

**Day 1—February 27, 2024**  
**1:00 to 5:00 p.m.**

**1. Welcome, Call to Order**

Chelsea Loomis, Reliability Assessment Committee (RAC) Co-chair, called the meeting to order at 1:01 p.m. MT on February 27, 2024. A quorum was present to conduct business. A list of attendees is attached as Exhibit A.

**2. Review WECC Antitrust Policy**

Enoch Davies, Reliability Modeling Manager, read aloud the WECC Antitrust Policy statement. The meeting agenda included a link to the posted policy.

**3. Approve Agenda**

Ms. Loomis introduced the proposed meeting agenda.

**By consensus, the RAC approved the agenda.**

**4. Review and Approve Previous Meeting Minutes**

Ms. Loomis introduced the minutes from the meeting on October 25–26, 2024.

**On a motion by Chifong Thomas, the RAC approved the minutes from October 25–26, 2024.**

**5. Review Previous Action Items**

Daja Bell, Administrative Coordinator, reviewed action items carried over from the RAC meeting on October 25–26, 2024. Action items that are not closed and will be carried forward can be found [here](#).

**6. Interregional Transfer Capability Study**

Vic Howell, Reliability Assessments and Modeling Director, discussed the interregional transfer capability study (ITCS) with the committee, and provided an overview on ITCS projects, ITCS phases, and NERC AG success poll results. The presentation is posted on the WECC calendar.

## **7. Studies Subcommittee**

Thomas Carr, Studies Subcommittee Chair, updated the committee on increasing the amount of distributed resources, potential changes to the path rating process, and studies that are underway.

## **8. System Review Subcommittee (SRS)**

Jefferey Anderson, SRS Co-chair, provided a high-level update on the SRS, changes to the Data Preparation Manual (DPM), summer base cases with path reversals, DPM rate changes, and FERC Order 886.

## **9. Modeling and Validation Subcommittee (MVS)**

Song Wang, MVS Chair, updated the RAC on the MVS and discussed with the committee renewable modeling updates, grid-forming inverter modeling, power plant modeling updates, GENTPJ model review, GENQEC readiness and challenges, load modeling updates, and active transmission system modeling. The presentation is posted on the WECC calendar.

## **10. RAC Nominating Committee**

The RAC discussed the RAC Nominating Committee and voted on the Nominating Committee Recommendation. The RAC decided to nominate Chelsea Loomis to continue conducting business as the RAC Co-chair. The presentation is posted on the WECC calendar.

**On a motion by Lorissa Cardoza, the RAC approved Chelsea Loomis to continue conducting business as the RAC Co-chair.**

## **11. RAC Steering Committee Update**

Mr. Davies discussed the work the RAC Steering Committee is performing and best practices going forward. The committee decided to move forward only scheduling RAC Steering Committee meetings as needed.

## **12. Production Cost Data Subcommittee (PCDS)**

Kevin Harris, PCDS Co-chair, updated the committee on the PCDS.

The presentation is posted on the WECC website.

## **13. Long-term Transmission Planning Task Force (LTPTF)**

Allison Auld-Hill, LTPTF Co-chair, updated the RAC on the LTPTF. Ms. Auld-Hill went over discussions to date, potential use cases identified to date, and background studies used. The presentation is posted on the WECC calendar.



## **RAC Meeting Minutes—February 27-28, 2024**

### **14. Short-circuit Modeling Subcommittee (SCMS)**

Amos Ang, SCMS Chair, updated the committee on progress of the SCMS, short-circuit duty cases, sim formats, modeling of inverter-based resources, and dynamic link libraries.

### **Day 2—February 28, 2024**

**9:00 a.m. to 12:00 p.m.**

### **15. RRC/RAC Coordination: Event and Performance Analysis Subcommittee (EPAS)**

Alan Wahlstrom, EPAS Chair, updated the RAC on the EPAS and provided an overview on the NERC event analysis process. The presentation is posted on the WECC calendar.

### **16. ESIG Weather Dataset**

Justin Sharp, Sharply Focused, discussed the ESIG weather dataset, evolving weather and weather education, electric system weather dependence, power system models, wind and solar storage, climate change, and what is needed for the weather dataset. The presentation is posted on the WECC calendar.

### **17. WestTech**

Chelsea Loomis discussed the WestTEC study with the committee. The study is still under development, and a steering committee has been formed for the study. More information about the study will be available at the March board meeting.

### **18. NERC Electromagnetic Transient Modeling Task Force (EMTTF)**

Aung Thant, NERC, presented on NERC's EMTTF, its strategies, its support of EMT adoption across NA, and its work items.

### **19. WECC EMTTF**

Philip Augustine, RAC Co-chair, discussed retiring the WECC EMTTF. The committee voted to approve the retirement of the task force.

**On a motion by Phillip Augustin, the RAC approved the retirement of the WECC EMTTF.**

### **20. Data Management Project Update**

Mr. Davies gave an update on the Data Management Project; the project is in progress. The Data Management Project team is discussing next steps with vendors and internally.



## RAC Meeting Minutes—February 27-28, 2024

### 21. FERC Order 881 (Ambient Adjusted Ratings)

Ms. Loomis discussed the FERC Order 881 and ambient adjusted ratings and submitting potential risks to the Reliability Risk Registry.

### 22. MOD-029 Retirement

Mr. Augustine discussed MOD-029 retirement, the six MOD standards that NERC will be retiring, and asked the committee questions about the retirement of the standards.

### 23. TPL-008-1

Dmitry Kosterev, Bonneville Power Administration; David Le, California Iso; and Hayk Zargaryan, Southern California discussed the TLP-008-1 standard, FERC Order 896, the NERC Project 2023-07 Drafting Team, planning cases for extreme heat and extreme cold weather events, extreme temperature assessments, contingencies and performance criteria, and standard drafting team next steps with the committee. The presentation is posted on the WECC calendar.

### 24. Engagement Survey Result

Mr. Davies discussed the Joint Guidance Committee's engagement survey results and the feedback from the survey.

### 25. RAC Three-year Work Plan

Mr. Davies updated the committee on the RAC's Three-year Work Plan and showed members where they can find the work plan.

### 26. Plexos to Gridview Comparison

Katie Rogers discussed the differences between the Plexos application and the Gridview application with the committee.

### 27. Public Comment

Ms. Loomis discussed the results received from the July in-person meeting poll. The committee decided to have a hybrid meeting for the July 9, 2024, RAC meeting.

### 28. Review New Action Items

There were no new action items created during this meeting.

- Invite Ben Hutchins to present on the observed changes in path flows at the July 2024 RAC meeting.
  - Assigned: Chelsea Loomis



## RAC Meeting Minutes—February 27-28, 2024

- Due Date: July 10, 2024

### 29. Upcoming Meetings

July 9–11, 2024..... Salt Lake City, Utah

October 15–17, 2024..... Virtual

### 30. Adjourn

Ms. Loomis adjourned the meeting without objection at 11:58 p.m.



## RAC Meeting Minutes—February 27-28, 2024

### Exhibit A: Attendance List

#### Members in Attendance

Hamid Atighechi ..... Powerex, Inc.

Allison Aud-Hill ..... Southern California Edison Company

Philip Augustin ..... Salt River Project

Jamie Austin ..... PacifiCorp

Deanna Carlson ..... Public Utility District No. 1 of Cowlitz County

Thomas Carr ..... Western Interstate Energy Board

Biju Gopi ..... California Independent System Operator

Jeff Hanson ..... Colorado Springs Utilities

Fred Heutte ..... NW Energy Coalition

Mike Johnson ..... Pacific Gas and Electric Company

Lorissa Jones ..... Bonneville Power Administration—Transmission

Peter Jones ..... Puget Sound Energy, Inc.

Lesley Kayser-Sprouse ..... Hetch Hetchy Water and Power

Chelsea Loomis ..... Western Power Pool

Steve Schaarschmidt ..... Colorado Springs Utilities

Tim Schiermeyer ..... Transmission Agency of Northern California

Trevor Schultz ..... Idaho Power Company

Masoud Shafa ..... California Department of Water Resources

Hari Singh ..... Public Service Company of Colorado (Xcel Energy)

Spencer Tacke ..... Auriga Corporation

Chifong Thomas ..... Thomas Grid Advisor

David Tovar ..... El Paso Electric Company

Gary Trent ..... Tucson Electric Power

Jerod Vandehey ..... Public Utility District No. 1 of Cowlitz County

Song Wang ..... Portland General Electric Company

Quinten Ziegler ..... Transmission Agency of Northern California



## RAC Meeting Minutes—February 27-28, 2024

### Members not in Attendance

Ravi Aggarwal .....Bonneville Power Administration—Transmission  
Sharmen Andrew.....MATL Canada L.P.  
Page Andrews .....Western Area Power Administration  
John Armenta .....Farmington Electric Utility System  
Paul Arnold ..... EnTranTek LLC  
Ehsan Azordegan ..... Kinectrics US  
Eric Bahr.....NorthWestern Energy  
Nathan Barcic .....California Public Utilities Commission  
Ian Beil.....Portland General Electric Company  
Constance Bergmark .....Imperial Irrigation District  
Charles Berry ..... City of Lompoc  
Mitchell Betonie .....Farmington Electric Utility System  
Scott Beyer .....Western Power Pool  
Aseem Bhatia.....California Department of Water Resources  
Jeffrey Billinton .....California Independent System Operator  
Savina Blackman.....Clearway Energy Operating, LLC (NRG)  
Brett Bodine .....Turlock Irrigation District  
Marian Bonar.....Gallatin Power Partners, LLC  
Lindsay Briggs .....Black Hills Corporation  
Lindsay Briggs .....Black Hills Corporation  
Marcus Brown.....NaturEner USA, LLC  
Jeremy Brownrigg.....Platte River Power Authority  
Jason Burwen .....GridStor LLC  
Shawn Carlson .....Basin Electric Power Cooperative  
Kris Carper .....Arizona Electric Power Cooperative, Inc. (Arizona G&T Cooperatives)  
Andrew Chanko .....Guzman Power Markets, LLC



## RAC Meeting Minutes—February 27-28, 2024

Tim Cherry ..... Metropolitan Water District of Southern California  
Chris Colson ..... Western Area Power Administration  
Dennis Desmarais ..... Copia Power DevCo, LLC  
Bryce Dininger ..... Central Arizona Water Conservation District  
Gordon Dobson-Mack ..... Powerex, Inc.  
Rodica Donaldson ..... EDF Renewable Energy  
Thomas Duane ..... Public Service Company of New Mexico  
Kirsten Eliassen ..... Gallatin Power Partners, LLC  
Greg Engels ..... British Columbia Utilities Commission  
Jonathon Flores ..... Los Angeles Department of Water and Power  
Shaun Foster ..... Portland General Electric Company  
Jordy Fuentes ..... Arizona Power Authority  
Jennifer Galaway ..... Portland General Electric Company  
Allen Green ..... U.S. Army Corps of Engineers, Portland District  
Ron Grife ..... Leeward Renewable Energy, LLC  
Ernie Griggs ..... Cascade Renewable Transmission, LLC  
John Gross ..... Avista Corporation  
Mike Guité ..... British Columbia Hydro and Power Authority  
Val Guzman Ridad ..... Silicon Valley Power (City of Santa Clara)  
Mark Hackney ..... Open Access Technology International  
Christina Hajny ..... U.S. Army Corps of Engineers, Portland District  
Ryan Hancock ..... Grid Subject Matter Experts  
Nadine Hanhan ..... Oregon Public Utility Commission  
Johanna Hanson ..... Washington Department of Commerce - State Energy Office  
Jonathan Hayes ..... Southwest Power Pool  
Bill Hosie ..... PSI Power System Innovation Corp.  
Peter Huang ..... Alberta Electric System Operator  
Ryan Hubbard ..... Tri-State Generation and Transmission—Reliability





## RAC Meeting Minutes—February 27-28, 2024

Rhett Hurless..... Absaroka Energy, LLC  
Richard Jackson..... U.S. Bureau of Reclamation  
Robert Jackson..... Burns & McDonnell (1898 and Co.)  
Harley Johnson ..... Tacoma Power  
Holly Johnson.....City of Redding  
Will Jolley.....GridStor LLC  
Robert Jones..... Seattle City Light  
Cathy Kim..... Copia Power DevCo, LLC  
Eli King..... Washington Department of Commerce - State Energy Office  
Ruth Kloecker..... ITC Grid Development, LLC  
Michael Korhonen ..... Western Area Power Administration  
Luca Kovacic ..... Direct Energy Business Marketing, LLC  
John Kyei..... TransCo Energy, LLC  
Josh Laurandeau .....NorthWestern Energy  
Justin Lee.....Salt River Project  
John Leland.....Northern Tier Transmission Group  
Daniel Leon ..... Power System Consultants, Inc.  
John Liang..... Public Utility District No. 1 of Snohomish County  
Todd Lichtas..... Tucson Electric Power  
Patrick Ma..... Energy Exemplar, LLC  
Peter Mackin..... GridBright, Inc.  
Richard Maguire ..... Electrical Consultants, Inc.  
Habibou Maiga ..... San Diego Gas and Electric  
Sarah Majok.....Sarah Aggrey Consulting Engineers LLC  
Jessica Markovich ..... Eugene Water & Electric Board  
Tiana Marmitt ..... Energy Exemplar, LLC  
Jesus Martinez.....Imperial Irrigation District  
John D. Martinsen..... Public Utility District No. 1 of Snohomish County



## RAC Meeting Minutes—February 27-28, 2024

Christopher McLean..... California Energy Commission  
Diana McMahon .....Salt River Project  
Jerry Melcher ..... California Public Utilities Commission, Office of Ratepayer Advocates  
Pete Mensonides ..... Turlock Irrigation District  
Keegan Moyer ..... Energy Strategies  
Foung Mua ..... Sacramento Municipal Utility District  
Julie Myerholtz.....First Solar  
Ramya Nagarajan ..... DesertLink, LLC  
George Nail.....Public Service Company of New Mexico  
Tyler Nice..... Eugene Water & Electric Board  
John Nierenberg..... Tacoma Power  
Mike Nitido ..... Tucson Electric Power  
Andrey Olennikov ..... Portland General Electric Company  
Vishal Patel ..... Southern California Edison Company  
Dave Peck ..... California Public Utilities Commission, Office of Ratepayer Advocates  
Mateusz Pena ..... Delta-Montrose Electric Association  
Chris Pink ..... Tri-State Generation and Transmission—Reliability  
Nathan Powell..... Deseret Generation & Transmission Cooperative  
Glen Pruitt ..... Public Utility District No. 1 of Chelan County  
Michael Pulskamp ..... U.S. Bureau of Reclamation  
Justin Radl..... EDF Renewable Energy  
Sunny Raheem ..... Southwest Power Pool  
Michael Rein.....Public Service Company of Colorado (Xcel Energy)  
Marco Rios ..... Pacific Gas and Electric Company  
Jay Robertson ..... Direct Energy Business Marketing, LLC  
Rob Robertson..... Leeward Renewable Energy, LLC  
Michael Roetzel..... Eligius LLC  
Philip Roice.....Pend Oreille County PUD #1



## RAC Meeting Minutes—February 27-28, 2024

Tracy Rolstad.....Public Utility District No. 2 of Grant County  
Sam Rugel..... Tucson Electric Power  
Micah Runner.....Black Hills Corporation  
Erik Schellenberg.....Idaho Power Company  
Matt Scheppers..... Platte River Power Authority  
Gretchen Schott.....Clearway Energy Operating, LLC (NRG)  
Tom Siegel .....Longroad Energy Holdings, LLC  
Robert Smith..... TransCanyon LLC  
Alejandro Solis ..... El Paso Electric Company  
Jonathan Stahlhut ..... TransCo Energy, LLC  
Rachel Stanford.....Utah Associated Municipal Power Systems  
Quincy Stormer.....Electrical Consultants, Inc.  
Jan Strack ..... San Diego Gas and Electric  
Tom Studer .....First Solar  
Holly Taylor ..... Western Interstate Energy Board  
Sonseeahray Thayer ..... Arizona Power Authority  
James Thompson .....First-LightEnergy  
Mark Thompson ..... TransCanada Energy Ltd.  
Jameson Thornton ..... Burns & McDonnell (1898 and Co.)  
Edwin Tso ..... Metropolitan Water District of Southern California  
Boris Tumarin..... Arizona Electric Power Cooperative, Inc. (Arizona G&T Cooperatives)  
Guy Van Uytven.....Guy Van Uytven  
Darrel G. VanCoevering..... EnTranTek LLC  
Pushkar Wagle.....Flynn Resource Consultants, Inc.  
Jonathan Walcott..... Delta-Montrose Electric Association  
Jeffery Watkins.....NV Energy  
Lowell Watros .....Grid Subject Matter Experts  
Philip Westby ..... Basin Electric Power Cooperative



## RAC Meeting Minutes—February 27-28, 2024

Steve Wickel ..... Public Utility District No. 1 of Chelan County  
David Wiley..... Arizona Public Service Company  
Kenneth Wilson ..... Siemens Energy, Inc.  
Scott Wilson.....Avista Corporation  
David Withrow .....California Public Utilities Commission  
Jeff Wyman..... ITC Grid Development, LLC  
Joanna Yang.....Puget Sound Energy, Inc.  
Chris Yoon ..... Seattle City Light  
Brian Young.....Central Arizona Water Conservation District  
Nick Zettel .....City of Redding  
Janice Zewe..... Sacramento Municipal Utility District  
Kevin Zhang..... British Columbia Hydro and Power Authority  
Karl Zimmerman .....First-LightEnergy  
Oren "Dayne" Zimmerman ..... Eligius LLC

### Others in Attendance

Chris Albrecht.....WECC  
Jeffrey Anderson..... Western Area Power Administration  
Amos Ang..... Southern California Edison Company  
Steve Ashbaker .....WECC  
Jamie Austin.....PacifiCorp  
Eric Baran..... WIRAB  
Ian Beil.....Portland General Electric Company  
Daja Bell .....WECC  
Kyle Bensley ..... El Paso Electric Company  
Scott Brooksby.....WECC  
Toxie Burris ..... Modesto Irrigation District  
Deanna Carlson.....Cowlitz County PUD  
Enoch Davies.....WECC



## RAC Meeting Minutes—February 27-28, 2024

Kanya Dorland.....California Public Utilities Commission  
Tucker Doug.....WECC  
Aaron Dykstra..... U.S. Bureau of Reclamation  
Donna Enriquez ..... El Paso Electric Company  
Matt Evans .....WECC  
Roberto Favela ..... El Paso Electric Company  
Martin Green .....Pattern Energy Group LP  
Kevin Harris ..... Pacific Northwest National Laboratory  
Vic Howell .....WECC  
Michael Jang ..... Seattle City Light  
Jon Jensen.....WECC  
Dmitry Kosterev .....Bonneville Power Administration—Transmission  
Sarah Lewis .....WECC  
Rafael Molano .....Bonneville Power Administration—Transmission  
Effat Moussa..... San Diego Gas and Electric  
Greg Park .....WECC  
Juan Placid ..... J.J. Power and Energy  
Ryan Quint ..... Elevate Energy  
Aaron Reid.....WECC  
Tim Reynolds .....WECC  
Katie Rogers .....WECC  
Trevor Rombough .....Black Hills Corporation  
Masoud Shafa.....California Department of Water Resources  
Alan Soe ..... San Diego Gas and Electric  
Branden Sudduth.....WECC  
Spencer Tacke.....Auriga Corporation  
Juan Vincente ..... El Paso Electric Company  
Trent Wilson.....WECC



**RAC Meeting Minutes—February 27-28, 2024**

Matt Zapotocky.....WECC

