



MRO 2022 Regional Summer Assessment

Areas at elevated or high risk that will require increased monitoring during the 2022 summer season

Balancing Authority Risk Areas

Midcontinent ISO (MISO)

High Risk. Capacity shortfalls are anticipated in North and Central areas of MISO's footprint during peak summer conditions, which may result in temporary, controlled load shedding. This is primarily the result of a decrease in generation capacity of 3.2 GW compared to the 2021 summer season and an increase of 1.7% in projected peak demand.

Manitoba Hydro (MH)

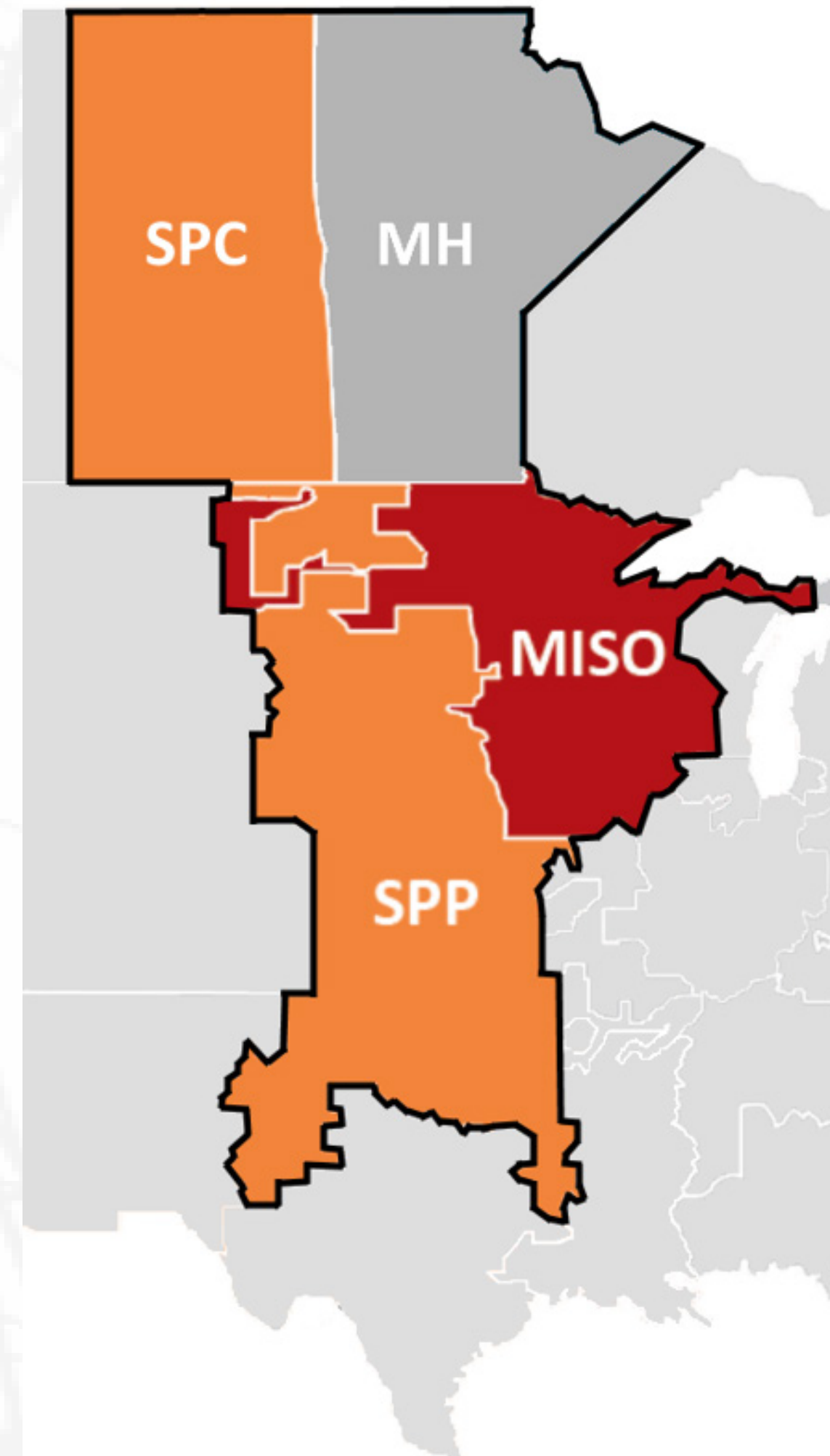
Low Risk. Anticipated resources are sufficient to meet reserve margin requirements under normal and extreme demand scenarios for the 2022 summer season.

Saskatchewan Power Corp. (SPC)

Elevated Risk. A 7.5% increase in peak demand projections related to economic load growth returning to pre-pandemic levels, increased oil and gas development activities, and revised forecast methodology for capturing summer peak demands, place SPC at greater risk for energy emergencies during periods of high demand.

Southwest Power Pool (SPP)

Elevated Risk. Drought conditions impacting the Missouri River and other water sources, relied upon by SPP entities for generation and once-through cooling processes, could lead to reduced output. As a result, emergency procedures may be required to meet peak demand during periods of high generator unavailability due to insufficient cooling water.



Risk Definitions

- High Risk** (Red circle): Resources are potentially insufficient to meet peak load during both normal and extreme conditions.
- Elevated Risk** (Orange circle): Resources are likely sufficient to meet peak load during normal conditions, but potentially insufficient during extreme conditions.
- Low Risk** (Grey circle): Resources are sufficient to manage normal summer peak demand and are at low risk of energy shortfalls from more extreme demand or generation outage conditions.

Summer Reliability Trends

- Generation forced outage rates are increasing as a result of component fatigue and an aging fleet, due in part to higher penetrations of intermittent resources that cause conventional generation to cycle more.
- As dependence on intermittent resources increases, there will be a greater need for fast responding dispatchable resources capable of following large unexpected changes in intermittent resource output.
- The time of greatest risk may not be during summer peak periods, especially as the resource mix evolves. The electric power industry needs to develop new and better methods to evaluate supply adequacy, especially when a significant amount of generation capacity has an intermittent fuel source that is difficult to forecast.

More information on these risks along with mitigation recommendations can be found in the full report here: www.mro.net