BTMG Initiative: Wholesale Generator Requirements to participate in NYISO Markets

Pradip Ganesan
Market Product Specialist, Energy Market Design
New York Independent System Operator

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Disclaimer

- The requirements for a generator to participate in the NYISO wholesale markets is not limited to the contents of this presentation.
- The presentation captures at a high level key obligations that a generator participating in the wholesale markets is expected to fulfill.
- Many of the obligations are set forth in the NYISO's Market Administration and Control Area Services Tariff and Open Access Transmission Tariff. However, other obligations are set forth in other NYISO documents (e.g., the NYISO Agreement, NYISO manuals, technical bulletins, and customer registration materials.)
- For complete details, please refer to these documents which are available Market Services Tariff posted on the NYISO website.

Prerequisites: Interconnection Process

- **Applies to Generation and Merchant Transmission Projects.**
- **3-Study Process for new interconnections:**
  - ***Feasibility Study – High level study, evaluates proposed Point of Interconnection (and alternative POIs as requested) configuration, focuses on local system, study report includes preliminary nonbinding cost estimate for System Upgrade Facility (SUF).***
  - ***System Reliability Impact Study (SRIS) – Intermediate level study, evaluates project impact on transfer capability and system reliability, includes updated nonbinding cost estimate for SUFs, includes review by stakeholders (TPAS) and Operating Committee approval.***
  - ***Class Year Facilities Study – Most detailed study, evaluates a set of "Class Year" projects that have: completed an SRIS, met the requisite regulatory milestone, and notified NYISO of desire to enter the Class Year. Determines binding cost estimates and cost allocation for SUFs. Also evaluates Deliverability of requested CRIS, identifies SDUs, and develops cost estimates and cost allocation for SDUs. Developers decide whether to accept SUF cost allocation, receive ERIS and move forward, or drop out of the Class Year. Developers that accept SUF cost separately decide whether to accept SDU cost allocation to receive CRIS.***

Prerequisites: Interconnection Process

- Projects move forward by executing an Interconnection Agreement.
- Interconnection Process is not required if generator already exists, has a current interconnection agreement with a TO, and is not proposing a material modification in its interconnection.

Prerequisites: Registration Details

- Generators that are already interconnected or have begun their interconnection process go through the registration process to participate in the wholesale markets.
  - *Operating limits, response rates, interconnection voltage level and other parameters will be collected during the registration process.*
- Generators must comply with metering and communication protocols required by the NYISO.
- Generators certify that, during the term their Agreement is effective with the NYISO that they will be in compliance with all federal, state and local laws, rules and regulations related to the Customer's performance as a generator.

Prerequisites: Minimum Participation Criteria

- **Participants in the NYISO administered markets must fulfill all NYISO credit requirements including the following:**
  - ***Maintaining current, written risk management policies and procedures.***
  - ***Having appropriate training and/or experience to transact in the ISO-Administered Markets.***
  - ***Having appropriate personnel resources and technical abilities to promptly and effectively respond to all NYISO communications.***
  - ***Meeting minimum capitalization criteria.***

Capacity Supplier Requirements

- **The NYISO's Services Tariffs lists obligations for generators to participate in the Capacity Market. By way of example (this list is not exhaustive) these include:**
  - ***Metering requirements***
  - ***Deliverability***
  - ***Providing information when requested by the ISO***
  - ***Seasonal DMNC requirements***
  - ***Maintenance coordination procedures***
  - ***Meeting the Bid, schedule or notify obligations in the Day-Ahead Energy and Ancillary Service markets***
  - ***Reporting outages and expected return dates***
  - ***Responding to an SRE request***
  - ***If located East of Central-East, bidding into the Day-Ahead and Real-Time Markets all Capacity available for supplying 10-Minute Non-Synchronized Reserve***
  - ***Reporting Generator Availability Data System (GADS) data***

Day Ahead Bidding and Real Time Scheduling Requirements

- The Services Tariff also lists requirements for participating in the Day Ahead Energy / Ancillary Services market, including, by way of example (these are not exhaustive):
  - *Bid Types (ISO-Committed Flexible, Self-Committed Flexible or ISO-Committed Fixed) bid*
  - *Upper Operating Limit specifications*
  - *Response rate specifications, including emergency response rates*
  - *Bilateral transaction specifications*
- The Services Tariff also lists requirements for participating in the real-time market including, by way of example (these are not exhaustive):
  - *Providing Bids, retaining or modifying those provided Day-Ahead*
  - *Notifications by generators with real time physical operating problems*

Other Opportunities / Requirements

- **Generators may be qualified, or become qualified, to provide the following ancillary services:**
  - *Voltage Support Service (requires Reactive Power (MVAr) capability testing)*
  - *Regulation Service (requires the capability to follow AGC (six-second) signals)*
  - *Operating Reserves (requires certain response rates, or start-up ability)*
  - *Black Start Service (requires testing)*
- **Performance Requirements – stated as a general matter**
  - *Generators get paid for performance appropriate to their schedule (basepoint); that is, their ability to control their output to conform to the basepoint or AGC signals sent them dictates their settlement*
  - *Deviations may subject the Market Participant to penalties*
  - *Wind, solar and landfill gas–fueled generators, and Limited Control Run-of-River hydro facilities, are paid for actual output without penalty because of the nature of their fuel source*
  - *Depending on the type of generator, previous forced outage rates, or previous performance in the energy market, are used to calculate the amount of Unforced Capacity a Capacity Supplier may offer in the Capacity market.*

Market Power Mitigation Rules

- Generators are also subject to market power mitigation rules, which are set forth in Services Tariff Section 23, Attachment H
- As a general matter, the capacity market power mitigation rules, both buyer-side (Offer Floor) and supplier-side (Pivotal Supplier) rules, only apply to capacity suppliers in Load Zones G, H, I, and J (and any future new capacity zone)
- Generators are also subject to Energy mitigation which is designed to mitigate the market effects of any conduct that would substantially distort competitive outcomes in the NYISO Administered Markets, while avoiding unnecessary interference with competitive price signals
- Mitigation rules are set forth in the NYISO Tariffs including the Market Power Mitigation Measures and the Market Monitoring Plan

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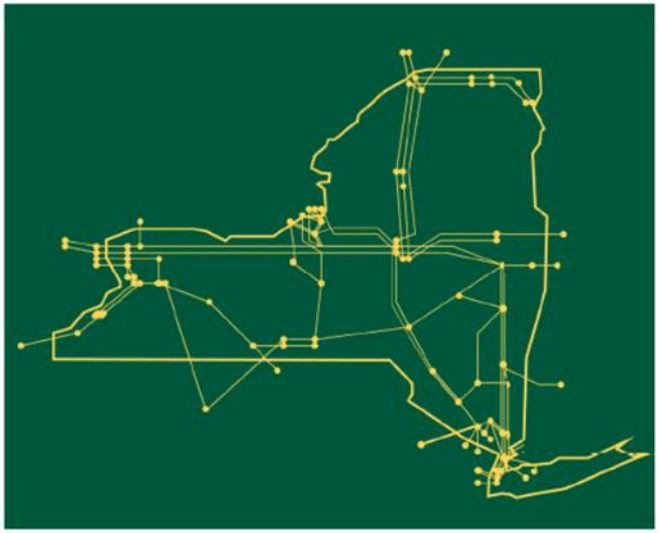

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