

External Resource Performance & Eligibility

Process Improvements for External Capacity Resources: Market Design
Concept Proposal

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Reposted – Revisions in Red Font

ICAPWG

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Reason for Improvement

- **Ensure that the NYISO can count on the energy from an external capacity supplier if the supplier is called upon.**
 - This proposal will support reliability during critical system conditions.
- **Provide comparable treatment of generators (internal and external) that sold capacity once it has been selected for an SRE on capacity resources.**
 - All resources that have sold capacity have an obligation to respond to an identified system reliability need.
- **Improve clarity of the obligation for external resources that sold capacity to respond to NYISO and potential new or enhanced penalty provisions for failure to do so.**

Objective

- **The NYISO's objective is to develop process improvements for calls for energy from external generators that sold capacity, while:**
 - Making external ICAP supplier calls more comparable to those to internal (NYCA) ICAP suppliers than they are at present.
 - Minimizing the impact to current software systems, operational processes, and market rules, allowing for a faster implementation.
 - Increasing the likelihood that external resources that sold capacity deliver energy when called upon for reliability needs.
- **The NYISO encourages stakeholder feedback that will help to accomplish this objective.**

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Challenge

Challenge - Overview

- SREs on external capacity sellers should be more comparable to internal (NYCA) capacity sellers than they are at present.
- The NYISO should be able to rely on the delivery of energy by external capacity sellers to meet reliability.
 - External capacity suppliers may not be scheduled to provide energy, depending on the resource bid, even when called upon by NYISO Operations during critical system conditions.
- The following slides provide a comparison of internal and external capacity seller SREs.

Challenge – Internal Capacity Seller SRE

- **Internal capacity sellers selected for SRE are notified by NYISO Operations.**
 - Internal capacity sellers are required to submit a Bid in response to an SRE from NYISO Operations and if scheduled are then considered “must run.” SRE’d internal (NYCA) resources are scheduled on at minimum generation, and available for further dispatch.
 - Energy market mitigation may be applied to reduce SRE Bids that do not reflect actual costs.

Challenge – External Capacity Seller SRE

- Currently, external capacity sellers selected for SREs are notified through a posting to the NYISO website (resources are not contacted directly).
- The timing of the notice provides the resource adequate time to submit required bids.
 - If the capacity resource is not online, then the external Control Area is not obligated to flow the transaction.
 - Such resources are then responsible to submit a transaction (import) bid for evaluation by the market software.
 - Import offers submitted by external capacity sellers are evaluated economically for scheduling.
 - If part of a SRE, external capacity sellers have the ability to submit a bid for energy (e.g., \$999/MWh) that is often not economic or reflective of their costs, and thus no energy would be provided in response to the call.

Background

Background

- **External capacity resource should perform and deliver energy at a level comparable with internal resources.**
 - The Management Response to the Analysis Group (AG) Performance Assurance Report recommended that the NYISO and its stakeholders consider improving requirements for external capacity resources.*

*Management Response to AG Performance Assurance Report: http://www.nyiso.com/public/webdocs/markets_operations/committees/bic_miwg/meeting_materials/2018-02-21/Performance%20Assurance%20Management%20Response%20Feb%2021%20MIWG%20FINAL.PDF

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Background

- The NYISO is considering the following project scope and welcomes stakeholder feedback.
- Performance
 - Improve requirements for external capacity sellers to ensure these resources are providing comparable reliability value as is expected of internal resources.
 - Targeting a Market Design Concept Proposal (MDCP) for 2018: Build upon the process used to perform an SRE when calling on external capacity sellers.
- Eligibility
 - Continue to evaluate what, if any, additional requirements are needed when deciding which resources are qualified to offer capacity into the NYISO.

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Proposal: Process Improvements for External Capacity Resources

Proposal Summary Comparison

| Action | Internal Capacity Sellers | External Capacity Sellers (Current) | External Capacity Sellers (Proposed) |
|--|--|---------------------------------------|--|
| Need identified, resources evaluated | Evaluated | Evaluated | Evaluated |
| Capacity seller selected for SRE notified | Yes | Yes | Yes |
| Energy Scheduling | Resource is scheduled on at min gen by NYISO | High energy bids can avoid scheduling | Resources responsible to flow energy in RT using energy bids |
| Resource provides energy | Yes | Only if scheduled | Yes |
| Resource receives make-whole payments if applicable | Yes | Yes | Yes |
| Capacity seller subject to applicable penalties for non-performance during SRE | Yes | Yes | Potential new or enhanced |

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External Capacity Resource Notification

- Operations would evaluate internal and external capacity sellers when deciding which resources to SRE.
- The NYISO proposes that it would select specific external capacity-backed transaction(s) able to resolve the reliability need as part of an SRE, and would notify the applicable external capacity seller(s).
 - The external capacity seller will be obligated to receive a schedule to flow into the NYCA in the Real-Time Market for amount of MW associated with the ICAP equivalent of the amount of UCAP sold.
 - External capacity-backed transactions can source MW from one or multiple generators (to which the capacity obligation is linked) fulfilling the ICAP obligation.
 - External capacity transactions can be satisfied with an ICAP tag for one or multiple external generators (provided the ICAP Supplier has “associated” the external generators with it in the ICAP AMS). The SRE can be for transactions of any of the tagged external generator(s).
 - Additionally, because the NYISO does not have the ability to ramp the resource every 5 minutes, it is not appropriate to call at the resource’s minimum generation point.

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External Capacity Seller SRE- Payment

- The NYISO proposes that an external capacity seller provision of energy in response to an SRE would settle at the LBMP at their proxy bus.
 - An external capacity seller that provides energy in response to a call could incur costs in both producing and delivering energy which are not covered by the applicable proxy bus LBMP.
 - Under this circumstance, the resource will be able to request verification of costs that it was unable to reflect in its Bid after the call and request after the fact reimbursement from the NYISO.
 - Fixed costs are generally not recoverable.

External Capacity Seller SRE – Non-Performance Penalties

- The NYISO proposes that if an external capacity resource that is not on a forced or scheduled outage is called and does the following, it will have satisfied its obligations:
 - 1) responds to the SRE bid request for the ICAP equivalent of the capacity sold, and
 - 2) is online, and
 - 3) flows a capacity backed transaction from its control area to the NYCA border for the ICAP equivalent of the amount of UCAP sold, for the duration of the SRE
- If an external capacity seller is unable to demonstrate all applicable requirements, then the resource will be assessed a penalty (See discussion starting at slide 21.)

Generator and Transmission Facility Outages External to the NYCA

- An external capacity seller that is unable to respond to a call due to a forced outage, *e.g.*, attempts but the equipment failed to start or was running and tripped offline, will not be subject to a penalty as a result of non-performance during the SRE.
 - However, NYISO Operations would not remove the SRE and, if the resource associated with the transaction became available, then it would be expected to respond.
 - The outage will impact the resource's EFORd.
- A **failure to deliver** energy in response to an SRE due to a transmission facility failure on the external control area system would be subject to a penalty for non-performance.

Example of how the Proposal would Work

Proposal Example

- **Assume an external capacity seller has been selected for an SRE, with the following status prior to the call:**
 - The capacity-backed valid transaction that the resource bid into the NYISO energy market was for 100 MW at a price that was not economic to be scheduled in the DAM.
 - The resource(s) supporting the capacity-backed transaction is(are) offline
- **Assume an internal capacity seller has also been selected for an SRE, with the following status prior to the SRE:**
 - The internal capacity resource bid 100 MW at a price that was not economic to be scheduled in the DAM.
 - The internal capacity resource is offline.
 - The internal resource's minimum generation point is equal to its upper operating limit.

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Proposal Example (continued)

- Under the NYISO's proposal, a selected external capacity seller has obligations that are comparable to those of a selected internal capacity seller.

| Obligation | External Capacity Seller SRE | Internal Capacity SRE |
|--|--|---|
| Be available for the amount of capacity sold | The resource(s) supporting the transaction in this example must be able to achieve a MW output equal to 100 MW once online | The resource in this example must be able to produce 100 MW of energy once online |
| Be online | The resource(s) supporting the transaction in this example must start | The resource must start |
| Deliver energy for the duration of the SRE | The supplier could change its ICAP transaction bid to -\$999 to ensure that it is scheduled to flow 100 MW to NY, though any offer that receives a 100MW schedule on the ICAP Transaction for the duration of the call would fulfill this obligation | The resource is marked as "must run," ensuring the resource is scheduled to produce 100 MW of energy. |

External Resource SRE Penalty Proposal

External Resource SRE Penalty

- The NYISO is seeking input on potential new or enhanced penalties for external resources that fail to satisfy their obligation to respond to an SRE, as well as the consequences for non-performance.
 - Because the obligation is to get the capacity to the NYCA border, an enhanced penalty provision could broaden the circumstances under which a failure to deliver energy from an external control area system would be subject to a penalty for non-performance.
 - This penalty will reinforce the obligation of external resources that sold capacity to respond to the NYISO.

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External Resource SRE Penalty (cont'd)

- The NYISO proposes the following calculation for certain penalties for external resources that fail to respond to an SRE.
 - There is a shortfall calculated as a percentage of time the resource responded to the SRE compared to the total requested response period.
 - The number of hours responding to the call (e.g., 1 hour respond out of a 2 hour call would be 50% response).
 - The deficiency charge is equal to 1.5 times the applicable Market-Clearing price for UCAP determined in the ICAP Spot Market Auction for the applicable month.
 - The value is then multiplied by the number of MW of shortfall and the percentage of time the resource responded out of the total requested response period.

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Next Steps

Next Steps

- The NYISO requests that any stakeholders who would like to provide feedback on this market design concept proposal should do so by August 10, 2018.
 - Please email feedback to deckels@nyiso.com

Appendix I: The Supplemental Resource Evaluation (SRE) Process*

Further information regarding the NYISO SRE process is included in the NYISO Market Services Tariff (MST), and in the Transmission & Dispatching Operations Manual at the following link:

www.nyiso.com/public/webdocs/markets_operations/documents/Manuals_and_Guides/Manuals/Operations/trans_disp.pdf



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SRE Process

- SRE commitment refers to the NYISO scheduling a generator to start-up to run at, or above its minimum generation level.
- The NYISO SRE process varies slightly depending on the timing of the SRE (*e.g.*, after Day-Ahead/before real time, and during real time); generally, for the SRE process:
 - If time permits, a notice is posted that an SRE is planned, and that additional resource bids are being solicited.
 - The amount, location and need (energy, regulation, or reserve) are identified, as well as the duration of the SRE.
 - The resource ability to resolve the reliability issue is considered.
 - Resources are selected for SRE on a least cost basis where least cost equals the composite availability, start-up costs, and minimum generation costs.
 - If these factors are equal, then bid energy cost is used as the tie breaker.

SRE Make-Whole Payments

- **Costs incurred by the resource in responding to the SRE, such as start-up, minimum generation, and incremental costs are made whole by the NYISO.**
 - Resources that have been SRE'd by the NYISO may lower but cannot raise accepted bid costs for the duration of the time that the resource is committed as an SRE.

Appendix II: Existing Consequences for External Capacity Supplier Energy Delivery Shortfalls

Determining Energy Delivery UCAP Shortfall

- **Currently, if an External ICAP Supplier fails to deliver Energy to the NYCA due to a failure to obtain appropriate transmission service or rights (or due to a forced outage), then:**
 - There is a shortfall starting from the later of 1) the beginning of the period for which the UCAP was certified or 2) the last demonstrated delivery of the Installed Capacity Equivalent
 - The shortfall extends to the earlier of either 1) the time at which the entity demonstrates delivery, or 2) the end of the term for which the block of UCAP was certified.

Determining Deficiency Charge

- **The deficiency charge is equal to 1.5 times the applicable Market-Clearing price for UCAP determined in the ICAP Spot Market Auction for the applicable month**
 - This value is prorated for the number of hours in the month that the External ICAP supplier is deemed to have a shortfall.
 - The value is then multiplied by the number of MW of shortfall.

The Mission of the New York Independent System Operator, in collaboration with its stakeholders, is to serve the public interest and provide benefits to consumers by:

- Maintaining and enhancing regional reliability
- Operating open, fair and competitive wholesale electricity markets
- Planning the power system for the future
- Providing factual information to policy makers, stakeholders and investors in the power system



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