

Overview of Certain ICAP Sanctions and Deficiency Charges

Instructor: Gina Elizabeth Craan

Manager, Market Training, NYISO

Intermediate ICAP Course

September 26-27, 2024

Rensselaer, NY

Topics of Discussion

- Deficiency charge calculation for failure to verify “out-of-period” DMNC or DMGC
- Recap of Day Ahead Market (DAM) ‘Bid, Schedule, Notify’ obligation
- Financial sanction associated with failure to comply with DAM obligation

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

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

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 = $1.5 \times \text{Spot Market Auction MCP} \times 1000 \times \min(\text{shortfall MW}, \text{shortfall MW cap})$

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	

Failure to Verify “out-of-period” DMNC or DMGC New York ISO Independent System Operator

■ 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 = $1.5 \times \text{Spot Market Auction MCP} \times 1000 \times \min(\text{shortfall MW}, \text{shortfall MW cap})$

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	

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)

$$\text{ICE} = \frac{\text{UCAP Sold}}{(1 - \text{Derating Factor}) * \text{Capacity Accreditation Factor}}$$

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 regarding 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 is equal to UCAP Sold (380 MW)

$$\text{ICE} = \frac{\text{UCAP Sold}}{(\text{1 - Derating Factor}) * \text{Capacity Accreditation Factor}}$$

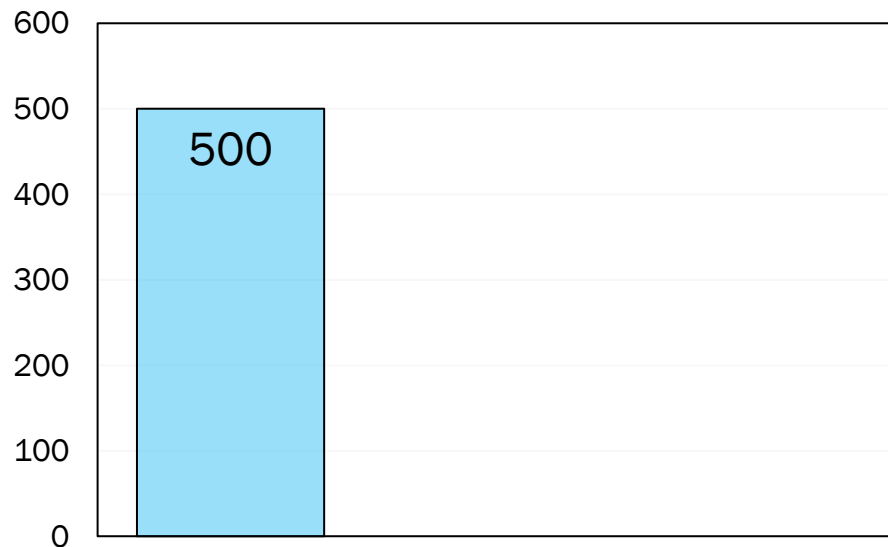
- DMNC = 500 MW
- Deliverability limit = 80%
- Derating factor = 5.00%
- Capacity Accreditation Factor = 100%

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 is equal to the UCAP Sold (380 MW)*

$$\text{ICE} = \frac{\text{UCAP Sold}}{(1 - \text{Derating Factor}) * \text{Capacity Accreditation Factor}}$$

- DMNC = 500 MW
- Deliverability limit = 80%
- Derating factor = 5.00%
- Capacity Accreditation Factor = 100%

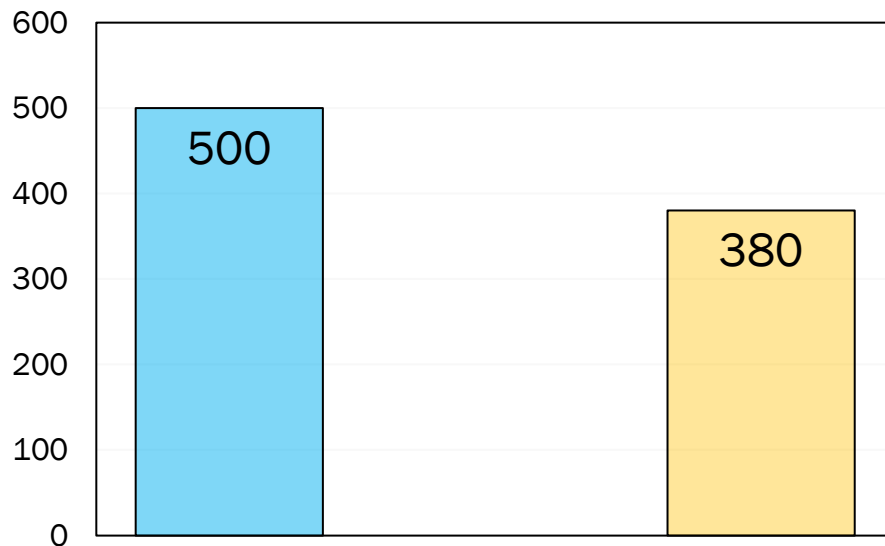


DAM Obligations for ICAP Suppliers Example

- 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 is equal to the UCAP Sold (380 MW)*

$$\text{ICE} = \frac{\text{UCAP Sold}}{(1 - \text{Derating Factor}) * \text{Capacity Accreditation Factor}}$$

- DMNC = 500 MW
- Deliverability limit = 80%
- Derating factor = 5.00%
- Capacity Accreditation Factor = 100%



Failure to Comply with ‘Bid, Schedule, Notify’ Obligation

Failure to Comply with ‘Bid, Schedule, Notify’

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'

■ 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/N otify 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	

Topics of Discussion Summary

- Deficiency charge calculation for failure to verify “out-of-period” DMNC or DMGC
- Recap of Day Ahead Market (DAM) ‘Bid, Schedule, Notify’ obligation
- Financial sanction associated with failure to comply with DAM obligation

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**