Announcement
Summer Assessment Warns of Potential Energy Shortfalls

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ATLANTA – NERC’s 2021 Summer Reliability Assessment warns that parts of North America are at elevated or high risk of energy shortfalls this summer during above-normal peak temperatures.

While NERC’s risk scenario analysis shows adequate resources and energy for most of North America, Texas, New England, MISO and parts of the West are at an “elevated risk” of energy emergencies. In the “high risk” category is California, which relies on large energy imports during peak demand scenarios and when solar resource output retreats in the evening hours. While more than 3 GW of additional resources are expected in California this summer compared to 2020, most will be solar photovoltaic (PV) generation.

These plants can provide energy to support peak demand, however solar PV output falls off rapidly in late afternoon while high demand often remains. Reliance on imports during these periods is an increasing reliability risk. While actions taken by the California Public Utilities Commission, CAISO and utilities to procure additional resources will help, the Western Interconnection’s increase in demand and decline in resources may reduce the amount of surplus capacity available when California is in shortfall.

“As the grid transforms and weather-dependent resources become increasingly important to maintaining the real-time supply for electricity, the bulk power system becomes more vulnerable to abnormal weather,” said John Moura, director of Reliability Assessment and Performance Analysis. “Above-average seasonal temperatures, such as those predicted for this summer, can contribute to high peak demand and impact the availability of generation resources and imports from neighboring areas. This means that it is especially important for the electric industry to ensure the committed resource mix can support a variety of abnormal conditions.”
As identified in the assessment, abnormal conditions that lead to elevated risk include prolonged above-average temperatures, low wind and solar scenarios, reduced transfers due to wildfire-related transmission outages. The assessment’s other key findings include:

- Protecting our critical electrical workforce from health risks during the COVID-19 pandemic remains a priority. Protocols put in place for reducing risks to personnel in control centers and on the front lines, including mutual assistance in hurricane-damaged areas, should be maintained as warranted by public health conditions. In 2021, there is remaining uncertainty in demand projections as governments adjust to changing public health guidelines and conditions and as the behavior of society adapts.

- Late-summer wildfire season in the western United States and Canada poses risk to bulk power system reliability. Government agencies warn of the potential for above-normal wildfire risk beginning in July in parts of the western United States as well as central and western Canada. Operation of the bulk power system can be impacted in areas where wildfires are active as well as areas where there is heightened risk of wildfire ignition due to weather and ground conditions.

NERC develops its independent assessments to identify potential bulk power system reliability risks. NERC’s annual Summer Reliability Assessment provides an evaluation of resource and transmission system adequacy necessary to meet projected summer peak demands. In addition to assessing resource adequacy, the assessment monitors and identifies potential reliability issues of interest and regional topics of concern. The reliability assessment process is a coordinated reliability evaluation between the Reliability Assessment Subcommittee, the Reliability and Security Technical Committee, the Regional Entities and NERC staff. The 2021 Summer Reliability Assessment reflects NERC’s independent assessment and is intended to inform industry leaders, planners, operators and regulatory bodies so they are better prepared to take necessary actions to ensure bulk power system reliability.

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Electricity is a key component of the fabric of modern society and the Electric Reliability Organization Enterprise 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.