

Media Release

Improved Summer Outlook from Solar, Storage Additions; Elevated Risk Persists for Off-Peak Periods

May 15, 2024

WASHINGTON, D.C. – NERC’s [2024 Summer Reliability Assessment \(SRA\)](#) finds that a large part of North America remains at risk of supply shortfalls, while other areas show reduced risk due to resource additions. Expected wide-area heat events that affect generation, wind output or transmission systems coupled with demand growth in some areas are contributing to adequacy risks for resources and transmission. All areas are assessed to have adequate supply for normal peak load due, in large part, to a record 25 GW of additional solar capacity being added since last year. However, energy risks are growing in several areas when solar, wind and hydro output are low.

“Demand is growing in many areas at a rapid pace with the adoption of electric vehicles and construction of new data centers, straining some parts of the system,” said Mark Olson, NERC’s manager of Reliability Assessments. “Adequacy concerns in growth areas are being partially mitigated by new firm transfer agreements, growth in demand response and postponed generator retirements.”

The assessment, summarized in the [2024 SRA video](#), finds a significant increase in demand, particularly in the Southwest, Texas and British Columbia. Consistent with last year, all areas are assessed to have adequate supply for normal peak load and conditions. However, the SRA identifies seven areas (Midcontinent Independent System Operator, MRO-SaskPower, NPCC-New England, Texas RE-ERCOT, WECC-British Columbia, WECC-California/Mexico and WECC-Southwest) as being at “elevated risk” of energy emergencies during extreme conditions. In addition to demand growth and extreme weather events, this is due to recent generator retirements, wind generator performance, drought and unplanned outages (or a combination of these factors), which may result in insufficient reserves.

“One of the key challenges operators face as the resource mix evolves is how to get through the summer evening periods with fewer available resources at their disposal,” said John Moura, NERC’s director of Reliability Assessments and Performance Analysis.

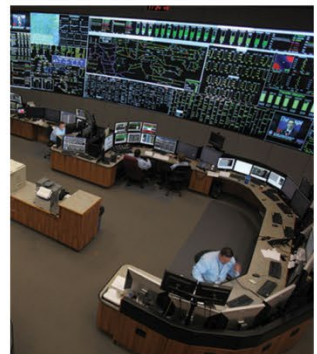
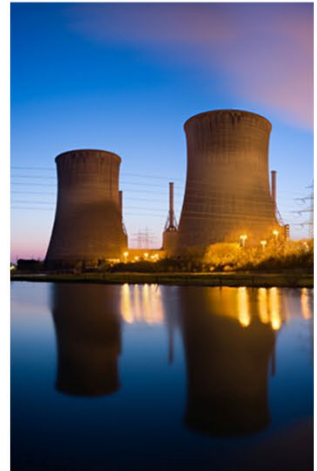
In Texas and California, where solar photovoltaic resources make up a large portion of the resource mix, the risk of electricity supply shortfalls occurs in the late afternoon and evening hours as solar output is diminished, but demand remains high. Natural gas supply and

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infrastructure are vitally important to grid reliability — particularly as variable energy resources satisfy more energy needs. While no bulk power system reliability impacts are foreseen for the upcoming summer, NERC continues to stress the increasing importance of gas and electric coordination. NERC recommends that Reliability Coordinators and Balancing Authorities be cognizant of natural gas supply infrastructure outage and maintenance plans with the potential to affect generators in their areas.

The SRA identifies other reliability issues that should be taken into consideration prior to summer. In particular, the response by inverter-based resources (IBR) to system disturbances, which affect solar facilities, battery storage and traditional generation, is an ongoing concern. NERC's [IBR Strategy](#) and [FERC Order No. 901](#) describe steps that NERC and industry can take to ensure that IBRs operate reliably and that system planning takes their characteristics into account.

The assessment also makes several recommendations that industry and policymakers should consider implementing prior to the start of the season:

- Reliability Coordinators, Balancing Authorities and Transmission Operators in the elevated risk areas should:
 - Review seasonal operating plans and the protocols for communicating and resolving potential supply shortfalls in anticipation of potentially extreme demand levels.
 - Employ conservative generation and transmission outage coordination procedures commensurate with long-range weather forecasts to ensure adequate resource availability.
 - Engage state or provincial regulators and policymakers to prepare for efficient implementation of demand-side management mechanisms called for in operating plans.
- Generator Operators with solar photovoltaic resources should implement recommendations from the March 2023 [IBR Performance Issues Alert](#).
- State regulators and industry should have protocols in place at the start of summer for managing emergent requests from generators for air-quality restriction waivers.

NERC's reliability assessment process is a coordinated reliability evaluation between the NERC Reliability Assessment Subcommittee, the Regional Entities and NERC staff with demand and resource projections obtained from the assessment areas. The SRA is intended to inform industry leaders, planners, operators and regulatory bodies so that they are better prepared to take necessary actions to ensure bulk power system reliability for the upcoming summer period.

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Electricity is a key component of the fabric of modern society and NERC, as the Electric Reliability Organization, serves to strengthen that fabric. The vision for the ERO Enterprise, which is comprised of NERC and the six Regional Entities, is a highly reliable and secure North American bulk power system. Our mission is to assure the effective and efficient reduction of risks to the reliability and security of the grid.