

NYISO Administered ICAP Market Auctions

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Module Objectives

At the conclusion of this module, trainees will be able to:

- Briefly explain how ICAP auctions work
- Identify pre-auction activities
- Distinguish between different ICAP auctions types
- Describe what is meant by the term 'Certification'
- Understand UCAP Bids and Offers
- Discuss 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

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

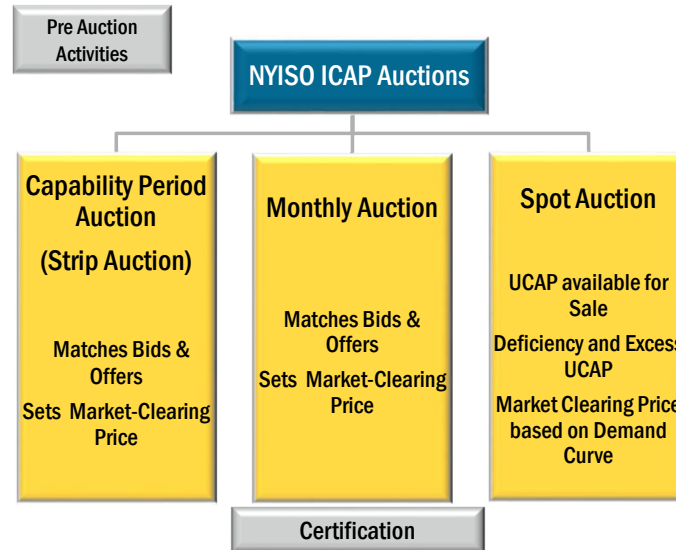
Pre Auction Activities

- 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

ICAP Auction Types

ICAP Market Auctions Types



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9

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

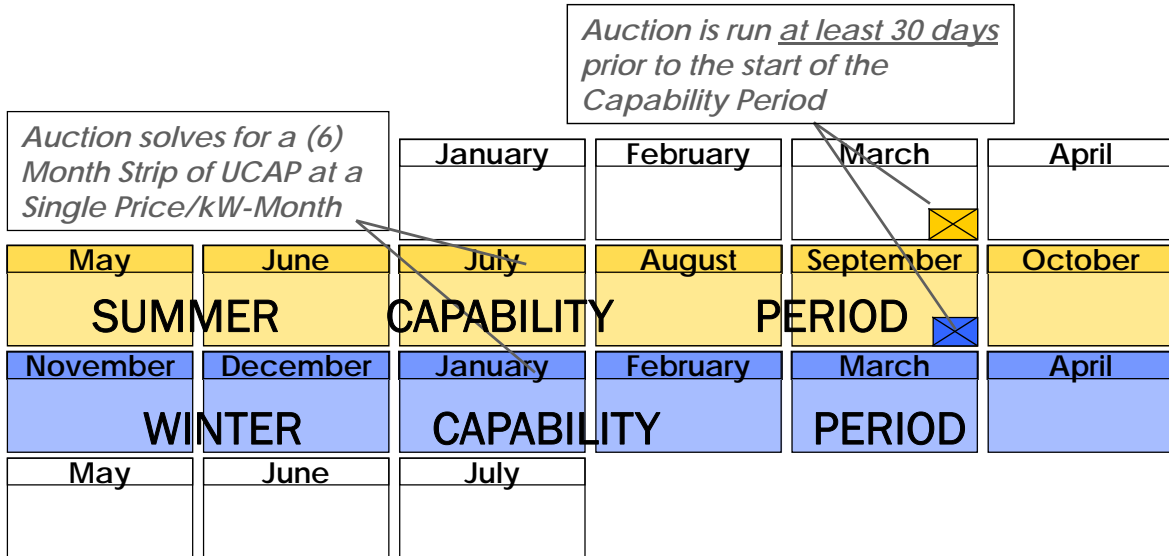
Capability Period Auction (Strip Auction)
Matches Bids & Offers
Sets Market- Clearing Price

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10

Capability Period Auction



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11

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

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12

Monthly Auction

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

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 | | | |
| | | | | | |

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

Let's Review

When does the Certification period take place?

✓

What happens during the Certification period?

✓

✓

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

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23

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

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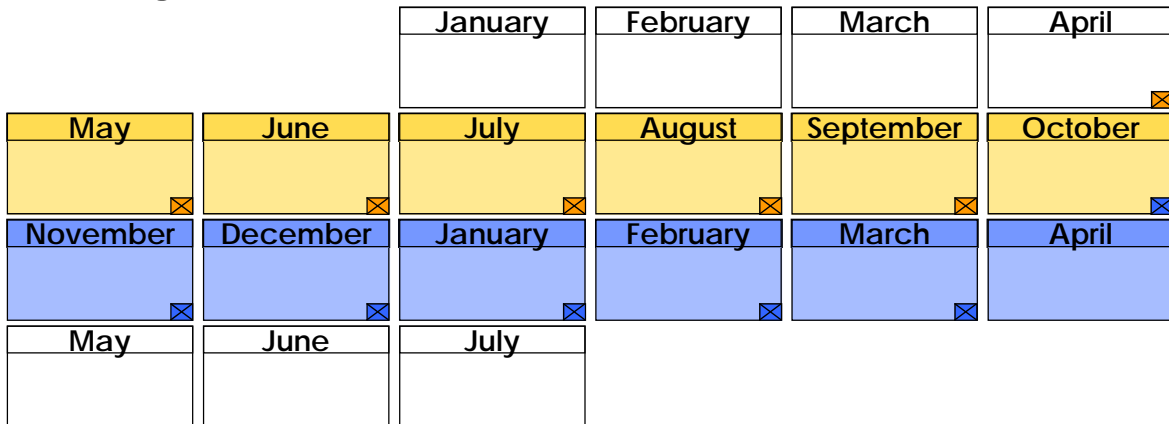
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24

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



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25

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

Certified UCAP

Strip Auction

Monthly Auction

Bilaterals

Spot Auction

Offer Available for Sale UCAP*

Purchase Supplier Shortfall

Purchase LSE Deficiency and Excess

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

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26

Let's Review



Which auction allows market participants to purchase capacity for an entire 6 month period all at once?

- a) Spot Market Auction
- b) Capacity Auction
- c) Monthly Auction
- d) Strip Auction

Let's Review



What is the purpose of holding the Spot Market Auction?

✓

✓

✓

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

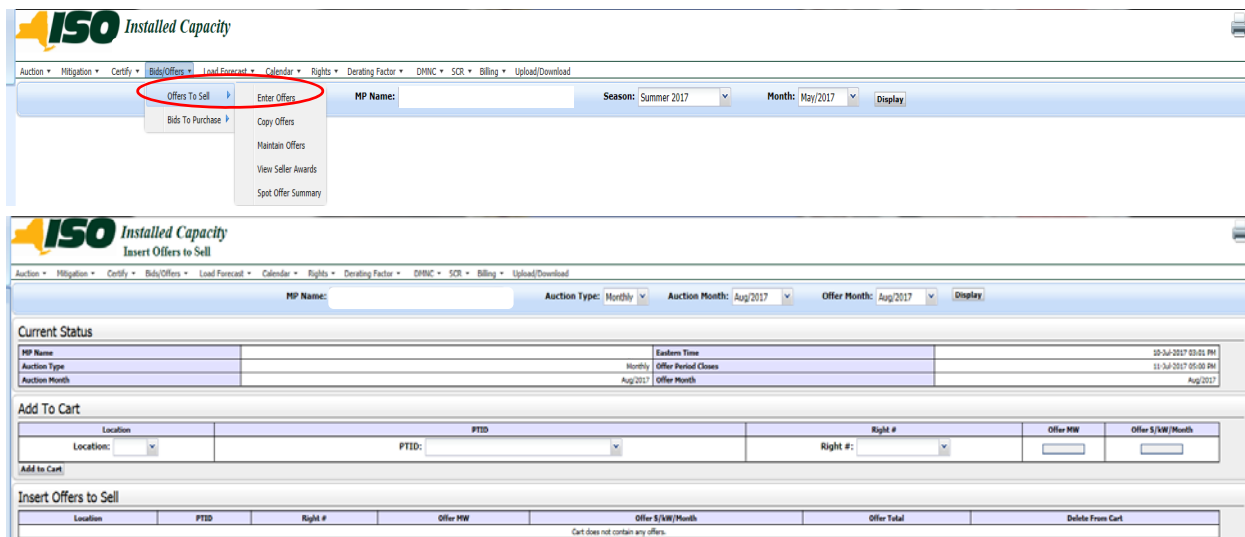
Offers to Sell UCAP in Auction

- 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



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



ISO Installed Capacity

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

Offers To Sell ▶ MP Name Season: Summer 2017 Month: May/2017 Display

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

Buyer Awards

| Month | Auction Type | Auction Month | Bid Location | Award Location | Pittigated Group | Total Awarded MW | Total Awarded \$ |
|----------|--------------|---------------|--------------|----------------|------------------|------------------|------------------|
| May/2017 | Monthly | May/2017 | LI | LI | | 5,000 | \$25,750.00 |
| May/2017 | Spot | May/2017 | NYCA | NYCA | | 76,200 | \$853,424.00 |
| May/2017 | Spot | May/2017 | R05 | R05 | | 227,800 | \$391,814.00 |
| May/2017 | Ship | May/2017 | LI | LI | | 0.000 | \$0.00 |
| Jun/2017 | Monthly | May/2017 | LI | LI | | 0.000 | \$25,750.00 |
| Jun/2017 | Monthly | May/2017 | R05 | R05 | | 0.000 | \$0.00 |
| Jun/2017 | Monthly | Jun/2017 | LI | LI | | 0.000 | \$0.00 |
| Jun/2017 | Monthly | Jun/2017 | R05 | R05 | | 0.000 | \$25,728.00 |
| Jun/2017 | Ship | May/2017 | LI | LI | | 0.000 | \$0.00 |
| Jul/2017 | Monthly | May/2017 | LI | LI | | 0.000 | \$25,750.00 |
| Jul/2017 | Monthly | May/2017 | R05 | R05 | | 0.000 | \$0.00 |
| Jul/2017 | Monthly | Jun/2017 | LI | LI | | 0.000 | \$0.00 |
| Jul/2017 | Monthly | Jun/2017 | R05 | R05 | | 25,000 | \$513,000.00 |
| Jul/2017 | Spot | Jul/2017 | R05 | R05 | | 40,000 | \$0.00 |
| Jul/2017 | Ship | May/2017 | LI | LI | | 0.000 | \$0.00 |

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37

Awarded Capacity- Same Price between Certain Locations



- **Awarded capacity:**
 - A 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
- **Example:**
 - For a specific Capability Period or Monthly Auction, when Market Clearing Price 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)

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38

Awarded Capacity: Same Price between Certain Locations



- **Example:**

November Monthly Auction, NYCA and LI MCP is set at \$2.00/kW-month

MP has a 10 MW NYCA requirement

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

MP is awarded 8MW of NYCA capacity at \$2.00 in the November Monthly auction

[Charge to MP: \$16,000]

MP is awarded 2 MW of LI capacity at \$2.00 in the November Monthly auction

[Charge to MP: \$4,000]

Total Charge to MP : \$20,000

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39

Awarded Capacity: Same Price between Certain Locations



If MP chooses Option C, MP offers the 2MW at \$0.00, as the 2MW LI capacity is not part of their NYCA requirement

- **Scenario 1:** For the Spot Market Auction, LI MCP = NYCA MCP = \$2.50/kW-month

Sell 2MW in LI at \$2.50

[Credit to MP \$5,000]

Buy 2MW in NYCA at \$2.50

[Charge to MP \$5,000]

Net Total: Charge to MP \$20,000

(-20,000+5,000-5,000)

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40

Awarded Capacity: Same Price between Certain Locations



- Scenario 2: For Spot Market Auction, LI MCP = \$2.50/kW-month, NYCA MCP = \$2.00/kW-month

Sell 2 MW in LI at \$2.50

[Credit to MP \$5,000]

Buy 2 MW in NYCA at \$2.00

[Charge to MP \$4,000]

Net total : Charge to MP \$19,000

$(-20,000 + 5,000 - 4,000)$

- Scenario 3: For Spot Market Auction, LI MCP = \$2.50/kW-month, NYCA MCP = \$3.00/kW-month

Market rules will not allow this scenario to happen

Awarded Capacity: Same Price between Certain Locations



For Option D: If MP chooses to not offer the 2 MW LI capacity into the Spot Market Auction and NYCA MCP = \$2.50/kW-month

Buy 2 MW of NYCA capacity at \$2.50

[Charge to MP \$5,000]

Net Total: Charge to MP \$25,000

$[(-20,000) + (-5,000)]$

ICAP Event Calendar



ISO Installed Capacity Event Calendar

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

Start Date From: 06/20/2019 To: 06/30/2019 Display

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 | GHDS - Deadline for Suppliers to submit GHDS data for May activity | |
| 05:00 PM | METROSTAT - Default Reference Price | |
| Friday Jun 21, 2019 | | |
| 08:00 AM | SCR - Condition Period for auction month of Aug Opens | |
| 08:00 AM | SCR - New Accreditation ID Request Period for Aug Opens | |
| 08:00 AM | SCR - Period Opens for TCs to import/modify add backs for nonpreseasonal resources newly certified for auction month of Aug | |
| 05:00 PM | LGPD SHOPT - Deadline for TCs to provide daily load shift (customer switching) for Jun | |
| 05:00 PM | TRGS UP - Deadline for TCs 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 v/s M3 transaction IDs entered into Spot M3 Auction @ \$0.00 | |
| Tuesday Jun 25, 2019 | | |
| 05:00 PM | SPOT MARKET AUCTION - Offer period closes for Jul Spot Market Auction | ← |
| Thursday Jun 27, 2019 | | |
| 05:00 PM | EXTERNAL TRANSACTIONS - Deadline to submit M3 transaction IDs for BCRs & External Spot events | |
| 05:00 PM | SOUSCRP - Deadline to update OAS 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 - RPs may begin to report resources with partial P102 sales for Jul in OAS | |
| Sunday Jun 30, 2019 | | |
| 11:59 PM | IMPORT RIGHTS - Deadline for return for Aug obligation if ISO announced fully allocated prior to that Certification Period opening | |

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43

Summary: Objectives



- Briefly explain how ICAP auctions work
- Identify pre-auction activities
- Distinguish between different ICAP auctions types
- Describe what is meant by the term 'Certification'
- Understand UCAP Bids and offers
- Discuss the ICAP Event Calendar

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Additional Resources



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