

NYSRC Comments on the NPCC “Roadmap to Implement Revisions to Address Contributions and Challenges Brought forward by Changing Technologies and Load Characteristics”

The New York State Reliability Council (NYSRC) has reviewed the NPCC’s *Roadmap to Implement Revisions to Address Contributions and Challenges Brought forward by Changing Technologies and Load Characteristics* (NPCC Roadmap) which identifies the need for substantive revisions to NPCC Directory #1- Design and Operation of the Bulk Power System.

The NYSRC strongly supports the need for NPCC to revise the planning and operation reliability criteria in Directory #1 in recognition of the rapidly changing electric power industry in North America, particularly in the Northeast U.S. As stated in the NPCC Roadmap: “the primary factors requiring that the criteria in Directory #1 need revision include the rapidly changing resource mix and extreme weather events, both of which, could potentially impact the reliability and resiliency of the electric power systems in many regions in North America”. These two factors have a compounding effect on both reliability and resiliency -- and we agree -- must be immediately addressed.

Consistent with the NPCC Roadmap, the NYSRC is in the process of implementing actions needed to preserve New York Control Area (NYCA) reliability recognizing extreme weather events, Inverter Based Resource (IBR) performance issues, the need to recognize energy adequacy, and gas supply issues. On July 8, 2022, the NYSRC approved whitepapers recommending many actions for NYCA which we also recommend for consideration in the NPCC Directory #1 Roadmap. These actions include:

- The NYSRC has a plan to develop new planning and operating criteria for ensuring that the New York State electric system’s generating resources and transmission system elements continue to deliver reliable performance for New Yorkers in the face of defined extreme weather events resulting from a changing climate¹.
- The NYSRC has a plan to develop new reliability criteria for IBR interconnection requirements for ensuring compliance with IEEE 2800-2022², which is one of the NPCC Roadmap’s priorities. This was the subject of a NYSRC workshop held on September 16, 2022 at the New York State Independent System Operator (NYISO)³.
- The NYSRC recently established a new reliability criterion requiring the calculation and reporting of *Loss of Load Hours (LOLH)* and *Expected Unserved Energy (EUE)* reliability metrics

¹ [https://www.nysrc.org/PDF/Documents/Extreme Conditions White Paper - EC Approved 7-8-22.pdf](https://www.nysrc.org/PDF/Documents/Extreme%20Conditions%20White%20Paper%20-%20EC%20Approved%207-8-22.pdf)

² [https://www.nysrc.org/PDF/Documents/Inverter Based Resources White Paper - EC Approved 7-8-2022.pdf](https://www.nysrc.org/PDF/Documents/Inverter%20Based%20Resources%20White%20Paper%20-%20EC%20Approved%207-8-2022.pdf)

³ <https://www.nysrc.org/workshops.html>

in all NYSRC and NYISO probabilistic resource capacity assessments and studies⁴. This requirement is consistent with the NPCC Roadmap which states that *energy adequacy* is an issue that must be addressed in the future; and that the EUE and LOLH metrics -- which measure loss of load in terms of energy and duration -- as well as the LOLE metric, be considered in future NPCC resource adequacy criteria and reliability assessment considerations.

- The NYSRC is considering the need to establish reliability rules for mitigating the impacts of gas pipeline contingencies.

NYSRC also recommends consideration of the following items in the NPCC Directory #1 Roadmap:

- Since output from intermittent resources are variable and not always available, the future electric system will require the addition of resources that utilize dispatchable, fast ramping and long-duration resource technologies. NYSRC believes that NPCC Criteria must evolve and be developed to address this issue in ways that preserve reliability and resilience in order to meet the resource adequacy needs of the NPCC Region.
- In its Roadmap document, NPCC acknowledges that there are parallel efforts throughout NERC and other North American Regions which are examining their respective planning and operating criteria in recognition of the above-described electric power system transition. NYSRC recognizes that there may be an organizational fear of duplication of Criteria enhancement efforts with a possible resultant delay in implementation. Further, NYSRC believes it would be imprudent to await these outcomes and concurs with the draft NPCC Roadmap report that NPCC must immediately move forward to update and enhance Directory #1 to address the above reliability challenges. NYSRC recognizes that NPCC Members must continue to monitor NERC and other Regional initiatives to coordinate NPCC criteria enhancement efforts accordingly. In the event that a duplication does occur, that duplication can be dealt with later as NPCC has done previously.

The NYSRC believes that this Directory #1 review and implementation should be addressed in light of the substantial number of intermittent resource projects that are in various stages of advanced development in many NPCC Areas including New York. Timely and proactive implementation of enhanced and forward looking NPCC Criteria is essential for maintaining the reliability and resilience of the power systems in NPCC.

The NYSRC greatly appreciates the NPCC's consideration of these comments regarding the NPCC Directory #1 Roadmap.

⁴ See NYSRC Reliability Rule, A.1: R2 on page 13, "NYSRC Reliability Rules and Compliance Manual", Version 46, June 10, 2022. <https://www.nysrc.org/NYSRCReliabilityRulesComplianceMonitoring.html>