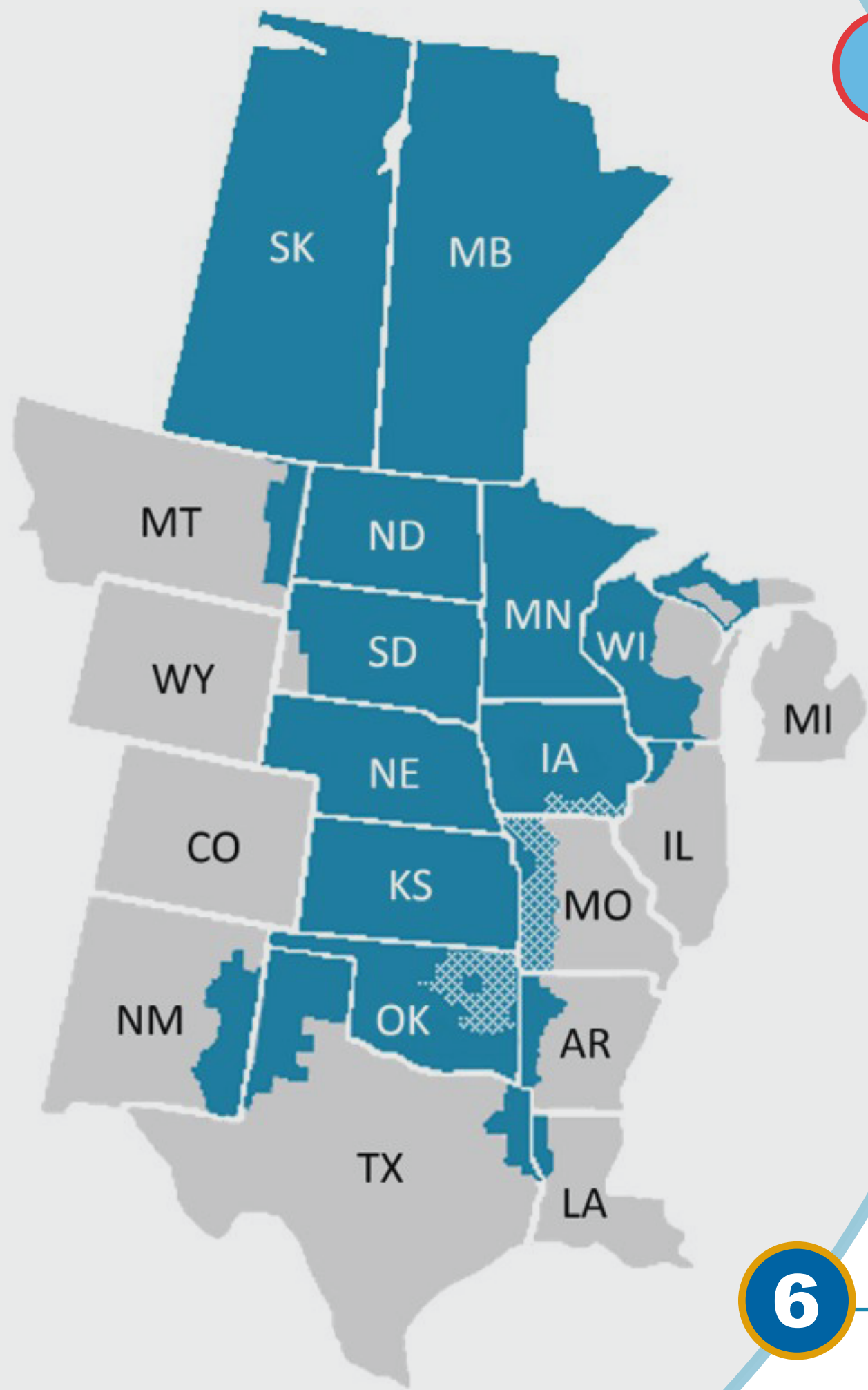




2025 Regional Risk Assessment

Top six risks to reliable and secure operation of the regional bulk power system



MRO Regional Territory

- 1**  **Extreme: Uncertain Energy Availability**
Increasing electricity demand coupled with rapid retirement of traditional power plants creates potential energy shortfalls. This is especially true when replacement generation is variable, weather-dependent and may not be available when needed.
DRIVERS: Legislative policies, generator retirements, new resource constraints, demand growth, inadequate transmission
- 2**  **High: Generation Outages During Extreme Cold Weather**
The electricity grid faces significant challenges during extreme cold weather, which is occurring more often and with greater intensity and duration. Recent events resulted in unprecedented customer load shed to maintain system stability.
DRIVERS: Insufficient winterization, lack of fuel supply, gas/electric interdependencies, generator retirements
- 3**  **High: Nation-State Threats**
The strategic objectives of nation-state-sponsored actors from China, Russia, and Iran pose significant cyber threats to the North American bulk power system. Their objectives vary, but generally aim to weaken our military and economic capabilities.
DRIVERS: Heightened geopolitical tensions, increasing sophistication of threat actors, insufficient internal controls
- 4**  **High: Supply Chain Compromise**
Occurs when a vendor is the vector for a threat actor who manipulates hardware, software, connected services, or software delivery mechanisms for financial gain. The risk is amplified by the limited number of vendors serving the industry as a whole.
DRIVERS: Supply chain complexity, growing reliance on third-parties, lack of third-party controls and visibility
- 5**  **High: Malicious Insider Threat**
Malicious insiders (employees, vendors, contractors) with access to critical systems and intent to do harm, can disrupt bulk power system operations. This risk does not include insider negligence.
DRIVERS: Limited detective controls in place, lack of insider threat programs
- 6**  **High: Inadequate IBR and DER Performance and Modeling**
Inverter-Based Resources (IBRs) and Distributed Energy Resources (DER)—wind, solar, and battery—are a relatively new technology for generating electricity. Industry and manufacturers are learning how to reliably integrate these resources into the power grid.
DRIVERS: Increasing reliance on IBRs to serve load, lack of visibility, lack of experience with technology

Read the full report at www.mro.net