



Draft Minutes of the Protective Relay Subgroup Meeting

Webex

February 22, 2022, 8:02 a.m. to 2:14 p.m. Central

Notice for this meeting was electronically posted to the MRO website [here](#) on January 25, 2022.

A final agenda, including advanced reading materials, was also posted on February 15, 2022.

1. Call to Order and Determination of Quorum

Protective Relay Subgroup (PRS) Chair Greg Sessler called the meeting to order at 8:02 a.m. Sessler welcomed everyone and brief introductions were made by those on the call. Rebecca Schneider, Reliability Analysis Administrator, advised the chair that a quorum of the PRS 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, Senior Systems Protection Engineer, Jake Bernhagen highlighted MRO's Standards of Conduct, Conflict of Interest, and Antitrust Guidelines

3. Consent Agenda

The PRS reviewed the consent agenda, which included draft minutes from the November 16, 2021 meeting.

Upon a motion duly made and seconded, the Protective Relay Subgroup approved the consent agenda, which included minutes from the November 16, 2021 PRS meeting as written.

4. Chair's Report

Chair Sessler had nothing to report since the last meeting.

5. New Members' Welcome Presentation

Bernhagen presented an overview to new members including the MRO organizational structure and ongoing initiative of the Organizational Group Oversight Committee (OGOC) to increase diversity on MRO's organizational groups. It was noted that the welcome presentation given during the meeting did not match the presentation provided in the agenda packet. Schneider updated the agenda packet during the meeting to include the correct welcome presentation.

6. PRS Business

PRS Charter Update Discussion.

Bernhagen led a discussion reminding the PRS members that a decision was approved in the fourth quarter to remove the locale requirement from the charter to help alleviate recruitment challenges. The proposed revisions to the charter will go to the Reliability Advisory Council for recommendation and approval by the OGOC. Discussion ensued.

Number of Members Discussion.

Bernhagen reminded the PRS of a discussion from the PRS' fourth quarter meeting regarding pending changes to Policy and Procedure 3 which would raise the number of possible organizational group



members per group from 19 to 21. Bernhagen noted that this topic has yet to be discussed and decided upon internally and that an update would be provided at the next PRS meeting.

PRS Nominations

The two nominees were given time to represent their nominations to the PRS.

Action Item List Review.

Chair Sessler reviewed the action item list and updates were made accordingly.

7. NERC Activities

Update on NERC System Protection and Control Working Group (SPCWG).

Mark Gutzmann, MRO representative on the NERC SPCWG, provided an overview on the recent work of the group. Gutzmann noted a reliability guideline called “Transmission System Phase Backup Protection”. Gutzmann also referenced FERC Order No. 881 that addresses ambient adjusted ratings. Greg Sessler noted that a presentation on FERC Order No. 881 may be a worthwhile pursuit for a future PRS meeting. Discussion ensued.

NERC Misoperation Information Data Analysis System User Group (MIDASUG) Update.

Bernhagen noted that there are no updates as the MIDASUG has not met since November 2021, and the next meeting is March 1, 2022.

FERC/NERC Protection System Commissioning Program Review.

Bernhagen solicited volunteers from the PRS to organize a second quarter webinar regarding FERC/NERC Protection System Commissioning Program Review. Sarah Marshall, Ryan Einer, and Cody Remboldt volunteered to assist Max Desruisseaux with this action item.

TADS.

MRO Principal Systems Protection Engineer, John Grimm, provided an update regarding TADS. Currently, TADS data reporting for MRO is 80 percent. There is an effort in 2022 to achieve 90 percent. Grimm addressed the need for data to be correct and submitted on time. The group was asked for ideas on how to increase participation.

8. Misoperations

To accommodate scheduling conflicts, Chair Sessler moved the Failure Modes and Mechanisms Task Force report (Agenda Item 8b.i.) ahead on the agenda. These minutes reflect the order in which the reports were provided.

Technical Presentations

Failure Modes and Mechanisms Task Force

Richard Hackman, Sr. Event Analysis Advisor, NERC, gave a presentation on examining cold weather generation failures using a failure modes and mechanisms approach. Hackman also asked for task force volunteers, especially in the area of electromagnetic and static relays.

Third Quarter 2021 Results and Review and Discussion.

MIDAS and Misoperations Q3 Update.

Bernhagen provided an overview of third quarter misops data. He will review in more depth when the fourth quarter data is available. A member asked the group if any of their companies were using multiprotocol label switching (MPLS) or other routable protocols for their communication-assisted transmission line protection schemes and if any misoperations have occurred on these schemes. Discussion ensued.



Technical Presentations

Out of Step Tripping

Kevin Jones, Consulting Engineer, Xcel Energy, gave a presentation on power swing blocking and out of step tripping. Discussion ensued.

Project Updates

Instantaneous Ground Overcurrent.

Bernhagen noted that there were no updates for this ongoing project. More information will be provided next quarter. An action item was captured to ask for volunteers for this project.

9. MRO 2022 Reliability Risk Assessment

John Seidel, Principal Technical Advisor, provided an overview of the MRO Regional Risk Assessment (RRA) highlighting the top reliability and security risks within the region. He also summarized the ERO-Wide Generation Resource Capacity by Fuel Type Table, noting the wind capacity numbers. The severe winter weather events in the South-Central United States were highlighted. Seidel also provided an overview of Demand Side Management (DSM). The top risks were reviewed and the rankings on the heat chart were explained. An attendee commented that workforce should be ranked as a higher risk because college graduates are not choosing careers in the power industry. Discussion ensued.

10. Event Analysis Report

Bernhagen, Sr. Systems Protection Engineer, provided an overview of the event analysis report. MRO is working on a key performance indicator (KPI). MRO will start tracking event analysis by the number of days it takes to process the event analysis report. The proposed goal is +/- 20 percent of 180 days (144-216). The Event Analysis group is also looking at major weather events such as hurricanes, etc.

11. 2022 Dates

Chair Sessler reviewed the 2022 meeting dates for the PRS and the other councils and subgroups.

12. PRS Roundtable Discussion

The PRS members next participated in a roundtable discussion. The following items were highlighted:

- PRC-004-6 requirements – Discussion regarding how to track the R5 date with the new standard. Does MRO need a new guidance document?
- MIDAS Misops – Bernhagen solicited volunteers to review quarterly misops and provide feedback. Several PRS members volunteered.

13. Other Business and Adjourn

Having no further business to discuss, the meeting was adjourned at 2:14 p.m.

Prepared by: Rebecca Schneider, Reliability Analysis Administrator

Reviewed and Submitted by: Jake Bernhagen, Sr. Systems Protection Engineer



Exhibit A – Meeting Attendees

PRS Members Present	
Name	Company, Role
Greg Sessler	American Transmission Co., Chair
David Wheeler	Southwestern Public Services Co., Vice Chair
Adam Daters	ITC
Alex Bosgoed	Saskatchewan Power Company
Casey Malskeit	Omaha Public Power District
Cody Remboldt	Montana-Dakota Utilities
Dennis Lu	Manitoba Hydro
Derek Vonada	Sunflower Electric Power Cooperative
Greg Hill	Nebraska Public Power District
Josh Erdmann	Xcel Energy
Matt Boersema	Western Farmers Electric
Ryan Einer	Oklahoma Gas & Electric
Sarah Marshall	Alliant Energy
Scott Paramore	Kansas City Board of Public Utilities
Terry Fett	Central Iowa Power Cooperative
MRO Staff	
Name	Title
Jake Bernhagen	Senior Protection Systems Engineer
John Grimm	Principal Systems Protection Engineer
John Seidel	Principal Technical Advisor
Rebecca Schneider	Temporary Administrator
Lisa Stellmaker	Executive Administrator and Office Manager
Dianlong Wang	Sr. Power Systems Engineer



Guests	
Name	Company
Richard Hackman	NERC
Kevin Jones	Xcel Energy
Mark Gutzmann	Xcel Energy
David Weir	Western Area Power Administration
Jeff Beasley	Grand River Dam Authority