

Report on CURRENT MARKET INITIATIVES RELEVANT TO RELIABILITY January 8, 2016

1) Behind the Meter: Net Generation Model

The NYISO's market rules do not include provisions that clearly explain how generation whose primary purpose is to serve onsite load can sell their excess generation into the wholesale electricity markets. This effort would look to clearly define those rules to allow this incremental generation capability to participate in the NY wholesale electricity markets.

Implications to Reliability: Increased transparency and ability to schedule generation which is currently behind the meter.

Update: NYISO received stakeholder Management Committee approval of the market design in December and will file the relevant tariff with FERC after Board approval in January. NYISO will also engage with stakeholders on further enhancements to integrate distributed resources into wholesale markets in 2016.

2) Comprehensive Shortage/Scarcity Pricing/Fuel Assurance

Improvements to the shortage pricing mechanisms will include the addition of a SENY location, representing Lower Hudson Valley, New York City and Long Island, a 30-minute reserve requirement, an increases to the NYCA 30-minute reserve requirement, restrictions on the maximum reserve to be held on LI and adjustments to the reserve shortage pricing levels. The revisions are desired to promote increased performance incentives, maintain price consistency with neighboring regions and align markets outcomes with operator actions and system conditions.

Update: The Comprehensive Shortage Pricing tariff changes were implemented in November 2015.

Improvements to the scarcity pricing mechanism will include application of scarcity prices to external locations and improve the efficiency of market outcomes through the modeling of a scarcity reserve product in the optimization during reliability Demand Response (DR) calls. This effort will look to move Scarcity Pricing into the real-time scheduling and pricing optimization engine to better align scheduling decisions with pricing outcomes.

Update: NYISO has engaged stakeholders in a review of the market design improvements to enhance the scarcity pricing mechanisms. The NYISO received

stakeholder approval of the changes in October and is targeting implementation of the new practice in 2nd Quarter of 2016.

Improvements to fuel and performance incentives are aimed at creating additional incentives for ICAP suppliers to be available on critical operating days. The NYISO will evaluate the need for additional mechanisms to enhance incentives for suppliers to be available to reliably meet the real-time needs of the NYCA, especially on days when there is a high risk of a reduction in real-time resource availability due to factors including high demand and fuel supply uncertainty.

Implications to Reliability: Improved real time market incentives will promote increased unit availability.

Update: The NYISO is reviewing various options for recognizing fuel-constraints through additional bidding features to evaluate interest in further developing the concept. Incorporating the fuel limitations directly in the scheduling software will allow for more efficient use of the resources to meet reliability needs.

3) Reforming the Energy Vision (REV)

The NYS Public Service Commission (PSC) initiated the "Proceeding on Reforming the Energy Vision (REV)" with the goal of aligning electric utility practices and the regulatory paradigm with technological advances in information management, power generation, and distribution. These changes include:

- A new business model in which Distributed Energy Resources (DERs) become a primary tool in the planning and operation of electricity systems. Utilities would be encouraged to invest in DERs that help to avoid or defer the need for more historically traditional distribution system investments.
- The establishment of a Distributed System Platform Provider (DSP) that actively manages and coordinates DERs while providing a market in which customers are able to utilize DERs in response to dynamic system conditions. Such customers would provide, and be compensated for, any system benefits associated with their responses.

Implications to Reliability: Enhanced system reliability and resiliency through distributed resource availability and active management of load consumption based upon market conditions.

Update: The NYISO is looking to partner in various REV demonstration projects to evaluate the potential for operational and market impacts from DER participation.

4) Reliability Must Run (RMR) Service Agreements

The FERC directed the NYISO to develop and file a set of rules to designate resources for RMR service to ensure the continued reliable and efficient operation of the power system and the NYISO Markets. The structure and administration of the program will require specifying the retirement notification obligations, process for evaluation of alternative solutions, definition of compensation and cost allocation provisions, and expectations for participation in the capacity and energy markets. The NYISO is additionally exploring enhancements to its long-term planning process to support identification of, and development of solutions for, potential generator retirements.

Implications to Reliability: Enhanced system reliability and resiliency through resource availability and improved planning processes, and improved market certainty and transparency.

Update: The NYISO has developed and filed with the FERC a proposed solution framework.

5) Locational Capacity Requirements (LCR): Review of Alternate Methodologies

The NYISO has initiated stakeholder discussion on evaluating alternate methodologies for setting LCRs. There are multiple possible approaches to determine the LCR requirement for a Capacity Zone after the IRM has been set under NYRCC's Policy 5. NYISO is facilitating a discussion in a ICAP Working Group Task Force to identify appropriate methodologies.

Implications to Reliability: Enhanced system reliability and resiliency through resource availability and improved planning processes, and improved market efficiency and transparency.

Update: The NYISO will work with stakeholders to develop enhancements to the current methodology for setting LCRs in 2016. David Patton, of the NYISO Market Monitoring Unit, has suggested that LCRs be set based on economics of procuring needed amounts of capacity to maintain NYCA-wide reliability.

6) Demand Curve Reset

The NYISO is reviewing vendor proposals to complete the upcoming Demand Curve Reset cycle. The selected consultant will conduct a study of the parameters used as the basis to set the NYISO's Installed Capacity Demand Curves beginning with the Summer 2017 Capability Period; will assess whether these parameters should apply to Demand Curves for a three, four, five or six year period, and; will propose and evaluate alternative methodologies to enhance the projection of Energy and Ancillary Services revenues used to determine the Unit Net CONE of the Demand Curve proxy plant, including approaches to reflect impacts from expected market rule changes.

Implications to Reliability: Enhanced system reliability and resiliency through improved market transparency and financial stability.

Update: The Analysis Group is leading the Demand Curve reset evaluation and has had several discussions with stakeholders on the framework of the current DCR process and an evaluation of the periodicity of the DCR. Any tariff revisions for a change in the periodicity of the DCR process will be filed with FERC in March 2016. The DCR process will continue throughout 2016 with filing of revised parameters in November 2016.