

AEP Ohio Competitive Bidding Process November 2018 Auction

**Bidder Webcast
Friday, September 7, 2018**

**Benjamin Chee, NERA
Chantale LaCasse, NERA**

Disclaimer

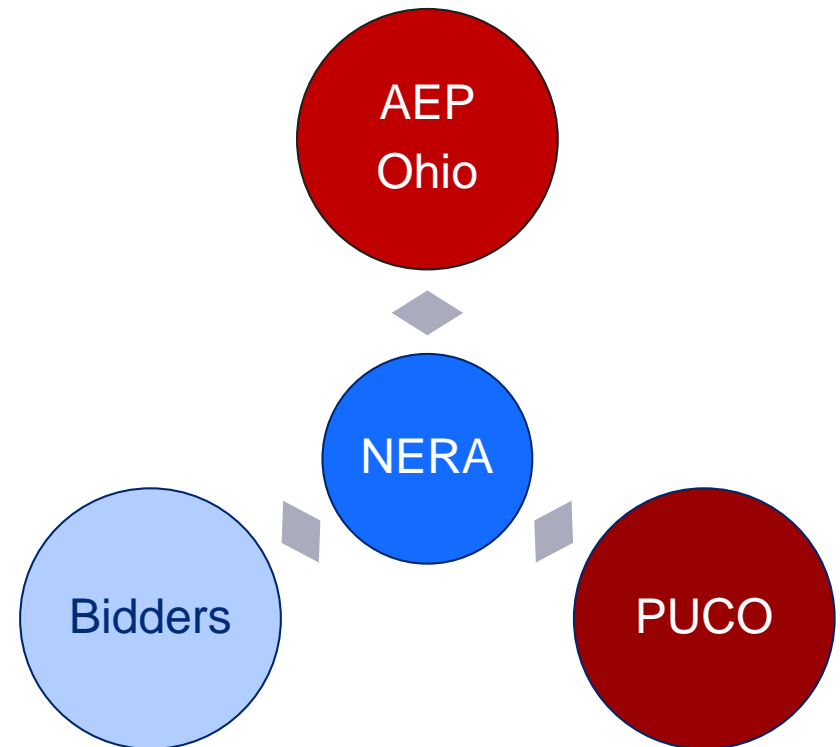
Any statements herein describing or referring to documents and agreements are summaries only, and are ***qualified in their entirety*** by reference to such governing documents

- 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

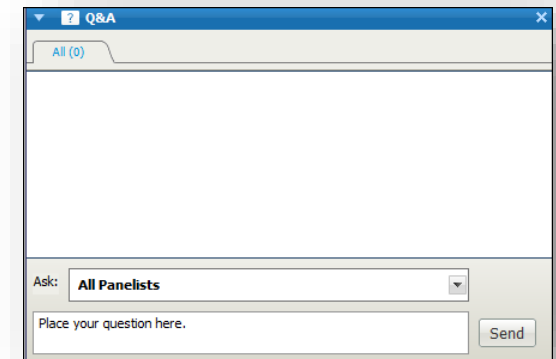


Agenda

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, 2018

- This is the third of a series of twelve **full requirements auctions** under **Case No. 16-1852-EL-SSO** (“ESP IV”)

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

...

Recap of Notable Changes under ESP IV

- Credit-based tranche cap is
 - applied in a given auction across all products
 - no longer an overall cap across all auctions
- Requirements for foreign entities
 - In Part 1, a foreign bidder (or foreign guarantor) must provide **drafts of additional documents required under the Master SSO Supply Agreement**
 - In Part 2, such bidder must provide the **executed additional documents** incorporating all changes required by AEP Ohio

Results of Previous Auction

Registered Bidders	12
Rounds in the Auction	17
Range of Starting Prices	\$65/MWh - \$85/MWh
Delivery Period Start	June 1, 2018

Product	Tranche Target	Clearing Price (\$/MWh)
12-month	17	52.01
24-month	17	48.29
36-month	16	46.53

PUCO accepted results on March 8, 2018.

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
Monday, November 5

Product	Delivery Period	Tranche Target	Load Cap	Tranche Size
12-month	June 2019- May 2020	17	13	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, auction continues and price ticks down if there is positive total excess supply
- **No sealed bid round**: bidders provide exit prices as they withdraw tranches throughout the Auction
- Auction establishes a **single clearing price**

Announcement: Minimum and Maximum Starting Prices, MW-Measure

- The **minimum and maximum** starting prices are:

Max	\$80/MWh
Min	\$60/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)	2,504
MW-measure*	25.04

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

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

Key Events

M	T	W	Th	F
Sep. 17	18	19	20	21 P1 Window Opens
24	25	26	27	28
Oct. 1	2	3 P1 Due	4 P1 Notification	5
8	9	10 P2 Window Opens	11	12
15	16	17	18	19
22	23 P2 Due	24	25	26
29	30 P2 Notification	31 Trial Auction	Nov. 1	2
5 Auction Starts	6	7	8	9

By September 21: Bidders can access account for application website

Announcements:

Sep. 7: Tranche targets, tranche size, MW-measure, and range of starting price

Oct. 15: Update to seasonal factors and MW-measure

Oct. 31: Round 1 price for Registered Bidders

Application Process is Online

Part 1 Application (Sep. 21 – Oct. 3)

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

Part 2 Application (Oct. 10 – Oct. 23)

- 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 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 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

Navigation

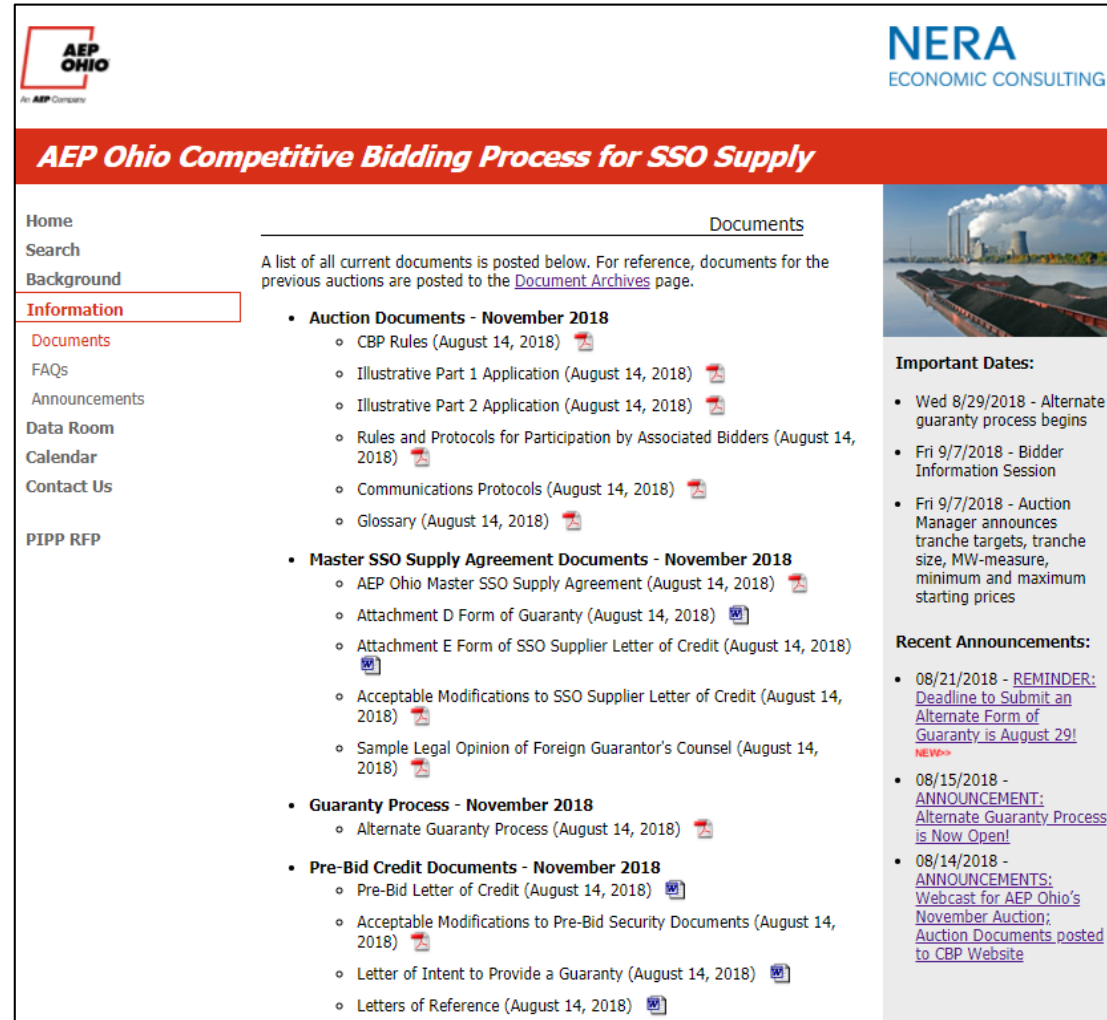


The screenshot shows the website for the AEP Ohio Competitive Bidding Process for SSO Supply. At the top left is the AEP OHIO logo. At the top right is the NERA ECONOMIC CONSULTING logo. A red banner across the top contains the title "AEP Ohio Competitive Bidding Process for SSO Supply". Below the banner is a navigation menu with items: Home (highlighted with a red box), Search, Background, Information, Data Room, Calendar, Contact Us, and PIPP RFP. The main content area features a "Home" heading and a paragraph: "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." To the right of the main text is a photograph of a city skyline. Below the photo is a section titled "Important Dates:" with a bulleted list: "Wed 8/29/2018 - Alternate guaranty process begins", "Fri 9/7/2018 - Bidder Information Session", and "Fri 9/7/2018 - Auction Manager announces tranche targets, tranche size, MW-measure, minimum and maximum starting prices". Below that is a section titled "Recent Announcements:" with a bulleted list: "08/21/2018 - [REMINDER: Deadline to Submit an Alternate Form of Guaranty is August 29!](#)" followed by "NEW>>".

Key Dates and Announcements

Document page includes:

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



AEP OHIO
An AEP Company

NERA
ECONOMIC CONSULTING

AEP Ohio Competitive Bidding Process for SSO Supply

Home | Search | Background | **Information** | Documents | FAQs | Announcements | Data Room | Calendar | Contact Us | PIPP RFP

Documents

A list of all current documents is posted below. For reference, documents for the previous auctions are posted to the [Document Archives](#) page.

- **Auction Documents - November 2018**
 - CBP Rules (August 14, 2018)
 - Illustrative Part 1 Application (August 14, 2018)
 - Illustrative Part 2 Application (August 14, 2018)
 - Rules and Protocols for Participation by Associated Bidders (August 14, 2018)
 - Communications Protocols (August 14, 2018)
 - Glossary (August 14, 2018)
- **Master SSO Supply Agreement Documents - November 2018**
 - AEP Ohio Master SSO Supply Agreement (August 14, 2018)
 - Attachment D Form of Guaranty (August 14, 2018)
 - Attachment E Form of SSO Supplier Letter of Credit (August 14, 2018)
 - Acceptable Modifications to SSO Supplier Letter of Credit (August 14, 2018)
 - Sample Legal Opinion of Foreign Guarantor's Counsel (August 14, 2018)
- **Guaranty Process - November 2018**
 - Alternate Guaranty Process (August 14, 2018)
- **Pre-Bid Credit Documents - November 2018**
 - Pre-Bid Letter of Credit (August 14, 2018)
 - Acceptable Modifications to Pre-Bid Security Documents (August 14, 2018)
 - Letter of Intent to Provide a Guaranty (August 14, 2018)
 - Letters of Reference (August 14, 2018)

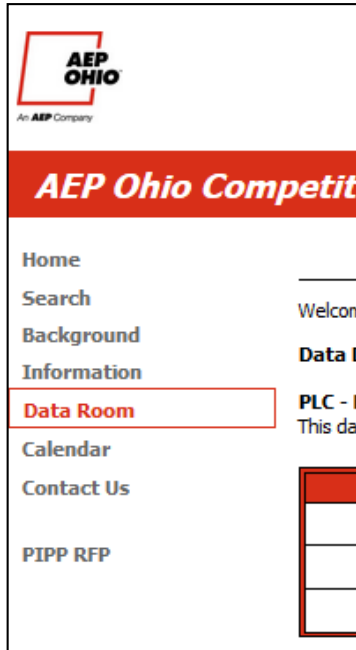
Important Dates:

- Wed 8/29/2018 - Alternate guaranty process begins
- Fri 9/7/2018 - Bidder Information Session
- Fri 9/7/2018 - Auction Manager announces tranche targets, tranche size, MW-measure, minimum and maximum starting prices

Recent Announcements:

- 08/21/2018 - [REMINDER: Deadline to Submit an Alternate Form of Guaranty is August 29!](#)
- 08/15/2018 - [ANNOUNCEMENT: Alternate Guaranty Process is Now Open!](#)
- 08/14/2018 - [ANNOUNCEMENTS: Webcast for AEP Ohio's November Auction; Auction Documents posted to CBP Website](#)

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



NEW! Data Room Changes: New Groups and Zones

Starting with the September 2018 Data Update :

- Hourly Energy, Customer Counts, and switching statistics aggregated across AEP Ohio Rate Zones (sum of CSP and OPCo instead of reported separately)
- Data provided at an aggregate level, as well as for residential and commercial customer groups (small commercial & industrial and large commercial & industrial data is reported together instead of reported separately)
- Data going forward will only be provided using the new groups and zones
- Five years of historical data will be available using the new groups and zones

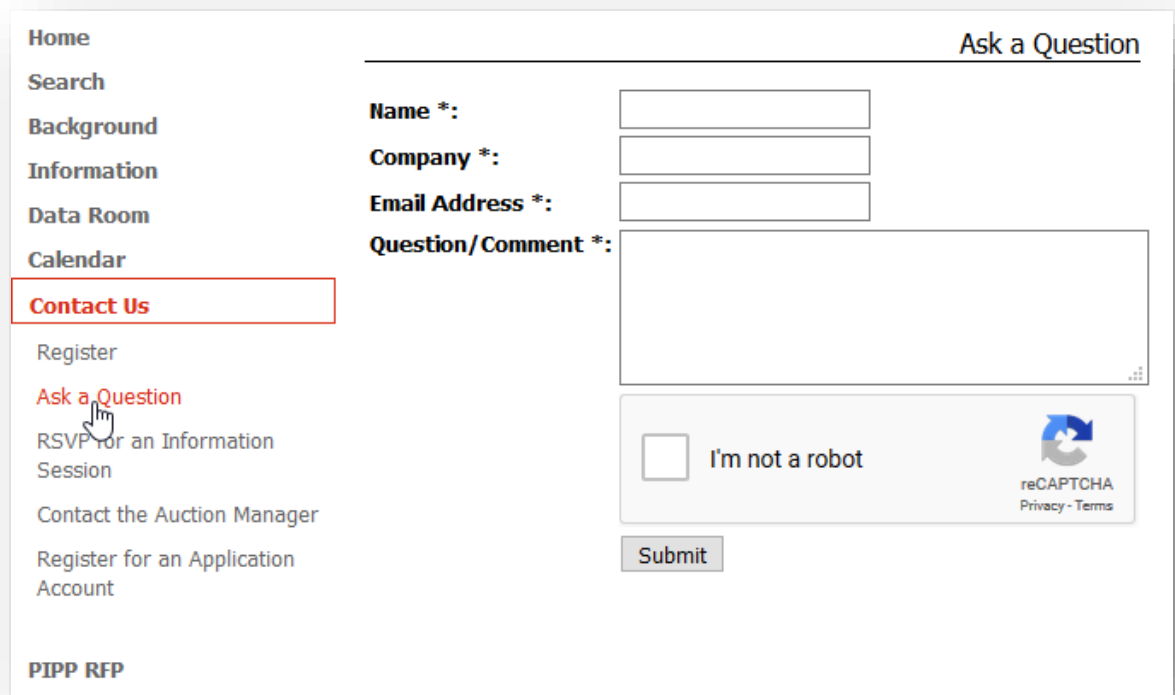
AEP Ohio Hourly Energy & Customer Counts

This data is typically updated monthly on or before the 20th of each month.

Group	Data Series	SSO	CRES	Data Range
Aggregate, Residential, C&I	Hourly Energy			6/1/2013 – 6/30/2018
Aggregate, Residential, C&I	Customer Counts			6/1/2013 – 6/30/2018

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



The screenshot shows the 'Ask a Question' form on the CBP website. On the left is a navigation menu with the following items: Home, Search, Background, Information, Data Room, Calendar, **Contact Us** (highlighted with a red border), Register, Ask a Question (with a mouse cursor), RSVP for an Information Session, Contact the Auction Manager, Register for an Application Account, and PIPP RFP. The main form area is titled 'Ask a Question' and contains the following fields: 'Name *:' with a text input box, 'Company *:' with a text input box, 'Email Address *:' with a text input box, and 'Question/Comment *:' with a large text area. Below these fields is a reCAPTCHA section with a checkbox labeled 'I'm not a robot' and a 'Submit' button. The reCAPTCHA logo and 'Privacy - Terms' link are also visible.

Part 4 | Application Process

Register for your Online Application Account Only for NEW bidders

www.AEPOhioCBP.com



Home
Search
Background
Information
Data Room
Calendar
Contact Us
Register
Ask a Question
RSVP for an Information Session
Contact the Auction Manager
Register for an Application Account
PIPP RFP

Register for an Application Account

Please complete the Expression of Interest to request an account for the application portion of the website. Application materials for AEP Ohio's CBP are submitted online through the application portion of this website.

Company *:
Primary Contact First Name *:
Primary Contact Last Name *:
Primary Contact Phone *:
Primary Contact Mobile :
Primary Contact Email *:
Secondary Contact First Name :
Secondary Contact Last Name :
Secondary Contact Phone :
Secondary Contact Mobile :
Secondary Contact Email :

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

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

Application Process Features and Reminders

- Application process for returning bidders is **streamlined**
 - Reminder of login credentials will be sent to returning bidders
 - 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 credit 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	Required/ or Optional	Waived for Returning Bidders
P1-1	Representative Designation	YES	YES
P1-2	Representative Responsibilities	YES	YES
P1-3	Designation of Nominees Insert	OPTIONAL	NO
P1-4	Legal Representative	YES	YES
P1-5	PJM Requirements	Limited Circumstances	NO
P1-6	Certifications	YES	NO
P1-7	Bidding Agreement	Limited Circumstances	NO

Part 2 Application: To Be Registered as a Bidder

1. Submit an indicative offer
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

1. **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

Indicative Offer at:	Tranches
Minimum Starting Price (60.00/MWh)	(a) <input type="text"/>
Maximum Starting Price (80.00/MWh)	(b) <input type="text"/>
Minimum Pre-Bid Security (\$500,000 x (b))	

- 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

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 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
- **No additional pre-bid security** is required

3. Certify compliance with Associations and Confidential Information Rules

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

4. Provide Additional Certifications

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

Additional Part 2 Requirements

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 include an opinion from foreign counsel and a sworn certificate of the corporate secretary
- 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	Applies to
P2-1	Cash Certification	Special Circumstances
P2-2	Certifications	All Bidders

Part 5 | Bidding in the Auction

Rounds Have Three Phases

Bidding Phase

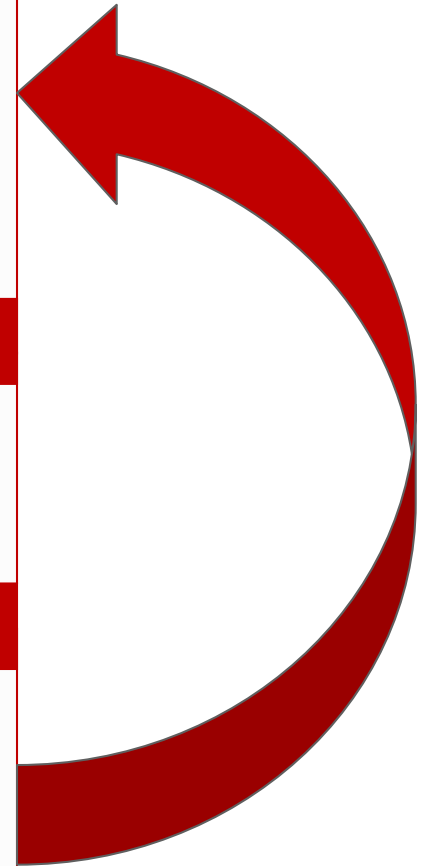
- Suppliers state how many tranches they want to supply at going price in round
- Auction Manager informs Registered Bidders of Round 1 price no later than 3 days before auction

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	51-55
Round 2 Price (\$/MWh)	67.75

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

Information in Bidder User Manual

- **Decrement is related to amount of total excess supply**
 - Price ticks down if there is positive total excess supply
 - Formula or table for determination of decrement will be provided to bidders
 - Auction Manager has discretion to override decrement
- Possible ranges of total excess supply provided in Bidder User Manual
- Bidder User Manual provided to Registered Bidders

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)	70.00
Bid Round 1 (tranches)	3
Price Round 2 (\$/MWh)	65.75
Bid Round 2 (tranches)	2
Exit Price	67.37

- 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 are filled

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

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

Retained Tranches	2	1	0
Auction Clearing Price		\$38.99	

Auction clearing price is \$38.99/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, October 31, 2018) is the bidders' opportunity to practice
2. The backup bid procedure is by phone
3. The last bid submitted and verified by the bidder 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

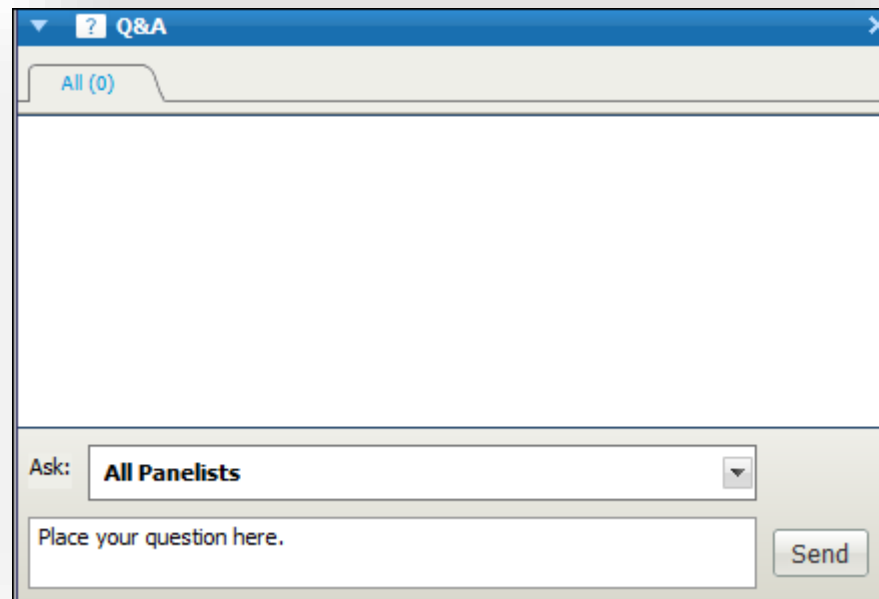
Contact the Auction Manager Team

**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
AEP Ohio CBP
1835 Market Street, Suite 1205
Philadelphia, PA 19103**

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



The image shows a screenshot of a web-based Q&A submission interface. The window title is "Q&A" and it has a close button in the top right corner. Below the title bar, there is a tab labeled "All (0)". The main area of the window is empty. At the bottom, there is a section for submitting a question. It includes a label "Ask:" followed by a dropdown menu currently set to "All Panelists". Below this is a text input field with the placeholder text "Place your question here." and a "Send" button to the right.