

NYISO Administered ICAP Market Auctions

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Intermediate ICAP Course

April 12-13, 2022

Remote Learning

Topics of Discussion

- How ICAP Auctions work
- Pre-Auction activities
- Three different ICAP Auctions types
- Certification
- UCAP Bids and Offers
- The ICAP Event Calendar

Buying and Selling Capacity in NY

- **Buying/selling capacity:**
 - NYISO Auction
 - Bilateral transactions
- **Installed Capacity Suppliers (ICAP Suppliers):**
 - Internal to NYCA
 - External suppliers in neighboring Control Areas

How do ICAP Auctions work?

- ICAP Suppliers offer to sell capacity in Auctions
- LSEs may bid to procure capacity in Auctions to meet their UCAP requirements
- Installed Capacity Marketers also may offer to buy and sell capacity
- NYISO runs Capability Period (Strip) and Monthly Auctions to match bids and offers, to determine the Market Clearing Price
- NYISO runs the ICAP Spot Market Auction to procure UCAP to fulfill any remaining LSE requirements, plus excess capacity obligations, using offers and the applicable ICAP Demand Curve to determine Market Clearing Price

Topic: Pre-Auction Activities

Pre-Auction Activities

- **Sell/Purchase Agreement**
 - Attachment F of ICAP Manual
 - Binding Agreement
 - Signed only once
 - Accepting Terms of Market Process
 - Must be in accordance with the Agreement, MST, and ICAP Manual
- **Data Submission Requirements for Suppliers**
 - See separate presentation, for example, certain capability and operating data

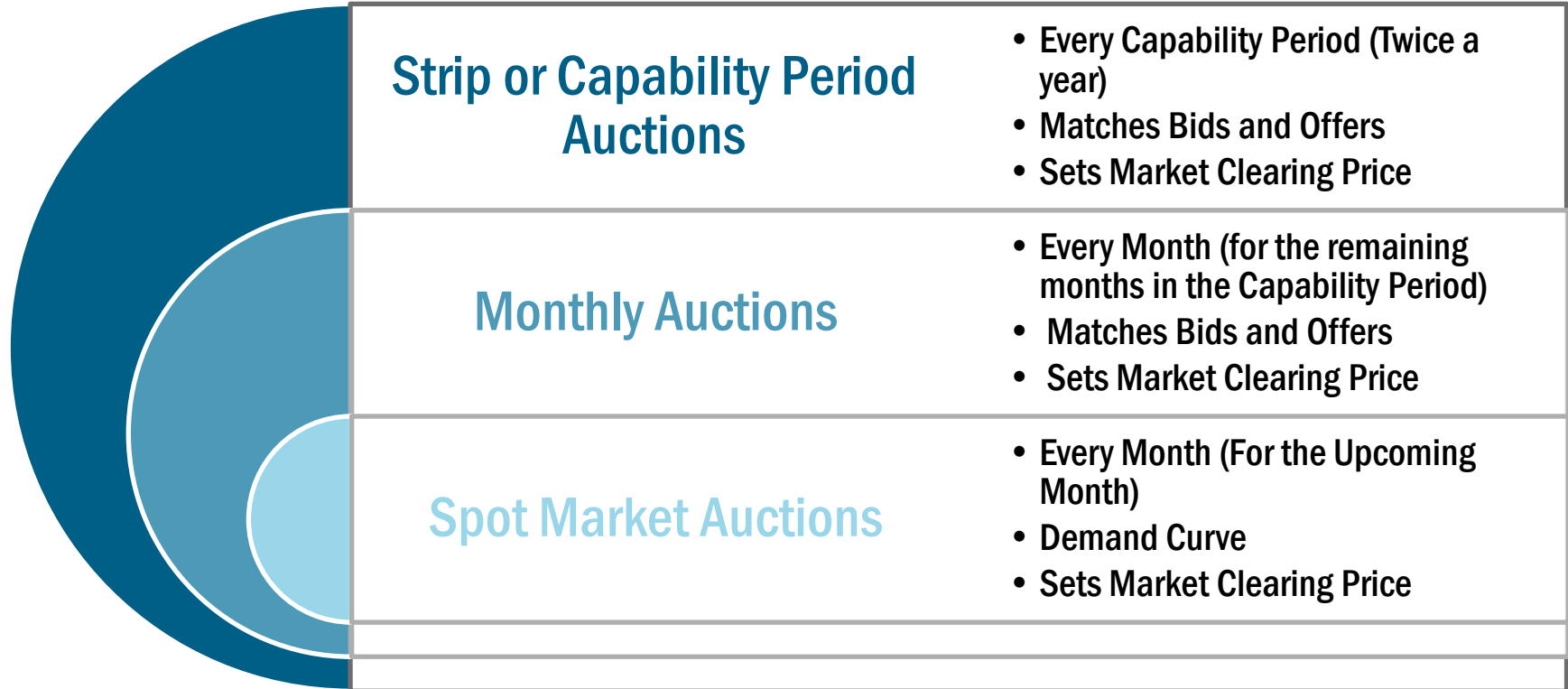
Pre Auction Activities

- **External ICAP Suppliers must provide assurance that**
 - The ICAP Equivalent of the amount of Unforced Capacity it supplies to the NYCA is deliverable to the NYCA
 - The ICAP Equivalent of the amount of Unforced Capacity it supplies to the NYCA will not be recalled or curtailed to satisfy the Load of the External Control Area, or that
 - In the case of Control Area System Resources, the External Control Area in which it is located will afford NYCA Load the same curtailment priority that it affords its own Control Area Native Load.

*** Section 5.12.2 of the Market Administration and Control Area Services Tariff

Topic: ICAP Auction Types

ICAP Market Auction Types



Capability Period Auction

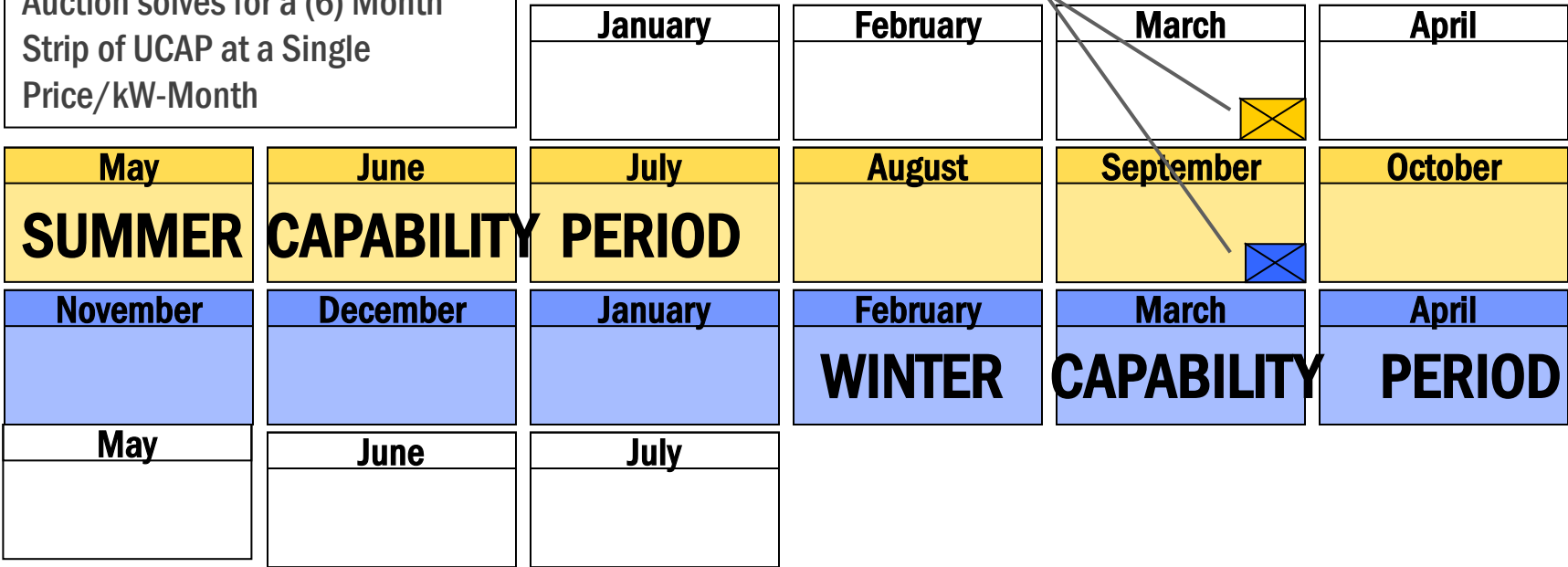
- **6- Month Auction (Strip)**
 - Summer Capability Period Auction
 - May through October
 - Winter Capability Period Auction
 - November through April
- **Held no later than 30 days prior to start of each Capability Period**
- **Exact auction dates identified in the ICAP Event Calendar**
- **UCAP bids and offers applicable to all months of the Capability Period**
 - Same price and MW amount for each month of the Strip auction (6 months)
- **Matches bids & offers, and sets the Market Clearing Price**

Capability Period Auction
(Strip Auction)
Matches Bids & Offers
Sets Market- Clearing Price

Capability Period Auction

Auction is run at least 30 days prior to the start of the Capability Period

Auction solves for a (6) Month Strip of UCAP at a Single Price/kW-Month



Monthly Auction

- Held at least 15 days prior to start of the Obligation Procurement Period (a calendar month)
- Exact auction dates identified in the ICAP Event Calendar
- May bid or offer for any month remaining in the Capability Period
 - Need not be all months, or the same amount of MW, or price
- Matches bids & offers, and sets the Market Clearing Price

Monthly Auction













Matches Bids & Offers

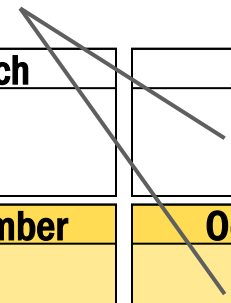
Sets Market-Clearing Price

Monthly Auction

Auction is run at least 15 days prior to the start of the obligation procurement period

May buy/sell for any month remaining in the Capability Period

		January	February	March	April
					
May	June	July	August	September	October
					
November	December	January	February	March	April
					
May	June	July			



Topic: Certification

-Prior to the Spot Market Auction

Certification

- **Certification is a key step to determine the market position for Suppliers and LSEs prior to the Spot Market Auction**

Certification Period

- **Begins the 1st of every month, and is applicable to the next Obligation Procurement Period**
 - For example, starts April 1st for the May Obligation Procurement Period
 - Monthly Auction occurs during the certification period
 - For example, May 2016 Monthly Auction bid/offer period is April 8th 8:00 AM – April 11th 5:00 PM
- **Closes just before the Spot Market Auction**
 - Generally one business day between certification closing and Spot Market Auction opening
 - For example, Certification closes on Thurs. (4/21/2016 at 5:00 PM), and the Spot Market Auction offer period opens on Mon. (4/25/2016 at 8:00 AM)

Certification: Supplier Obligations

- ICAP Suppliers identify ('certify') the MW amounts of UCAP sold through bilaterals, Strip and Monthly auctions by allocating those sales to specific Resource PTIDs
- Internal ICAP Suppliers
 - Allocate the UCAP sold in Strip or Monthly Auctions to specific Resource PTIDs or Resale UCAP
 - Enter, maintain, and confirm Internal Bilateral transactions, then allocate those sales to specific Resource PTIDs

Certification: Supplier Obligations

■ External Capacity Resources

- Imports must include PTID with any offer
 - Awarded offers are automatically allocated to PTIDs
- Submit MIS Transaction ID numbers for all types of External Capacity Resources:

- Export Bilateral Transactions (EBT)
- Export Purchased Capacity (EPC)
- External Auction Sales
- Wheel Through Transactions
- Grandfathered Import Rights (GFR)
- External CRIS Rights (ECRs)
- First Come First Serve (FCFS) Import
- Unforced Capacity Deliverability Rights (UDRs)

Certification: Supplier Obligations

■ External Capacity Resources

- FCFS Import Rights for bilateral transactions need to be confirmed by the seller
- Enter, maintain, and confirm External Bilateral transactions
 - ECRs bilateral transactions
 - Export and Wheels Through bilateral transactions
- MPs must provide MIS transaction IDs in AMS
- Capacity must be deliverable to the NYCA border
- NYISO confirms the capacity in the MIS transaction ID is not committed to another Control Area via inter-area checkout after the Spot Market Auction results are posted

Certification: Supplier Obligations

- **Supplier Shortfall**
 - If ICAP supplier sold more UCAP than was available to allocate to the PTID, it must:
 - **Secure UCAP to cover shortage, or**
 - **If deficient when certification closes, NYISO will purchase the MW amount deficient in the Spot Market Auction, on its behalf**

Certification: LSE Obligations

- UCAP purchased by an LSE that has not been certified by the certification deadline and that is eligible to be used to meet the LSE's UCAP requirements is automatically certified
- LSEs must certify bilateral transactions, it is not done automatically
- If LSE has not procured the full amount of its UCAP requirements in Strip or Monthly auctions, or via confirmed bilaterals or self supply prior to the Spot Market Auction, NYISO purchases in the Spot Market Auction, on its behalf

Spot Market Auction

- Spot Market Auction pertains to a single calendar month (Obligation Procurement Period)
- Purpose
 - Purchase total or remaining capacity amount to cover LSEs' requirements (including excess capacity)
 - Cover any ICAP Supplier Shortfall
 - Provide an opportunity for ICAP Suppliers and LSEs to sell remaining (i.e., unallocated) or Resale UCAP
 - Resale UCAP is purchased capacity that a supplier, marketer or LSE may resell in Spot Market Auction

Spot

Auction

UCAP Available for Sale

Deficiency and Excess UCAP

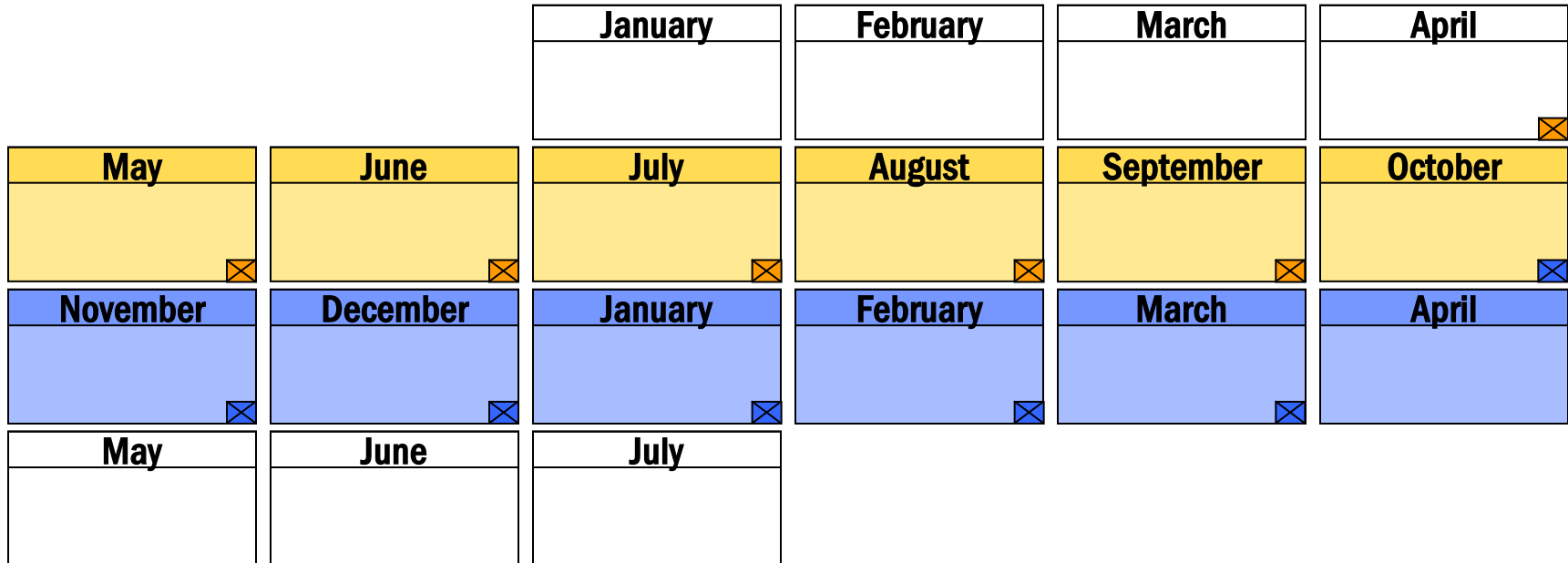
Market-Clearing Price based on Demand Curve

Spot Market Auction

- UCAP Offers to sell for upcoming month (Obligation Procurement period) only
- LSEs do not bid; NYISO “submits” bids for UCAP on their behalf
- Spot Auction is solved using the ICAP Demand Curves
 - Four Demand Curves
 - NYCA and three localities (G-J Locality, NYC, LI)
- Auction results usually posted 2 business days prior to start of the Obligation Procurement Period (month)
- Exact auction dates identified in the ICAP Event Calendar

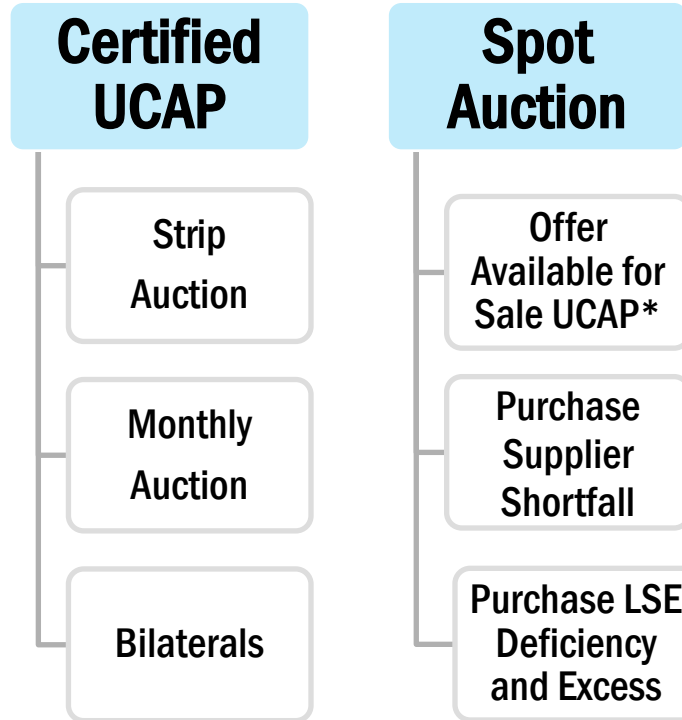
Spot Market Auction

- Auction is run 4-5 business days prior to the start of the month
- May sell for upcoming month only
- Before Spot, must certify Capacity purchased and sold
- Solves using the ICAP Demand Curve



ICAP Market Auction Summary

All purchases and sales in Strip and prior Monthly Auctions, and confirmed bilateral transactions, must be certified at the close of the Certification period, before the Spot Auction opens



*Offers from Suppliers (including LSEs with Resale UCAP above the requirement purchased through Strip & Monthly auctions or through Bilateral transactions)

Topic: UCAP Bids and Offers

Offers to Sell UCAP in Auction

- Offers to sell UCAP electronically submitted into the ICAP Automated Market System (AMS) for:
 - Strip, Monthly, or Spot Market Auctions
- UCAP Offers
 - Offered in MW
 - Entered to the tenth of a MW (≥ 0.1)
 - Offer price in \$/kW/month
 - Entered to the cent ($\geq \$0.00$)

Offers to Sell UCAP in Auction

- **ICAP Suppliers and Marketers determine their offer price subject to:**
 - Offer price associated with External CRIS Rights (ECR) cannot exceed the ECR Offer Cap
 - Offers in Mitigated Capacity Zones (J, G-J) may be subject to Market Mitigation Measures:
 - **Supplier-side and Buyer-side Mitigation Measures will be discussed in another module**

Offers to Sell UCAP in Auction

- Offers to sell UCAP can be \$0.00 (often referred to as a “price taker”), or for the minimum price, seller will accept
- Zero Dollar Offers (“Credit ZDO”) \$0.00/MW Offers are applicable for the Spot Market Auction
 - Prior to close of certification,
 - Can offer some or all capacity in the Spot Market Auction at \$0.00, but this type of offer is not required
 - Users with both “Certify” and “Offer” privilege can allocate Credit ZDO for specific internal PTIDs
 - At close of certification, system creates the actual \$0.00/MW offers for the affected internal PTIDs and Resale MW. ZDO offers cannot be edited after certification closes

Offers to Sell UCAP in Auction

- **Location of ICAP resource**
 - Localities, Rest of State, or neighboring External Control Areas
- **UCAP offered from External Resources in Strip, Monthly, and Spot Auctions must have a PTID associated with the offer**
 - External CRIS Rights Offer has a Right # specified; it will be applied to the ECR Offer Obligation
 - External Spot Market Auction Awards submit MIS Transaction ID numbers after the Spot market Auction
- **UCAP offered from Internal Resources need to specify PTIDs for only the Spot Market Auction**

Entering Offers to Sell in AMS

ISO Installed Capacity

Auction ▾ Mitigation ▾ Certify ▾ **Bids/Offers ▾** Load Forecast ▾ Calendar ▾ Rights ▾ Derating Factor ▾ DMNC ▾ SCR ▾ Billing ▾ Upload/Download

Offers To Sell ▾ Enter Offers
 Bids To Purchase ▾ Copy Offers
 Maintain Offers
 View Seller Awards
 Spot Offer Summary

MP Name: Season: Summer 2017 ▾ Month: May/2017 ▾

ISO Installed Capacity
Insert Offers to Sell

Auction ▾ Mitigation ▾ Certify ▾ **Bids/Offers ▾** Load Forecast ▾ Calendar ▾ Rights ▾ Derating Factor ▾ DMNC ▾ SCR ▾ Billing ▾ Upload/Download

MP Name: Auction Type: Monthly ▾ Auction Month: Aug/2017 ▾ Offer Month: Aug/2017 ▾

Current Status

MP Name		Eastern Time	10-Jul-2017 03:01 PM
Auction Type	Monthly	Offer Period Closes	11-Jul-2017 05:00 PM
Auction Month	Aug/2017	Offer Month	Aug/2017

Add To Cart

Location	PTID	Right #	Offer MW	Offer \$/kW/Month
Location: <input type="text"/>	PTID: <input type="text"/>	Right #: <input type="text"/>	<input type="text"/>	<input type="text"/>

Insert Offers to Sell

Location	PTID	Right #	Offer MW	Offer \$/kW/Month	Offer Total	Delete From Cart
Cart does not contain any offers.						

Bids to Purchase UCAP in Auction

- Bids electronically submitted to the ICAP Automated System (AMS)
- Represents a binding obligation to purchase UCAP in auction
- LSEs' and ICAP Marketer's Bids to purchase UCAP entered for Strip or Monthly Auctions only
 - LSEs don't bid in Spot Auction; NYISO bids for UCAP needed to meet requirements that are not met at the close of certification
- UCAP Bids
 - Bid in MW
 - Entered to the tenth of a MW (≥ 0.1)
 - Bid price in \$/kW/month
 - Entered to the cent ($\geq \$0.00$)

Entering Bids to Purchase UCAP in AMS



[Auction](#) ▾ [Mitigation](#) ▾ [Certify](#) ▾ [Bids/Offers](#) ▾ [Load Forecast](#) ▾ [Calendar](#) ▾ [Rights](#) ▾ [Derating Factor](#) ▾ [DMNC](#) ▾ [SCR](#) ▾ [Billing](#) ▾ [Upload/Download](#)

MP Name Season: Summer 2017 ▾ Month: May/2017 ▾ Display

- Offers To Sell ▸
- Bids To Purchase ▸**
 - Enter Bids
 - Copy Bids
 - Maintain Bids
 - View Buyer Awards

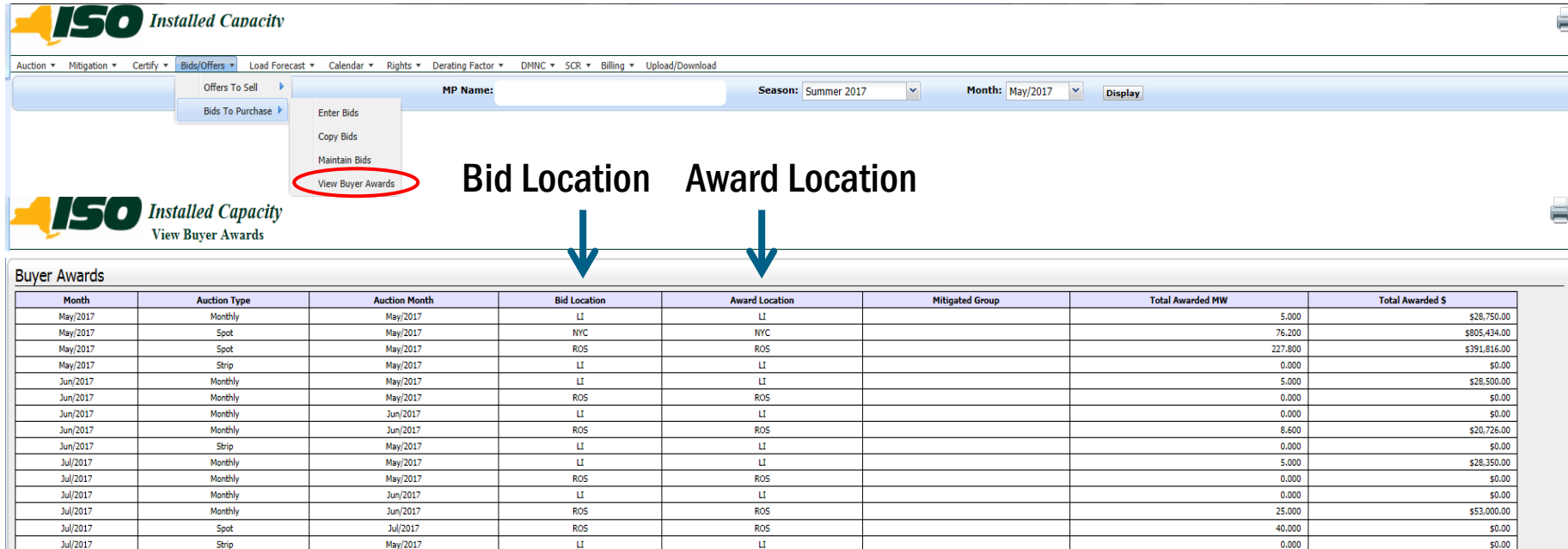
Add to Cart

Location	Bid MW	Bid \$/kW/Month
Location: NYC ▾	<input type="text"/>	<input type="text"/>

Add to Cart

View Buyer Awards

Users may view total Auction Awards from all auctions



The screenshot shows the ISO Installed Capacity web application interface. The 'Bids/Offers' menu is open, and the 'View Buyer Awards' option is highlighted with a red circle. Below the menu, the text 'Bid Location' and 'Award Location' is displayed with blue arrows pointing down to the 'Buyer Awards' table. The table lists various auction details including Month, Auction Type, Auction Month, Bid Location, Award Location, Mitigated Group, Total Awarded MW, and Total Awarded \$.

Month	Auction Type	Auction Month	Bid Location	Award Location	Mitigated Group	Total Awarded MW	Total Awarded \$
May/2017	Monthly	May/2017	LI	LI		5.000	\$28,750.00
May/2017	Spot	May/2017	NYC	NYC		76.200	\$805,434.00
May/2017	Spot	May/2017	ROS	ROS		227.800	\$391,816.00
May/2017	Strip	May/2017	LI	LI		0.000	\$0.00
Jun/2017	Monthly	May/2017	LI	LI		5.000	\$28,500.00
Jun/2017	Monthly	May/2017	ROS	ROS		0.000	\$0.00
Jun/2017	Monthly	Jun/2017	LI	LI		0.000	\$0.00
Jun/2017	Monthly	Jun/2017	ROS	ROS		8.600	\$20,726.00
Jun/2017	Strip	May/2017	LI	LI		0.000	\$0.00
Jul/2017	Monthly	May/2017	LI	LI		5.000	\$28,350.00
Jul/2017	Monthly	May/2017	ROS	ROS		0.000	\$0.00
Jul/2017	Monthly	Jun/2017	LI	LI		0.000	\$0.00
Jul/2017	Monthly	Jun/2017	ROS	ROS		25.000	\$53,000.00
Jul/2017	Spot	Jul/2017	ROS	ROS		40.000	\$0.00
Jul/2017	Strip	May/2017	LI	LI		0.000	\$0.00

Awarded Capacity – Bid and Award Locations

Awarded Capacity: Same Price between locations

- Occasionally, an MP can be awarded capacity in a location they did not bid for
- This scenario could take place in the Capability Period and the Monthly Auctions

For Example:

- For a specific Capability Period or Monthly Auction, when Market Clearing Price (MCP) is the same for the LI and the NYCA, MP could get awarded capacity from the LI location for its NYCA bid

MP Options for the awarded LI capacity

- Option A: Use it to meet requirement in the Locality awarded in
- Option B: Enter into a Bilateral Transaction
- Option C: Offer the capacity into a remaining auction for the same month
- Option D: Not offer the capacity into the remaining auction (subject to mitigation rules for Pivotal Suppliers)

Awarded Capacity: Bid and Award Locations

Example: In the November Monthly Auction:

MP has a 10 MW NYCA requirement
MP bids for 10MW of NYCA capacity at \$3.00/kW-month

NYCA Market Clearing Price (MCP): \$2.00/kW-month
and LI Market Clearing Price (MCP) : \$2.00/kW-month

MP is awarded 8 MW of NYCA capacity at \$2.00

CHARGE to MP: $\$2.00 \times 8 \text{ MW} \times 1000 = \$16,000$

MP is awarded 2 MW of LI capacity at \$2.00

CHARGE to MP : $\$2.00 \times 2 \text{ MW} \times 1000 = \4000

For the November Monthly Auction: Total CHARGE to MP = $\$16,000 + \$4000 = \underline{\$20,000}$

MP Options for Awarded LI Capacity in the New York ISO November Spot Market Auction

If MP chooses Option C (Offer the capacity into a remaining auction for the same month):
MP offers the 2MW at \$0.00, as the 2MW LI capacity is not part of their NYCA requirement

Scenario 1: LI MCP = \$2.50/kW-month
NYCA MCP = \$2.50/kW-month

MP sells 2 MW of in
LI capacity at
\$2.50/kW-month

CREDIT to MP:
 $\$2.50 \times 2 \text{ MW} \times 1000$
= \$5,000

MP is awarded 2 MW
of NYCA capacity at
\$2.50

CHARGE to MP :
 $\$2.50 \times 2 \text{ MW} \times 1000$
= \$5000

Net Total for 10 MW NYCA requirement =
 $\$20,000 - \$5000 + \$5000 =$ CHARGE to MP of
\$20,000

Scenario 2: LI MCP = \$2.50/kW-month
NYCA MCP = \$2.00/kW-month

MP sells 2 MW of in
LI capacity at
\$2.50/kW-month

CREDIT to MP:
 $\$2.50 \times 2 \text{ MW} \times 1000$
= \$5,000

MP is awarded 2 MW
of NYCA capacity at
\$2.00

CHARGE to MP :
 $\$2.50 \times 2 \text{ MW} \times 1000$
= \$4000

Net Total for 10 MW NYCA requirement =
 $\$20,000 - \$5000 + \$4000 =$ CHARGE to MP of
\$19,000

Scenario 2: LI MCP = \$2.50/kW-month
NYCA MCP = \$3.00/kW-month

Market rules will not allow this scenario
to happen

MP Options for Awarded LI Capacity in the November Spot Market Auction

If MP chooses Option D (Not offer the capacity into the remaining auction):

MP will still have to buy 2 MWs in the November Spot Market Auction to fulfil 10 MW NYCA requirement

NYCA MCP = \$2.50/kW-month

MP is awarded 2 MW
of NYCA capacity at
\$2.50

CHARGE to MP :
 $\$2.50 \times 2 \text{ MW} \times 1000$
= \$5000

Net Total for 10 MW NYCA requirement =
 $\$20,000 + \$5000 =$ CHARGE to MP of
\$25,000

ICAP Event Calendar



Auction ▾ Mitigation ▾ Load Forecast ▾ Calendar ▾ Rights ▾ Upload/Download

Start Date From: To:

Event Schedule

Legend:

Winter Season Event

Summer Season Event

Season Change Event

Thursday Jun 20, 2019

05:00 PM	CERTIFICATION - Deadline for Certification for LSEs and Suppliers for Jul	←
05:00 PM	GADS - Deadline for Suppliers to submit GADS data for May activity	
05:30 PM	MITIGATION - Default Reference Price	

Friday Jun 21, 2019

08:00 AM	SCR - Enrollment Period for auction month of Aug Opens	
08:00 AM	SCR - New Aggregation ID Request Period for Aug Opens	
08:00 AM	SCR - Period Opens for TOs to import/modify add backs for non-provisional resources newly enrolled for auction month of Aug	
05:00 PM	LOAD SHIFT - Deadline for TOs to provide daily load shift (customer switching) for Jun	
05:00 PM	TRUE UP - Deadline for TOs to provide true-up load shift (actual data) for LSE activity 3 months prior	

Monday Jun 24, 2019

08:00 AM	SPOT MARKET AUCTION - Offer period opens for Jul Spot Market Auction	←
05:00 PM	IMPORT RIGHTS - Allocated Import Rights w/o MIS transaction IDs entered into Spot Mkt Auction @ \$0.00	

Tuesday Jun 25, 2019

05:00 PM	SPOT MARKET AUCTION - Offer period closes for Jul Spot Market Auction	←
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Thursday Jun 27, 2019

05:00 PM	EXTERNAL TRANSACTIONS - Deadline to submit MIS transaction IDs for ECRs & External Spot awards	
05:00 PM	SCR/EDRP - Deadline to update DRIS contacts to be used for event/test notifications for Jul	
05:00 PM	SPOT MARKET AUCTION - ISO posts results of Jul Spot Market Auction	←

Friday Jun 28, 2019

08:00 AM	SCR - RIPs may begin to report resources with partial PTID Sales for Jul in DRIS	
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Sunday Jun 30, 2019

11:59 PM	IMPORT RIGHTS - Deadline for returns for Aug obligation if ISO announced fully allocated prior to that Certification Period opening	
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Summary - Topics of Discussion

- How ICAP Auctions work
- Pre-Auction activities
- Three different ICAP Auctions types
- Certification
- UCAP Bids and Offers
- The ICAP Event Calendar

Additional Resources

- **Open Access Transmission Tariff and Market Administration and Control Area Services Tariff**
- **Installed Capacity Manual**
- **ICAP Automated Market System User's Guide**