

Introduction to the Installed Capacity (ICAP) Market

Instructor: Gina Elizabeth Craan
Manager, Market Training, NYISO

Intermediate ICAP Course
June 27-28, 2023
Remote Learning

Intro Topics of Discussion

- Benefits of the NYISO ICAP Market
- Processes & Activities Associated with Managing ICAP Market
- Features of the ICAP Automated Market System (ICAP AMS)

Topic 1:

ICAP Market Benefits

ICAP Market Benefits

- Ensures resource adequacy
- Resources recover a portion of fixed costs
- Provides market signal for investment

Benefits of the ICAP Market:

- Ensures resource adequacy
 - Do we have enough?
 - Supply is sufficient to meet load
 - Adhere to reliability standard

Benefits of the ICAP Market:

- Recover portion of fixed costs

Variable Costs vs. Fixed Costs



Energy Market

(Market Clearing Prices - LBMPs)



**Portion from ICAP
Market**

(Auction Clearing Prices)

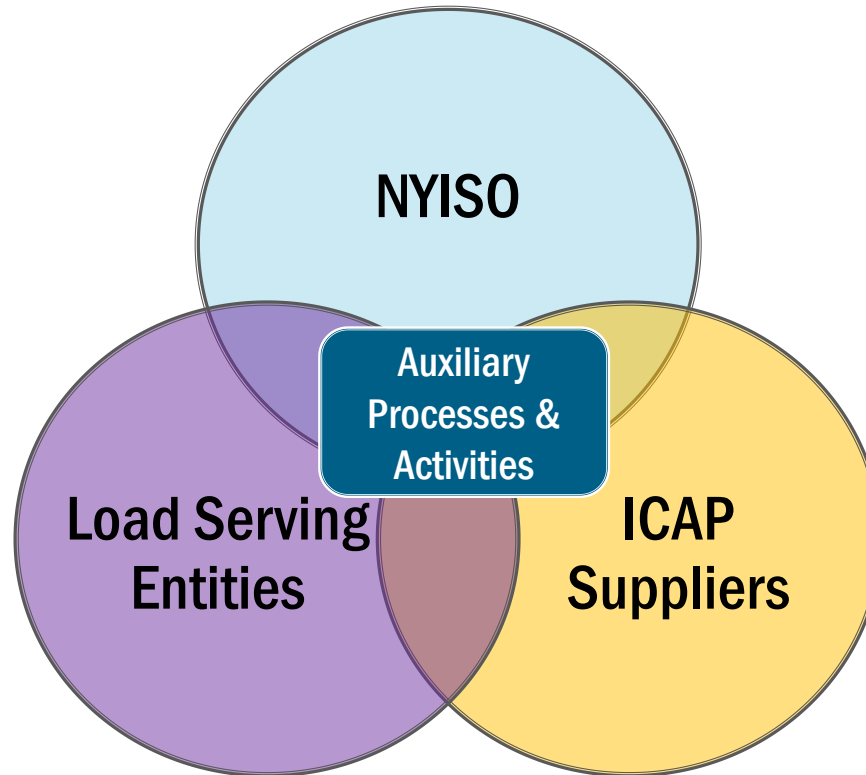
Benefits of the ICAP Market:

- **Market signal for investment**
 - **Potential Investors:**
 - **Is it worth building a new plant?**
 - **Where should I build a new plant?**
 - **Do I have the technology to build a plant that is competitive?**

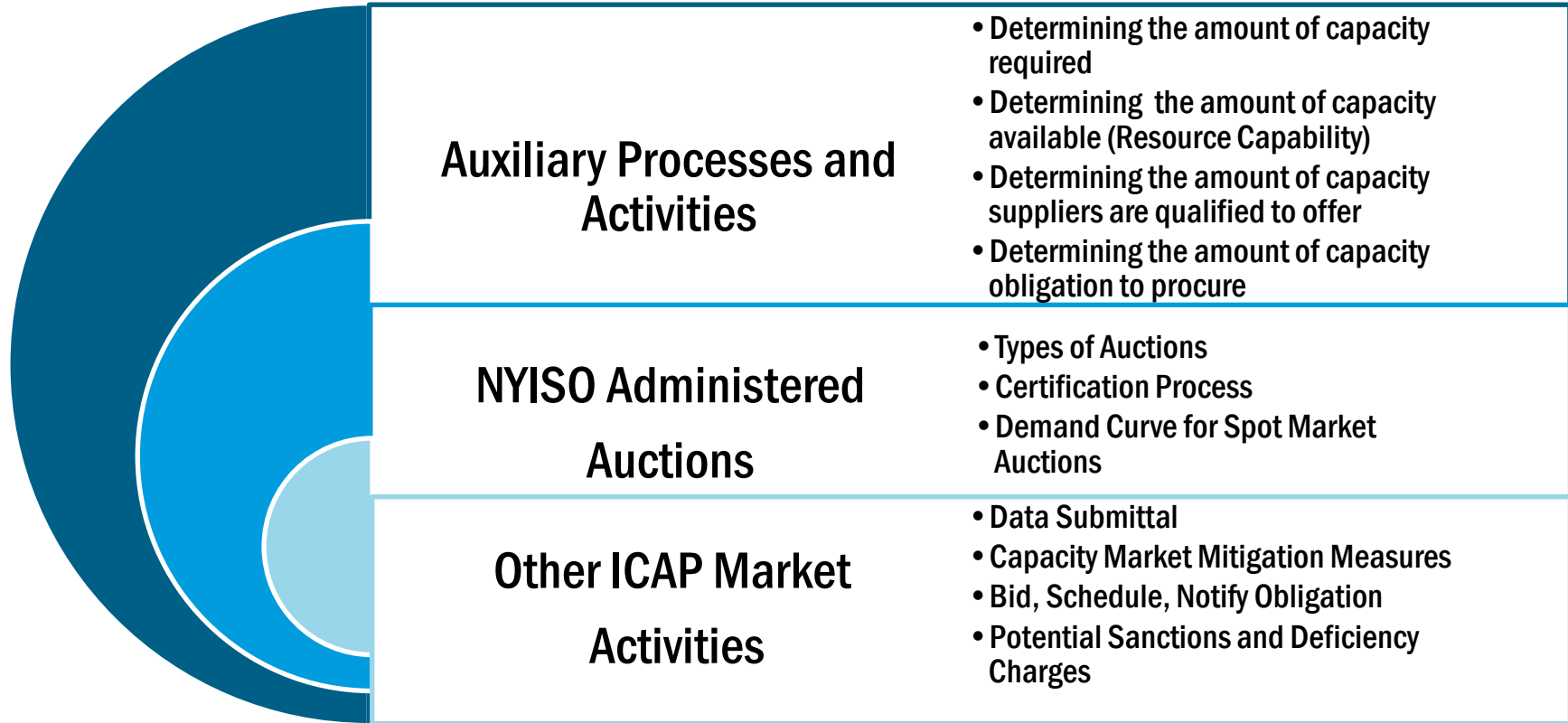
Topic 2:

Market Processes & Activities

ICAP Market Mechanics



How Does the ICAP Market Work?



Topic 3:

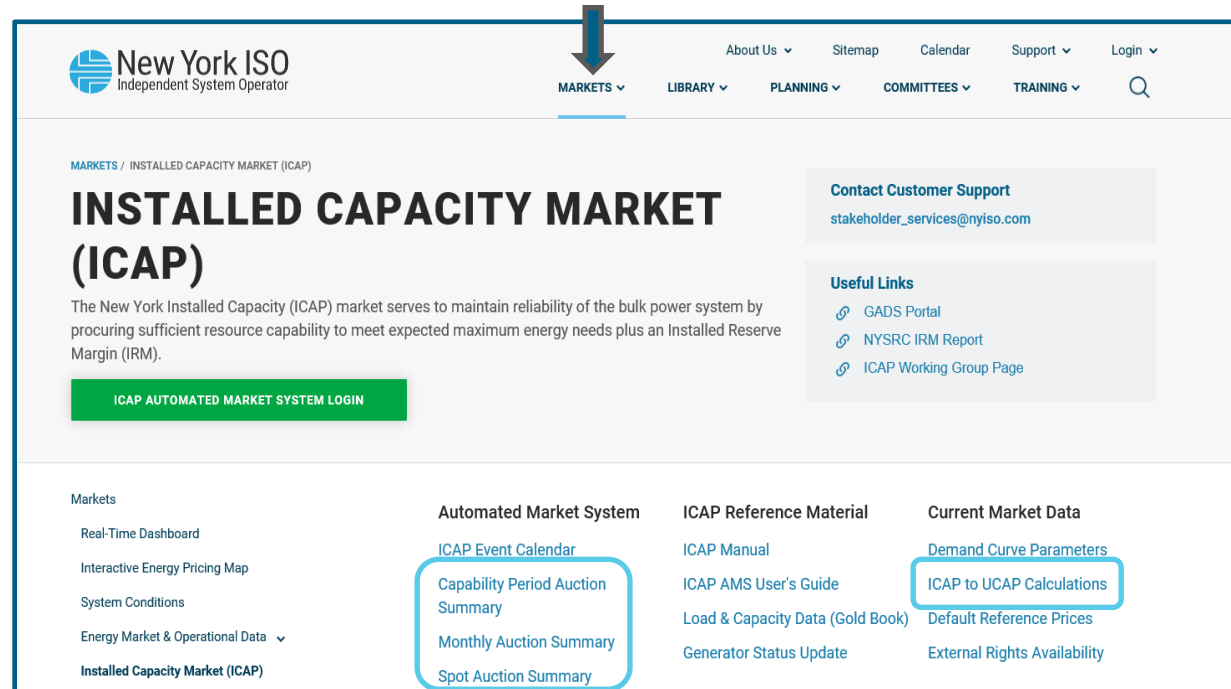
**ICAP Automated Market System
(ICAP AMS)**

ICAP Automated Market System

- **Web-enabled application**
- **Supports auction preparation requirements**
 - Data management, retrieval and general information requirements of participation
 - Transmission Owners enter load forecast and load-shift information
 - Supports NYISO internal administrative functions required to administer the market
 - ICAP Event Calendar

ICAP Automated Market System

- Public postings produced
 - Auction Data/Results
 - NYCA Load Forecast and UCAP requirements by Transmission District and Municipal Electric Utility



New York ISO Independent System Operator

MARKETS ▾ LIBRARY ▾ PLANNING ▾ COMMITTEES ▾ TRAINING ▾

MARKETS / INSTALLED CAPACITY MARKET (ICAP)

INSTALLED CAPACITY MARKET (ICAP)

The New York Installed Capacity (ICAP) market serves to maintain reliability of the bulk power system by procuring sufficient resource capability to meet expected maximum energy needs plus an Installed Reserve Margin (IRM).

[ICAP AUTOMATED MARKET SYSTEM LOGIN](#)

[Contact Customer Support](mailto:stakeholder_services@nyiso.com)
stakeholder_services@nyiso.com

Useful Links

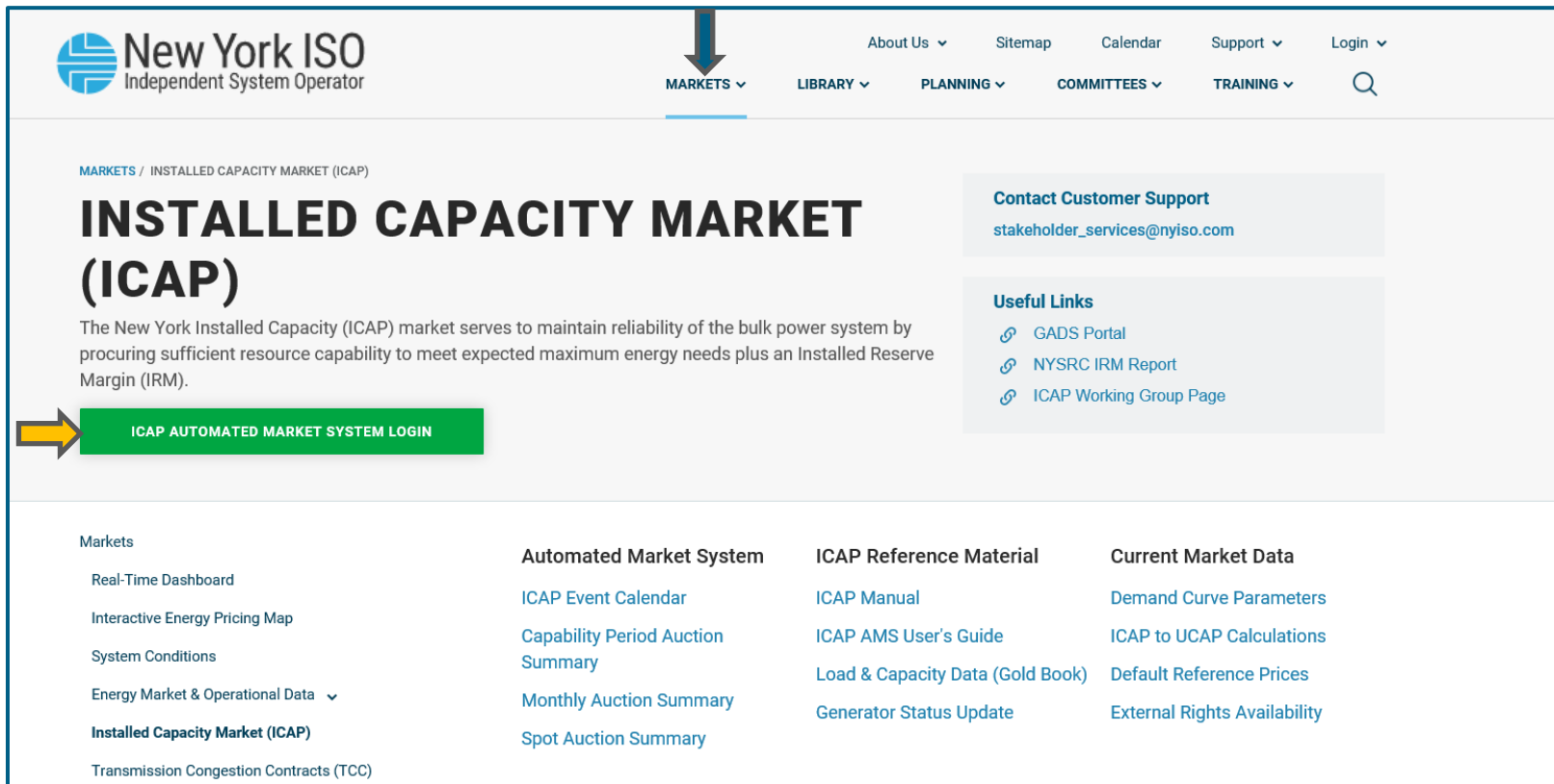
- [GADS Portal](#)
- [NYSRC IRM Report](#)
- [ICAP Working Group Page](#)

<p>Markets</p> <ul style="list-style-type: none"> Real-Time Dashboard Interactive Energy Pricing Map System Conditions Energy Market & Operational Data ▾ Installed Capacity Market (ICAP) 	<p>Automated Market System</p> <ul style="list-style-type: none"> ICAP Event Calendar Capability Period Auction Summary Monthly Auction Summary Spot Auction Summary 	<p>ICAP Reference Material</p> <ul style="list-style-type: none"> ICAP Manual ICAP AMS User's Guide Load & Capacity Data (Gold Book) Generator Status Update 	<p>Current Market Data</p> <ul style="list-style-type: none"> Demand Curve Parameters ICAP to UCAP Calculations Default Reference Prices External Rights Availability
---	--	--	---

ICAP Automated Market System

- **Secure user-specific data:**
 - Load Serving Entities can view UCAP requirements
 - Suppliers can submit and view DMNC information
 - Suppliers may view their Resources' Equivalent Demand Forced Outage Rate (EFORd) ratings over a Capability Period
 - Submit bids/offers
 - Provide certification information for bilateral transactions and for generator allocations
 - View market position
 - Settlement-related information to support customer invoicing

ICAP Automated Market System



The screenshot shows the New York ISO website's navigation menu with 'MARKETS' selected. The main content area is titled 'INSTALLED CAPACITY MARKET (ICAP)' and includes a description of the market's purpose. A green button labeled 'ICAP AUTOMATED MARKET SYSTEM LOGIN' is highlighted with a yellow arrow. To the right, there are sections for 'Contact Customer Support' and 'Useful Links'. The footer contains a grid of links categorized under 'Markets', 'Automated Market System', 'ICAP Reference Material', and 'Current Market Data'.

New York ISO
Independent System Operator

MARKETS ▾ LIBRARY ▾ PLANNING ▾ COMMITTEES ▾ TRAINING ▾

MARKETS / INSTALLED CAPACITY MARKET (ICAP)

INSTALLED CAPACITY MARKET (ICAP)

The New York Installed Capacity (ICAP) market serves to maintain reliability of the bulk power system by procuring sufficient resource capability to meet expected maximum energy needs plus an Installed Reserve Margin (IRM).

ICAP AUTOMATED MARKET SYSTEM LOGIN

Contact Customer Support
stakeholder_services@nyiso.com

Useful Links

- GADS Portal
- NYSRC IRM Report
- ICAP Working Group Page

Markets

- Real-Time Dashboard
- Interactive Energy Pricing Map
- System Conditions
- Energy Market & Operational Data ▾
- Installed Capacity Market (ICAP)**
- Transmission Congestion Contracts (TCC)

Automated Market System

- ICAP Event Calendar
- Capability Period Auction Summary
- Monthly Auction Summary
- Spot Auction Summary

ICAP Reference Material

- ICAP Manual
- ICAP AMS User's Guide
- Load & Capacity Data (Gold Book)
- Generator Status Update

Current Market Data

- Demand Curve Parameters
- ICAP to UCAP Calculations
- Default Reference Prices
- External Rights Availability

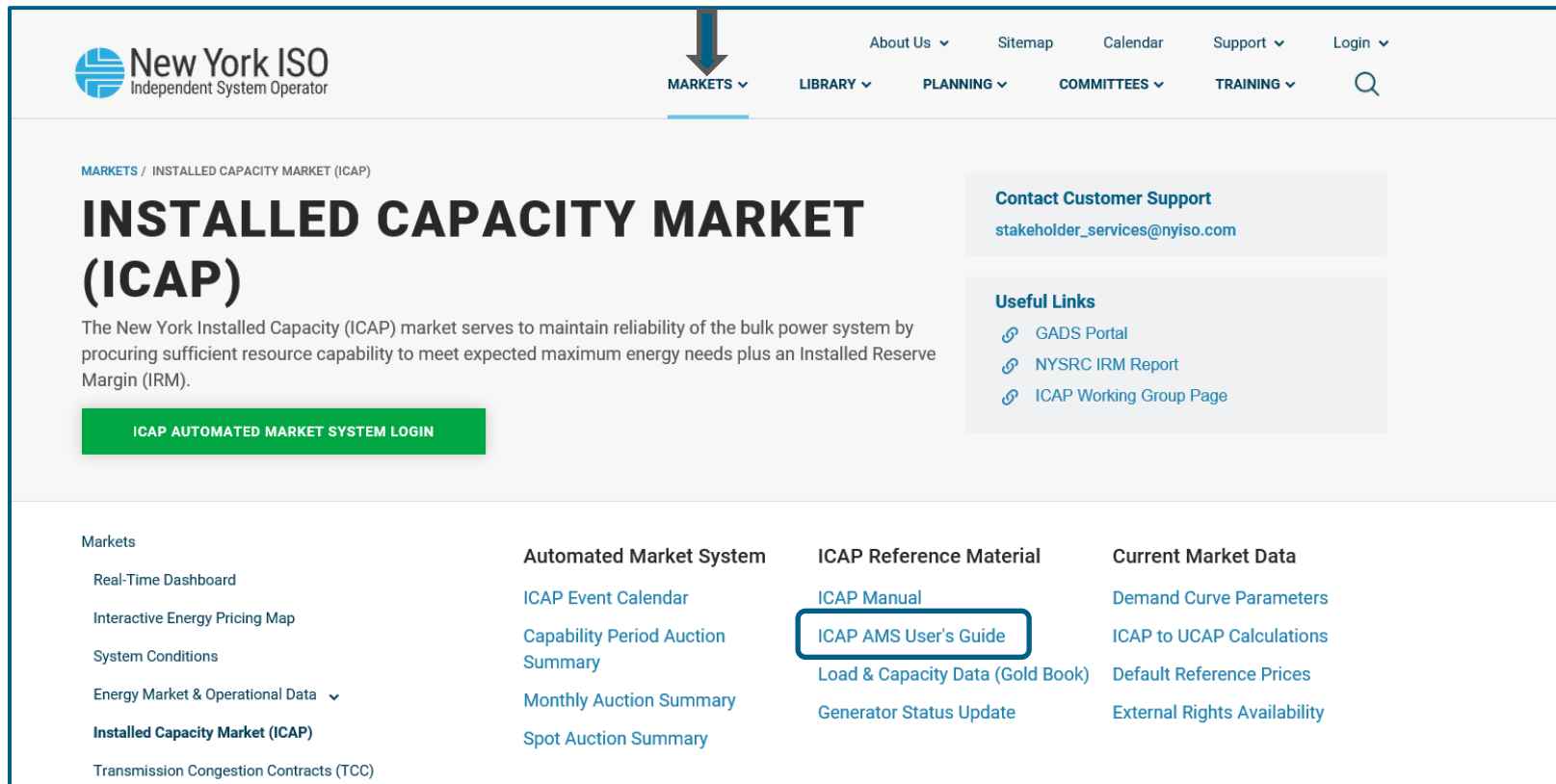
ICAP Automated Market System



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

Auction	Certify	Bids/Offers
View Strip/Monthly Auction	Bids	Offers To Sell
View Spot Market Auction	Exports	Bids To Purchase
View Offer Auction Results	View	Enter Offers
View Strip Auction Summary	All	Enter Bids
View Monthly Auction Summary	View	Copy Bids
View Spot Auction Summary	View PTIDs	Maintain Bids
View Rebate Summary	View Certification Details	View Buyer Awards
	Assign Transaction IDs	
	Deliverability Limits	
	Wheels Through	
	Exports	

ICAP AMS Users Guide



New York ISO
Independent System Operator

MARKETS ▾ LIBRARY ▾ PLANNING ▾ COMMITTEES ▾ TRAINING ▾

MARKETS / INSTALLED CAPACITY MARKET (ICAP)

INSTALLED CAPACITY MARKET (ICAP)

The New York Installed Capacity (ICAP) market serves to maintain reliability of the bulk power system by procuring sufficient resource capability to meet expected maximum energy needs plus an Installed Reserve Margin (IRM).

[ICAP AUTOMATED MARKET SYSTEM LOGIN](#)

Contact Customer Support
stakeholder_services@nyiso.com

Useful Links

- [GADS Portal](#)
- [NYSRC IRM Report](#)
- [ICAP Working Group Page](#)

Markets

- Real-Time Dashboard
- Interactive Energy Pricing Map
- System Conditions
- Energy Market & Operational Data ▾
- Installed Capacity Market (ICAP)**
- Transmission Congestion Contracts (TCC)

Automated Market System

- ICAP Event Calendar
- Capability Period Auction Summary
- Monthly Auction Summary
- Spot Auction Summary

ICAP Reference Material

- ICAP Manual
- ICAP AMS User's Guide**
- Load & Capacity Data (Gold Book)
- Generator Status Update

Current Market Data

- Demand Curve Parameters
- ICAP to UCAP Calculations
- Default Reference Prices
- External Rights Availability

Start Date From: To: [Display](#)

Event Schedule

Legend:

Winter Season Event	Summer Season Event	Season Change Event
---------------------	---------------------	---------------------

Tuesday Apr 23, 2019

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

Wednesday Apr 24, 2019

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

Thursday Apr 25, 2019

05:00 PM		SPOT MARKET AUCTION - Offer period closes for May Spot Market Auction
----------	--	---

Monday Apr 29, 2019

03:30 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 May
05:00 PM		SPOT MARKET AUCTION - ISO posts results of May Spot Market Auction

Tuesday Apr 30, 2019

08:00 AM		SCR - RIPs may begin to report resources with partial PTID Sales for May in DRIS
05:00 PM		SCR - Deadline for MPs to report Change of Status in DRIS for Winter 2018-2019
11:59 PM		IMPORT RIGHTS - Deadline for returns for Jun obligation if ISO announced fully allocated prior to that Certification Period opening
11:59 PM		End Winter 2018-2019 Capability Period

Wednesday May 01, 2019

12:00 AM		Start of Summer 2019
08:00 AM		CERTIFICATION - Certification Period begins for LSEs and Suppliers for Jun
08:00 AM		ESTIMATED LOAD - TOs can begin to provide estimated load position by LSE for Jun 1
08:00 AM		GADS - Suppliers can begin submitting GADS data for Apr activity
08:00 AM		LOAD SHIFT - TOs can begin to provide daily load shift (customer switching) for May
08:00 AM		SCR - MPs can begin to report Change of Status in DRIS for Summer 2019
08:00 AM		TRUE-UP - TOs can begin to provide true-up load shift (actual data) for LSE activity 3 months prior
05:00 PM		DMNC - Deadline to submit DMNC data for New Generators to ensure can be used for Jun
05:00 PM		ECR - Deadline to create bilaterals for External CRIS Rights and submit supporting docs for Jun ICAP
05:00 PM		LOCALITY EXPORTS - Deadline to notify NYISO of Locality export to External Control Area for Jun
05:00 PM		UDR - Deadline for UDRs to submit each qualified resource L.D. with each MW amount for Jun

Friday May 03, 2019

08:00 AM		IMPORT RIGHTS - First Come First Serve - begin to submit requests
05:00 PM		IMPORT RIGHTS - First Come First Serve - deadline to submit requests

Summary

- **Benefits of the ICAP Market**

- **Processes and activities associated with the ICAP Market**
 - Capacity Required
 - Resource Capability (Capacity Available)
 - Capacity Suppliers Qualified to Offer
 - Load Serving Entities (“LSE”) Obligations
 - ICAP Auctions and Awards
 - ICAP Settlements
 - Capacity Market Mitigation Measures
 - ICAP Sanctions and Deficiencies

- **ICAP Automated Market System (ICAP AMS)**