

Renewables and Self Supply Compliance Filing

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ICAP WG/MIWG Joint Meeting

December 2

Krey Blvd, Rensselaer, NY

Background

- ◆ **Commission’s October 9, 2015 order (EL15-64) directed the NYISO to revise the buyer-side capacity market power mitigation measures (“BSM Rules”) to exempt certain narrowly defined renewable and self-supply resources from Offer Floor mitigation.**
- ◆ **The Commission concluded that applying buyer-side mitigation measures to such resources was unnecessary to the extent that they have “limited or no incentive and ability to exercise buyer-side market power to artificially suppress ICAP market prices.” (¶10).**
- ◆ **The Commission indicated it “expect[s] NYISO to work with its stakeholders in developing this compliance filing.”(¶10)**

Schedule and timeline

- ◆ The compliance filing is due January 7, 2016.
- ◆ Proposed stakeholder meetings:
 - ~~ICAP WG November 18, 2015~~
 - Joint MIWG & ICAP WG December 2, 2015
 - ICAP WG December 16, 2015
- ◆ In today's presentation, the NYISO is presenting to Stakeholders, and seeking input on, design elements it is considering.

Renewable Exemption

- ◆ ... A renewable resources exemption in NYISO should be limited to renewable resources that are both purely intermittent and that have relatively low capacity factors and high development costs because these resources have limited or no incentive and ability to artificially suppress capacity prices. In addition, the exemption should limit the total amount of such renewable resources—in the form of a megawatt cap—that may receive the exemption, to further limit any risk that these exempted resources will impact NYISO’s ICAP market prices. ... (§51)

Renewable Exemption- Two possible approaches and a hybrid

- ◆ **First approach: Exempt specific technologies in the tariff**
 - *The technology would have to be an Intermittent Power Resource as defined in MST 2.9*
 - **MST 2.9 definition:**
Intermittent Power Resource: A device for the production of electricity that is characterized by an energy source that: (1) is renewable; (2) cannot be stored by the facility owner or operator; and (3) has variability that is beyond the control of the facility owner or operator. In New York, resources that depend upon wind, solar energy or landfill gas for their fuel have been classified as Intermittent Power Resources. Each Intermittent Power Resource that depends on wind as its fuel shall include all turbines metered at a single scheduling point identifier (PTID).
 - *This approach would be based on analysis that looks at the costs and capacity factors of these units given the current Demand Curves to identify when that technology is “purely intermittent and [...] have limited or no incentive and ability to artificially suppress capacity prices”(¶51)*
 - **Might include a capacity factor cap by technology (based on the expected capacity factor of project)**

Renewable Exemption- First approach

- **The exemption of these units would be revisited as part of the Demand Curve reset cycle since the analysis depends on Mitigated Capacity Zone Demand Curve slopes, and the net costs of new entry by energy source.**
 - The DCR would include gathering information on the costs of intermittent renewables, and using the slopes of the demand curve etc. would determine if a technology would be exempt.
 - Similarly to the current DCR process, the Market Monitoring Unit would comment on the continuation of the exemption for the renewable technology.

Renewable Exemption- Second approach and hybrid

- ◆ **Second Approach:** Renewable projects could request a Renewable Exemption and would be evaluated based on project specific characteristics to determine if they “have limited or no incentive and ability to artificially suppress capacity prices.” Projects would need to
 - *Be an Intermittent Power Resource*
 - Proposing to use the MST 2.9 definition (see slide 5).
 - *Have a relatively low capacity factor and high development costs*
 - *Resources requesting a Renewable Exemption would be evaluated based on the characteristics of the project (MW, capacity factor, development costs, etc.). The NYISO will grant the exemption if there is no “incentive or ability to artificially suppress ICAP market prices using the resource.”*
 - *The NYISO will compare the costs of the project to the potential savings to NYCA load of having the unit enter the market.*
- ◆ **The NYISO is considering a hybrid of the two approaches. Wind and Solar would automatically be exempt (based on expected costs and expected capacity factors) and other Intermittent Power Resources could request a project specific exemption.**

Renewable Exemption- MW Cap

- *The MW Cap*

- To limit the potential impact of the exempted resources on NYISO's ICAP market prices, the Commission's Order also specified that the total amount of renewable resources that may receive the exemption should be limited.
- Although the proposed rule is designed to protect the ICAP market by the requirement that the units "have limited or no incentive and ability to artificially suppress capacity prices," the MW Cap is an effective safety valve for unanticipated events.
 - The current absence of any Wind or Solar resources in Mitigated Capacity Zones means that we need to look elsewhere for guidance on what would constitute possible future market entry.
 - Using the load growth would not be optimal because it varies from year to year and the development of renewables may not be linked to load growth since they could replace other technologies.

Renewable Exemption- MW Cap

- The NYISO is considering a MW cap that applies to all Mitigated Capacity Zones. It is not clear that individual Mitigated Capacity Zone caps would make sense or how they would be set.
 - Some stakeholders proposed a backward looking approach however
 - There are no wind or solar resources in Mitigated Capacity Zones.
 - Intermittent Power Resource technology and costs of new entry of have changed over the years.
 - A forward looking approach based on the current interconnection queue seems to be more appropriate
 - We do not know what Class Year projects will be in but can use the proposed In-Service dates as a proxy for Class Year (acknowledging that projects in the queue may be delayed or canceled).
 - When looking at wind and solar projects in the interconnection queue for all Zones, there are approximately 511.7MW for 2015, 732.6MW for 2016, 939 MW for 2017, 393.6 MW for 2018, and 148.5 MW for 2019 based on their proposed in-service dates and nameplate ratings.
 - Although none of those resources are in located in Mitigated Capacity Zones, it does provide us with a useful upper threshold: given current market conditions we would not expect more than approximately 1000MW ICAP (approximately 200MW UCAP assuming a 20 percent capacity factor) of renewables to enter in the Mitigated Capacity Zones in a given Class Year given that that is the amount proposed in the NYCA as a whole.

Renewable Exemption

- On average, over the past 10 years, there has been 680MW annually of new entry NYCA wide (a minimum annual entry of 17MW and a maximum entry of 1458MW) using Gold Book in-service dates and name plate ratings.
- The NYISO is considering a cap of 200MW UCAP/1000MW ICAP (assuming an approximate 20 percent capacity factor) per Class Year cap on Renewable Exemptions.
 - **The unforced capacity percentages for on shore wind are 10% Summer/30% Winter, for offshore wind (Zone K) 38% Summer and Winter and for solar (tilting arrays) 46% in the Summer and 2% in the Winter (ICAP manual §4.5)**
 - **Since this is intended to be a safety valve, 200MW UCAP/approximately 1,000 MW ICAP, appears to be a reasonable cap.**
- If more resources are eligible in a given Class Year than permitted under the cap, the exemptions would be adjusted *pro rata* among each of the renewable projects that are in that round of the Class Year, and again at the time of the completion of the Class Year, with the remaining MW evaluated under the Part A and B Tests for an exemption or Offer Floor determination.

Renewable Exemption

- ***Similarly to CEE and BSM determinations:***
 - The NYISO would post on its website a list of each project requesting a Renewable Exemption and, when the determination is final, the determination of whether a project is exempt or non-exempt from an Offer Floor.
 - The Market Monitoring Unit will publish a report on the NYISO's determination
- ***To provide transparency to stakeholders, the NYISO will also post on its web site a narrative and numerical example showing how a project requesting a Renewable Exemption based on project specific characteristics would be evaluated.***
- ◆ **The NYISO is seeking stakeholder input on the design, and whether there are other features or options to consider.**

Self Supply Exemption

- ◆ See ¶61 and ¶65 (among others) including:
 - *... The entity self-supply exemption we direct here must be limited to load serving entities whose ICAP portfolios are consistent with reasonably anticipated levels of their future ICAP obligations.... [T]he net-short and net-long thresholds should be tight enough to prevent a load serving from being able to deliberately overpay for a resource in an attempt to manipulate ICAP market prices in a way that benefits the load serving entity's other purchases from the ICAP market (¶61, footnotes omitted))*

Self Supply Exemption

- ◆ Last presentation, I reviewed possible approaches
 - *PJM approach*
 - The maximum net short threshold is dependent on the type of Self-Supply LSE.
 - The maximum net long thresholds are based on individual LSE capacity obligations (calculated on a three year average basis)
 - *Calculated*
 - The Complainants' proposed a method to calculate an LSE specific net short threshold (see Mike Cadwalader's Exhibit B to the Complaint EL15-64)

Self Supply Exemption

- ◆ The NYISO is considering a hybrid approach combining the PJM approach and Cadwalader approach.
 - *The Maximum Net Short threshold would be calculated based on the actual circumstances in effect when the unit requests the exemption (load in Mitigated Capacity Zone(s), slope of the demand curve, cost of new entry etc.)*
 - *The Maximum Net Long threshold would be based on a 10 year projection of the LSE's capacity obligation.*
- ◆ A unit seeking a self supply exemption would have to request the exemption similarly to the process used for a Competitive Entry Exemption.
 - *The unit would either have to be owned or be under a long term (10 year or more) supply contract with the LSE*
 - *Both the unit requesting the exemption and the LSE seeking to self supply would have to provide & certify to it (similar to the Competitive Entry Exemption Certification and Acknowledgement in 23.4.5.7.9.2)*
 - The requesting generator and the LSE would have to certify that there are no irregular or anomalous arms length contracts and that there are no “arrangement for any payments or subsidies that are specifically tied to the [load serving entity] clearing its project in [NYISO's ICAP market], or to the construction of its project.”
 - The LSE would have to certify that it has not divested substantially all of their capacity resources.
 - The LSE would have to provide all the “must take” long term contracted capacity/bilateral capacity purchases that serve load or might serve load in the Mitigated Capacity Zone(s) in which the unit requesting the exemption is located as well as the long term contracted capacity/bilateral capacity sales.

Self Supply Exemption

- ◆ **Maximum Net Short Threshold:**

- *Would be calculated for the requesting unit similar to Exhibit B of the Complaint*
 - This essentially compares the costs an LSE would incur to procure ICAP via the generator versus the savings from that unit's entry.
 - The NYISO would post a narrative and numerical example of the calculation.
- *Would use the LSE's actual capacity obligation(s) and existing generation, UDRs and SCRs and bilateral supply contracts (purchase agreements)*

- ◆ **Maximum Net long threshold:**

- *The higher of*
 1. 10 years of load growth (using the gold book forecast) or
 2. 1 % of load growth over 10 years.
- *The basis would be the average of the last 3 years of load for the LSE.*

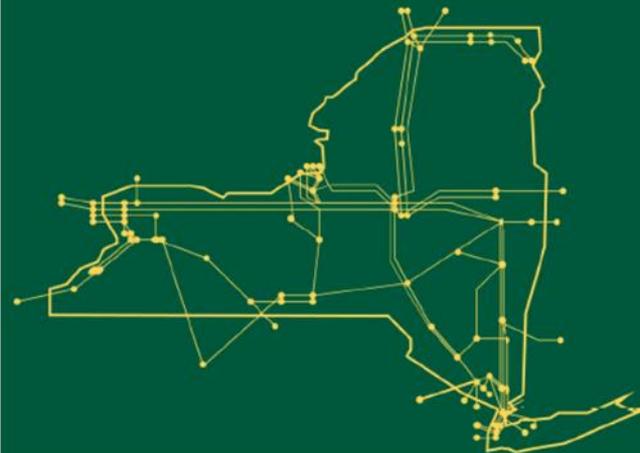
- ◆ **To get a Self Supply Exemption both the Net Short and Net Long criteria must be satisfied:**

- *The deficit of the Self-Supply LSE's owned and contracted capacity in each Mitigated Capacity Zone would be compared to the applicable Maximum Net Short thresholds. If the former is greater than the later, the Net Short criteria is satisfied.*
- *The excess of the Self-Supply LSE's owned and contracted capacity in each Mitigated Capacity Zone would be compared to the applicable Maximum Net Long thresholds. If the former is less than the later, the Net Long criteria is satisfied.*

Next steps

- ◆ **Soliciting stakeholder feedback**
 - *At this meeting, in writing (sent to deckels@nyiso.com) or by scheduling a call (by contacting Nicole Bouchez nbouchez@nyiso.com) as soon as possible.*
- ◆ **Next meeting will be December 16. The NYISO will present its proposed approach and will be seeking further stakeholder input.**

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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