

1. Welcome, Call to Order

Jon Aust, Reliability Risk Committee (RRC) Co-Chair, called the meeting to order at 10:02 a.m. MT on June 28, 2022. A quorum was present to conduct business. A list of attendees is attached as Exhibit A.

2. Review WECC Antitrust Policy

Vic Howell, Director of Reliability Risk Management, read aloud the WECC Antitrust Policy statement. The meeting agenda included a link to the posted policy.

3. Approve Agenda

Mr. Aust introduced the proposed meeting agenda.

On a motion by Greg Park, the RRC approved the agenda.

4. Review and Approve Previous Meeting Minutes

Mr. Aust introduced the minutes from the meeting on February 15, 2022.

On a motion by Gene Henneberg, the RRC approved the minutes from February 15, 2022.

5. Review Previous Action Items

Mr. Howell reviewed action items carried over from the RRC meeting on February 15, 2022. Action items that are not closed and will be carried forward can be found [here](#).

6. Recap of Inaugural Meeting

Dede Subakti, RRC Co-Chair, presented the recap of the inaugural meeting. The RRC not only adds value by bringing awareness to organizations, but it also adds value by having the RRC organizations provide input into the list of known and emerging reliability and security risks and identifying work that can be done to address those risks most effectively. Mr. Subakti discussed the importance of being fully engaged with the RRC. The RRC also discussed the importance of cybersecurity awareness.

The presentation is posted to the [WECC website](#).

7. New Reliability Risk Priorities Review

Victoria Ravenscroft, Senior Policy and External Affairs Manager, presented the new reliability risk priorities. The RRC discussed the four priorities:

- Cybersecurity;
- Extreme natural events;
- Resource adequacy; and
- The impact of changing resources and customer loads on the bulk power system (BPS)

The presentation is posted to the [WECC website](#).

8. RRC's Security Discussion

Mr. Aust led a discussion on the RRC's security work through the Cyber Security Work Group (CSWG) and the Physical Security Work Group (PSWG).

John Graminski, Senior Cyber Security Specialist, presented an update on the recent efforts of the CSWG and PSWG. The RRC discussed having a presentation on cybersecurity trends.

Lenin Maran, Sacramento Municipal Utility District (SMUD), presented the CSWG chair report. The CSWG meets quarterly and will work on providing best practices to other work groups and committees. The RRC discussed the challenges associated with old equipment, supply chain issues, and the importance of implementing strong security practices. Entities were encouraged to increase participation by joining the CSWG.

Gary King, Pacific Gas and Electric (PG&E), presented the PSWG report. The PSWG's focus is to promote best practices and ensure that physical security measures are being used. Historically, the emphasis of PSWG discussions has been on vendors and products. The PSWG is moving away from vendor and product discussions to more information and knowledge sharing about physical security challenges and best practices.

The presentation is posted to the [WECC website](#).

9. Committee Restructure Initiative

Shelli Nyland, Project Coordinator, presented the Joint Guidance Committee (JGC) committee restructure initiative. Changes will go into effect January 2023. The JGC determined a process for reviewing the groups. The purpose is to increase stakeholder's engagement, leadership, and ensure there is clear direction. The RRC discussed the restructure and how it may affect subcommittees and committees.

The presentation is posted to the [WECC website](#).



10. Subcommittee Updates

Gage Marek, Bonneville Power Administration (BPA), presented an update for the Joint Synchronized Information Subcommittee (JSIS). The presentation included updates to the Oscillation Analysis Work Group (OAWG), Transient Stability Analysis Work Group (TSAWG) and the Data Delivery and Management Work Group (DDMWG). The JSIS is focusing on reorganizing the committee structure.

The presentation is posted to the [WECC website](#).

Greg Park, Western Power Pool (WPP), presented an update for the Human Performance Work Group (HPWG). The HPWG produced a white paper on the transfer of knowledge within the industry. The HPWG charter is being reviewed and potential best practices will be provided.

Mr. Park presented an update for the Generator Operator Work Group (GOWG). The GOWG is focusing on the new standards that include cold weatherization. The BAL-003 standard team is drafting the new standards that will contain new Generator Owner requirements.

Mr. Park presented an update for the Relay Work Group (RWG). The RWG created the 2021 Misoperations Report and is updating a document to reference recent work on commissioning protection systems.

Mr. Park presented an update for the Event and Performance Analysis Subcommittee (EPAS). The EPAS continues its monthly review of qualifying events that occur.

The presentation is posted to the [WECC website](#).

Danielle Smith, Sacramento Municipal Power District (SMUD), presented the 2022 Interchange Scheduling and Accounting Subcommittee (ISAS) Preschedule Calendar Guideline for RRC approval. The ISAS discussed and voted to add the Juneteenth holiday and add verbiage explaining how to observe Christmas Eve if it falls on a weekend. Bonneville Power Administration (BPA) expressed concern about the Preschedule Guidelines Christmas Eve changes, see Exhibit B for details. There were no other concerns expressed and no objections to approval.

By consensus, the RRC approved the ISAS Prescheduling Calendar Guideline.

The presentation is posted to the [WECC website](#).

The Preschedule Calendar Guideline is posted to the [WECC website](#).

Daniel Baker, Southwest Power Pool (SPP), presented an update on recent work of the Performance Work Group (PWG). The PWG completed the system inertia anomalies for the year 2020. The PWG will be focusing on frequency performance training and analysis and integration.



The presentation is posted to the [WECC website](#).

Gene Henneberg, NV Energy, presented an update for the Remedial Action Scheme Review Subcommittee (RASRS). The RASRS reviewed 17 schemes for approval. The RASRS updated the Design Guide and is updating the charter.

The presentation is posted to the [WECC website](#).

11. Subgroup Template & Update Discussion

Mr. Park presented the subgroup report template for PowerPoint presentations. Concern was expressed about showing the progress of the work being done. The RRC discussed adding a section for reliability risks that need to be brought to the RRC.

The presentation is posted to the [WECC website](#).

12. 2021 Wildfire Data Analysis Results and 2022 Wildfire Data Request

Steve Ashbaker, Director of Reliability Initiatives, presented the 2021 wildfire data analysis results and the 2022 wildfire data request. It was suggested that next year's analysis be enhanced by including baseline information such as percentage of lines that are in the voltage class and circuit miles of lines affected. A questionnaire will be sent out July 18, 2022, with 30 days to respond. The RRC discussed doing a comparison with the 2021 and 2022 data. Mr. Ashbaker will obtain a comparison of the line data for only the lines affected for the utilities that responded and will include the circuit miles. Mr. Ashbaker will get the non-confidential FERC data and share it with the RRC.

The presentation is posted to the [WECC website](#).

13. Risk Management Process Development

Mr. Howell presented an introduction of the RRC risk management framework developed by the RRC strike team (Rich Hydzik, Grace Anderson, Brian Robinson, Tim Reynolds, and Vic Howell). Risk management is a primary focus for the RRC, and it is important that the RRC use a methodical process for understanding reliability and security risks and determining and taking action to address those risks.

Grace Anderson, California Energy Commission (CEC), presented the RRC risk management framework principals. The RRC discussed cybersecurity risks and the Electricity Information Sharing and Analysis Center (E-ISAC) events that are reported. Risks for the interconnection will be considered when moving to phase three. Concern was raised about outage coordination being heavily dependent on email.



Tim Reynolds, Event Analysis and Situational Awareness Manager, presented the RRC risk management framework diagram. The discussion included a list of participants in the RRC risk management process and the roles of those participants. Tim stressed the importance of RRC members' participation in bringing awareness of reliability and security risks to the RRC for inclusion in the process.

Ms. Anderson presented the elements of the RRC risk management process. The RRC discussed the purpose of the RRC, which is to identify and address reliability and security risks. The group discussed the purposeful use of the language "address risks" versus "mitigate risks."

Rich Hydzik, Avista Corporation (AVA), presented the risk management framework attributes. RRC members provided feedback to the strike team; however, the strike team acknowledged that the magnitude of content was quite a lot to take in. The strike team committed to providing RRC members with an opportunity to review the content of the presentation offline and provide feedback.

Mr. Howell concluded by reviewing next steps for the development of the RRC risk management process.

The presentation is posted to the [WECC website](#).

14. Reliability and Security Indicator Overview

Mr. Howell presented an overview of WECC's reliability and security indicators. RRC members were encouraged to review the webpage and the different indicators. The RRC discussed that more entities need to be involved with future improvements on both the indicators and the dashboard. Mr. Howell stressed the importance of having a place in WECC's committee structure where WECC staff can collaborate with stakeholders on these improvements.

The presentation is posted to the [WECC website](#).

15. RC West Primary Frequency Response Tool

Raja Thappetaobula, California Independent System Operator (CAISO), presented the Reliability Coordinator (RC) West primary frequency response tools. It was noted that this tool represents a perfect example of an entity seeing an emerging risk and acting to address that risk. The tool is indicating that the interconnection is at the highest risk for low inertia impacts when load is low and generation is low, and the interconnection is at the lowest risk for low inertia impacts when load is at peak and generation is high. This risk has always been there, and this tool has brought that risk to light. The RRC would like to have a follow-up discussion with CAISO after it gets the tool implemented in real-time operations.

The presentation is posted to the [WECC website](#).



16. Update on Future UFLS Assessment Approach

Enoch Davies, System Stability Manager, provided an update for the future underfrequency load shedding (UFLS) assessment approval approach. WECC will not be doing future assessments and reports due to a conflict with WECC doing the assessments and the audits on those assessments. WECC will continue to work on data collection and will make the data available. The current assessment will be finished but the results might require continued work.

17. RRC Work Plan development

Mr. Aust led the discussion on the RRC work plan development. The three-year work plan draft will be developed and sent to the RRC to discuss during the next meeting.

18. Public Comment

No comments were offered.

19. Review New Action Items

- Send the RRC Leadership and Nicole an email about the Preschedule Calendar concerns.
 - Assigned To: Andy Myers
 - Due Date: July 1, 2022
- Finalize the subgroup update template by including a place to highlight reliability/security risks identified as part of the subgroup's work.
 - Assigned To: RRC Leadership
 - Due Date: October 19, 2022
- Incorporate RRC feedback into the RRC risk management framework and follow up with the RRC with a way of reviewing the framework content offline and providing feedback at a later date.
 - Assigned To: RRC Risk Management Strike Team
 - Due Date: October 19, 2022
- Develop first draft of the RRC risk management process for review at the October 19, 2022, RRC meeting.
 - Assigned To: RRC Risk Management Strike Team
 - Due Date: October 19, 2022
- Send the list of UFLS planning coordinators and entity participants to the RRC.
 - Assigned To: Enoch Davies
 - Due Date: October 19, 2022
- Add the RRC three-year work plan draft to the October agenda.
 - Assigned To: Vic Howell
 - Due Date: October 19, 2022



- Present cybersecurity trends to the RRC
 - Assigned To: CSWG
 - Due Date: October 19, 2022

20. Upcoming Meetings

October 20, 2022.....Salt Lake City, Utah

21. Adjourn

Mr. Aust adjourned the meeting without objection at 12:00 p.m.



Exhibit A: Attendance List

Members in Attendance

Margaret Albright.....Bonneville Power Administration—Transmission
Yari Ali San Diego Gas and Electric
Rachel Allen Tacoma Power
Grace Anderson California Energy Commission
Phil Augustin.....Salt River Project
Jonathan Aust.....Western Area Power Administration
Manuel Avendano Southern California Edison Company
Eric Baran..... Western Interstate Energy Board
Kyle Bensley El Paso Electric Company
Brad Bouillon.....California Independent System Operator
Jennifer Bray Arizona Electric Power Cooperative, Inc. (Arizona G&T Cooperatives)
Robert Bray Arizona Electric Power Cooperative, Inc. (Arizona G&T Cooperatives)
Toxie Burriss..... Modesto Irrigation District
Keith Carman Tri-State Generation and Transmission—Reliability
Randy Cleland..... El Paso Electric Company
Alexis Cortez Transmission Agency of Northern California
Cory Danson.....Western Area Power Administration
Mario Delgado El Paso Electric Company
Charles Faust.....Western Area Power Administration
Roberto Favela El Paso Electric Company
Angela Hall.....Pend Oreille County PUD #1
Brett Hallborg..... British Columbia Hydro and Power Authority
Tim Hamilton..... Arizona Electric Power Cooperative, Inc. (Arizona G&T Cooperatives)
Dave Hardy Tri-State Generation and Transmission—Reliability
David Hardy..... Tri-State Generation & Transmission—Power Management Division
David Hartman..... Arizona Electric Power Cooperative, Inc. (Arizona G&T Cooperatives)



Gene Henneberg.....NV Energy
Mark Hesters..... California Energy Commission
Jennine Hinkle..... City of Riverside
Ross Hohlt DesertLink, LLC
Raj Hundal..... Powerex, Inc.
Richard Hydzik.....Avista Corporation
Linda Jacobson-QuinnFarmington Electric Utility System
Michael Jang Seattle City Light
Harley Johnson Tacoma Power
Mike Johnson..... Pacific Gas and Electric Company
Pete Jones Puget Sound Energy, Inc.
Tim Kedis..... Southern California Edison Company
Adam Labuga..... Turlock Irrigation District
Luis Leon Arizona Public Service Company
Les MacLarenBritish Columbia Ministry of Energy and Mines
Gage Marek Bonneville Power
Steven Majuta..... Tucson Electric Power
Lenin Maran Sacramento Municipal Utility District
Zachary Mensonides Modesto Irrigation District
Andrew MeyersBonneville Power Administration—Transmission
Russell A. Noble Public Utility District No. 1 of Cowlitz County
Greg ParkWestern Power Pool (formerly Northwest Power Pool Corporation)
Vishal Patel Southern California Edison Company
LeRoy Patterson.....Public Utility District No. 2 of Grant County
Mike Pfeister.....Salt River Project
Mark PrintyImperial Irrigation District
James Ramos Turlock Irrigation District
Luz Ramos El Paso Electric Company



Mike RamseyCalifornia Department of Water Resources
Brian Robinson.....Utility Services, Inc.
Brent Roholt.....PacifiCorp
Sam Rugel Tucson Electric Power
Jose Ruiz..... El Paso Electric Company
Trevor SchultzIdaho Power Company
Eric ShellenbergIdaho Power Company
Kenneth Silver..... 8minute Solar Energy
Matt Smelser.....Imperial Irrigation District
Danielle Smith..... Sacramento Municipal Utility District
Amy Sopinka.....British Columbia Ministry of Energy and Mines
Evan Sorrell Puget Sound Energy, Inc.
Mike Stussy.....Public Utility District No. 2 of Grant County
Dede SubaktiCalifornia Independent System Operator
RajaShekar Thappetabobula California Energy Commission
Chifong Thomas Thomas Grid Advisor
Juan Vicente..... El Paso Electric Company
David Wiley..... Arizona Public Service Company
Diana Wilson.....Alberta Electric System Operator
Scott WinnerBonneville Power Administration—Transmission
Jessica Zamonis.....Western Power Pool (formerly Northwest Power Pool Corporation)

Member Organizations not in Attendance

AltaLink Management Ltd., British Columbia Utilities Commission, Cambridge Energy Solutions, Cat Creek Energy LLC, City of Burbank, City of Pasadena, Clearway Energy Operating, LLC (NRG), Colorado Springs Utilities, CP Energy Marketing (US) Inc., DataCapable Inc., Delta-Montrose Electric Association, Electric Power Research Institute, Eugene Water & Electric Board, FortisBC, Inc., Grid Numerics, Guy Van Uytven, Hetch Hetchy Water and Power, Los Angeles Department of Water and Power, MATL Canada L.P., MCE, NextEra Energy Resources, LLC, Oregon Public Utility Commission, Pacific Northwest National Laboratory, PacifiCorp Merchant Function, Portland General Electric Company, Public Service Company of Colorado (Xcel Energy), Public Utility District No. 1 of



Snohomish County, Quanta Technology, LLC, Regime LLC, Renewable Northwest, TransCo Energy, LLC, Utah Division of Public Utilities, Utilicast L.L.C., Wyoming Office of Consumer Advocate

Others in Attendance

Steve AshbakerWECC
Daniel BakerSouthwest Power Pool
Layne BrownWECC
Lorrisa Cardoza Bonneville Power Administration
Terrance ClinganFERC
Enoch DaviesWECC
John GraminskiWECC
Chris GuimeraWECC
Mark Hackney Open Access Technology International
James HansonWECC
Curtis HollandWECC
Vic HowellWECC
Lesley Kayser-Sprouse San Francisco Water
Nicole LeeWECC
Saad MalidWECC
Jerry MelcherCalifornia Public Utilities Commission
Dan Mooy Energy Exemplar
Shelli NylandWECC
Bert PetersWECC
Eric Raatz Tuscon Electric Power
Victoria RavenscroftWECC
Tim ReynoldsWECC
Kenneth Wilson Western Resources



Exhibit B: Preschedule Guideline Concerns

Bonneville had some concerns regarding the recently proposed changes to the Preschedule Guideline. The concerns are regarding the proposed changes around Christmas Eve. BPA is fully supportive of the inclusion of Juneteenth as a scheduling holiday.

Bonneville's concern is regarding the codification and observance of scheduling holidays when Christmas Eve falls on either a Saturday or Sunday. Historically, there has not been consistency regarding the observance of a scheduling holiday when Christmas Eve falls on a Saturday or Sunday. Bonneville believes that the reason for the inconsistency over the years is deliberate, that the Preschedule Calendar Guideline was not intended to be entirely prescriptive nor exhaustive of every possible permutation that may occur around the scheduling of holidays and drafting of the preschedule calendar. Rather, the drafter of the preschedule calendar should follow the principles that appear near the end of the document. One of which discusses minimizing multiple scheduling days. The proposed changes around Christmas Eve conflict with this principle.

The recent proposed change to always observe a scheduling holiday when Christmas Eve falls on a Saturday or Sunday injects unnecessary operational uncertainty to the short-term planning, trading, and scheduling activities as the proposed changes call for scheduling holidays on December 23 or December 26. This results in scheduling up to five days out, and Bonneville believes that observing a scheduling holiday for Christmas Eve (when it falls on a Saturday or Sunday) is not necessary. Bonneville believes that the weather and load forecasts used in the initial trading and scheduling for five days out will be dramatically different than the weather and load forecasts on the day of flow, and thus injects unnecessary risk and operational uncertainty (especially during the winter month of December). Bonneville believes that reliability and scheduling as close as possible to the day of flow should outweigh the need to observe a scheduling holiday when Christmas Eve falls on a Saturday or Sunday.

