NYISO Update : Probabilistic Locality Exchange Factor Analysis

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August 22, 2017

DRAFT – FOR DISCUSSION PURPOSES ONLY

Background

- **Potomac Economics' 2015 State of the Market report raised a concern with the treatment of capacity exports from import constrained localities**
  - A proposed ISO-NE rule change would allow a resource already qualified in a subsequent auction to participate in 2017/2018
- **The NYISO developed tariff revisions with stakeholders and on November 30, the NYISO filed MC-approved tariff revisions**
  - The Commission approved the tariff revisions* on January 29th
- **The tariff provides for the LE Factor to be determined based on a power flow analysis. The methodology identifies the amount of ROS generation that can be brought into the Locality given the constraint relief provided by the export**

*The Commission rejected the phase-in of the Locality Exchange Factor (LE Factor) incorporated into the proposal at the direction of the MC

Background

- Management Committee-Approved Motion Included that the NYISO is to:
  - Work with Stakeholders further on this issue in 2017 and by June 1, 2017 file with the Commission either an informational report on the evaluation or a filing proposing to amend the ISO Tariffs
- After the NYISO filed the proposed tariff revisions, it contracted with GE to aid in exploring potential refinements to the LE Factor calculation and modeling assumptions using a probabilistic approach
- On June 1, the NYISO filed an informational report and did not propose Tariff changes

GE Probabilistic Summary

- **GE was tasked with developing a model that could be used to determine an LE Factor in a probabilistic manner that was:**
  - Stable and predictable
  - Could be repeated for sales from any Locality to any neighboring Control Area
- **GE obtained stakeholder input as it was developing the methodology and analyzing the results**
- **GE's final recommendations, analysis and conclusions were presented at the June 29th ICAPWG meeting. It concluded that:**
  - Calculating a Probabilistic LE Factor adds complexity and unpredictability
  - Additional research would be necessary to address the varied issues identified with this approach
  - The probabilistic method does not give results which differ significantly from the 47.8% found using the current deterministic method (*i.e.*, 47.8% vs. ~59%)

GE Probabilistic Summary

- **The NYISO solicited Stakeholder feedback in order to inform the NYISO's next steps**
  - That feedback is summarized on the following slides and in some instances, written feedback is posted with the meeting material

Stakeholder Feedback

- **IPPNY**
  - Agrees with GE's findings and conclusions and supports the NYISO discontinuing work on the probabilistic-based LE Factor and redirect those resources to the other capacity market projects under consideration
  - Complete comments posted with meeting material
- **Transmission Owners, LIPA, NYPA**
  - Developed an alternative approach for calculating LE Factors that would retain the deterministic study but incorporate a probabilistic adjustment to account for the percentage of time NY and its neighboring Control Area do not have loss of load events at the same time
  - Separate presentation posted with meeting material

Stakeholder Feedback

- **MI**
  - Supports an LE Factor that is reflective of deterministic and probabilistic analyses
  - Contends that the current LE Factor of 47.8% appears understated by some amount
  - Given the significant financial implications associated with ensuring that the LE Factor is accurate and equitable, supports continuing work on this issue as needed
- **UIU**
  - Recommends further refinements to the GE probabilistic modeling technique and supports further exploring how an LE Factor could be applied to imports

NYISO Response

- **The NYISO continues in its initial conclusion described at the June 29 ICAPWG meeting that continued effort into the probabilistic modeling approach is not practicable**
  - The model introduces unpredictability into the administration of the market, and market prices, that is inconsistent with sound economic principles
  - There is no evidence to support that continued efforts to refine the probabilistic modeling would result in a methodology that would provide year to year outcomes that were reasonably stable

NYISO Response

- **We have fulfilled our commitment with respect to the Treatment of Capacity Exports from Localities effort in 2017**
  - Deployed FERC approved capacity market changes in February 2017
  - Provided updates, facilitated stakeholder discussions, and filed the June 1 informational report with FERC
  - Developed a whitepaper and supported review by the NYSRC and ICS to evaluate this issue
  - The NYISO, in consultation with GE, and with stakeholder input,
    - Developed a methodology for a probabilistic approach
    - Thoroughly reviewed and analyzed the results of the probabilistic model

Next Steps

- The TO proposal represents a potential hybrid approach which combines elements of the deterministic and probabilistic models. There are concerns that this hybrid approach may not meet the required Loss of Load Expectation (LOLE) criterion of 1 day in 10 years.
- The NYISO is considering whether the TO proposal or an alternate formula based model may be developed and benchmarked to provide a high degree of confidence that the 1 in 10 LOLE criterion is maintained
  - The NYISO will engage GE to explore these approaches
- The NYISO will seek stakeholder input once GE has evaluated the issue and performed some validation
- The NYISO expects this new effort will take 4 to 6 months with stakeholder involvement before the NYISO and its stakeholders will be able to make a considered judgment on its suitability for implementation

Questions?

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

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