



AEP Ohio Competitive Bidding Process March 2023 Auction

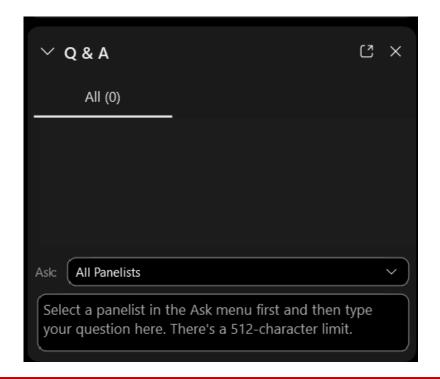
Bidder Webcast Monday, January 9, 2023

Katie Orlandi, NERA **Rachel Northcutt**, NERA **Matt Pettit**, NERA



Submitting Text Questions during the Webcast

 To submit text questions to the presenters, please locate the "Q&A" panel on the righthand side of your screen, type in your question, and hit Enter to submit your question



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



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

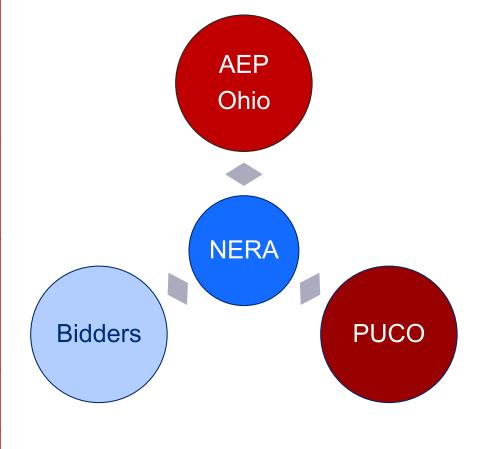
- These governing documents include:
 - Public Utilities Commission of Ohio ("PUCO") Orders under Case No. 16-1852-EL-SSO (April 25, 2018) and Case No. 17-2391-EL-UNC (July 15, 2020, August 26, 2020, June 16, 2021, and February 9, 2022)
 - Bidding Rules for the Auctions Under the Competitive Bidding 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 https://www.aepohiocbp.com/



NERA's Role as Auction Manager

Role	Description
Communication	To be the single point of contact with bidders All questions must be referred to the Auction Manager
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
- 2. Product Design and Contract
- 3. CBP Website
- 4. Application Process
- 5. Bidding in the Auction



Part 1 Overview



Upcoming Auction is on March 7, 2023

- This is the final auction of a series of twelve full requirements auctions under Case No. 16-1852-EL-SSO ("ESP IV")
- This March 2023 Auction seeks to procure 55 tranches of a 12-month product with a contract term of June 1, 2023, to May 31, 2024 (the tranche target of 55 tranches is based on AEP Ohio's revised schedule approved on February 9, 2022, under Case No. 17-2391-EL-UNC in the picture below and includes 5 unfilled tranches from the November 2022 Auction)

				2047	1	2018			2019		2020		2021		2022	2023	2024
			_	2017		2018			2019		2020	+	2021	+	2022	2023	2024
Auction	Product Months			111112	1 2 3 4	5 6 7 8 9	10 11 12 1	1 2 3 4	5 6 7 8 9 10 11	12 1 2 3 4	5 6 7 8 9 10 11 1	2 1 2 3 4	5 6 7 8 9 10 11 1	12 1 2 3 4	5 6 7 8 9 10 11 1	2 1 2 3 4 5 6 7 8 9	0 10 11 12 1 2 3 4 5
	12	17				17%		12 Mon	th								
1 (Nov. 2017)	24	17	40	1		17%				24 Mor	th						
,	36	16				16%						36 Mon	th				
	12	17				17%		12 Mon	th								
2 (Mar. 2018)	24	17	40		2	17%				24 Mor	ith						
	36	16				16%						36 Mon	th				
3 (Nov. 2018)	12	17	13			·	3		17%	12 Mor	th						
4 (Mar. 2019)	12	17	13					4	17%	12 Mor	th						
5 (Nov. 2019)	12	17	27								ADLE:	/lon	th		_		
3 (NOV. 2013)	24	17	21							J4 O 11	1			24 Mor	nth		
6 (Mar. 2020)	12	17	27							6	17%	12 Mon	th				
5 (THAT 7 2020)	24	17									17%			24 Mor			
7 (Nov. 2020)	12	17	26								7		17%	12 Mor			
, ,	12	16											16%	12 Mor			
8 (Mar. 2021)	12	17	26									8	17%	12 Mor			
2 (1)	12	16											16%	12 Mor		40.00	
9 (Nov. 2021)	12	50	40										9	40	50%	12 Month	
10 (Mar. 2022)	12	50	40											10	50%	12 Month	12 Month
12 (Mar. 2023)*		50	40												- 111	12 50%	12 Month
12 (Iviar. 2023)**	12	50	40													12 50%	12 Wonth

The March 2023 Auction will procure 55 tranches of a 12-month product



Results of Previous Auction

Registered Bidders	7
Rounds in the Auction	4
Range of Starting Price	\$100/MWh - \$130/MWh
Delivery Period Start	June 1, 2023

Product	Tranche Target	Tranches Procured	Clearing Price (\$/MWh)
One-year	50	45	119.98

PUCO accepted results on November 2, 2022



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



Load Will Be Divided into Tranches

Auction Date

Tuesday, March 7

Product	Delivery Period	Tranche Target	Load Cap	Tranche Size
12-Month	June 2023- May 2024	55	44	1%



Auction Format is a Clock Auction

- Multiple tranches of a single term
- Multiple rounds
 - Each round, suppliers state how many tranches they want to supply at the going price announced by the Auction Manager
 - From one round to the next, the auction continues and the price ticks down if there is excess supply
- No sealed bid round: bidders provide exit prices as they withdraw tranches throughout the Auction
- Auction establishes a single clearing price

Announcement: MW-Measure



- 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)	3,489
MW-measure*	34.89

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

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



Key Events

M	Т	W	Th	F
Jan. Webcast 9	10	11	P1 Window 12 Opens	13
16	17	18	19	20
23	24	25	26	P1 Due
30	31	Feb.	P1 Notification	P2 Window 3 Opens
6	7	8	9	10
13	14	15	16	17
President's 20 Day	P2 Due	22	23	24
27	P2 Notification 28	Mar. Trial Auction	Round 1 Price	3
6	Auction Starts	8	9	10

By Jan. 12: Bidders can access online form

Announcements:

Jan. 09: Tranche target, tranche size, MW-measure, seasonal factors

By Jan. 17: Minimum and maximum starting prices

Feb. 03: Update to seasonal factors and MW-measure as necessary

Mar. 02: Round 1 price for Registered Bidders



Application Process is Online

Part 1 Application (Jan. 12 – Jan. 27)

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

Part 2 Application (Feb. 3 – Feb. 21)

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

No hardcopies required!



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 credit ratings of Bidder or Guarantor
- The credit-based tranche caps have been increased for the March 2023
 Auction and are provided in the table below:

Credit I			
S&P	Credit-Based Tranche Cap		
BB and above	Ba2 and above	BB and above	No cap
BB-	Ba3	BB-	15
Below BB-	Below Ba3	Below BB-	8
	8		

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 price 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 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

www.AEPOhioCBP.com



AEP OHIO

NERA ECONOMIC CONSULTING

AEP Ohio Competitive Bidding Process for SSO Supply

Home

Search

Background

Information

Data Room

Calendar

Contact Us

Application Website

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:

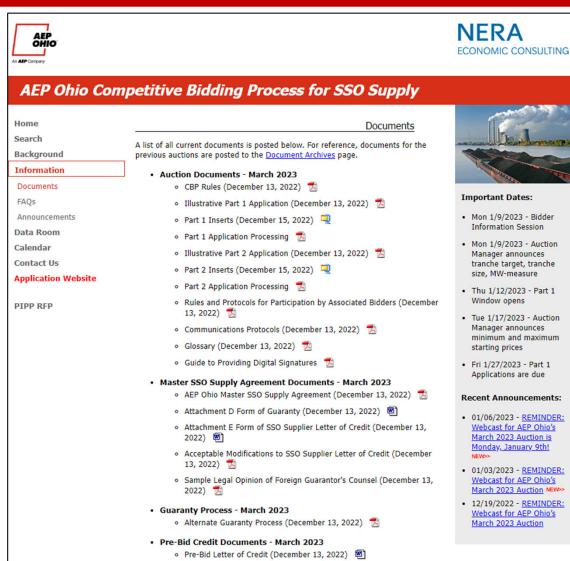
- Mon 1/9/2023 Bidder Information Session
- Mon 1/9/2023 Auction Manager announces tranche target, tranche size, MW-measure
- Thu 1/12/2023 Part 1 Window opens
- Tue 1/17/2023 Auction Manager announces minimum and maximum starting prices
- Fri 1/27/2023 Part 1 Applications are due



Information Tab

Document page includes:

- **CBP** Rules
- Master SSO Supply Agreement
- **Qualification Information**
- Credit Instruments
- **Communications Protocols**
- **Associated Bidder Rules**
- Glossary of key terms
- **Guide to Providing Digital** Signatures



· Acceptable Modifications to Pre-Bid Security Documents (December 13,

2022)



Data Room and Data Categories



Data Room includes:

Files updated on or before the 20th of each month:

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

Additional files updated less frequently:

 Government Aggregation (data through September 2022)



Ask a Question Through the CBP Website

PIPP RFP

- 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			
Background	Name *:	ı.	
Information	Company *:		
Data Room	Email Address *:		
Calendar	Question/Comment *:		
Contact Us			
Register			
Ask a Question			
RSVP for an Information Session		I'm not a robot	reCAPTCHA Privacy - Terms
Contact the Auction Manager		Submit	
Register for an Application Account			
Application Website			



Part 4 | Application Process



Accessing the Application Website

- The URL to access the online forms is: https://aepohiocbp-application.com
- The application website is also accessible via a link on the CBP website



New Bidders Must Register for your Online Application Account



www.AEPOhioCBP.com

application

Home	Register for an Application Account			
Search	Please complete the Expression of Interest to request an account for the appl			
Background	portion of the website. Application materials for AEP Ohio's CBP are submi			
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 :			
Application Website	Secondary Contact Mobile :			
	Secondary Contact Email :			

The individual that registers for the account will receive an email with account activation instructions.

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

Current Account Holders and Account Activation



- Current account holders do not need to re-register for an account to access the online forms
 - For Returning Bidders that qualified to participate in an auction in 2021 or later, an email with instructions on how to activate their account will be sent to the Representative
 - For entities that registered for an account in 2021 or later, the email with instructions to activate the account will be sent to the person that registered for the account
- All account holders (including Returning Bidders) will need to activate their account by following the instructions provided in the account activation email

The Auction Manager will send instructions for accessing and completing the online forms to all account holders prior to the opening of the Part 1 Window



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



Download the Inserts from the CBP Website

The Inserts are available on https://aepohiocbp.com/

Information / Documents





Completing Inserts with Digital Signatures

- Inserts may be:
 - Printed, signed (and notarized if required), scanned, and uploaded;
 OR
 - Submitted with a digital signature and additional documentation or information verifying the identity of the signatory
- Digitally signed Inserts are not required to be notarized
- If completing an Insert with a digital signature, additional documentation or information to verify identity of signatory may include:
 - A certificate of completion from DocuSign
 - A Final Audit Report from Adobe Sign
 - Evidence that the digital signature has been certified by the signatory using a document signing certificate (such as that through Adobe Acrobat)
 - Other documentation or information produced by another commercially available software that can be used to verify the identity of the signatory

Guide to Providing Digital Signatures available on CBP website



List of Inserts and to Whom They Apply

#	Insert	When Applicable	Notary Line
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; retained for returning bidders	YES
P1-5	PJM Requirements	Only Applicable in Limited Circumstances; retained for returning bidders	NO
P1-6	Certifications	REQUIRED OF ALL BIDDERS	NO
P1-7	Bidding Agreement	Only Applicable in Limited Circumstances	NO



- 1. Submit an indicative offer
- 2. Submit pre-bid security (pre-bid letters of credit must be sent via electronic means only to AEP-CBP@nera.com)
- 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

- 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 (to be announced by January 17, 2023)



- 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



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
- No additional pre-bid security is required

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



Pre-Bid Letter of Credit – Electronic ONLY

- The standard form of the Pre-Bid Letter of Credit to be submitted as electronic PDF file only
- If providing a pre-bid letter of credit, it must be provided ONLY to the Auction Manager at AEP-CBP@nera.com
- Electronic PDF version is to be the operative instrument and hardcopies of the Pre-Bid Letter of Credit will NOT be accepted

Opportunity to propose modifications to the standard form of the Pre-Bid Letter of Credit with the Part 1 Application



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

No Notary Public line on Part 2 Inserts



Part 5 Bidding in the Auction



Rounds Have Three Phases

Bidding Phase

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

Calculating Phase

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

Reporting Phase

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





Possible Reduction of Tranche Target

- If there is insufficient supply to ensure competitive bidding, the Auction Manager has the discretion to reduce the tranche target
- 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 tranche target will be eliminated



Bid in Round 1

- A bid in round 1 is a number of tranches that the bidder is willing to supply at the round 1 price
- Bidder cannot bid 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



Sample Reports

Bidder sees:

- Range of total excess supply
 - Range provided includes actual excess supply
- The next round price
- The result of the bidder's own bid

Report: Round 1		
Total Excess Supply	106 - 110	
Round 2 Price (\$/MWh)	123.50	

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



Bidding in Round 2 and Subsequent Rounds

- In response to a reduction in price, a bidder may:
 - Leave bid unchanged
 - Withdraw tranches from the Auction
- Bidder cannot bid more than its eligibility
 - 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

Price Round 1 (\$/MWh)	130.00
Bid Round 1 (tranches)	16
Price Round 2 (\$/MWh)	123.50
Bid Round 2 (tranches)	15
Exit Price	126.20

- Exit price is a last and best offer
 - Above current going price
 - Below or equal to previous going price



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 that is the auction clearing price
- Two cases on how the auction clearing price is determined:
 - when the number of tranches bid is equal to the number of tranches available, the auction clearing price is the price of the final round
 - when there are fewer tranches bid than tranches available, the auction clearing price is lowest exit price at which the tranche target is filled



Auction Clearing Price Example

Round	Price \$/MWh	Bidder A	Bidder B	Bidder C	#Bid	Target	#Bid – Target
R11	99.82	19	24	14	57	55	2
R12	99.02	17	23	12	52	55	-3

Tranches withdrawn	2	1	2
Exit Prices	99.47	99.65	99.79

Retained Tranches	2	1	0
Auction Clearing Price		\$99.65	

To fill the tranche target of 55 tranches:

- 1. take 52 tranches bid at going price
- 2. take 2 tranches at \$99.47
- 3. take 1 tranche at \$99.65

Auction clearing price is \$99.65/MWh, the lowest price at which all tranches available are filled



Basics of the Bidding Methods

- 1. Bidders submit bids online using the Auction Software. The Trial Auction (Wednesday, March 01, 2023) 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
- 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

If providing a Pre-Bid Letter of Credit, it must be sent electronically to the Auction Manager by email at AEP-CBP@nera.com



Questions?

 To submit text questions to the presenters, please locate the "Q&A" panel on the righthand side of your screen, type in your question, and hit Enter to submit your question

