



Minutes of the Reliability Advisory Council Meeting

Hybrid: St. Paul, MN and Webex

Thursday, August 10, 2023, 8:02 a.m. to 2:03 p.m. Central

Notice for this meeting was electronically posted to the [MRO website](#) on July 12, 2023.

A final agenda, including advanced reading materials, was also posted on August 3, 2023.

1. Call to Order and Determination of Quorum

The Reliability Advisory Council (RAC) Vice Chair, Gayle Nansel, called the meeting to order at 8:02 a.m. Nansel welcomed everyone and introductions were made. Reliability Analysis Administrator, Rebecca Schneider, advised the vice chair that a quorum of the RAC was present. A complete list of attendees is included as [Exhibit A](#).

2. Standards of Conduct and Antitrust Guidelines

Pursuant to Policy and Procedure 4, Bryan Clark, MRO Director of Reliability Analysis, highlighted MRO's Standards of Conduct and Antitrust Guidelines.

3. Vice Chair's Remarks

Vice Chair Nansel noted the open seat on the RAC with a term ending 12/31/2024 as well as the five members whose terms will expire at the end of 2023. She also noted the open seat on the NERC Inverter-Based Resource Performance Subcommittee (IRPS). Nansel mentioned the upcoming Organizational Group Oversight Committee (OGOC) meeting on September 13, 2023, where the Risk Roundtable Energy Reliability Planning Discussion will be continued from the June meeting. She also highlighted the upcoming NERC Geomagnetic Disturbance (GMD) Workshop on August 15-16, 2023, and the NERC Misoperation Workshop on October 25-26, 2023. Discussion ensued.

4. Consent Agenda

The RAC reviewed the consent agenda, which included draft minutes from the May 18, 2023 meeting.

Upon a motion duly made and seconded, the RAC approved the consent agenda in its entirety.

5. MRO Board of Directors, OGOC and General Update

Clark provided a recap of the second quarter OGOC meeting on June 14, 2023, which included the Energy Reliability Planning Risk Discussion. Clark also noted that the OGOC approved the recommended changes to the RAC and Protective Relay Subgroup (PRS) charters. He highlighted the third quarter OGOC Meeting Risk Roundtable on September 13, 2023. The topic is a continuation of the Energy Reliability Planning Discussion from last quarter. Clark highlighted items from the June meeting, including fuel supply and increased membership among entities that control fuel supply in Regional Transmission Organizations (RTO's), demand-side management of load, and lacking technology to ensure power grid reliability and meet the carbon-free legislation. Future meeting dates for the OGOC and Board for the remainder of the year were shared. Discussion ensued.



6. 2023 Reliability Conference Feedback

MRO Manager of Outreach and Stakeholder Engagement, Cris Zimmerman, shared survey results from the 2023 Annual Reliability Conference. The survey feedback was generally positive with an overall average score of 4.31, and the event was considered successful. A few areas of improvement were identified, such as the relevance of the material provided in relation to the attendees job function. The Outreach Department will work to improve on next year's conference, including more interaction or breakout sessions and making the presentations available prior to the conference. Discussion ensued.

7. Advisory Council Work Plans

Security Advisory Council (SAC)

SAC Chair, Ian Anderson, and MRO Director of Security, Steen Fjalstad, provided an overview of the MRO Security Department and SAC Work Plan. Anderson highlighted the SAC and Security Advisory Council Threat Forum (SACTF) 2023 accomplishments, such as the SACTF Weekly Threat Call, the Regional Security Risk Assessment (RSRA) survey working session, and the 10th Annual MRO Security Conference in Oklahoma City on September 26-28, 2023. The SAC is also hosting a webinar on IT/OT Convergence on August 29, 2023.

Compliance Monitoring and Enforcement Program Advisory Council (CMEPAC)

MRO Director of Compliance Monitoring, Bill Steiner, provided an overview of the CMEP Advisory Council Work Plan. Steiner highlighted CMEPAC Outreach efforts, including the CMEP Conference held on July 26, 2023, in addition to monthly calls, newsletters and webinars. The CMEPAC also supports the NERC Standards Review Forum (NSRF). Steiner noted several ongoing initiatives for the advisory council as well as some of its achievements, notably a very well-attended conference.

8. Technical Presentation

Xcel Energy Consulting Engineer, Kevin Jones, gave a technical presentation to the RAC on the topic of a 115kV fault disturbance. The featured event occurred on October 28, 2020 during Winter Storm Billy between the Blanco and Floyd County Substations. Jones shared one-line diagrams of the affected system, followed by an event summary, conclusions and recommendations. Discussion ensued.

9. Reliability and Security Technical Committee Meeting Update

Reliability Advisory Council and RSTC member, John Stephens, provided a recap of the Reliability and Security Technical Committee (RSTC) meeting on June 21-22, 2023. Stephens noted the RSTC News Bulletin distributed by NERC on August 4, 2023. The bulletin is a monthly newsletter that will keep industry informed of the RSTC's ongoing efforts and provide a brief summary of RSTC activities from the last meeting. Stephens highlighted the Standard Authorization Request (SAR) approved at the June meeting for MOD-31, relating to data collection on Distributed Energy Resources (DERs). Stephens also noted that the Energy Reliability Assessment Task Force (ERATF) has been upgraded to the Energy Reliability Assessment Working Group (ERAWG). Additionally, the Board of Trustees will meet next week to approve and issue the biennial RISC Priority Report. Stephens mentioned the upcoming NERC GMD Workshop and NERC Misoperation Workshop. The next RSTC hybrid meeting will be in September 20-21, 2023. Discussion ensued.



10. MRO Representatives on NERC Subgroups

NERC Electric Gas Working Group (EGWG) – Jaimin Patel

Patel provided a written report located in the agenda packet. Discussion ensued.

NERC Inverter-Based Resource Performance Subcommittee (IRPS) – Open

This seat is currently open and no written report was provided.

NERC System Planning Impacts from DER Working Group (SPIDERWG) – Wayne Guttormson

Guttormson provided a written report located in the agenda packet. Discussion ensued.

NERC System Protection and Control Working Group (SPCWG) – Lynn Schroeder

Schroeder provided an overview of the written report located in the agenda packet. She noted that the SPCWG continues to discuss FERC Order 881 and Ambient Adjusted Ratings (AARs) related to the PRC-023 loadability standard. Schroeder also mentioned the PRC-024 IBR White Paper draft is complete and ready for review at the next meeting, which is later today. SPIDERWG submitted a SAR on PRC-006 that the SPCWG will also be discussing. Discussion ensued.

NERC Energy Reliability Assessment Working Group (ERAWG) – Tom Whynot

Whynot provided a written report located in the agenda packet. Discussion ensued.

11. 2023 Work Plan Update

Action Item Review

Vice Chair Nansel reviewed the action items in the 2023 work plan. Updates were made accordingly. Discussion ensued.

12. Reliability Coordinator Updates

Midcontinent Independent System Operator (MISO)

RAC member, Durgesh Manjure, reported that temperatures across the footprint have been average this summer with a few extreme weeks in June and July, where emergency alerts were issued. MISO issued maximum generation alerts on July 27-28, 2023. Year-to-date, MISO's peak load was 120 gigawatts in July. Year-to date, the north central region peaked at 26 gigawatts, and the central region peaked at 62 gigawatts. Last week, the south region reached a new peak load of over 34 gigawatts. Solar is still incipient at MISO but did reach a new peak of 3,000 megawatts on June 20. Manjure noted that prices are trending downwards to more historical averages, and real-time Locational Marginal Price (LMP) is also lower.

Manjure explained that the situation in the south region was caused by high heat in the south and low wind in the north central region. Additionally, MISO lost 1,100 megawatts of generation in the north creating congestion challenges. MISO does not have enough solar to compensate for lack of wind in high heat conditions. Discussion ensued.

Saskatchewan Power Corporation (SPC)

RAC member, Binod Shrestha, reported that summer temperatures have been hotter resulting in a higher summer load. SaskPower set a new record summer peak load of 3,670 megawatts (100 megawatts higher than last summer). There was a forced outage at a large coal plant causing energy



issues with operating reserves in June, July and August. SaskPower has declared six Energy Emergency Alert 3's (EEA) this summer. Temperatures have cooled down, and load is expected to be normal (~2,800-2,900 megawatts). Winter peak load is forecasted to be 3,900 megawatts in December or January. SaskPower is not expecting any issues with operating reserves or energy adequacy during the winter months. Discussion ensued.

Southwest Power Pool (SPP)

RAC member, C.J. Brown, reported that SPP has issued many alerts due to the heat in the south. The highest loads occurred in late July. Net load days are the most challenging for SPP at or above the 45,000 megawatt level. The uncertainty response team has been working non-stop for months. SPP has seen some large load increases and set a new record peak load on July 28, 2023. Additionally, SPP is currently in a resource alert this week. Brown shared a slide illustrating the challenges of variable energy and why fuel diversity matters. Solar is not a large part of SPP's fleet yet, and wind generation is unpredictable. Discussion ensued.

13. Planning Coordinator Updates

Southwest Power Pool (SPP)

Joshua Pilgrim, Senior Engineer 2, provided an update on SPP's planning coordination activities. He discussed the Integrated Transmission Planning (ITP) process which covers reliability and economic upgrades annually. He highlighted the Transmission Services Team who studies the upgrades and projects for load additions within the footprint. Pilgrim gave a brief overview of the Generation Interconnection (GI) Process. He outlined the ITP 20 Year Assessment, which is done on a five-year planning cycle and focuses on high-voltage projects. The ITP 20 is strictly an economic study which helps inform the decisions made in other studies. Pilgrim also shared SPP's 2023 Notice to Construct (NTC) Summary. Discussion ensued.

Midcontinent Independent System Operator (MISO)

RAC member, Andy Witmeier, provided an update on MISO's system planning. Witmeier discussed the industry transformation affecting the planning process which includes fleet changes, fuel assurance, extreme weather and electrification. Witmeier shared the common MISO Transmission Expansion Plan (MTEP) project categories and noted that MTEP23 will be MISO's largest portfolio outside of a Multi-Value Project (MVP) due to large baseline reliability projects. Several ongoing projects were highlighted including MISO's Long Range Transmission Plan (LRTP) and the SPP-MISO Joint Targeted Interconnection Queue (JTIQ) Study. Witmeier shared the progress of LRTP Tranche 2 and a snapshot of MISO's Future 2A. A significant amount of new transmission is anticipated. Witmeier also provided a status update of MISO's Interconnection Queue, noting approved projects awaiting construction. Discussion ensued.

14. MRO Regional Risk Assessment (RRA)

MRO Principal Technical Advisor, Mark Tiemeier, lead a discussion on the 2023 Regional Risk Assessment (RRA). Tiemeier outlined the RRA process and methodology and shared the dates for the upcoming Risk Information Sessions and Risk Ranking Workshop in October 2023. Tiemeier highlighted the top seven risks that have been identified for 2024 and solicited feedback from the RAC members. Discussion ensued.



15. NERC Standards Review Forum Update

Vice Chair Nansel provided an update on behalf of the NERC Standards Review Forum (NSRF). Nansel will continue to follow the NSRF meetings and distribute relevant items to the RAC, as needed.

16. Protective Relay Subgroup Update

MRO Manager of Reliability Performance, Jake Bernhagen, provided an update on behalf of the Protective Relay Subgroup (PRS). Bernhagen highlighted items from the second quarter meeting on June 27, 2023, including a Commissioning Lessons Learned presentation by Xcel Energy and a Relay Automation Demonstration by Minnkota Power Cooperative. Bernhagen shared highlights from the upcoming third quarter meeting in September, notably technical presentations from Quanta Technology, LLC and Western Area Power Administration (WAPA). Bernhagen also noted the NERC Misoperation Workshop scheduled for October 25-26, 2023 in Atlanta, Georgia. Bernhagen would like to encourage further collaboration between the PRS and the other regions' relay subgroups within the ERO Enterprise.

17. 2023 Meeting Dates

Vice Chair Nansel reviewed the 2023 meeting dates for the RAC, as well as the other councils and subgroups. Clark reviewed the draft 2024 meeting dates for the RAC, as well as the other councils and subgroups. Clark noted that the first quarter RAC meeting may be virtual. He mentioned that MRO would like to promote more in-person attendance at council meetings and may alter the language used in the outreach materials, replacing the word "hybrid". Clark reminded the RAC members of MRO's reimbursement policy for travel expenses. He commented on collaboration week for 2024 and solicited feedback from the council members. Discussion ensued,

18. RAC Member Roundtable

Vice Chair Nansel invited member participants to share other relevant industry observations. No roundtable topics were shared.

19. Other Business and Adjourn

Having no further business to discuss, the meeting was adjourned at 2:03 p.m.

Prepared by: Rebecca Schneider, Reliability Analysis Administrator.

Reviewed and Submitted by: Bryan Clark, Director of Reliability Analysis



Exhibit A – Meeting Attendees

Reliability Advisory Council Members Present	
Name	Organization
Gayle Nansel, Vice Chair	Western Area Power Administration
Andy Witmeier	MISO
Binod Shrestha	Saskatchewan Power Corporation
Bryn Wilson	Oklahoma Gas & Electric
C.J. Brown	Southwest Power Pool
Dallas Rowley	Oklahoma Gas & Electric
Derek Brown	Evergy
Durgesh Manjure	MISO
Jason Weiers	Otter Tail Power Company
Jeremy Severson	Basin Electric Power Cooperative
John Stephens	City Utilities of Springfield Missouri
Nandaka Jayasekara	Manitoba Hydro
Ron Gunderson	Nebraska Public Power District
MRO Staff Present	
Name	Title
Bryan Clark	Director of Reliability Analysis
Rebecca Schneider	Reliability Analysis Administrator
Shawn Keller	Outreach Coordinator
Cris Zimmerman	Manager of Outreach and Stakeholder Engagement
Mark Tiemeier	Principal Technical Advisor
Salva Andiappan	Principal Reliability Assessment Engineer
Jake Bernhagen	Manager of Reliability Performance
Lisa Stellmaker	Executive Administrator



Carolina Margaria	Assistant Corporate Secretary and Governance Administrator
Steen Fjalstad	Director of Security
Margaret Eastman	Security Administrator
Bill Steiner	Director of Compliance Monitoring
Michelle Olson	Compliance Monitoring Administrator
Mark Flanary	Director of Risk and Mitigation
Tasha Ward	Director of Enforcement and External Affairs
Max Desruisseaux	Senior Power Systems Engineer
Eric Graftaas	Principal Power Systems Engineer
Other Attendees	
Name	Organization
Jaimin Patel	Saskatchewan Power Corporation
Lynn Schroeder	Sunflower Electric Power Corporation
Kevin W. Jones	Xcel Energy
Joshua Pilgrim	Southwest Power Pool
Ian Anderson	Oklahoma Gas & Electric
Angela Wheat	Southwestern Power Administration
Eric Hammes	Dairyland Power Cooperative
Larry Brusseau	Corn Belt Power Cooperative
Mark Eastwood	City Utilities of Springfield Missouri
John Roemen	Western Area Power Administration
Paul Mehlhaff	Sunflower Electric Power Corporation
Vic Howell	WECC