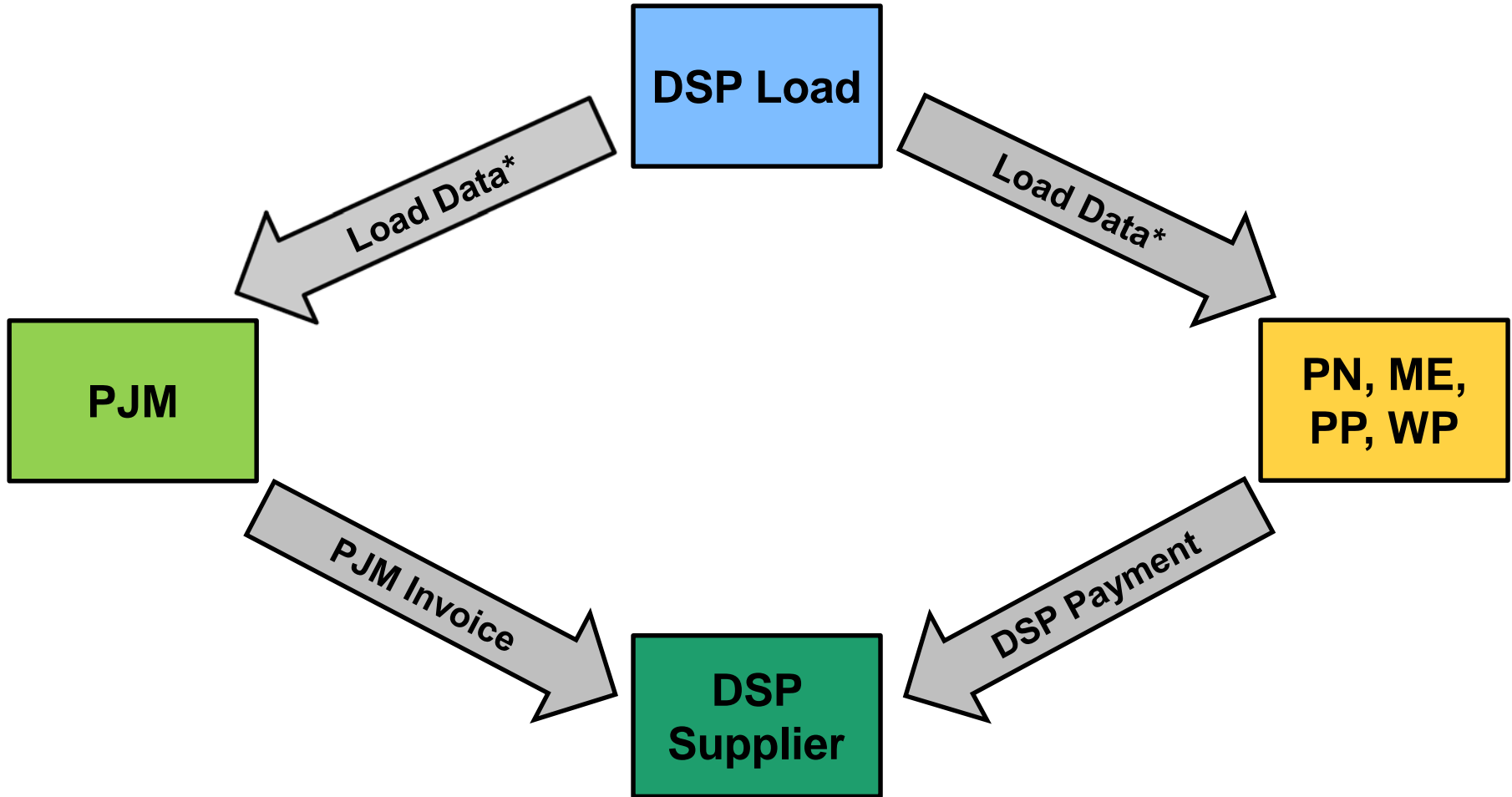
- Information about the Default Service Program
- Download Supplier documents (Supplier Master Agreement, Bidding Rules, etc.)
- Download load and other data
- Auction calendar
- Results from previous auctions under the current Default Service Program
- News and announcements
- Frequently Asked Questions (FAQs)
- Register to receive updates
- Submit questions
- Information about FirstEnergy, CRA International, PJM

Register on the Information Website

- Register to receive information updates regarding Default Service Program – provide name, company name, valid email address
- Once registered, prospective bidders can submit questions

PJM Settlement

Settlement Landscape



* Load data are developed by the Meter Data Coordinator as designated on the Market Participant's application. The Meter Data Coordinator uses the same PJM settlement data to calculate the Default Service Invoice as well as to submit the settlement data to PJM.

PJM Settlement

The Role of RTO Operations Settlements at FirstEnergy Pennsylvania

Acts as the Meter Data Coordinator for Default Service Suppliers

- Submits load data to PJM for generation of invoices
 - Primary and Secondary data
 - Re-Settlement periods as necessary
- Default Service Load split by tranches won in delivery period

Uses PJM settlement load data to develop the Default Service Invoices

- Primary and Secondary data are used for Final Monthly Energy Allocation (FMEA) and Preliminary Monthly Energy Allocation (PMEA)
- Spreadsheet format
- Emailed
- Based on tranches awarded in the Default Service procurement process

PJM Settlement

Example: DSP Service for a DSP Supplier

INVOICE PREPARED FOR:		Penn Power POLR			Counterparty							
					Banking Institution							
					City/State/Zip							
					ABA:							
					Swift Code:							
					Account Number:							
Start	3/1/2017											
End	3/31/2017											
		Auction			LMP							
		Price			Price + Adder		LMP					
		Billing Units			Billing Units		Price + Adder		Total		Total	
		MWh			MWh		Amount \$		Amount MWh		Amount \$	
		Rate			Seasonal		Price					
		\$/MWh			Factor		Amount \$					
PRIMARY SETTLEMENT												
										Product	Product	
										Start	Stop	
Residential												
	RES1	-	0.00	1	\$	-	-	\$	-	-	\$	-
Commercial												
EPPPPC	COM1	-	0.00	1	\$	-	-	\$	-	-	\$	-
EPPPPC	COM2	4,862.045	84.12	1	\$	408,995.23	-	\$	-	4,862.045	\$	408,995.23
EPPPPC	COM3	-	0.00	1	\$	-	-	\$	-	-	\$	-
Prior Period Adjustments												
Industrial												
	IND1	-	0.00	1	\$	-	-	\$	-	-	\$	-
SECONDARY SETTLEMENT												
Residential												
	RES1	-	0.00	1	\$	-	-	\$	-	-	\$	-
Commercial												
EPPPPC	COM1	-	0.00	1	\$	-	-	\$	-	-	\$	-
EPPPPC	COM2	152.465	84.12	1	\$	12,825.36	-	\$	-	152.465	\$	12,825.36
EPPPPC	COM3	-	0.00	1	\$	-	-	\$	-	-	\$	-
Prior Period Adjustments												
Industrial												
	IND1	-	0.00	1	\$	-	-	\$	-	-	\$	-
Grand Total									5,014.510	\$	421,820.59	
Class Totals												
Residential									-	\$	-	
Commercial									5,014.510	\$	421,820.59	
Industrial									-	\$	-	
									5,014.510	\$	421,820.59	

PJM Settlement

Example: Invoice From PJM



PJM Settlement, Inc.
2750 Monroe Blvd.
Audubon, PA 19403

INVOICE NUMBER:

CUSTOMER ACCOUNT:

CUSTOMER IDENTIFIERS:

FINAL BILLING STATEMENT ISSUED:

BILLING PERIOD: _____ to _____

Monthly Billing Total:

Previous Weekly Billing Total:

Monthly Billing Statement Summary

Total

TERMS: PAYABLE IN FULL BY EPT ON
WIRE TRANSFER FUNDS TO: PJM SETTLEMENT, INC.

FOR INQUIRIES CONTACT:

PJM MEMBER RELATIONS (Banking / Payment):

PJM MARKET SETTLEMENTS (Billing Line Items):

ADDITIONAL BILLING STATEMENT INFORMATION:

PJM Settlement

FirstEnergy Pennsylvania's RTO Operations Settlements

Robert D. Brown

rdbrown@firstenergycorp.com

330.384.5573

Dave Woomer

dwoomer@firstenergycorp.com

610.921.6312

Bidding Format

Reservation Price and Starting Price

There is a reservation price for each product

- No tranche for a product will be procured at a price that is above the reservation price for the product
- Reservation prices will not be disclosed to bidders

Starting price for each product = announced price for round 1

- Announced no later than three (3) business days before bidding starts
- No lower than the product's minimum starting price; no higher than its maximum starting price
- Starting price \geq reservation price

Bidding Format

Discretion to Reduce Tranche Target

Discretion to reduce tranche targets (# tranches to procure)

- If there is insufficient supply bid for the tranches to ensure competitive bidding, Independent Evaluator may reduce the tranche targets
 - The criteria that could lead to such a reduction will be determined prior to the auction(s) but will not be announced
 - Once certain pre-specified criteria related to excess supply and related to the reservation prices have been met, the discretion to reduce the tranche targets will be eliminated and there will be no reduction in the tranche targets
 - Any exercise of this discretion would be more likely in the earlier rounds of the auction(s)
- If the Independent Evaluator reduces the tranche targets, bidders will be informed of the revised tranche targets

Bidding Format

Bidder's Eligibility and Load Cap

Bidder's eligibility

- This is the maximum number of tranches the bidder can bid in a round
- Bidder's eligibility for a round = total number of tranches they bid in the preceding round
- Thus, bidder's eligibility cannot increase during auction(s) – only stays the same or declines

The load cap limits the bidder's initial eligibility – i.e., maximum number of tranches the Qualified Bidder is allowed to bid on in round 1 across all products

Load cap is a % of load aggregated across all products in each auction

	Residential / Commercial Auction	Industrial Auction
Commission-Ordered Load Cap %	75%	75%
Tranche Target	34 tranches	31 tranches
Load Cap	25 tranches	23 tranches

- No bidder may bid on and win more tranches than the load cap – enforced by ensuring that each bidder's initial eligibility does not exceed the load cap in the auction

Bidding Format

Clock Format

Bidders bid using the Independent Evaluator's Bidding Website

Multiple-round, multiple-product, descending-price clock format

- Each round has specified start and end times
- For each product, the price for the next round is announced (“announced price”) – price falls round to round
- Round opens and each bidder submits the number of tranches of each product it is willing to supply at the product's announced price
- Round closes
 - **If the total number of tranches bid > tranche target for any product**, then announced price for that product will be reduced for the next round by a price decrement
 - **If the total number of tranches bid \leq tranche target for any product**, then the announced price for that product will remain unchanged for the next round
- Round results are reported prior to the start of next round

Bidding Format

Default Bid

Default bid for a bidder

- If bidder entered round with positive eligibility but fails to submit a confirmed bid in the round, then default bid will be submitted on behalf of the bidder
 - **Products for which the announced price decreased from the preceding round** – the default bid will equal zero (0) tranches
 - **Products for which the announced price did not decrease from the preceding round** – the default bid will equal the accepted number of tranches from the preceding round
- A bidder with zero (0) tranches across all products – i.e., zero eligibility – in an auction will not be able to submit any more bids in that auction

Bidding Format

Subscription State = Measurement of Excess Supply

At the end of each round, a product is over-subscribed (excess supply > 0), subscribed (excess supply = 0), or under-subscribed (excess supply < 0)

Excess supply = # of tranches bid – tranche target

- 1) **If excess supply > 0:** Price for the product is reduced by a price decrement and the auction will continue with the next round.
- 2) **If excess supply = 0:** Price for the product will remain unchanged. Bidders who bid on the product will not be able to reduce their tranches bid on the product in the next round of the auction.
- 3) **If excess supply < 0 and no bidders reduced the number of tranches they bid on the product:** Price for the product will remain unchanged. Bidders who bid on the product will not be able to reduce their tranches bid on the product in the next round of the auction.
- 4) **If excess supply < 0 and one or more bidders reduced the number of tranches they bid on the product:** Consequences are the same as case #3, and also a rollback will be applied to the product.

Bidding Format

Rollback

When there is excess supply for a product at the end of round R, the announced price will decline for the round R+1

- In round R+1, bidders are free to reduce the tranches bid for the product either by switching tranches from the product to another product, and/or by reducing the total tranches bid across all products
- Products that were over-subscribed in round R and that are under-subscribed in round R+1 (excess supply < 0) are subject to a rollback following round R+1

The rollback process following round R+1 retains sufficient number of tranches that were bid on the product in round R such that excess supply for the product following round R+1 equals zero

- Tranches rolled back are selected at random from the tranches reduced or switched from round R to round R+1
- The price associated with rolled back tranches is the round R price (the price at which the tranches were bid) – i.e., a price higher than the round R+1 price
- Only tranches that were both bid on a product in round R and not bid on the product in round R+1 are subject to a possible rollback
- Even after a rollback, the total number of tranches accepted for a bidder across all products will be no greater than the total number of tranches the bidder bid in round R

Bidding Format

Illustrative Example – Single Product

Illustrative Bidding in an Auction (single-product example)							
Round	Tranche Target	Announced Price (\$/MWh)	Number of Tranches Bid				Total
			BidderA	BidderB	BidderC	BidderD	
1	100	\$75.00	34	55	21	72	182
2	100	\$70.00	30	55	15	50	150
3	100	\$66.00	20	52	10	45	127
4	100	\$62.00	15	48	0	44	107
5	100	\$59.50	0	48	—	42	90

The auction will conclude after round 5 because excess supply for the product was no longer positive. In the round, only 90 tranches of supply were bid against 100 tranches being procured. Negative excess supply triggers a rollback of 10 tranches.

BidderA bid 15 tranches at \$62.00/MWh in round 4 and 0 tranches at \$59.50/MWh in round 5. Because BidderA reduced its bid, it is subject to a rollback of up to 10 tranches.

BidderB bid 48 tranches in rounds 4 and 5. Because BidderB did not reduce, it is not subject to a rollback. BidderB wins 48 tranches at the clearing price.

BidderC bid 0 tranches at \$62.00/MWh in round 4 and is not subject to any rollback.

BidderD bid 44 tranches at \$62.00/MWh in round 4 and 42 tranches at \$59.50/MWh in round 5. BidderD is subject to a rollback of up to 2 tranches.

Rollback Results				
Round	Price (\$/MWh)	Tranches		
		BidderA	BidderB	BidderD
4	\$62.00	15	48	44
5	\$59.50	0	48	42
Rollback	\$62.00	9	0	1
Winning	\$62.00	9	48	43
Clearing price for all 100 tranches won = \$62.00				

Bidding Format

Winning Tranches, Bidders, and Prices

If Excess Supply = 0 for all products at end of a round

- Winning tranches are the tranches bid in the last round of each auction
- Winning bidders are the bidders who bid those tranches
- Uniform pricing: Price to be paid for winning tranches for a product will be the highest price for any tranche in the product's bid stack

If Excess Supply ≤ 0 for all products at the end of a round

- There will be a rollback for all products with excess supply < 0
- There will be no rollback for products with excess supply $= 0$
- Uniform pricing: Price to be paid for winning tranches for a product will be the highest price for any tranche in the product's bid stack

Note: In all cases, a product's bid stack has at most two prices

- If the bid stack has rolled-back tranches, then there are two prices in the bid stack – the most recent (i.e., lower) announced price and the next-most recent (i.e., higher) announced price
- If the bid stack does not have rolled-back tranches, then there is only one price in the bid stack – the most recent announced price

Bidding Format

Close of the Auctions

Shortly after the last round of the auctions, results are determined by the Independent Evaluator, then:

- Independent Evaluator provides to the Companies and the Commission the identity of winning bidders, the number of tranches won by each winning bidder, and the prices for the tranches won
- Independent Evaluator notifies:
 - Each winning bidder of how many tranches the bidder has won and at what prices
 - Each unsuccessful bidder that the bidder has not won any tranches
- The Commission will have 48 hours after the conclusion of the auctions to determine if there has been a violation of the auction rules in such a manner as to invalidate the auction(s) based upon an assessment from the Independent Evaluator

The Companies and winning bidders will execute the Supplier Master Agreement

Bidding Format

Contingency Plan

Contingency Plan for the Default Service procurement auctions

- See Section 10 of the Bidding Rules
 - 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

Bidding Format

Technical Difficulties During the Auctions

- Unforeseen technical difficulties may happen during an online auction
- Pursuant to the auction rules, if a technical difficulty occurs during the auctions, depending on the circumstances the Independent Evaluator will:
 - Inform all the bidders as soon as possible, by phone and/or Independent Evaluator Message page on the Bidding Website
 - Accept bids using the Backup Bidding Fax Number
 - Extend the duration of bidding round(s), extend the time between bidding round(s), or otherwise pause the auction

Timeline for Upcoming Auction

Timeline for the DSP-V January 2020 Auction	
Activity	Date
WebEx Information Session	Wednesday, December 4, 2019
Part 1 Applications can be submitted	Thursday, December 5, 2019
Deadline: CRA announces tranche targets and tranche sizes (% and MW)	Friday, December 6, 2019
Deadline to submit Part 1 Applications	Friday, December 20, 2019
CRA announces minimum and maximum starting prices	Thursday, January 2, 2020
Part 2 Applications can be submitted	Thursday, January 2, 2020
CRA announces any update to the tranche sizes (MW)	Wednesday, January 8, 2020
Deadline to submit Part 2 Applications	Tuesday, January 14, 2020
Bidder User Manuals Distributed	Tuesday, January 21, 2020
Mock Auction for Registered Bidders	Wednesday, January 22, 2020
CRA announces starting prices to Registered Bidders	Wednesday, January 22, 2020
Auction for Registered Bidders	Monday, January 27, 2020
Commission Decision due second day after conclusion of auction (tentative)	Wednesday, January 29, 2020
Supplier Master Agreement Signed (tentative)	Friday, January 31, 2020
Power Flow	Sunday, March 1, 2020

Q&As

Please do NOT identify yourself if you have a question

Following the prepared presentation

- Questions received and queued during the prepared presentation will be answered in the following order:
 - Email
 - Verbal (to enter the queue, notify the operator)
- After questions sent via email are answered, the phone line will be opened for callers interested in asking questions verbally
- The operator will introduce callers using an assigned port number
- Callers should NOT identify themselves when asking questions

Q&As raised during this bidder information session will be posted on the Information Website

Thank you for your interest in FirstEnergy's Pennsylvania Default Service Program