



AEP Ohio Competitive Bidding Process November 2019 Auction

Bidder Webcast Thursday, September 5, 2019

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Disclaimer

Any statements herein describing or referring to documents and agreements are summaries only, and are *qualified in their entirety* by reference to such governing documents

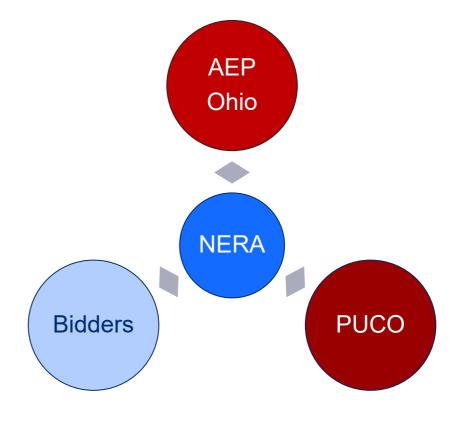
- These governing documents include:
 - PUCO Order under Case No. 16-1852-EL-SSO
 - Bidding Rules for the Auctions Under the Competitive Bidding Process of Ohio Power Company ("CBP Rules")
 - Master Standard Service Offer ("SSO") Supply Agreement
 - Rules and Protocols for Participation by Associated Bidders
 - Part 1 Application
 - Part 2 Application

Please see the CBP website for complete documentation http://www.aepohiocbp.com/



NERA's Role as Auction Manager

Role	Description
Communication	To be the main point of contact with bidders
CBP Rules	To ensure the CBP Rules, as approved by the PUCO, are followed
Qualifications	To ensure bidder qualifications are evaluated equitably and fairly
Auction	To administer the Auction
Results	To present results to PUCO





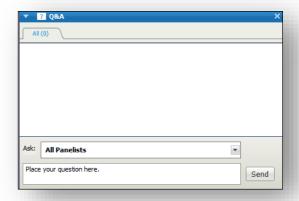
Agenda

- 1. Overview of this Auction
- 2. Product Design and Contract
- 3. CBP Website
- 4. Application Process
- 5. Bidding in the Auction



Ask a Question during the Webcast

- Questions will be taken in writing through the WebEx interface:
 - Locate the "Q&A" on the right hand side of your screen
 - Select "All Panelists" in the "Ask" box
 - Type in your question including the relevant slide number
 - Click "Send" to submit your question
- We will respond to questions as we go along as practicable and we will also pause to provide responses at the end of the presentation



This presentation as well as questions and answers will be posted to the CBP website



Part 1 Overview



Upcoming Auction is on November 5, 2019

 This is the fifth of a series of twelve full requirements auctions under Case No. 16-1852-EL-SSO ("ESP IV")

			2017	2018	2019	2020	2021	2022
Auction	Product Months	Load Cap	42					2 1 2 3 4 5 6 7 8 9 10 11 12
1 (Nov. 2017)	12 24 36	40	1	17% 17% 16%	12 Month	24 Month	36 Month	
2 (Mar. 2018)	12 24 36	40		2 17% 17% 16%	12 Month	APALETE	36 Month	
3 (Nov. 2018) 4 (Mar. 2019)	12	13		3	17%	12 Month		
5 (Nov. 2019)	12 24	27			5	17% 17%	12 Month	24 Month
6 (Mar. 2020)	24	27				17%	12 Month	24 Month
7 (Nov. 2020)	12 36	26				7	17% 16%	12 Month
8 (Mar. 2021)	12 36	26					8 17% 16%	12 Month
9 (Nov. 2021)	12 24	27					9	17% 17%
10 (Mar. 2022)	12 24	27						10 17%
11 (Nov. 2022) 12 (Mar. 2023)		13						11



Results of Previous Auction

Registered Bidders	13	
Rounds in the Auction	14	
Range of Starting Price	\$60/MWh - \$80/MWh	
Delivery Period Start	June 1, 2019	

Product	Tranche Target	Clearing Price (\$/MWh)	
One-year	17	46.63	

PUCO accepted results on March 6, 2019.



Product Description

Product	Load-following, slice-of-system, full requirements Denominated in tranches	
Tranche	a fixed percentage of the load of SSO customers	
SSO Customers	those customers who take retail generation service from AEP Ohio, excluding PIPP customers	
Delivery Point	Pnode ID 1269364670	
LSE Responsibility	is assumed by the SSO Supplier, including scheduling SSO Supply and making arrangements for delivery of SSO Supply	



Supply Will Be Divided into Tranches

Auction Date

Tuesday, November 5

Product	Delivery Period	Tranche Target	Load Cap	Tranche Size
One-year	June 2020- May 2021	17	27	1%
Two-year	June 2020- May 2022	17	21	1%



Auction Format is a Clock Auction

- Multiple tranches of each product
- Multiple products and multiple rounds
 - Each round, suppliers state how many tranches they want to supply at the going prices announced by the Auction Manager
 - From one round to the next, auction continues and prices tick down if there is positive total excess supply
- Switching between products is allowed
- Auction concludes when no price ticks down
- No sealed bid round: bidders provide exit prices as they withdraw tranches throughout the Auction
- Auction establishes a single clearing price for each product

Announcement: Minimum and Maximum Starting Prices, MW-Measure



— The minimum and maximum starting prices are:

Max	\$75/MWh
Min	\$55/MWh

- The PLC (MW) is based on the five highest coincident peaks experienced by PJM in prior year for SSO customers (i.e., non-shopping only)
- The MW-measure is provided for reference and information purposes only

PLC (MW)	2,489	
MW-measure*	24.89	

^{*}The amount of actual quantity to be delivered depends on many factors (e.g., migration of SSO customers).

 Suppliers for a product are paid the auction clearing price for that product for each MWh of supply during the delivery term (Seasonal Factors = 1.00)



Key Events

M	Т	W	Th	F
Sep.				P1 Window
16	17	18	19	20 Opens
23	24	25	26	27
	Oct.	P1		
30	1	Due 2	3	4
	P1 Notification	P2 Window		
7	8	9 Opens	10	11
14	15	16	17	18
	P2			
21	Due 22	23	24	25
	P2	Trial		Nov.
28	Notification 29	Auction 30	31	1
	Auction			
4	5 Starts	6	7	8

By September 20: Bidders can access account for application website

Announcements:

Sep. 5: Tranche targets, tranche size, MW-measure, and range of starting prices

Oct. 9: Update to seasonal factors and MW-measure

Oct. 31: Round 1 prices for Registered Bidders



Application Process is Online

Part 1 Application (Sep. 20 – Oct. 2)

- Provide contact and company information
- Upload Inserts
- Upload required supporting documents

Part 2 Application (Oct. 9 – Oct. 22)

- Provide information and indicative offer
- Upload Inserts
- Provide hardcopy of pre-bid letter of credit or wire cash

No hardcopy of application forms required!



Post-Auction: PUCO Approval and Power Flow

- Auction results are contingent on final PUCO approval
- Auction Manager submits a confidential report on auction results to PUCO on the day the Auction closes
- PUCO will issue a decision within two days of auction close
 - If PUCO does not act within this window, auction results are deemed accepted
- PUCO may publicly release the auction clearing prices and the names of the winning bidders from the Auction
- Master SSO Supply Agreement fully executed and winning bidders fulfill creditworthiness requirements within three days of the Commission's acceptance of results



Part 2 Product Design and Contract



Full Requirements

- SSO Suppliers:
 - Will assume all responsibilities of an LSE
 - Are responsible for providing full requirements service to SSO customers of AEP Ohio, excluding PIPP customers, and to bear all costs that are associated with this responsibility
- Full requirements service and the LSE obligations of SSO
 Suppliers are defined in the Master SSO Supply Agreement

Attachment F of the Master SSO Supply Agreement:

Sample PJM Invoice

Credit Requirements under the Master SSO Supply Agreement



Two Credit Requirements and Two Unsecured Credit Lines:

- Independent Credit Requirement (ICR) and the Independent Credit Threshold (ICT)
 - Amount required per tranche; declines throughout the term of the Master SSO Supply Agreement
- Mark-to-Market (MTM) and Credit Limit
 - Differences between the prevailing market prices on a valuation date and the market prices in effect on the date the Auction is completed
- Credit Limit and Independent Credit Threshold will depend upon a credit evaluation
- Form of Guaranty and Form of Performance Assurance Letter of Credit provided as attachments to the Master SSO Supply Agreement



Part 3 | CBP Website





AEP Ohio Competitive Bidding Process for SSO Supply

Home

Search

Background

Information

Data Room

Calendar

Contact Us

PIPP RFP

Home

This Ohio Power Company ("AEP Ohio") website provides information to prospective suppliers that seek to provide full requirements service for AEP Ohio's Standard Service Offer ("SSO") customers through a Competitive Bidding Process ("CBP"). This site contains the documents and announcements related to the CBP. NERA Economic Consulting ("NERA") serves as AEP Ohio's Auction Manager.



Important Dates:

- Wed 8/28/2019 Alternate guaranty process begins
- Thu 9/5/2019 Bidder Information Session
- Thu 9/5/2019 Auctioin Manager Announces Tranche Targets, Tranche Size, MW-measure. Minimum and Maximum Staring Prices

Recent Announcements:

08/23/2019 ANNOUNCEMENT:
 November 2019 Auction
 Documents Posted to the





Information Tab

Document page includes:

- CBP Rules
- Master SSO Supply Agreement
- Qualification Information
- Credit Instruments
- Communications Protocols
- Associated Bidder Rules
- Glossary of key terms





Data Room and Data Categories



Data Room includes:

- Hourly energy
- Customer counts
- PLC and NSPL Data
- Monthly Switching Statistics
- Historical Unaccounted for Energy

Updated on or before the 20th of each month



Ask a Question Through the CBP Website

- Contact Us / Ask a Question
 - Bidder questions answered via email typically within 2 business days
 - Responses and questions are posted as FAQs on CBP website
- You may also contact us via email at AEP-CBP@nera.com

Home			Ask a Question
Search	N *-		
Background	Name *:		
Information	Company *:		
Data Room	Email Address *:		
Calendar	Question/Comment *:		
Contact Us			
Register			
Ask a Question			
RSVP or an Information		I'm not a robot	
Session		TITTIOL & TODOL	reCAPTCHA
Contact the Auction Manager			Privacy - Terms
Register for an Application Account		Submit	
PIPP RFP			



Part 4 | Application Process

Register for your Online Application Account Only for NEW bidders



www.AEPOhioCBP.com

Home	Register for an Application Account			
Search	Please complete the Expression of Interest to request an account for the application			
Background	portion of the website. Application materials for AEP Ohio's CBP are submitted online			
Information	through the application portion of this website.			
Data Room	Company *:			
Calendar	Primary Contact First Name *:			
Contact Us	Primary Contact Last Name *:			
Register	Primary Contact Phone *:			
Ask a Question	Primary Contact Mobile :			
RSVP for an Information Session	Primary Contact Email *:			
Contact the Auction Manager	Secondary Contact First Name :			
Register for an Application	Secondary Contact Last Name :			
Account	Secondary Contact Phone :			
	Secondary Contact Mobile :			
PIPP RFP	Secondary Contact Email :			

Returning bidders will receive reminder of login credentials by email from the Auction Manager

Contact Us / Register for an Application Account

Alternatively, email AEP-CBP@nera.com with:

- Company name
- full name of contact
- phone and alternate number
- email address



Application Process Features and Reminders

- Application process for returning bidders is streamlined
 - Part 1 Form pre-populated with previously submitted contact information and PJM information
 - All bidders (including returning bidders) must provide financial information and make certifications
- Inserts. Bidders download, prepare, sign, and upload their own "Inserts" with their applications
- Acceptable modifications of the pre-bid security documents are posted on the CBP website



Up-Front Requirements for Part 1 Are Simple

1. Applicant's Contact Information

- Representative: Represents the Applicant in the Auction
- Legal Representative in Ohio: Agrees to accept service of process
- Nominees (optional): to be included in electronic communications from the Auction Manager to the bidder along with Representative

2. PJM requirements

- Qualified as a "Market Buyer" and "Market Seller"
- Qualified as a "Load Serving Entity"

Notifications sent to Representative and Nominees by email



Certifications, Financial Information, and Documents

3. Certifications

- Agree to terms of Master SSO Supply Agreement
- Agree to CBP Rules
- Keep information related to the Auction confidential

4. Financial Information

- Annual and quarterly financial statements
- Credit ratings
- Additional information for foreign applicants or applicants relying on foreign guarantor
- Submit via upload to application website

5. Request for modifications to pre-bid credit instruments (optional)

- Submit redline via upload to application website
- Any modification accepted for one bidder will be made available to all bidders on an optional basis

New and Returning Bidders
Provide This Information and Documents



List of Inserts and to Whom They Apply

#	Insert	When Applicable	Waived for Returning Bidders
P1-1	Representative Designation	REQUIRED OF ALL BIDDERS	YES
P1-2	Representative Responsibilities	REQUIRED OF ALL BIDDERS	YES
P1-3	Designation of Nominees Insert	OPTIONAL	NO
P1-4	Legal Representative	REQUIRED OF ALL BIDDERS	YES
P1-5	PJM Requirements	Only Applicable in Limited Circumstances	NO
P1-6	Certifications	REQUIRED OF ALL BIDDERS	NO
P1-7	Bidding Agreement	Only Applicable in Limited Circumstances	NO



Part 2 Application: To Be Registered as a Bidder

- 1. Submit an indicative offer and preliminary interests
- 2. Submit pre-bid security
- 3. Make certifications including compliance with Rules related to Associations and Handling of Confidential Information
- 4. Provide additional certifications
- 5. Foreign entities: Provide executed additional documents required under the Master SSO Supply Agreement

Requirements for new and returning bidders are the same In the Part 2 Application



Indicative Offer and Preliminary Interests

- Submit an indicative offer the maximum number of tranches that the bidder is willing to bid
 - At the minimum starting price and at the maximum starting price



- The indicative offer at the maximum starting price determines:
 - The maximum number of tranches that the bidder can bid in the Auction (the initial eligibility)
 - The amount of pre-bid security required with the Part 2 Application



Preliminary Interest is by Product

Preliminary Interest (number of tranches)				
Product	Preliminary Interest at the Minimum Starting Price:	Preliminary Interest at the Maximum Starting Price:		
One-year	13	13		
Two-year	13	13		

- Bidder provides number of tranches that it intends to bid of each product at the minimum and maximum starting prices
- Preliminary interest in a product at a given price should not exceed the indicative offer at that price
- Sum of preliminary interests can exceed the indicative offer



Bidders are Subject to Load Caps

- A bidder cannot bid or win more than 80% of the tranches available at the start of the auction
- Amount a bidder can bid and win in a given auction could be further reduced to the credit-based tranche cap depending on creditworthiness assessment of Bidder or Guarantor

Credit Rating for Bidder or Guarantor			
S&P	Moody's	Fitch	Credit Based Tranche Cap
BB and above	Ba2 and above	BB and above	No cap
BB-	Ba3	BB-	10
Below BB-	Below Ba3	Below BB-	5
	Not rated		5



Additional Part 2 Requirements

2. Submit pre-bid security

- Each Qualified Bidder must submit a letter of credit or cash in an amount of \$500,000 per tranche of its indicative offer at the maximum starting price
- Additional pre-bid security may be required (\$300,000 per tranche)

Certify compliance with Associations and Confidential Information Rules

- Certify that the Qualified Bidder is not "associated with" another Qualified Bidder to promote competitiveness of the Auction
- Keep information related to the Auction confidential



Additional Part 2 Requirements

4. Provide Additional Certifications

- Agree that bids in auction will be a binding obligation
- Agree not to assign rights as Registered Bidder

5. Requirements for foreign entities

- A foreign bidder or a bidder desiring to rely on the creditworthiness of a foreign entity must provide the executed additional documents required under the Master SSO Supply Agreement
- Additional documents should incorporate all changes required by AEP
 Ohio upon review of the draft documents submitted with the Part 1

 Application



List of Inserts and to Whom They Apply

#	Insert	When Applicable	
P2-1	Cash Certification	Applicable in Specific Circumstances	
P2-2	Certifications	REQUIRED OF ALL BIDDERS	



Part 5 | Bidding in the Auction



Auction Format is a Clock Auction

Multi-product design

Tranches for all products are procured at once

Multi-round design

- Suppliers state how many tranches they want to supply at prices suggested by the Auction Manager
- Price for a product ticks down if there is excess supply for that product
- Suppliers can switch their bids from one product to another



Rounds Have Three Phases

Bidding Phase

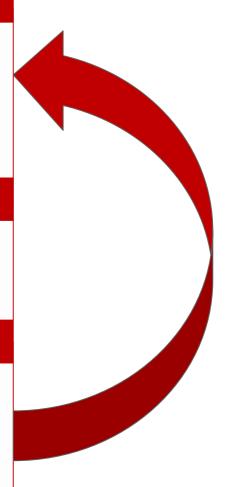
- Suppliers state how many tranches they want to supply at going prices for the round
- Auction Manager informs Registered Bidders of Round 1 prices no later than 3 days before auction

Calculating Phase

 Auction Manager tabulates the results of that round's bidding phase and calculates the prices for the next round

Reporting Phase

- Information provided to bidders:
 - Total Excess Supply range; and
 - Going prices for next round





Possible Reduction of Volume

- If there is insufficient supply to ensure competitive bidding, the Auction Manager has the discretion to reduce the volume
- 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 have been met, the discretion to reduce the volume will be eliminated



Bid in Round 1

- A bid in round 1 is a number of tranches of each product that the bidder is willing to supply at the round 1 prices
- Bidder cannot bid (in total across all products) more than its initial eligibility determined by the indicative offer at the maximum starting price
- Bidder will not be able to increase the number of tranches bid throughout the Auction (but a bidder may increase the number of tranches bid on a particular product by switching)



Sample Reports

Bidder sees:

- Range of total excess supply
 - Total excess supply aggregates excess supply for both products and free eligibility
 - Range provided includes actual excess supply
- The next round prices
- The result of the bidder's own bid

Report: Round 1		
Total Excess Supply 51-55		
Product	Round 2 Price (\$/MWh)	
One-year	67.75	
Two-year	69.25	

Bidder has no information about others' bids, identities or eligibilities



Bidding in Round 2 and Subsequent Rounds

- In response to reduction in prices, a bidder may:
 - Leave bid unchanged
 - Withdraw tranches from the Auction
 - Switch: Reduce tranches bid on one product and increase tranches bid on another
 - Withdraw and Switch
- Bidder cannot bid more than its eligibility across all products
 - In round 2, eligibility is the number of tranches bid in round 1
 - In round 3 and all subsequent rounds, eligibility in a round is the eligibility in the prior round less any tranches that were withdrawn from the Auction



Withdrawing Tranches

 When reducing the number of tranches bid, a bidder must provide an exit price

	One-year	Two-year
Price Round 1 (\$/MWh)	60.00	62.00
Bid Round 1 (tranches)	6	3
Price Round 2 (\$/MWh)	58.00	61.75
Bid Round 2 (tranches)	6	2
Exit Price		61.88

- Exit price is a last and best offer
 - Above current going price
 - Below or equal to previous going price
- Eligibility is lost whether or not the withdrawal is retained





	One-year	Two-year
Price Round 1 (\$/MWh)	60.00	62.00
Bid Round 1 (tranches)	6	3
\triangle	+1	-1
Price Round 2 (\$/MWh)	58.00	61.75
Bid Round 2 (tranches)	7	2
Switching Priority	1	-

- A bidder can reduce the tranches bid on one product and increase the same number of tranches bid on the other product
- This is a request to switch, which could be denied





	One-year	Two-year
Price Round 1 (\$/MWh)	60.00	62.00
Bid Round 1 (tranches)	6	3
\triangle	+1	-2
Price Round 2 (\$/MWh)	58.00	61.75
Bid Round 2 (tranches)	7	1
Exit Price		61.88

- When the reduction in the number of tranches bid on one product is greater than the increase in the number of tranches bid on the other product, the bidder will be asked to name an exit price for the tranche(s) withdrawn
- Eligibility is lost whether or not the withdrawal is retained



How Does the Auction Continue and Close?

- Auction continues as long as there is positive total excess supply
 - When there are more tranches bid than there are available
- When the auction closes, a uniform price is determined for each product that is the auction clearing price for that product
- Bidding on all products will stop at the same time and all bidders that win tranches for a product get the same price
 - Price for a product is the lowest price at which tranche target for the product is filled
 - Could be the going price of the last round, an exit price, or the price associated with a denied switch



Auction Clearing Price Example

Round	Price \$/MWh	Bidder A	Bidder B	Bidder C	#Bid	Target	#Bid – Target
R11	39.42	7	8	4	19	17	2
R12	38.68	5	7	2	14	17	-3

Tranches withdrawn	2	1	2
Exit Prices	38.69	38.99	39.42

Retained Tranches	2	1	0
Auction Clearing Price		\$38.99	

To fill the tranche target of 17 tranches:

- 1. take 14 tranches bid at going price
- 2. take 2 tranches at \$38.69
- 3. take 1 tranche at \$38.99

Auction clearing price is \$38.99/MWh, the lowest price at which all tranches available are filled



Basics of the Bidding Methods

- Bidders submit bids online using the Auction Software. The Trial Auction (Wednesday, October 30, 2019) is the bidders' opportunity to practice
- 2. The backup bid procedure is by phone
- 3. The last bid submitted and verified in the bidding phase and processed by the Auction Software is the bid that counts. A backup bid counts when entered and verified by the Technical Assistant in the bidding phase and processed by the Auction Software, not when it is called in
- 4. It is the bidder's responsibility to get a bid in on time. It is the bidder's responsibility to ascertain the systems needed to minimize the chance that technical difficulties will impair its ability to bid in the Auction
- 5. If providing a backup bid, it is the bidder's responsibility to provide a complete bid consistent with the CBP Rules



System Requirements are Minimal

Standard PC	Windows Vista, Windows 7 or later, or MacOS 10.7 or later		
Internet Connection	Primary access through a company network		
Supported Web Browser	Internet Explorer 11 or later, as well as the most recent versions of Mozilla Firefox, Apple Safari, or Google Chrome		



Contact the Auction Manager Team

NERA Economic Consulting
Auction Manager
For AEP's Ohio CBP
Contact us by email at AEP-CBP@nera.com

Address for delivery of pre-bid letter of credit

NERA – Auction Manager

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Questions?

 To submit questions to the presenters, please locate the "Q&A" on the right hand side of your screen, and select "All Panelists" in the "Send to" box; type in your question and click "Send" to submit your question

