

Overview of Certain ICAP Sanctions and Deficiency Charges

Instructor: Gina Elizabeth Craan
Manager, Market Training, NYISO

Intermediate ICAP Course

June 27-28, 2023

Remote Learning

Topics of Discussion

- **Determine when and how the deficiency charge for failure to verify “out-of-period” DMNC or DMGC is calculated.**
- **State the DAM market obligations.**
- **Calculate a financial sanction for failing to comply with the “bid, schedule, notify” requirement.**

*** This module does not describe all potential penalties and sanctions associated with Installed Capacity and is intended to be a limited overview of two examples.

NYISO Actions

- **Evaluate market activity for potential violations**
- **Imposes the sanction or deficiency charge on Market Participants for failing to comply with certain requirements**

Topic 1:

Failure to verify “out-of-period” DMNC or DMGC

Failure to Verify “out-of-period” DMNC or DMGC

- If the UCAP amount sold by an ICAP Supplier using an “out-of-period” test is more than the amount of UCAP verified with an “in-period” test, the supplier has a shortfall and is subject to a deficiency charge
- The shortfall MW value is the difference between the UCAP sold based on the “out-of-period” test and what UCAP could have been sold with the “in-period” test
 - That MW amount will be no greater than the difference between the Generator’s previous like Capability Period UCAP and the UCAP supplied

****Reference MST Sections 5.12.8 and 5.14.2*

Failure to Verify “out-of-period” DMNC or DMGC

Deficiency Charge Calculation

$$1.5 \times \text{Spot Market Auction MCP} \times 1000 \times \text{Min}(\text{Shortfall MW}, \text{Shortfall MW Cap})$$

- Where 1000 is the multiplier used to convert Spot Market Auction \$/kW-month to \$/MW-month,
- And MCP = Market Clearing Price

Failure to Verify “out-of-period” DMNC or DMGC

■ Example Calculation

- ICAP Supplier sold 100 MW of UCAP based on an “out-of-period” DMNC test
- In-period DMNC test verified only 80 MW of UCAP available for sale
- The shortfall is 20 MW
- Previous like period UCAP was 80 MW; the shortfall MW cap is 20 MW
- Spot Market Auction MCP is \$5.00/kW-month

Deficiency Charge = 1.5 x Spot Market Auction MCP x 1000 x min(shortfall MW, shortfall MW cap)

Spot Market MCP	Sold UCAP MW	Verified UCAP MW by In-Period DMNC	Shortfall MW	Previous Like Period UCAP MW	Shortfall MW Cap	Deficiency Charge
\$5.00	100	80	20	80	20	\$150,000

Deficiency Charge = 1.5 x \$5.00 x 1000 x min (20MW, 20MW) = \$150,000

Failure to Verify “out-of-period” DMNC or DMGC

■ Another Example Calculation

- ICAP Supplier sold 15 MW of UCAP based on an “out-of-period” DMNC test
- In-period DMNC test verified only 10 MW of UCAP available for sale
- The shortfall is 5 MW
- Previous like period UCAP was 12 MW; the shortfall MW cap is 3 MW
- Spot Market Auction MCP is \$5.00/kW-month

Deficiency Charge = 1.5 x Spot Market Auction MCP x 1000 x min(shortfall MW, shortfall MW cap)

Spot Market MCP	Sold UCAP MW	Verified UCAP MW by In-Period DMNC	Shortfall MW	Previous Like Period UCAP MW	Shortfall MW Cap	Deficiency Charge
\$5.00	15	10	5	12	3	\$22,500

Deficiency Charge = 1.5 x \$5.00 x 1000 x min (5 MW, 3 MW) = \$22,500

Topic 2:

DAM Obligations for ICAP

Suppliers

DAM Obligations for ICAP Suppliers

The Installed Capacity Equivalent (ICE) corresponds to the “ICAP Sold for DAM” referenced in the ICAP Automated Market System (AMS)

$$\text{ICE} = \frac{\text{UCAP Awarded}}{(1 - \text{Derating Factor}) * \text{Duration Adjustment Factor}}$$

Energy Scheduled, Bid or Notified \geq ICE

****Except as noted in:*

MST Section 5.12.11, which has a different rule for Intermittent Power Resources, Municipally-Owned Generation, Special Case Resources, and Energy Limited Resources

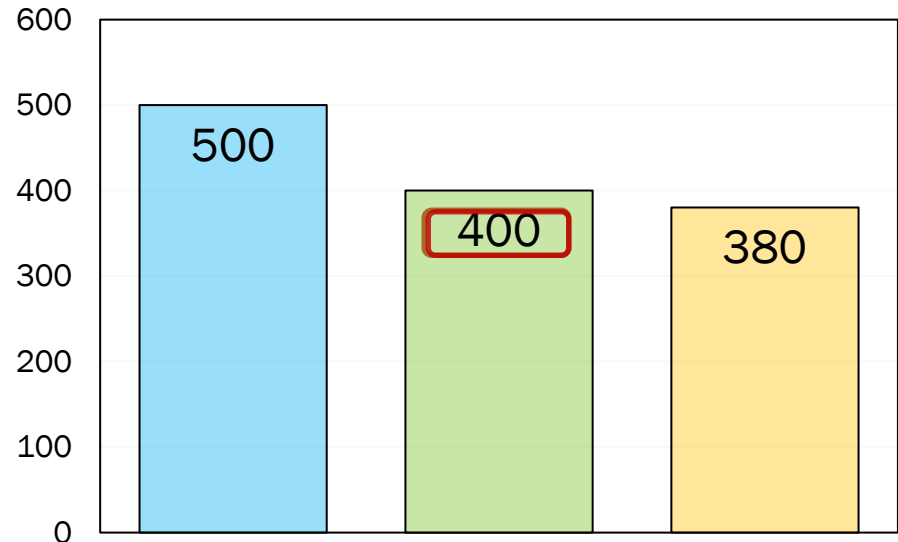
MST Section 5.12.7, which has a different rule for ESRs in regards to the amount to schedule, Bid, or declare to be unavailable.

DAM Obligations for ICAP Suppliers Example

- How much ‘ICE’ must this supplier “bid, schedule or notify” in the DAM if it qualified to offer 380 MWs of UCAP.
 - Assume that the amount of qualified UCAP was equal to the awarded UCAP (380 MW)

$$ICE = \frac{UCAP\ Awarded}{(1 - Derating\ Factor) * Duration\ Adjustment\ Factor}$$

- DMNC = 500 MW
- Deliverability limit = 80%
- Derating factor = 5.00%
- Duration Adjustment Factor = 100%



Topic 3:

Failure to Comply with “Bid, Schedule, Notify” Requirement

Failure to Comply with “Bid, Schedule, Notify” Requirement

- Failure to comply may result in financial sanctions imposed by NYISO up to the product of a deficiency charge and the maximum number of MW that the Supplier failed to bid, schedule or notify in any hour in that day
- The deficiency charge may be up to one and one-half times the applicable Market-Clearing Price of Unforced Capacity determined in the ICAP Spot Market Auction corresponding to where the Installed Capacity Supplier’s capacity cleared

**Reference Sections 5.12.8 and 5.12.12.2 of MST*

Failure to Comply with “Bid, Schedule, Notify” Requirement

Deficiency Charge Calculations

$$\text{Deficiency Charge/Day} = \{(1.5 \times \text{Spot MCP} \times 1000) \times [\text{ICE MW} - (\text{Bid MW} + \text{Scheduled MW} + \text{Notified Unavailable MW})]\} / (\text{total days in month})$$

- 1000 is the multiplier used to convert Spot Market Auction \$/kW-month to \$/MW-month
- ICE is the Installed Capacity Equivalent
- The Installed Capacity Equivalent (ICE) corresponds to the “ICAP Sold for DAM” referenced in the ICAP Automated Market System (AMS)
- Shortfall MW = [ICE MW - (Bid MW + Scheduled MW + Notified Unavailable MW)]

$$\text{Deficiency Charge/Hr} = (\text{Deficiency Charge/Day}) / 24$$

Failure to Comply with “Bid, Schedule, Notify” Requirement

■ Example Calculation

- ICAP Supplier in NYC sold 100 MW UCAP and failed to offer the ICE obligation in the DAM or schedule a bilateral transaction for three days in June, and the ICAP Supplier failed to notify the NYISO. The ICE obligation in the DAM is 110 MW for the period.
- NYC Spot Market Auction clearing price is \$12.00/kW-month.

$$\text{Deficiency Charge/Day} = \{(1.5 \times \text{Spot MCP} \times 1000) \times [\text{ICE MW} - (\text{Bid MW} + \text{Scheduled MW} + \text{Notified Unavailable MW})]\} / (\text{total days in month})$$

Spot MCP (kW-month)	ICE MW DAM Obligation	Bid/Sched/Notify in DAM	Shortfall MW	# of Days in Month	Deficiency Charge/Day	# of Days Deficient	Total Deficiency Charge
\$12.00	110 MW	0 MW	110 MW	30	\$66,000	3	\$198,000

$$\text{Deficiency Charge/Day} = \{(1.5 \times \$12 \times 1000) \times (110 \text{ MW} - 0 \text{ MW})\} / 30 = \$66,000$$

Summary: Topics of Discussion

- Determine when and how the deficiency charge for failure to verify “out-of-period” DMNC or DMGC is calculated.
- State the DAM market obligations.
- Calculate a financial sanction for failing to comply with the “bid, schedule, notify” requirement.

Additional Resources

- **Market Administration and Control Area Services Tariff (MST)**
- **Installed Capacity Manual**
- **Installed Capacity AMS User's Guide**
- **E-Learning Resource - Energy Storage Resources Participation Model**