



**Reliability Assessment Committee
Meeting Minutes
March 1–2, 2023
Salt Lake City, UT**

1. Welcome, Call to Order

Chifong Thomas, Reliability Assessment Committee (RAC) Co-Chair, called the meeting to order at 1:02 p.m. MT on March 1, 2022. 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. Thomas introduced the proposed meeting agenda.

On a motion by Peter Mackin, the RAC approved the agenda.

4. Review and Approve Previous Meeting Minutes

Marie Smith, Administrative Coordinator, introduced the minutes from the meeting on October 18–19, 2022.

An update to Item 6 was made to reflect “The committee discussed the proposal to adjust the ADS process and how they process may change year to year, as well as better placement for those resources.”

On a motion by Tracy Rolstad, the RAC approved the minutes from October 18–19, 2022.

5. Review Previous Action Items

Ms. Smith reviewed action items carried over from the RAC meeting on October 18–19, 2022. Action items that are not closed and will be carried forward can be found [here](#).

6. RAC Co-chair Nominating Committee Recommendation

Philip Augustin, Salt River Project, was recommended to become the RAC co-chair.

On a motion by Tracy Rolstad, the RAC approved the recommendation for Philip Augustin to be the new co-chair of the RAC.



7. California Mobility Center Reliability Working Group

Ryan Quint, NERC, presented an update for the California Mobility Center Reliability Working Group.

The committee discussed the timeline for the presented modeling activities and electric vehicle (EV) auto cells focused in California with the timeline of when data can start being collected.

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

8. Technical Committee Restructure

Victoria Ravenscroft, Senior Policy and External Affairs Coordinator, and Mr. Davies provided an update on the technical committee restructure. The Joint Guidance Committee (JGC) approved the technical committee structure. Along with this, a new RAC Charter was drafted and is still being revised with respect to quorum and membership.

9. Studies Subcommittee

Mr. Augustin provided an update on the Studies Subcommittee (StS). The committee discussed the 2023 study programs and who is participating.

10. Production Cost Data Subcommittee

Jamie Austin, PacifiCorp, presented an update on the Production Cost Data Subcommittee (PCDS).

On a motion by Peter Mackin, the RAC approved the PCDS Charter.

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

The PCDS Charter is posted on the [WECC website](#).

11. System Review Subcommittee

Tracy Rolstad, Public Utility District No. 2 of Grant County, presented an update on the System Review Subcommittee (SRS).

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

12. Short Circuit Modeling Work Group

Amos Ang, Southern California Edison Company, gave an update for the Short-Circuit Modeling Work Group (SCMWG).

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



13. Poll on the UFLS and GMD Assessment Approach

Chelsea Loomis provided a poll for the underfrequency load shedding (UFLS) and geomagnetic disturbance (GMD) assessment approach. There have been concerns about this topic brought to the attention of the RAC previously. Mr. Davies and Ms. Thomas provided a brief history of the UFLS and GMD data.

14. Model and Validation Subcommittee

Song Wang, Portland General Electric, presented an update on the Modeling and Validation Subcommittee (MVS). The committee discussed the potential for changing the hydro model as explained in the presentation.

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

15. Data Management Solution Project

Amanda Sargent, Senior Resource Adequacy Analyst, is looking for a vendor to increase security when collecting loads and resources data. A request for proposal was released for the data management project and the deadline was extended. A list of 70 technical requirements for the project was made available. The advisory group will be meeting to discuss suggestions.

16. The National Transmission Planning Study

Hamody Hindi, Department of Energy, presented an update on the National Transmission Planning Study.

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

17. Long-Term Transmission Planning

Saad Malik, Reliability Assessments Director, presented an update on long-term transmission planning. Comments for this are due April 7, 2023.

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

18. Future RAC Meeting Arrangements

Mr. Davies suggested the committee meet in person once a year and have the other meetings virtually. There were concerns about budgeting to travel to Salt Lake City. There was also support for having one in-person meeting per year that all members would strive to attend in person.



19. Public Comment

Richard Marrs, Quantum Planning Group, reminded the committee how long WECC has done 20-year studies. Chris McLean, California Energy Commission, supported the comment and suggested a survey-style report of the previous 20-year studies.

20. Review New Action Items

There were no new action items created during this meeting.

21. Upcoming Meetings

June 27-28, 2023Salt Lake City, UT
October 24-26, 2023 Virtual

22. Adjourn

Ms. Thomas adjourned the meeting without objection at 12:14 p.m.



Exhibit A: Attendance List

Members in Attendance

Ravi AggarwalBonneville Power Administration—Transmission
 Hamid Atighechi Powerex, Inc.
 Jamie AustinPacifiCorp
 John Gross.....Avista Corporation
 Jeff HansonColorado Springs Utilities
 David Hartman.....Arizona Electric Power Cooperative, Inc.
 Peter Jones Puget Sound Energy, Inc.
 Justin Lee.....Salt River Project
 Chelsea LoomisWestern Power Pool
 Peter Mackin..... GridBright, Inc.
 Valeriy Oleshko Jr.....Western Area Power Administration
 Tracy Rolstad.....Public Utility District No. 2 of Grant County
 Robert Smith..... TransCanyon LLC
 Muhammad Tayyab.....Western Area Power Administration
 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
 David Wiley..... Arizona Public Service Company
 Kenneth Wilson Siemens Energy, Inc.
 Kevin Zhang..... British Columbia Hydro and Power Authority

Members not in Attendance

Sharmen Andrew.....MATL Canada L.P.
 John ArmentaFarmington Electric Utility System
 Paul Arnold EnTranTek LLC
 Robin Arnold..... Renewable Northwest



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Manuel Avendano..... Southern California Edison Company
Ehsan Azordegan Kinectrics US
Eric Bahr.....NorthWestern Energy
Nathan Barcic.....California Public Utilities Commission
Chris Benson..... Cascade Renewable Transmission, LLC
Constance BergmarkImperial Irrigation District
Mitchell BetonieFarmington Electric Utility System
Scott BeyerWestern Power Pool
Aseem Bhatia.....California Department of Water Resources
Jeffrey BillintonCalifornia Independent System Operator
Savina Blackman.....Clearway Energy Operating, LLC (NRG)
Brett Bodine Turlock Irrigation District
Chad Bowman..... Public Utility District No. 1 of Chelan County
Lindsay BriggsBlack Hills Corporation
Marcus Brown..... NaturEner USA, LLC
Jeremy Brownrigg..... Platte River Power Authority
Shawn Carlson Basin Electric Power Cooperative
Thomas Carr..... Western Interstate Energy Board
Andrew ChankoGuzman Power Markets, LLC
Tim Cherry Metropolitan Water District of Southern California
Tom Christensen..... Basin Electric Power Cooperative
Tim Cook DesertLink, LLC
Dennis Desmarais.....Copia Power DevCo, LLC
Bryce DiningerCentral Arizona Water Conservation District
Gordon Dobson-Mack..... Powerex, Inc.
Rodica Donaldson EDF Renewable Energy
Thomas DuanePublic Service Company of New Mexico
Jared Ellsworth.....Idaho Power Company



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Greg Engels British Columbia Utilities Commission
Jonathon Flores Los Angeles Department of Water and Power
Thomas Flynn..... California Energy Commission
Ellie Foruzan Transmission Agency of Northern California
Shaun Foster Portland General Electric Company
Ron Grife..... Leeward Renewable Energy, LLC
Ernie Griggs..... Cascade Renewable Transmission, LLC
Brenda Grossgebauer Utah Associated Municipal Power Systems
Mike Guité British Columbia Hydro and Power Authority
Val Guzman Ridad Silicon Valley Power (City of Santa Clara)
Mark Hackney Open Access Technology International
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
Fred Heutte..... NW Energy Coalition
Bill Hosie..... PSI Power System Innovation Corp.
Ryan Hubbard..... Tri-State Generation and Transmission—Reliability
Rhett Hurless..... Absaroka Energy, LLC
Ben Hutchins Power System Consultants, Inc.
Robert Jackson..... Burns & McDonnell (1898 and Co.)
Richard Jackson..... U.S. Bureau of Reclamation
Holly Johnson..... City of Redding
Mike Johnson..... Pacific Gas and Electric Company
Harley Johnson Tacoma Power
Lorissa Jones..... Bonneville Power Administration—Transmission
Robert Jones..... Seattle City Light
Lesley Kayser-Sprouse..... Hetch Hetchy Water and Power



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Cathy Kim..... Copia Power DevCo, LLC

Eli King..... Washington Department of Commerce—State Energy Office

Ruth Kloecker..... ITC Grid Development, LLC

John Kyei..... TransCo Energy, LLC

Mike Larsen..... Public Utility District No. 1 of Cowlitz County

Josh Laurandeau.....NorthWestern Energy

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

Richard Maguire.....Public Utility District No. 2 of Grant County

Habibou Maiga..... San Diego Gas and Electric

Sarah Majok.....Sarah Aggrey Consulting Engineers LLC

Jessica Markovich..... Eugene Water and Electric Board

Tiana Marmitt..... Energy Exemplar, LLC

Jesus Martinez.....Imperial Irrigation District

John D. Martinsen..... Public Utility District No. 1 of Snohomish County

Diana McMahan.....Salt River Project

Jerry Melcher..... California Public Utilities Commission, Office of Ratepayer Advocates

Pete Mensonides..... Turlock Irrigation District

Keegan Moyer.....Energy Strategies

Julie Myerholtz.....First Solar

Ramya Nagarajan..... DesertLink, LLC

George Nail.....Public Service Company of New Mexico

Tyler Nice..... Eugene Water and Electric Board

John Nierenberg..... Tacoma Power

Mike Nitido..... Tucson Electric Power



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Andrey Olennikov..... Portland General Electric Company
Erik Olson..... Puget Sound Energy, Inc.
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 and Transmission Cooperative
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
Rob Robertson..... Leeward Renewable Energy, LLC
Philip Roice..... Pend Oreille County PUD #1
Sam Rugel..... Tucson Electric Power
Faranak Sarbaz..... Los Angeles Department of Water and Power
Roy Sashwat Renewable Northwest
Steve Schaarschmidt..... Colorado Springs Utilities
Ronald Schellberg..... Northern Tier Transmission Group
Erik Schellenberg..... Idaho Power Company
Matt Scheppers..... Platte River Power Authority
Tim Schiermeyer..... Transmission Agency of Northern California
Gretchen Schott..... Clearway Energy Operating, LLC (NRG)
Masoud Shafa..... California Department of Water Resources
Tom Siegel Longroad Energy Holdings, LLC
Gary Simonson..... Energy Strategies
Hari Singh..... Public Service Company of Colorado (Xcel Energy)
Alejandro Solis..... El Paso Electric Company



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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

Spencer Tacke Auriga Corporation

Angela Tanghetti California Energy Commission

Holly Taylor Western Interstate Energy Board

Mark Thompson TransCanada Energy Ltd.

Edwin Tso Metropolitan Water District of Southern California

Boris Tumarin Arizona Electric Power Cooperative, Inc.

Guy Van Uytven Guy Van Uytven

Darrel G. VanCoevering EnTranTek LLC

Pushkar Wagle Flynn Resource Consultants, Inc.

Jonathan Walcott Delta-Montrose Electric Association

Song Wang Portland General Electric Company

Jeffery Watkins NV Energy

Lowell Watros Grid Subject Matter Experts

Steve Wickel Public Utility District No. 1 of Chelan County

Scott Wilson Avista Corporation

Wes Wingen Black Hills Corporation

David Withrow California Public Utilities Commission

Jeff Wyman ITC Grid Development, LLC

Brian Young Central Arizona Water Conservation District

Nick Zettel City of Redding

Janice Zewe Sacramento Municipal Utility District

Others in Attendance

Ruben Arrendondo Regime LLC



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Adam Bow Arizona Public Service Company
Toxie Burriss..... Modesto Irrigation District
Earl Campbell..... Arizona Public Service Company
Stephanie Conn.....Salt River Project
Jacob Flores.....Salt River Project
James Hanson.....WECC
Gene Henneberg.....NV Energy
Jennine Hinkle..... City of Riverside
Chris HofmannSalt River Project
Vic HowellWECC
Raj Hundal..... Powerex, Inc.
Michael Jang..... Seattle City Light
Luz Ramos El Paso Electric Company
Tim ReynoldsWECC
Boone Staples Tenaska, Inc.
Juan Vicente..... El Paso Electric Company
Margaret Albright..... Bonneville Power Administration
Amos Ang..... Southern California Edison Company
Philip Augustin.....Salt River Project
Larissa Cardoza Bonneville Power Administration
Dinah CiscoSalt River Project
John Clarke Seattle City Light
Alexis Cortez.....Transmission Agency of Northern California
Enoch Davies.....WECC
Kanya Dorland.....California Public Utilities Commission
Maddy Eberhard.....WECC
Kathy Estrada.....GDS Associates Inc.
Biju Gopi Alberta Electric Systems Operator



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Angie Hall..... Pend Oreille County PUD #1
Kevin Harris Pacific Northwest National Laboratory
Mark Hesters California Energy Commission
Richard Hydzik.....Avista Corporation
Jon Jensen.....WECC
Tim Kedis..... Southern California Edison Company
Richard Marrs Quantum Planning Group
Chris McLean California Energy Commission
Raphael Molano Bonneville Power Administration
Effat Moussa Sempra Energy Trading Corporation
Tyson Niemann.....WECC
Heidi Pacini WestConnect
Katie Peterson GM
Ryan Quint North American Electric Reliability Corporation
Victoria Ravenscroft.....WECC
Trevor Rombough Black Hills Corporation
Marie SmithWECC
Alan Soe San Diego Gas and Electric
Branden Sudduth.....WECC
Mike Walker California Mobility Center
Yi Zhang.....California Independent System Operator

