Consumer Impact Analysis: External Capacity Performance & Obligations

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Background

- The Analysis Group (AG) in its October 2017 report made several recommendations about external resource performance, particularly during critical operating conditions
- In particular, the AG Report suggested that the better alignment of external resource performance with internal resource performance merited further evaluation
- The AG Report also pointed out that the deliverability of external capacity to the NYCA border has not been tested during periods when the New York's neighbors are facing critical operating conditions
- The NYISO proposed looking at two aspects of external capacity performance and obligations:
  - External SRE Penalty (Proposal Completed and Approved by Stakeholders)
  - External Capacity Deliverability and Eligibility (On Going Effort)

Project Objectives

- Ensure that external capacity resources are providing reliability value that is comparable to that provided by internal capacity resources
- Enhance the deliverability of energy needed for reliability from external capacity resources, corresponding to the capacity these external resources sold into the NYISO markets
- Minimize the impact of proposed changes to software systems, operations and market rules to facilitate faster implementation of project objectives

NYISO's Proposal

- **SRE Penalty Proposal**
  - To the extent an external capacity resource fails to meet any or all the external capacity call requirements, it shall be subject to a penalty*
- **The NYISO is in the process of developing a proposal with its stakeholders to address the Deliverability and Eligibility segment of this project**
  - Attempt to understand any obstacles that prevent external capacity resources from delivering capacity-backed energy to the NYCA border
  - Strive for comparability between internal and external capacity resources with regards to assurance of energy deliverability
  - The guiding principles that summarize the requirements for capacity market eligibility were presented to a Joint Installed Capacity and Market Issues Working Group meeting on May 6, 2019

* The External Capacity Call Requirements and the Penalty Formula were fully described in an April 17, 2019 Presentation to the Business Issues Committee

Consumer Impact Analysis (IA) Evaluation Areas

- Present the potential impact on all four evaluation areas

RELIABILITY Successfully aligning external resource performance with internal resource performance should help in maintaining system reliability, especially during critical operating periods	**COST IMPACT/ MARKET EFFICIENCIES** The NYISO does not expect a reduction in imports offered into NYISO capacity auctions as a result of better aligning external resource performance with internal resource performance
ENVIRONMENT/ NEW TECHNOLOGY No Impact Expected	**TRANSPARENCY** No Impact Expected

Expected Impacts

- The NYISO does not expect a reduction in imports offered into NYISO capacity auctions as a result of better aligning external resource performance with internal resource performance
- If some external resources cannot meet the new requirements, it is likely that they will be replaced by other external resources that can
- Additionally, some internal MW that previously went unsold may now clear to offset any reductions in imports
- If there is a reduction in imports, it is only expected to occur in the ROS, as downstate clearing prices are anticipated to continue to incentivize imports into Localities

Cost Impacts

- The cost impacts are based on a hypothetical reduction of some level of imports to the ROS. As discussed earlier, we do not anticipate any loss of imports to the Localities
- Computed both the short and long term possible capacity cost impacts of losing some external capacity resources
- The NYISO does not anticipate any reduction in Energy Imports due to reductions in Capacity (if any) from external capacity resources

Capacity Market Impact

- **Assumptions:**
  - Studied the short and long term impact of losing 100MW, 200MW and 300MW of capacity from external resources
  - Assumed that the loss of capacity was in the ROS
  - Zones J, K and GHI are not expected to lose capacity due to the new SRE penalty rules or the external capacity deliverability proposal because of the relatively higher price in those zones
  - The IRM/LCR values from the as found system were used

Short Term Cost Impact Methodology

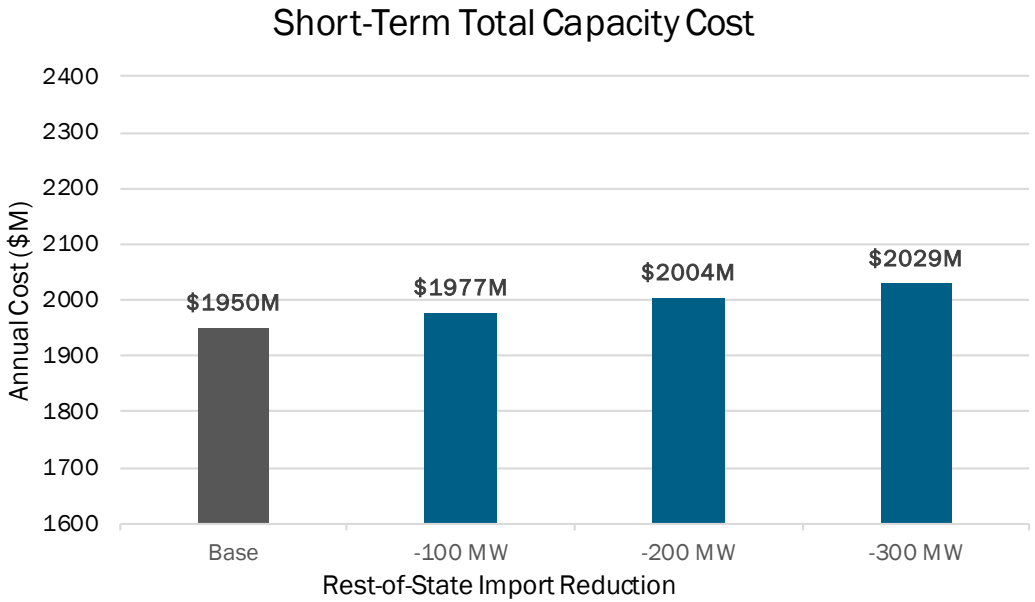
- Used the 2019 as found system as a base case, for both the short and long term consumer impact analysis
  - 2019 as found system, with capacity reductions of 100MW, 200MW and 300MW
- The short term analysis assumed no additional changes to generation

Long Term Cost Impact Methodology

- **Used the 2019 as found system as the base case**
  - The same 100MW to 300MW reduction in capacity as assumed in the short term analysis
  - Used the 2019 Demand Curve Values
- **For the supply level, use the historic excess defined as a percentage of excess above the requirements observed over the last three Capability Years in each of the different Localities**

Short Term Results

- For the short-term cases, we removed Capacity Imports from ROS and decreased the Unsold MW, since more Unsold MW would be expected to clear in the auctions due to the reduction in Imports
- Since no change in generation is assumed for the short-term cases, total Annual Cost increases as the reduction in Capacity Imports increases

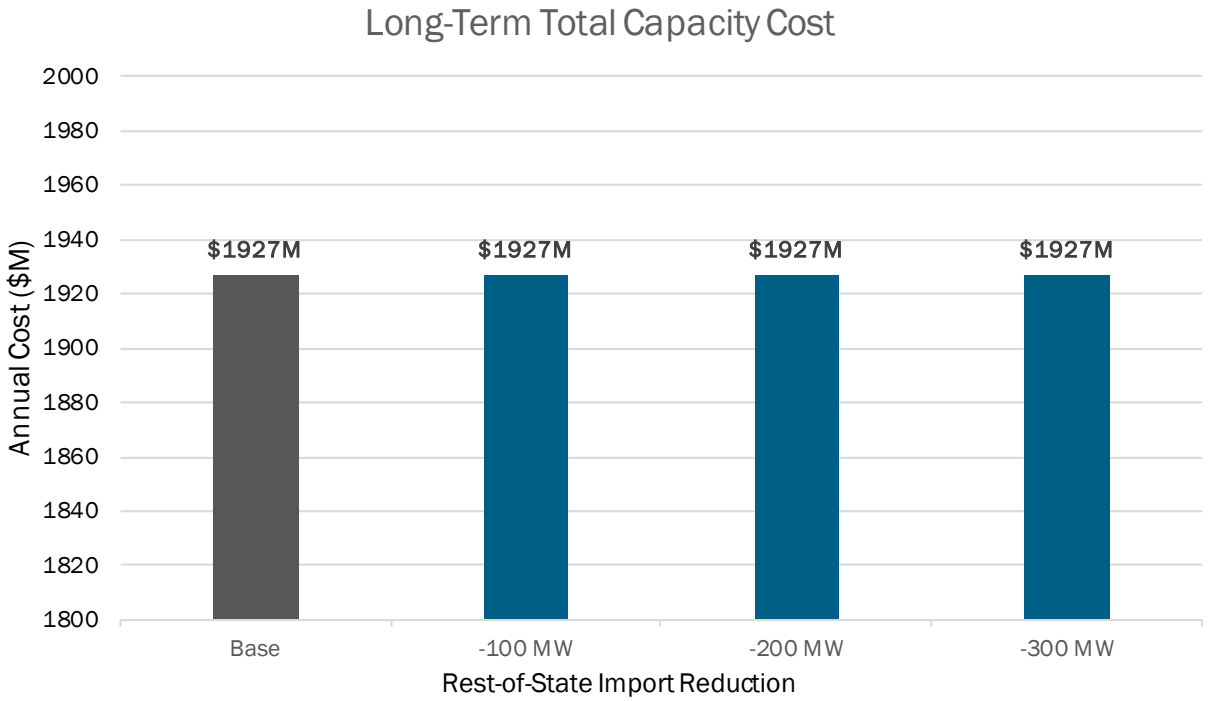


Short Term Capacity Cost Impact

Scenario	Total Annual Cost ($M)	Delta from Base Case ($M)
Base Case	1950	0
-100 MW	1977	27
-200 MW	2004	54
-300 MW	2029	79

Long Term Results

- In the long-term scenarios, we removed Capacity imports from ROS and adjusted back to the average 3-year historic level of excess



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Long Term Capacity Cost Impact

Scenario	Total Annual Cost ($M)
Base Case	1927
-100 MW	1927
-200 MW	1927
-300 MW	1927

Other Impacts

- **Evaluate Other Impact:**
  - Reliability Impacts
  - Environmental Impacts
  - Impacts on Transparency

Reliability Impacts

- As noted in the AG Report, the deliverability of external capacity to the NYCA border has not been tested during periods when the New York's neighbors are facing critical operating conditions
- Successfully aligning external resource performance with internal resource performance should help in maintaining system reliability, especially during critical operating periods

Environmental Impacts

- No impacts expected

Impacts on Transparency

- No impacts expected

Feedback?

- Email additional feedback to:
- deckels@nyiso.com

Questions?

We are here to help. Let us know if we can add anything.

Appendix

AC Interface Import Values

- For Capability Year 2019-2020, the maximum amount of Installed Capacity subject to Total MW limits that may be allocated for NYCA interfaces from each of the following Control Areas is as follows:

Neighboring Control Area	Total (MW)	Grandfathered (MW) and CY External CRIS (MW)	Remaining (MW)
PJM	1112	38	1074
ISO-NE	279	0	279
Ontario	128	0	128
Quebec via Chateauguay	1114	1110[2] April - November 239 December - February 259 March	4 April - November 875 December - February 855 March

Source: NYISO Installed Capacity Manual, Section 4.9.6

2 The MW at Quebec via Chateauguay are subject to Section 25.7.11 of the NYISO OATT Attachment S

UDR Interface Import Values

- Unforced Capacity Deliverability Rights (UDRs):

Unforced Capacity Deliverability Rights	
Cross Sound Cable (CSC) – New England to Long Island, Zone K	330 MW
Neptune Cable – PJM to Long Island, Zone K	660 MW
Linden VFT – PJM to New York City, Zone J	315 MW
Hudson Transmission Project – PJM to New York City, Zone J	660 MW

Source: NYISO Installed Capacity Manual, Section 4.9.6

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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