ESA's Recommendations on NYISO's Capacity Accreditation Straw Proposal

Introduction

NYISO is proposing to implement a revised capacity accreditation (CA) study process to determine the incremental reliability contribution of capacity resource types in order to establish, and then update, capacity values and duration adjustment factors. NYISO's proposed CA reforms would apply to all resources, including standalone and co-located or hybrid storage resources. Effective Load Carrying Capability (ELCC) or Marginal Reliability Improvement (MRI) studies are two potential methodologies NYISO has proposed to achieve this. NYISO has noted that this study would not replace resource-specific derating factors, though some derating factor calculations may need to be reexamined as part of this market design effort.

At NYISO's 8/9 ICAPWG presentation, six elements of the straw proposal were presented:

• Study base: how should the study be modeled?

• As-found or at-criterion: at what level of excess should the study be run?

• Frequency: how often should the study be run?

• Resources: which resource types will be included in a study?

• Locations: at what geographic granularity should the study produce results?

• Marginal vs. Average: should resources be valued at their marginal or average incremental reliability value?

ESA's comments and recommendations on the six straw proposal elements are below.

Comments/Recommendations

Study Base: How should the study be modeled?

- The NYISO proposes to use the Installed Reserve Margin (IRM) or Locational Minimum Installed Capacity (LCR) studies as a base for this study

The Installed Reserve Margin (IRM) study, performed by the NYISO for and in conformance with the NYS Reliability Council, and the Locational Capacity Requirement (LCR) study are annual studies to determine the minimum Installed Capacity Requirements for New York State for the following year, and the NYC, Long Island and Lower Hudson Valley Capacity Localities, respectively. NYISO has explained that because they already use the IRM and the LCR studies annually to determine the minimum Installed Capacity Requirements in NY, it makes sense to also use these studies and models as the basis for the accreditation study they ultimately select.

Recommendation/Comment: The IRM approach will enable NYISO to maintain the underlying 0.1 LOLE principle. NYISO's proposal will also align with current resource adequacy models and proposed market enhancements under consideration. However, ESA would like to note that there are areas of the IRM

study that should be improved upon, including addressing risks that the IRM study was not designed to fully address, such as correlated outages that are associated with an evolving grid. As extreme weather may cause correlated outages, ESA recommends that NYISO include means by which to better capture those correlations for the purposes of resource adequacy modeling and capacity accreditation—either as a base case or a sensitivity case.

As-found vs. At-criterion - at what level of excess should the study be run?

- The NYISO proposes to run this study at-criterion

NYISO proposes to run this study on an "at-criterion" system because this approach reflects all the constraints (e.g. forced outages, transmission capability limitations) at any given time. Additionally, NYISO says that "at criterion" is better at ensuring a loss of load expectation of not more than 1 day in 10 years (or 0.1 days/year).

NYISO explained that the as-found system is the "today" system as we know it and may not reflect all the constraints described above at any given time. Running the study on the as-found system would produce very few loss of load events that could make calculating CA values for specific resources difficult and prone to error

Recommendation/Comment: A requirement of modeling the study at criterion should not be included in NYISO's proposed tariff language since the most appropriate modeling approach can change from one study to the next. The decision of choosing an at criterion approach versus an as-found approach for each study should be left to stakeholders to decide both for this study and future studies.

NYISO has not shared what level of excess is associated with an as found system. ESA requests that NYISO share more information about this aspect of an as found system.

Frequency: How often should the study be run?

- The NYISO proposes to perform this study annually as this this would align capacity accreditation for resources with other resource adequacy modeling and studies currently in effect and would produce results that closely align with the current grid conditions and resource mix. Currently the tariff requires the CA study to be performed every four years.

Recommendation/Comment: At this time, ESA does not have comments on the frequency that the study should be run at.

Resources: which resource types will be included in the study?

- The NYISO proposes to evaluate all resource types to determine whether they should be subject to this study.

- The NYISO intends to evaluate the potential for all resources to be subject to this new capacity accreditation construct
- The NYISO will then determine whether and how these new rules might apply to specific resource types, and how each resource type should be studied

Recommendation/Comment: The study will determine how the methodology used to calculate duration adjustment factors (DAFs) for duration-limited resources will be adjusted to reflect the CA for each resource type. ESA finds NYISO's proposal to evaluate all resource types to determine whether they should be subject to this study to be reasonable.

Locations: at what geographic granularity should the study produce results?

- The NYISO is proposing to perform this study for resource types at the Capacity Locality level (consistent with LCR study) because performing this study at the Capacity Locality level will align results with the ICAP Market auction's LCR process.

Recommendation/Comment: NYISO performs the LCR study at the Capacity Locality level and for their ICAP market auctions, and so they are also proposing to perform this study at that same level to ensure alignment of the underlying principles used in both cases. ESA finds this rationale to be reasonable.

Marginal vs. Average: should resources be valued at their marginal or average incremental reliability value?

- NYISO is proposing to use the marginal values produced from this study for each resource type when measuring the capacity accreditation of ICAP Suppliers because NYISO believes that using marginal capacity accreditation values will result in better market efficiency and properly signal which resource types are best suited to support grid reliability and that using marginal capacity accreditation values best aligns with the NYISO's prompt ICAP Market structure.

NYISO said in their ICAPWG presentation on 8/30 that average accreditation would result in severe inefficiencies and overpayment in the long term, however, the drawbacks of the marginal approach were not noted.

Recommendation/Comment: Average value approaches, such as PJM has recently implemented, avoid undervaluing the resource adequacy contribution of individual energy storage and hybrid storage projects. At the next several meetings, we request that NYISO provide a detailed analysis of the benefits and drawbacks of both the marginal and average approaches, as well as more opportunities for thorough discussion of both approaches.