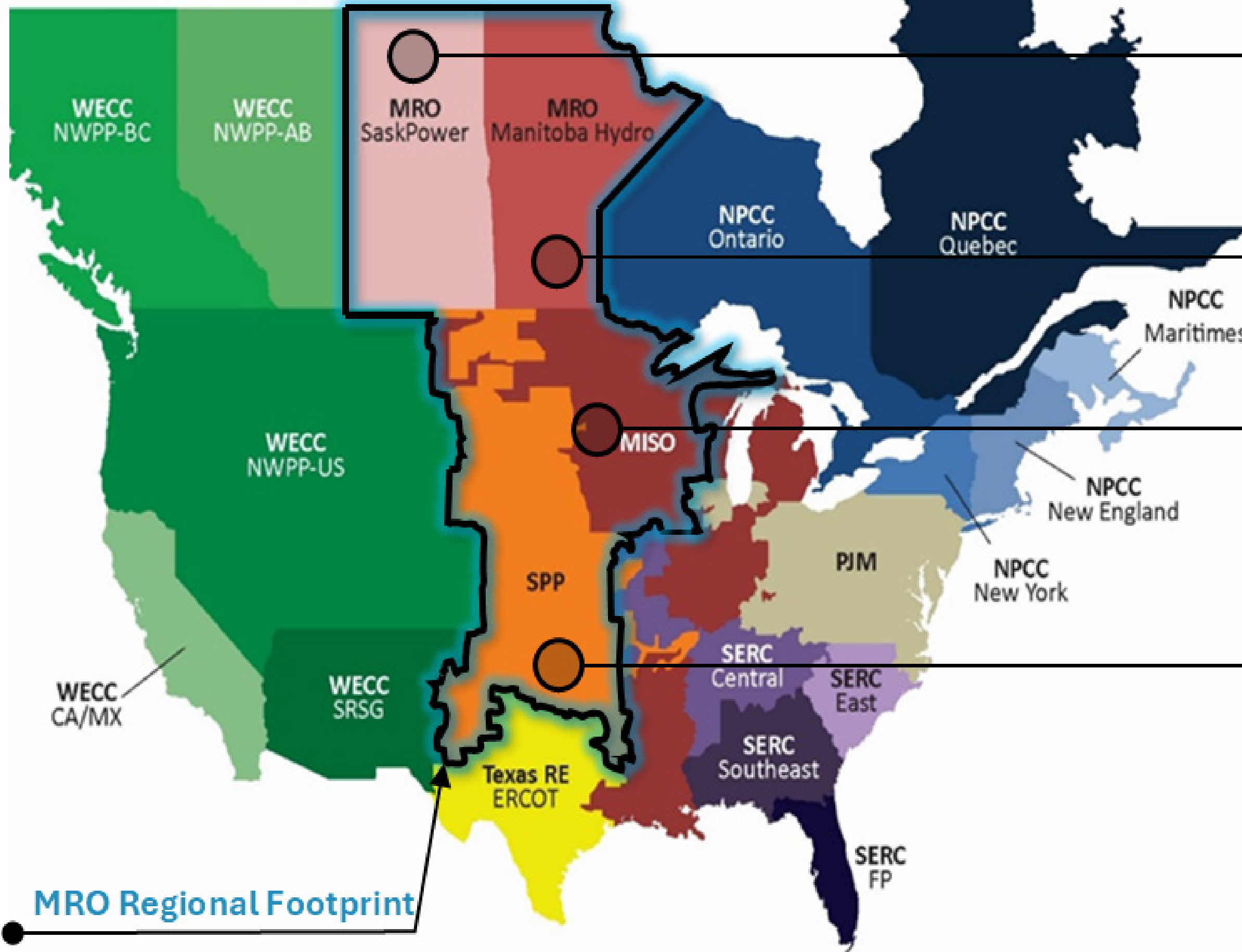




# 2024 Regional Winter Assessment

A comprehensive evaluation of resource and transmission system adequacy, emerging trends, and projected reliability concerns for the bulk power system in MRO's regional footprint for the upcoming winter season.

## NERC Assessment Areas



## Key Findings

- SaskPower**  
 Sufficient capacity for normal peak demand with typical maintenance and forced outages. Extreme winter weather combined with generation/transmission outages could result in energy shortfalls.
- Manitoba Hydro**  
 Resources are sufficient to meet reserve margin requirements under normal and extreme winter conditions.
- Midcontinent ISO (MISO)**  
 Sufficient capacity for normal peak demand with typical maintenance and forced outages. Extreme winter weather combined with generation and transmission outages could result in energy shortfalls.
- Southwest Power Pool (SPP)**  
 Sufficient capacity for normal peak demand with typical maintenance and forced outages. Extreme winter weather combined with major generation and transmission tie-line outages could result in energy shortfalls. Interruptions in fuel supply could also pose challenges for SPP this winter season.

## Reliability Trends

- Higher penetrations of intermittent resources require conventional generators to cycle more, causing component fatigue and forced generation outages.
- Protection system misoperations are a leading cause of events in the MRO region and are being monitored.
- Weather-related issues are leading contributors to sustained transmission outages in winter.

## Recommendations

### Industry:

- Review NERC alerts related to cold weather preparedness and participate in MRO's voluntary Generator Winterization Program.
- Maintain situational awareness of unplanned generation outages and low wind forecasts and employ operating mitigations when needed during extreme weather conditions to ensure resource adequacy.
- Develop methods to ensure sufficient generation resource availability before the winter season, particularly when a substantial portion of capacity relies on intermittent fuel sources.

### State and Provincial Regulatory Agencies:

- State and provincial regulators should assist grid operators prior to, and during, the winter season by supporting requested environmental and transportation waivers, as well as public appeals for electric load and natural gas conservation.

More information on these risks and mitigation recommendations can be found in the full report here: [www.mro.net](http://www.mro.net)