



October 16, 2019

Honorable Kathleen Burgess
Secretary
New York State Public Service Commission
Three Empire State Plaza
Albany, New York 12223-1350

Re: Case 19-E-0530 - Resource Adequacy Matters

Dear Secretary Burgess:

The attached cover letter and comments in Case 19-E-0530 regarding Resource Adequacy Matters are submitted on behalf of the New York State Reliability Council ("NYSRC").

Please contact me if you have questions concerning these comments.

Respectfully submitted,

A handwritten signature in black ink that reads "Paul L. Gioia". The signature is written in a cursive style with a long horizontal line extending to the left.

Paul L. Gioia
Counsel to the
New York State Reliability Council

Enclosures

Case 19-E- 0530 – Proceeding on Motion of the Commission to
Consider Resource Adequacy Matters

Comments submitted by the
New York State Reliability Council

Introduction

The New York State Reliability Council (“NYSRC”) appreciates the opportunity to submit comments in this proceeding. The NYSRC, among its other responsibilities, is responsible for establishing the annual statewide resource adequacy requirement for the New York Control Area (“NYCA”), defined in terms of an Installed Capacity Requirement (“ICR”) which is translated into and an Installed Reserve Margin (“IRM”).¹ The IRM is implemented by the New York Independent System Operator (“NYISO”) and Load Serving Entities (“LSEs”) in the New York State through the NYISO’s Capacity Market. Given its primary responsibility in establishing the annual resource adequacy requirement for New York State, the NYSRC has a special interest in participating in this proceeding.

History and Formation of NYSRC

A competitive wholesale electricity market was established in New York State in 1999 at the direction of the Commission. The NYSRC was formed at the same time to ensure that the reliability standards necessary to protect the special reliability needs of the state’s bulk power system were maintained in the new competitive electricity market.

¹ The annual statewide ICR is established by implementing NYSRC Reliability Rules for providing the corresponding statewide Installed Reserve Margin (“IRM”) requirements. The IRM requirements relates to ICR through the following equation: $ICR = (1+ IRM Requirement) \times \text{Forecasted NYCA Peak Load}$ (NYSRC Reliability Rules, A. Resource Adequacy, Introduction).

The NYSRC was approved by an order issued by the Federal Energy Regulatory Commission (“FERC”) in 1998,² with the support of the Commission, and subsequent FERC orders.³ In its orders, FERC approved the NYSRC Agreement among the members of the former New York Power Pool (“NYPP”) which established the NYSRC’s responsibilities, and the NYISO/NYSRC Agreement, which established the relationship between the NYISO and the NYSRC and their respective responsibilities.⁴ Under the NYISO/NYSRC Agreement, the NYISO and the NYSRC are separate entities but are committed to work together, and the NYISO is required to provide support to the NYSRC that is necessary for the NYSRC to perform its responsibilities.

One of the responsibilities assigned to the NYSRC is the establishment of the annual statewide ICR and IRM for the New York State. Section 3.03 of the NYSRC Agreement reads as follows:

The ICR is described generally in terms of an installed reserve margin or IRM. The NYISO was assigned the responsibility of determining the installed capacity obligations of LSEs and establishing locational capacity requirements (“LCRs”) needed to ensure that the statewide ICR is met.⁵ The responsibilities assigned by the NYSRC Agreement and the NYISO/NYSRC Agreement are implemented in the NYSRC’s Reliability Rules, the NYSRC’s Policy No. 5-13, Procedure for Establishing New York Control Area Installed Capacity Requirements,⁶ and the NYISO’s Market Administration and Control Area Services Tariff (“Services Tariff”).

The NYSRC Agreement established an Executive Committee comprised of 13 members, including representatives of each of the six major electric utilities in New York, one member representing each of the Wholesale Suppliers, Municipal Systems and Cooperatives, and Large Consumers, and four unaffiliated members. The affairs of the NYSRC are conducted by the Executive Committee, which has established

² *Cent. Hudson Gas & Elec. Corp., et al.*, 83 FERC ¶ 61,352 (1998), *order on reh’g*, 87 FERC ¶ 61,135 (1999).

³ *Cent. Hudson Gas & Elec. Corp., et al.*, 86 FERC ¶ 61,062 (1999); *Cent. Hudson Gas & Elec. Corp., et al.*, 87 FERC ¶ 61,135 (1999); *Cent. Hudson Gas & Elec. Corp., et al.*, 88 FERC ¶ 61,138 (1999).

⁴ The NYSRC Agreement and the NYISO/NYSRC Agreement are available on the NYSRC website, www.nysrc.org, under Documents/Agreements.

⁵ NYISO/NYSRC Agreement, §3.4; NYISO Services Tariff §§ 5.10 and 5.11.4.

⁶ NYSRC Policy 5-13 is available on the NYSRC website, www.nysrc.org, under Documents/Policies.

three subcommittees: The Installed Capacity Subcommittee, which, with the assistance of the NYISO, conducts a comprehensive technical study each year to determine the IRM for the following year; the Reliability Rules Subcommittee, which modifies existing Reliability Rules and establishes new Reliability Rules when needed to maintain or enhance the reliability of the New York bulk power system; and the Reliability Compliance Monitoring Subcommittee, which monitors compliance with the Reliability Rules by the NYISO and participants in the NYISO's competitive markets. The NYSRC's Reliability Rules must be consistent with reliability standards of the North American Electric Reliability Corporation ("NERC") and Northeast Power Coordinating Council ("NPCC") but may be more stringent or specific to address the special reliability needs of the New York bulk power system.⁷

Development of the Annual IRM Study Report

Resource adequacy is fundamental to power system reliability. It is described as follows in the NYSRC Reliability Rules and Compliance Manual:

Reliability – The degree of performance of the bulk electric system that results in electricity being delivered to customers within accepted standards and in the amount desired. Reliability may be measured by the frequency, duration, and magnitude of adverse effects on the electric supply. Electric system reliability can be addressed by considering two basic and functional aspects of the electric system – adequacy and security.

Adequacy – The ability of the electric system to supply the aggregate electrical demand and energy requirements of the customers at all times, taking into account scheduled and reasonably expected unscheduled outages of system elements.

Security – The ability of the electric system to withstand disturbances such as electric short circuits or unanticipated loss of system elements.

The NYSRC prepares an annual Technical Study Report that utilizes a probabilistic approach to determining the annual statewide IRM. The study uses a criterion described in terms of a Loss of Load Expectation ("LOLE"), which refers to the probability that the system would be forced to disconnect any firm load (i.e., cut service to consumers). The criterion used by the NYSRC with respect to the

⁷ NYSRC Agreement, § 3.01

acceptable LOLE is one day in every ten years, or .1 days per year. This criterion is a recognized industry standard. It has also been adopted by the NPCC and is binding on the NYISO independent of its adoption by the NYSRC.

The annual IRM study evaluates demand uncertainty, scheduled and forced outages and deratings of generators and transmission facilities, assistance from neighboring control areas, transmission system emergency transfer capability and load relief from operating procedures. The NYISO is required to establish Local Capacity Requirements for the three localities in the NYCA to ensure that the statewide IRM requirement is met. The study includes a base case and sensitivity analyses for various contingencies. General Electric's Multi-Area Reliability Simulation ("MARS") program is the primary computer program used for the probabilistic analysis. The NYSRC Executive Committee considers the base case study analysis as well as the sensitivity analyses and any other relevant factors before determining the annual statewide IRM. Under the NYSRC Agreement any change in the annual statewide IRM must be approved by FERC.

Each year the Commission reviews the NYSRCs' IRM Study and has consistently adopted the same IRM adopted by the NYSRC.

Questions Posed by the Commission; Reliability Concerns Related to the Significant Planned Increase in Renewable Resources

The questions posed by the Commission in its order primarily relate to the NYISO's Capacity Market and the treatment of renewable resources in that market. The NYSRC is not involved in the structure or rules of the NYISO's Capacity Market nor in how different types of resources are selected in that market. Consequently, the NYSRC offers no responses to the questions posed by the Commission at this time. However, the NYSRC does have some concerns with respect to the potential impact on electric system reliability of the substantial increase in renewable electric resources currently planned by the state.

The intermittent nature of renewable resources creates challenges with regard to both the planning and operation of the state's bulk power system. There must be assurance that system reliability is protected. For example, when intermittent resources are not available, because they are dependent on weather conditions that change throughout the day, there must be assurance that adequate alternative resources are available to continue to meet all of the state's electricity needs. It also should be noted that the capacity factor of renewable resources (i.e., their availability

when the New York bulk power system is at peak requirements) is significantly lower than traditional electricity resources. This is especially important because under recently enacted legislation the entire New York economy will be electrified and supported by renewable resources.⁸

Additional transmission facilities and/or other resources will be required to enable the power produced by renewable resources to serve the load centers in New York State, and new operating reserve requirements and operating performance rules will be needed to ensure that the New York State bulk power system continues to operate reliably with the significant increase in intermittent resources.

As the state increases its reliance on renewable electric resources, the NYSRC will monitor the impact on resource adequacy and the operation of the New York bulk power system to make sure that the IRM and all reliability requirements are maintained.

Conclusion

As the Commission is well aware, achievement of the state's ambitious goals with respect to the increased utilization of renewable resources to reliably meet all of New York's electricity needs will involve the responsibilities of a number of entities, including the Commission, NYISO, FERC and NYSRC. The NYSRC submits that it is essential that these entities work cooperatively to ensure that the state can achieve its renewable resource goals as promptly and effectively as possible, while maintaining the reliability of the state's bulk power system, which is so vital to the public health and safety and essential to the effective functioning of the New York State's economy.

⁸ The Climate Leadership and Community Protection Act ("CLCPA") 7/8/19