

2023 Summer Reliability Assessment

While the increased deployments of wind, solar, and batteries positively impact resource adequacy for normal summer peak demand, two-thirds of North America is at risk of energy shortfalls this summer during periods of extreme demand. The elevated risk outlook is driven by a combination of conventional generation retirements, a substantial increase in forecast peak demand, and an increasing threat to reliability from a wide-spread heat event.

SPP and MISO: With little excess firm capacity, wind energy output is key to meeting normal summer peak demand and more extreme demand levels. Low wind and high demand periods can result in energy emergencies.

Ontario: Extended nuclear refurbishment has reduced available capacity, resulting in limited reserves to manage unplanned outages and peak demand. Generation and transmission outages will be increasingly difficult to accommodate, a condition that the Independent Electricity System Operator expects to persist for the foreseeable future. Generator owners and system operators must act conservatively and coordinate outages.

ERCOT: More than 4 GW of solar resources were added in ERCOT since last summer; however, this is offset by continued increases in forecasted demand due to economic growth. There is a risk that dispatchable generation can be insufficient for high demand levels when wind output is unusually low.

SERC Central: A higher peak demand forecast and less supply capacity this summer will challenge operators to maintain reserves in extreme scenarios. Conditions could again require appeals for load reductions and energy emergencies for external assistance.

New England: While ISO New England expects to have sufficient capacity to meet summer peak demand, reserve margins are projected to be lower this summer due to less generation and firm imports. Operators are more likely to require conservative operating procedures for managing capacity deficiencies.

U.S. West: Wide-area heat events can drive demand well-above normal and strain resources and the transmission network. Under an extreme summer peak load, California would need to rely on increased imports to maintain adequate reserves. Conditions could again require voluntary or controlled load relief.

