BTM:NG Energy and CRIS Tariff Revisions

Joint Installed Capacity and Market Issues Working Group

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Krey Corporate Center

BTM:NG Topics, Review of Concepts, and Edits to Energy Tariff Revisions

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Topics

- BTM:NG Initiative Overview and General Concepts
- Benefits of BTM:NG Resources
- Edits to Energy Tariff Revisions for BTM:NG Resources (first presented Oct. 23)
- Edits to CRIS Tariff Revisions for BTM:NG Resources (first presented Oct. 26)
- Next Steps
- Appendix

General Concepts for BTM:NG Resource Participation in NYISO Markets

Previous presentations regarding the BTM:NG project are available on the NYISO's website

BTM:NG Resources

- **A BTM:NG resource is a facility that has on-site generation capability that routinely serves its host Load and has excess generation capability after serving that host Load**
- **BTM:NG resources will be allowed to participate in:**
  - ***Energy Market***
  - ***Capacity Market***
  - ***Ancillary Services Market***

Benefits of BTM:NG Resources

- **Access to this additional supply may:**
  - ***Improve grid reliability and operational flexibility***
  - ***Provide more clarity and certainty for future resource investment within New York State***
  - ***Improve awareness of resources not currently participating in the NYISO wholesale markets***

General Eligibility Requirements for BTM:NG Resources

- **Each BTM:NG resource must:**
  - ***Be designed and operated to facilitate the business function of the on-site load by providing electricity in the regular course of business;***
  - ***Meet NYSDEC requirements to operate under non-emergency conditions;***
  - ***Have an effective interconnection agreement;***
  - ***Meet minimum net generation requirements;***
  - ***Have appropriate metering configurations; and***
  - ***Be responsive to dispatch instructions for each PTID as a single entity interfacing with the grid***

Participation Requirements

- **To qualify as a BTM:NG resource, a minimum of 1 MW of Average Coincident Host Load will be required**
  - ***Host Load includes all electrically connected loads within the defined electrical boundary served by the on-site generation***
- **The behind-the-meter generator must have a nameplate rating of greater than 2 MW**
- **The interconnection must also allow an export (injection to the grid) of at least 1 MW**
  - ***Multiple injection points at lower voltages may be acceptable provided they aggregate to a single injection into the NYS Transmission System***
- **Each BTM:NG resource must have a revenue grade TO net meter at each interconnection point from the BTM:NG resource to the distribution or transmission system**
- **The BTM:NG resource must have telemetry and, if bidding flexibly, be able to follow dispatch instructions from NYISO via the connecting TO**
  - ***Direct communication with the NYISO is permitted as a secondary communication path***

BTM:NG Resource Facility Configurations

- **Participation at a facility will be either:**
  - ***As a single generator serving a host load***
    - **Required to provide reserves if bidding flexibly**
    - **Offering regulation service is optional**
  - ***As an aggregated set of generators serving a host load***
    - **Required to provide 10 min non-spin and 30 minute reserve products if bidding flexibly**
- **The ISO shall review and approve each facility seeking to participate as a BTM:NG resource**

BTM:NG Energy Tariff Revisions

Definitions

- **The following definitions are updated in the Market Administration and Control Area Services Tariff (MST) in response to comments received from stakeholders and for clarification.**
  - ***Behind-the-Meter Net Generation Resource (BTM:NG) – Definition clarified as a Generator serving a Host Load at a single PTID point. Updated definition to clarify what qualifies as a BTM:NG Resource.***
  - ***Dispatchable – Ministerial changes.***
  - ***Emergency Upper Operating Limit (UOL_E) – Definition remains unchanged since October 23rd stakeholder presentation. The definition allows for a BTM:NG to have a different UOL_E value from UOL_N if the resource can reduce its Host Load during extraordinary circumstances. The UOL_E is capped at the Resource's Injection Limit.***

Definitions

- **The following definitions are updated in the Market Administration and Control Area Services Tariff (MST) in response to comments received from stakeholders and for clarification.**
  - ***Generator – Ministerial changes.***
  - ***Host Load – Ministerial changes.***
  - ***Injection Limit – Ministerial changes.***
  - ***Intermittent Power Resource – This change to this definition was removed and incorporated in the definition of a BTM:NG resource.***
  - ***Normal Upper Operating Limit (UOL_N) – Ministerial changes.***
  - ***Operating Reserves – 30-Minute Reserve definition updated.***

Tariff Revisions

- **Section 4.2.1.1 - General Customer Forecasting and Bidding Requirements**
  - ***The NYISO withdraws its proposal to substitute its own Host Load estimate for the BTM:NG Resource's estimate.***
  - ***New Section 15.3B of the MST describes a new charge to BTM:NG Resources for Persistent Host Load Over Forecasting.***
- **Section 4.2.1.3.1 – General Rules for Day-Ahead Bids**
  - ***Revised to state that a Generator that is electrically interconnected to a Host Load will only be able to submit Day-Ahead Bids as a BTM:NG Resource (not as a traditional Generator).***

Tariff Revisions

- **Section 4.2.3 - Security Constrained Unit Commitment ("SCUC")**
  - ***Removed reference to UOLn.***
- **Section 4.4.1 - Real-Time Commitment ("RTC")**
  - ***Removed reference to UOLn.***
- **Section 4.4.1.2 – Real-Time Market Bids and Other Requests**
  - ***Revised to state that a Generator that is electrically interconnected to a Host Load will only be able to submit Real-Time Bids as a BTM:NG Resource (not as a traditional Generator).***
  - ***The NYISO withdraws its proposal to substitute its own Host Load estimate for the BTM:NG Resource's estimate. Instead, see Section 15.3B of the MST for details.***

Tariff Revisions

- **Section 4.4.1.2.1 – Real-Time Bids to Supply Energy and Ancillary Services, other than External Transactions**
  - ***Ministerial changes.***
- **Section 4.5 Real-Time Market Settlements**
  - ***BTM:NG Resources are not subject to the procedure when bid as Self-Committed Flexible.***
- **Section 15.3 Rate Schedule 3 – Payments for Regulation Service**
  - ***Revised to reflect that BTM:NG Resources cannot provide regulation service when the Resource has multiple generators that participate in aggregate and are dispatched as a single unit.***

Tariff Revisions

- **Section 15.3A.3 – Exemptions (to Charges Applicable to Suppliers That Are Not Providing Regulation Service)**
  - ***Ministerial changes.***
- ***Section 15.3B – Rate Schedule "3-B" – Persistent Host Load Over Forecast Charges Applicable to Behind-the-Meter Net Generation Resources***
  - ***Section describes how persistent Host Load over forecast charges shall be assessed each interval when the Forecasted Host Load Difference is above the tolerance set in ISO procedures.***

Tariff Revisions

- **Section 15.3B – Rate Schedule "3-B" – Persistent Host Load Over Forecast Charges Applicable to Behind-the-Meter Net Generation Resources**
  - ***Applicable when Host Load is over-forecasted in Real-Time Bids.***
    - **Difference between forecast and actual Host Load must exceed a 3% tolerance band**
    - **The over forecast must exceed 3% for greater than 15 minutes**
  - ***Similar to rules in place for Generators that do not follow Real-Time basepoints.***
  - ***If the Behind-the-Meter Net Generation Resource's over forecast meets both components of the test, the Resource shall pay the Persistent Host Load Over Forecast Charge for the overage in excess of 3% and for the time in excess of 15 minutes.***

Tariff Revisions

- **Section 15.4.1.2.1 – Spinning Reserve**
  - ***Ministerial changes.***
- ***Section 18.12 - Proration Of Start-Up Bid For Generators That Are Committed In The Day-Ahead Market, Or Via Supplemental Resource Evaluation***
  - ***Ministerial changes.***

BTM:NG CRIS Tariff Revisions

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CRIS Tariff Revisions – Att. S

- **Ministerial and clarifying changes in response to comments received at Oct 26th ICAPWG.**
- **Definitions**
  - ***Capacity Resource Interconnection Service ("CRIS"), Class Year Deliverability Study – further revised for clarity***
  - ***Class Year CRIS Project – revised to clarify that the definition includes not just CRIS-only projects but all projects requesting CRIS***
- **Section 25**
  - ***25.3.1 Deliverability Interconnection Standard Scope and Purpose – updated to reference existing rule for 2MW or smaller facilities***

CRIS Tariff Revisions – Att. S

- **Section 25 (cont.)**
  - ***25.7.4 Participation in Capacity Markets – removal of references to estimated Net ICAP and simplification of wording for CRIS***
  - ***25.8.1 Project Cost Allocation Figures – removal of references to estimated Net ICAP***
  - ***25.9.3.4.1 CRIS for Facilities Not Subject to NYISO Interconnection Procedures – clarifications for effective interconnection***
  - ***25.9.3.4.1.1 BTM:NG Resource – clarification for initial CRIS level***

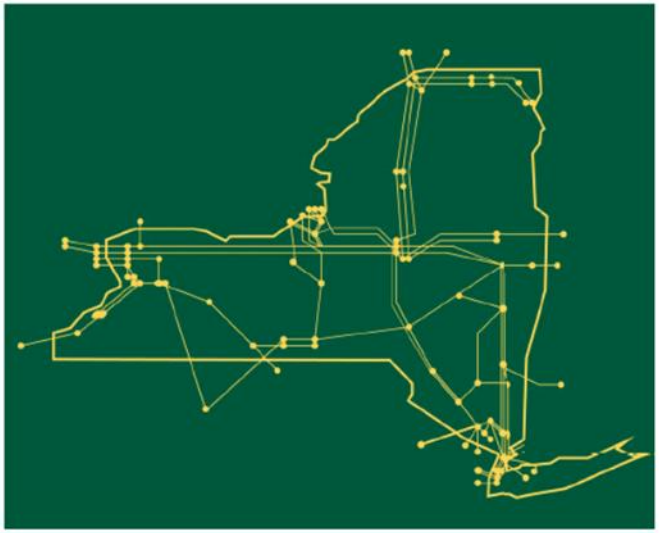
CRIS Tariff Revisions – Att. X

- Ministerial and clarifying changes in response to comments received at Oct 26th ICAPWG
- 30.3.1 Interconnection Requests General – clarification of method by which increases to BTM:NG are measured
- 30.3.2.4 CRIS Elections – removal of references of estimated Net ICAP

Next Steps

- **Tariff Revisions and Review**
  - ***Joint ICAPWG/MIWG (Nov 18th, 2015)***
  - ***Joint ICAPWG/MIWG (Nov 19th, 2015)***
  - ***BIC (December 2015)***
  - ***MC (December 2015)***
  - ***Board Approval (January 2016)***
  - ***Filing (February 2016)***
  - ***Implement (Q4 2016) – Contingent upon timely approval from Market Participants, the NYISO Board of Directors and FERC***

The New York Independent System Operator (NYISO) is a not-for-profit corporation responsible for operating the state's bulk electricity grid, administering New York's competitive wholesale electricity markets, conducting comprehensive long-term planning for the state's electric power system, and advancing the technological infrastructure of the electric system serving the Empire State.



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