

power transactions on the New York State Power System. The NYSRC conducts its mission with no intent to advantage or disadvantage any Market Participant's commercial interests. Its sole focus is maintaining the reliability of the Bulk Electric System in the New York Control Area.

II. Comments

Large loads – whether co-located with generating facilities or standalone – will most likely be interconnected at voltage levels exceeding the 100kV North American Electric Reliability Corporation (“NERC”) definition of Bulk Electric System. As a result, this will bring the interconnection of such large load facilities within the scope of the Commission-approved Electric Reliability Organization (“ERO”) mandatory requirements that are designed to preserve the reliable operation of the power system.³

In general, under the ERO standards, all proposed system modifications, including transmission and generation additions or significant load reductions or additions, must be analyzed and designed to ensure system-wide coordination and continued system reliability and resilience to provide society with an “adequate level of reliability.”⁴ Reliability Coordinators, Transmission Planners, Transmission Planning Coordinators and Regional Entities currently must comply with ERO reliability standards requirements and, in some cases, regional criteria requirements that provide the minimum power system performance expectations. These

³ See the definition of Bulk Electric System (BES) and Bulk-Power System in the NERC Glossary available at:

https://www.nerc.com/pa/Stand/Glossary%20of%20Terms/Glossary_of_Terms.pdf.

⁴ See NERC, *Informational Filing on the Definition of “Adequate Level of Reliability”* (May 10, 2013) available at:

https://www.nerc.com/globalassets/standards/resources/documents/adequate_level_of_reliability_definition_informational_filing.pdf.

requirements serve as the foundation for good utility practices in transmission planning and operation.

As the power system becomes more operationally stressed due to the increased addition of large loads coupled with the penetration of intermittent resources, the probability of triggering automatic underfrequency load shedding (“automatic UFLS”) programs will likely increase for large loads. The Commission’s ANOPR seeks comment on a number of principles for reform, including “whether other operational limitations should be considered [and] the minimum technical requirements for such system protection facilities”⁵ Moreover, the ANOPR provides that utilities serving large loads must meet all applicable NERC, regional, and local reliability standards, criteria and rules.⁶ Utilities and local reliability regulators such as the NYSRC must be prepared to revise large load interconnection requirements as necessary to preserve both resilience and reliability.

While there are many areas of reliability related concern, one that has not been raised but is vital is automatic UFLS programs and their role as the last line of defense used during periods of stressed system conditions after operators have exhausted all of their manual load shedding (*i.e.*, rotating blackout) options. The NYSRC submits that consideration of automatic UFLS would be consistent with operations reforms or principles to guide the Commission’s advancement of large load interconnections.

A. Greater Focus on Automatic UFLS During Large Load Interconnection

Although the automatic UFLS standard calls for having a certain amount of load to be under automatic control to be shed, the addition of large loads at a swift pace makes it all the

⁵ ANOPR ¶ 23.

⁶ ANOPR ¶ 31.

more important to ensure that the automatic UFLS programs are up to date and can address the presence of new large loads on the system. The NYSRC has a direct interest in ensuring that the addition of a large load does not disrupt reliability and resilience after a disturbance to the power system.

There are a number of other NERC standards and principles that the NYSRC submits should be relied upon heavily in the analysis surrounding the reliability and resilience impacts of large new loads coming online and their interaction with existing automatic UFLS programs. Not specifically discussed in the ANOPR materials, but extremely important to the preservation of an adequate level of reliability are the mandatory requirements of PRC-006-5 related to automatic UFLS. The purpose of the standard is stated as follows: “[t]o establish design and documentation requirements for [automatic UFLS] programs to arrest declining frequency, assist recovery of frequency following underfrequency events and provide last resort system preservation measures” (emphasis added).

The functionality of this “last resort system preservation” program is assessed through studies, which identify the electrical islands that may be formed under simulated disturbance conditions. The studies are used to establish the parameters of the UFLS Entity automatic UFLS programs as required by the standard. Automatic underfrequency load shedding programs will activate and shed pre-selected load automatically if all manual load shedding (for example rotating blackouts) by operators has been exhausted and system frequency continues to decline. The expectation is that the system can be reconstructed from the remaining energized islands to reduce the likelihood that the black start of the entire system is avoided.

Potential adverse impacts to reliability and resilience must be examined in advance (not reactively) and be addressed through the design of the interconnection facility. Good utility

practice mandates that the reliability effects of the added large load be thoroughly examined in advance, the risks thoroughly identified, and then mitigated through the application of good utility practice in planning, design, construction, and testing. A substantial portion of what is required in the ERO standards is directed in such a way as to avoid ever experiencing load loss, cascading, and uncontrolled separation as outlined in the definition of the adequate reliability mentioned earlier. However, the automatic UFLS programs are rarely thought of because they are not triggered frequently. Although, in recent years, automatic UFLS has come close to being activated during Winter Storm Uri.

NERC did not envision the magnitude of the single load additions that are being contemplated and studied at this time (*i.e.*, 500, 1,000, 1,500 MW/MVA loads). At the time of the initial adoption of PRC-006, load growth was either relatively slow or non-existent in some areas and there was consensus around the current requirement in R4 to perform a functional review of the effectiveness of the UFLS program only once every five-years. It is likely that without offering some portion of the newly connected large load to become part of the automatic UFLS program, the utility may not be able to find enough additional load to place under automatic UFLS control to meet the NERC or regional standard requirements (due to the five-year examination period). More importantly, if a portion of the large new load is not incorporated in a study, the studied system's automatic UFLS program may not work to achieve the purpose of providing guidance and limiting the extent of system separation. This is a retroactive, not preemptive approach. The NYSRC respectfully submits that the Commission should consider modifying this approach to account for the current state of the system and the rapid changes underway.

The ANOPR at paragraph 12 notes the need for standardization of the interconnection procedures and agreements for such loads. While the NYSRC takes no position on agreements related to pricing of service to large loads, it has an interest in the agreements to the extent they call for studies of the impact of large loads on system reliability and resilience.

The NYSRC respectfully requests that the Commission take note of the reliability and resilience aspect of integration of large loads into the system and offer some guidance to the ERO and to industry. There is recognition in the ANOPR that the large new loads will be coming online quickly. Thus, the need to identify the processes necessary to serve these loads and understand the relationship between their service and automatic UFLS programs is urgent. It is likely that retroactive automatic UFLS studies conducted only once every five years will not pick up the reliability and resilience implications of these large loads on the existing automatic UFLS programs and instead should be implemented through the interconnection process by the Reliability Coordinator or the interconnecting Transmission Owner as appropriate. The current scheme at the NERC level calls for conducting such studies only every five years, after the load has been connected. Given the magnitude of the proposed loads, these studies should be conducted in advance of interconnection to assure the functionality of automatic underfrequency load shedding programs.

III. Conclusion

The NYSRC is in support of the Commission's inquiry into necessary reforms to effectuate the interconnection of large loads. Accordingly, the NYSRC submits that automatic UFLS programs must be considered in the design of large load facilities interconnecting to the transmission system from a preemptive or proactive planning perspective. The power system will reveal, often with striking speed and severity, the consequences of deficiencies in planning,

design, or operation. The NYSRC's recommendations set forth herein are intended to prevent planning deficiencies and strengthen operational expectations of large loads in order to maintain the reliability of the Bulk Electric System.

The NYSRC appreciates the Commission's consideration of these comments.

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Respectfully Submitted,

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CERTIFICATE OF SERVICE

I hereby certify that the foregoing Comments of the New York State Reliability Council, L.L.C. has been served upon each person designated on the official service list compiled by the Secretary in this proceeding in accordance with the requirements of Rule 2010 of the Commission's Rules of Practice and Procedure.

Dated: November 21, 2025
Albany, New York

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