

Renewables and Self Supply Compliance Filing

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ICAP WG
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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 FERC granted an extension of time to February 21, 2016 to make the compliance filing.
- ◆ Stakeholder meetings:
 - ◆ ~~ICAP WG November 18, 2015~~
 - ◆ ~~Joint MIWG & ICAP WG December 2, 2015~~
 - ◆ ~~ICAP WG January 13, 2016~~
 - ◆ ~~ICAP WG January 19, 2016~~
 - ◆ ICAP WG January 26, 2016
 - ◆ Additional ICAP WG to review tariff language
- ◆ In today's presentation, the NYISO is presenting to stakeholders, and seeking input on, its proposed approach to the Self Supplies and Renewables exemption.
 - ◆ *The NYISO is continuing to consider questions and comments from the January 13 and 19 ICAP WG meetings and other comments.*
 - ◆ *The NYISO is not able to reflect answers and responses in this presentation because of posting deadlines but will endeavor to do so at the meeting.*
- ◆ To aid in the review of this presentation the NYISO endeavored to present any additions to past presentations in blue (deletions are not indicated)

Renewable Exemption

Renewables 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)

Renewables Exemption

- ◆ The NYISO is proposing to pursue the “hybrid” approach presented at the December 2, 2015 ICAP WG.
- ◆ The exemption process would be similar to other existing exemptions like the Competitive Entry Exemption (timeline for request, certification form, etc) and would require that the renewable resource be “purely intermittent, have relatively low capacity factors and have high development costs.” The resource could either be an
 - *Exempt technology: Exempt based on its technology type. This will be based on the NYISO’s determination using analysis that considers the expected costs and capacity factors of these units given the current Demand Curves to identify when that technology has “purely intermittent and [...] have limited or no incentive and ability to artificially suppress capacity prices” (§51), or*
 - *Other renewable technology: Projects with other intermittent technologies 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.”*

Renewables Exemption

- ◆ In both cases, the technology would have to be an Intermittent Power Resource. **This includes resources** defined in MST 2.9 (not proposing to change this definition)
 - ***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).
- ◆ **The NYISO will also include Limited Control Run-of-River Hydro Resources**
 - ***MST 2.12 definition:***
Limited Control Run-of-River Hydro Resource: A Generator above 1 MW in size that has demonstrated to the satisfaction of the ISO that its Energy production depends directly on river flows over which it has limited control and that such dependence precludes accurate prediction of the facility's real-time output.

Renewables Exemption – Exempt Technologies

- ◆ Exempt technology resources would be exempt based on the NYISO’s analysis to determine if that technology has “limited or no incentive and ability to artificially suppress capacity prices.”
- ◆ Which technologies to include in the exempt technologies will be reviewed in the same time frame as the Demand Curve reset (DCR)
 - *Over time, technology costs and market conditions (and thus the incentive and the ability to artificially suppress capacity prices) could change so periodic review is needed.*
 - *Over time there may be new intermittent technologies.*
 - *The NYISO is proposing to perform this review in relation to the DCR time frame because the impact of new entry on capacity prices depends on the Demand Curve and because the DCR consultant can gather the information about the costs of different technology types at the same time as the proxy unit costs.*

Renewables Exemption – Exempt Technologies

- ◆ The process would include gathering information on the costs of intermittent renewables, and determining if a technology will be exempt.
 - *Intermittent renewable technologies would be considered for addition and removal from the list of exempt technology resources.*
- ◆ The NYISO will publish the list of technologies examined and those determined to be exempt.
- ◆ The Market Monitoring Unit would comment on the determination of the list of exempt renewable technologies.

Renewables Exemption- Wind and Solar Analysis

- ◆ **The NYISO’s compliance filing will propose an initial exemption for Wind and Solar technologies based on the current ICAP Demand Curves with certain updated parameters. The filing will include the NYISO’s analysis. The next DCR (and each DCR thereafter) would be the time frame for reviewing exempt technologies. This is a transitional provision because the Order establishes a tariff effective date of October 9, 2015.**
- ◆ **The analysis uses the Net Present Value (NPV) of a hypothetical project with the technology type (and location) along with the expected costs savings of capacity from the entry on capacity prices to determine if that technology has “limited or no incentive and ability to artificially suppress capacity prices.” The analysis is similar to existing frameworks.**

Renewables Exemption- Wind and Solar Analysis

- ◆ Financing Parameter Assumptions (updated from the 2014 DCR)

Debt	50%
Equity	50%
Interest Rate (Nominal)	4.80%
Return on Equity Rate (Nominal)	9.65%
Inflation	2.30%
Composite Tax Rate (NYC)	45.37%
Composite Tax Rate (non-NYC)	39.62%

- ◆ Other Assumptions:

- *Capacity revenues and Energy revenues*
- *Fixed O&M costs*
- *The longevity of capacity market price suppression*
- *Investment horizons, tax depreciation schedules and depreciation type MACRS.*
- *Need to perform analysis for each Mitigated Capacity Zone*

Renewables Exemption- Wind and Solar Analysis

- ◆ The NYISO’s preliminary analysis suggests that solar and wind (onshore and offshore) have limited or no incentive to depress capacity prices.

Resource Location	Onshore Wind	Solar	Offshore Wind
NYC	limited or no incentive	limited or no incentive	limited or no incentive
G-I	limited or no incentive	limited or no incentive	n/a

- ◆ The NYISO intends to provide further details of the analysis to stakeholders.

Renewables Exemption –Other Technologies

- ♦ Intermittent Power Resource projects using other technologies that are not on the “exempt list” 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.”
- ♦ Resources requesting a Renewable Exemption would be evaluated based on the characteristics of the project (project location, MW, expected capacity factor, anticipated 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 analysis is a project specific analysis similar to the analysis of exempt renewable technologies. The analysis will compare the Net Present Value (NPV) along with the expected costs savings from impact of the entry on capacity prices to determine if that project has “limited or no incentive and ability to artificially suppress capacity prices.”*

Renewable Exemption- MW Cap

- *The MW Cap*

- To limit the potential impact of the exempt 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 to further limit any risk (see Order language on slide 4).
- 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 designed to act as a safety valve for unanticipated events.
 - Using 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 Intermittent Power Resources could replace other existing technologies.
 - The current absence of any Wind or Solar Intermittent Power Resources (in service or proposed) in Mitigated Capacity Zones means that we need to look elsewhere for guidance on what would constitute possible future market entry.

Renewable Exemption- MW Cap

- ◆ The NYISO is proposing A 1,000 MW ICAP cap (roughly equivalent to a 200 MW UCAP assuming a 20 percent capacity factor) based on analysis of wind and solar projects in the interconnection queue and on the NYCA wide new entry MW over the past 10 years. [Relocated bullet]
- ◆ The NYISO is proposing 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.
- ◆ The MW Cap would be for each Class Year and there would be no rollover of any unused MW.
- ◆ If the total MW of eligible resources in a given Class Year is greater than the cap, the exemptions would be adjusted **proportionally based on ICAP MW** 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

- ◆ To provide transparency, the NYISO will post on its web site a narrative and numerical example showing how a hypothetical project requesting a Renewable Exemption based on project specific characteristics would be evaluated.

- ◆ Similarly to CEE and BSM processes:
 - *The NYISO will post on its website a list projects 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.*

Self Supply Exemption

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

- ◆ A unit seeking a self supply exemption would have to request the exemption. The process will be similar to the process used for a Competitive Entry Exemption.
 - *The unit would either have to be owned by or be under a long term (10 year or more) supply contract with the LSE*
 - *Both the owner of the unit for which the exemption was requested, and the LSE seeking to self supply would have to provide certifications (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” **with parties other than the power supply contract between the LSE and the generator requesting the self supply exemption.**
 - The LSE would have to certify that it has not divested substantially all of its capacity resources.
 - The LSE would have to state the amount and certify the last three years of load served (including affiliate loads) **broken out by Load Zone.**
 - The LSE would have to provide information on its (and its affiliates’) long term contracts (including confirms and any other form of agreement) to acquire capacity and a description of all generators in which it (and its affiliates) has a direct or indirect ownership interest (and may be requested by the NYISO to provide contracts).
 - Long term in this context would be an initial contact of 10 years or more with at least 6 years remaining at the time the unit enters the Class Year.

Self Supply Exemption

- ◆ The NYISO is proposing a calculated unit specific method for the net short threshold.
 - *This uses actual unit net CONE information instead of the CONE of a representative unit.*
 - *The cost of the unit and CRIS MW will be collected as part of the mitigation process (similar to the existing BSM process)*
 - *The characteristics of the load will be collected as part of the application and certification process.*
 - *For transparency, the NYISO will post a narrative and numerical example.*

Self Supply Exemption

◆ Maximum Net Short Threshold:

- *Calculated for each applicant. Compares the costs an LSE would incur to procure ICAP via the generator versus the savings to the LSE from that unit's entry.*
 - Uses the LSE's actual capacity obligation(s) and existing Resources, including generation, UDRs and SCRs and bilateral contracts (purchase agreements)
- *Calculated so that if the cost savings of price suppression are less than the cost of subsidizing the entrant, a self-supplying LSE can receive an exemption.*
- *Requires the following data:*
 - **LSE parameters:**
 - MW of capacity from long term contracts and owned generation (direct or indirect)
 - Entrant **CRIS requested** MW (unit specific) & Entrant Net CONE (unit specific)
 - LSE load obligation (based on peak load share)
 - **Demand curve parameters:**
 - Price forecast, without the entrant
 - Slope (used to calculate price effect of the entrant)
 - **System parameters**
 - Total UCAP

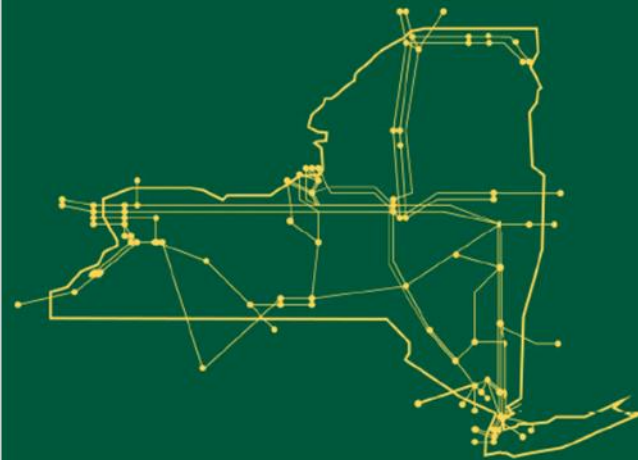
Self Supply Exemption

- ◆ **Maximum Net long threshold:**
 - *The higher of*
 1. 10 years of load growth (using the gold book forecast for the Mitigated Capacity Zone) 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 and affiliates.*
 - *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.*
- ◆ **Draft tariff revisions will be posted as soon as practicable. The NYISO is continuing to seek comments on the proposal and will schedule a meeting to review the draft tariff revisions. The date is TBD.**

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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