

## **1. Welcome, Call to Order**

Thomas Carr, Studies Subcommittee (StS) Chair, called the meeting to order at 1:10 p.m. MT on October 16, 2023. A quorum was present to conduct business. A list of attendees is attached as Exhibit A.

## **2. Review WECC Antitrust Policy**

Katie Rogers, Senior Engineer, Reliability Assessments, read aloud the WECC Antitrust Policy statement. The meeting agenda included a link to the posted policy.

## **3. Approve Agenda**

Mr. Carr introduced the proposed meeting agenda.

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

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

Mr. Carr introduced the minutes from the meeting on August 21, 2023.

**By consensus, the StS approved the minutes from August 21, 2023.**

## **5. Review Previous Action Items**

Ms. Rogers reviewed action items carried over from the StS meeting on August 21, 2023. Action items that are not closed and will be carried forward can be found [here](#).

## **6. The JGC Metrics Survey**

The Joint Guidance Committee is seeking feedback on stakeholder participation via survey. StS members are encouraged to complete the survey, [here](#).

## **7. UFLSWG Update**

Robby Anderst, Under Frequency Load Shedding Work Group Chair, provided the first update on behalf of Angel Aquino, PowerWorld. Mr. Aquino researched the 25% contingency amounts for heavy summer and light spring. There were small islands forming in the simulation causing

the simulations to stop. Mr. Aquino created a small tool in Transient Stability that is designed to “kill” these islands and stop them from forming.

## 8. 2023 Study Program Update

John Jensen, Engineer, Reliability Modeling, presented on the Year 20 Extreme Cold/LDES study assessment. This assessment is in alignment with the 10-year Extreme Cold/LDES assessment. This report is currently under review and will tentatively be publishing by mid-January, 2024.

Katie Rogers, Senior Engineer, Reliability Assessments, presented on the Year 20 Compound Load Impacts study assessment. This assessment is currently under review through the advisory group. To build the study, Ms. Rogers viewed the reasonable assumptions for electrification, including buildings and vehicles.

Tyson Niemann, Staff Engineer, Reliability Modeling, presented on the study assessment for Grid Strength. Recently, the advisory group discussed making changes to the assessment since the last update. This group is taking Tri-State, PacifiCorp, and Bonneville Power Administration to review the additional updates. The group is determining any changes needed for the synchronous generators to inverter-based resources.

Amanda Sargent, Senior Resource Adequacy Analyst presented on the Year 20 Extreme Heat/LDES study assessment. This study focuses on the Year 2042 heat wave compared to the August 2021 heat wave of the same magnitude. The stakeholder advisory group will meet to review and discuss the data on the heat waves. Ms. Sargent commented that the end of the summer wildfires and smoke contributed to solar issues.

Ken Wilson, Trans Grid Consulting, commented on placing new generation especially wind and solar in the next iteration of the foundational case he also noted that it should have long-term storage modeling.

Peter Mackin, GridBright, Inc. reminded the group that an objective of this work is to see the impacts on unserved energy based on resources and weather events.

## 9. Ideas For Future Study Assessments

Karen Reedy, Public Service Company of New Mexico, participated in the advisory group on the extreme cold study assessment and noted that there should be a cost-effective model.



## StS Meeting Minutes—October 16, 2023

Mr. Mackin commented the Path 66 rating may increase and this will mitigate the effects of extreme heat.

Ms. Rogers will research storage modeling and discuss with the StS at a future meeting. Ms. Rogers reminded the group that WECC has Plexos and she has spent the last year testing storage modeling functionality. Mr. Rogers will share Plexos updates at the upcoming Reliability Assessment Committee meeting.

Rafeal Molano, Bonneville Power Administration, noted that with current events in Texas and the Northwest transmission distribution should remain on the list of topics for future discussions.

### 10. Public Comment

No comments were made.

### 11. Review New Action Items

- Discuss future GMD studies at the next meeting.
  - Assigned To: StS.
  - Due Date: next StS Meeting.
- Maintain a list of ideas discussed during this meeting.
  - Assigned To: Katie Rogers.
  - Due Date: next StS Meeting.

### 12. Upcoming Meetings

TBD..... Virtual

### 13. Adjourn

Mr. Carr adjourned the meeting without objection at 2:56 p.m.



## Exhibit A: Attendance List

### Members in Attendance

Nayeem Mohammad Abdullah..... Metropolitan Water District of Southern California  
Robby Anderst ..... Puget Sound Energy, Inc.  
Brenna Andrews ..... NorthWestern Energy  
Vinson Banh ..... Alberta Department of Energy  
Thomas Carr ..... Western Interstate Energy Board  
Patrick Corrigan..... Public Service Company of Colorado (Xcel Energy)  
Tuan Dang ..... Public Utility District No. 1 of Snohomish County  
Chris Gilden ..... Tri-State Generation and Transmission—Reliability  
Talal Hanna ..... San Diego Gas and Electric  
Jeff Hanson ..... Colorado Springs Utilities  
Daniel Johnson Jr. .... Black Hills Corporation  
Lesley Kayser-Sprouse..... Hetch Hetchy Water and Power  
Todd Lichtas..... Tucson Electric Power  
Peter Mackin..... GridBright, Inc.  
Jake Maxfield..... PacifiCorp  
Mitchell Miller..... NorthWestern Energy  
Eepsita Priye..... Puget Sound Energy, Inc.  
Karen Reedy ..... Public Service Company of New Mexico  
Katie Rogers ..... WECC  
Erik Schellenberg ..... Idaho Power Company  
Chifong Thomas ..... Thomas Grid Advisor  
David Tovar..... El Paso Electric Company  
Cole Youngers ..... Avista Corporation  
Hayk Zargaryan..... Southern California Edison Company  
Janice Zewe..... Sacramento Municipal Utility District



## StS Meeting Minutes—October 16, 2023

### Members not in Attendance

Waseem Arif.....FortisBC, Inc.

Ian Beil.....Portland General Electric Company

Scott Beyer .....Western Power Pool

Aseem Bhatia.....California Department of Water Resources

Ron Calvert.....Utility System Efficiencies, Inc.

Shawn Carlson .....Basin Electric Power Cooperative

David Cathcart.....Bonneville Power Administration—Transmission

Desmond Chan .....Seattle City Light

Ken Che.....Public Utility District No. 1 of Snohomish County

Thomas Duane .....Public Service Company of New Mexico

Jonathon Flores .....Los Angeles Department of Water and Power

Thomas Flynn.....California Energy Commission

Alex Fratkin.....NV Energy

Fred Heutte.....NW Energy Coalition

Bryant Hicks.....Salt River Project

Bill Hosie.....PSI Power System Innovation Corp.

Robert Jackson.....Burns & McDonnell (1898 and Co.)

Michael Korhonen .....Western Area Power Administration

Christopher Kulink.....Portland General Electric Company

May Le.....Public Utility District No. 2 of Grant County

David Le.....California Independent System Operator

Chelsea Loomis .....Western Power Pool

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

Daniel McGuire.....Salt River Project

Christopher McLean.....California Energy Commission

Pete Mensonides .....Turlock Irrigation District

Patrick MontPlaisir.....Western Area Power Administration



## StS Meeting Minutes—October 16, 2023

Valeriy Jr. Oleshko..... Western Area Power Administration  
Ebrahim Rahimi..... California Independent System Operator  
Dipendra Rai ..... British Columbia Hydro and Power Authority  
Daniel Ramirez..... Energy Strategies  
Benjamin Rodriguez..... El Paso Electric Company  
Faranak Sarbaz..... Los Angeles Department of Water and Power  
Amanda Sargent ..... WECC  
Masoud Shafa..... California Department of Water Resources  
Hari Singh..... Public Service Company of Colorado (Xcel Energy)  
Alejandro Solis..... El Paso Electric Company  
Jan Strack ..... San Diego Gas and Electric  
Spencer Tacke..... Auriga Corporation  
Angela Tanghetti ..... California Energy Commission  
Khanh Thai ..... Tacoma Power  
Jameson Thornton ..... Burns & McDonnell (1898 and Co.)  
Patrick Truong ..... Sacramento Municipal Utility District  
Dhayanesh Velusamy ..... Burns & McDonnell (1898 and Co.)  
Jeremy Webber..... FortisBC, Inc.  
Curtis Westhoff..... Idaho Power Company  
Di Xiao..... Southern California Edison Company  
Xiaofei (Sophie) Xu..... Pacific Gas and Electric Company  
Dennis Yegorov..... PacifiCorp  
Kevin Zhang..... British Columbia Hydro and Power Authority  
Wenjuan (Wendy) Zhang ..... Pacific Gas and Electric Company

### **Others in Attendance**

Samer Abou El Joud..... ZGlobal  
Lakmal Chandrasekara..... Turlock Irrigation District  
Jyostsna Chatrati..... NV Enbery



## StS Meeting Minutes—October 16, 2023

chris corral ..... El Paso Electric Company  
Enoch Davies ..... WECC  
Dennis Doyle ..... WECC  
Matt Evans ..... WECC  
Matt Evans ..... WECC  
David Frederick ..... zglobal  
Tom Green ..... Public Service Company of Colorado (Xcel Energy)  
Jorge Guterrez ..... Imperial Irrigation District  
Vic Howell ..... WECC  
Jon Jensen ..... WECC  
Pranav Kishore ..... Burns & McDonnell (1898 and Co.)  
Nima Miri ..... seattle . Gov  
Rafael Molano ..... Bonneville Power Administration—Transmission  
Tyson Niemann ..... WECC  
Asil Rafiq ..... Zglobal  
Amanda Sargent ..... WECC  
Tim Schiermeyer ..... Transmission Agency of Northern California  
Marie Smith ..... WECC  
Ken Wilson ..... Trans Grid Consulting  
Matt Zapotocky ..... WECC

