

**1. Welcome, Call to Order**

Philip Augustin, Studies Subcommittee (StS) Chair, called the meeting to order at 10:00 a.m. on January 19, 2022 MT. A quorum was present to conduct business. A list of attendees is attached as Exhibit A.

**2. Review WECC Antitrust Policy**

Mr. Jensen, read aloud the WECC Antitrust Policy statement. The meeting agenda included a link to the posted policy.

**3. Approve Agenda**

Mr. Augustin introduced the proposed meeting agenda.

Modifications were made.

**On a motion by Peter Mackin, the StS approved the agenda.**

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

Mr. Augustin introduced the minutes from the meeting on December 1, 2022.

**On a motion by Peter Mackin, the StS approved the minutes from December 1, 2022.**

**5. Review Previous Action Items**

Mr. Augustin reviewed action items carried over from the StS meeting on December 1, 2022.

Action items that are not closed and will be carried forward can be found [here](#).

**6. Study Program Next Steps**

Kirha Quick, Project Coordinator, spoke about the next two studies that includes the Variability Loads and Resources, and the Extreme Events. February 9, 2022 there will be a two week open window to for comments. March 2, 2022 there will be a request for final approval. To help make it clearer the DER report cleanup was intensive. The final report will be requested for approval today.

## 7. Report Review

Mr. Jensen presented the changes made to the DER report that was originally approved on 12-1-2021. The content was not changed just some of the wording, and a few graphs that weren't needed.

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

## 8. Approval Items

*Approval Item:* Impact of Distributed Energy Resources Assessment.

**On a motion by Peter Mackin, the StS approved the Impact of Distributed Energy Resources Assessment.**

## 9. UFLSWG Update

Hari Singh presented an update on Under Frequency Load Shedding Work (UFLSWG). He held an open discussion on how to get feedback, and participation due to difficulties with the software to complete the under-frequency load simulations. The simulation ran great at 10% but ran into issues when running the 20% imbalance. The simulation results don't look very good. The models might be pushed beyond their limit. A solution is being investigated. If under 25% of under frequency load shedding can't be done, then changes need to be made. The UFLSWG is having low indication of interest, and currently needs a vice chair. The StS discussed sending an announcement letter asking for a chair, and the vice-chair at the RAC level. Mr. Jensen will draft the letter.

## 10. Public Comment

No comments were offered.

## 11. Review New Action Items

- Jon Jensen draft letter to request and chair and vice chair for USLSWG. Send to the RAC distribution list.
  - Assigned To: Jon Jensen, and Phillip Augustin
  - Due Date: February 9, 2022

## 12. Upcoming Meetings

February 9, 2022..... Virtual  
 March 2, 2022 ..... Virtual\*  
 March 23, 2022 ..... Virtual\*



*\*Meeting may be virtual due to the COVID-19 pandemic.*

**13. Adjourn**

Mr. Augustin adjourned the meeting without objection at 11:00 a.m.



## Exhibit A: Attendance List

### Members in Attendance

Philip Augustin.....Salt River Project  
Scott Beyer..... Northwest Power Pool Corporation  
Thomas Carr.....Western Interstate Energy Board  
Ken Che.....Public Utility District No. 1 of Snohomish County  
Alex Fratkin..... NV Energy  
Jeff Hanson.....Colorado Springs Utilities  
Jon Jensen..... WECC  
John Liang.....Public Utility District No. 1 of Snohomish County  
Todd Lichtas.....Tucson Electric Power  
Peter Mackin.....GridBright, Inc.  
Bradley Postovoit..... Southern California Edison Company  
Dipendra Rai..... British Columbia Hydro and Power Authority  
Karen Reedy..... Public Service Company of New Mexico  
Erik Schellenberg.....Idaho Power Company  
Spencer Tacke..... Auriga Corporation  
Chifong Thomas..... Thomas Grid Advisor  
Di Xiao..... Southern California Edison Company

### Members not in Attendance

Nayeem Mohammad Abdullah..... Metropolitan Water District of Southern California  
Waseem Arif.....FortisBC, Inc.  
Eric Bahr.....NorthWestern Energy  
Aseem Bhatia.....California Department of Water Resources  
Ben Brownlee..... Energy Strategies  
Robert Burner..... Duke Energy  
Ron Calvert..... Utility System Efficiencies, Inc.  
Shawn Carlson.....Basin Electric Power Cooperative



David Cathcart ..... Bonneville Power Administration—Transmission  
Desmond Chan..... Seattle City Light  
Tom Christensen..... Basin Electric Power Cooperative  
Patrick Corrigan ..... Public Service Company of Colorado (Xcel Energy)  
Tuan Dang..... Puget Sound Energy, Inc.  
Thomas Duane ..... Public Service Company of New Mexico  
Jonathon Flores..... Los Angeles Department of Water and Power  
Thomas Flynn..... California Energy Commission  
Jennifer Galaway ..... Portland General Electric Company  
William Gibson..... Hetch Hetchy Water and Power  
Chris Gilden..... Tri-State Generation and Transmission—Reliability  
Laurie Hammack..... Seattle City Light  
Scott Harding ..... Black Hills Corporation  
Kody Heppner..... Turlock Irrigation District  
Fred Heutte ..... NW Energy Coalition  
Bill Hosie..... PSI Power System Innovation Corp.  
Robert Jackson..... Burns & McDonnell  
Lesley Kayser-Sprouse..... Hetch Hetchy Water and Power  
Christopher Kulink..... Portland General Electric Company  
David Le..... California Independent System Operator  
May Le..... Public Utility District No. 2 of Grant County  
Chelsea Loomis..... Northwest Power Pool Corporation  
Richard Maguire..... Public Utility District No. 2 of Grant County  
Daniel McGuire ..... Salt River Project  
Pete Mensonides..... Turlock Irrigation District  
Patrick MontPlaisir ..... Western Area Power Administration  
Valeriy Jr. Oleshko..... Western Area Power Administration  
Mark Pigman..... Tacoma Power



Epsita Priye.....Puget Sound Energy, Inc.  
Ebrahim Rahimi..... California Independent System Operator  
Daniel Ramirez..... Energy Strategies  
Faranak Sarbaz..... Los Angeles Department of Water and Power  
Masoud Shafa.....California Department of Water Resources  
Rikin Shah.....PacifiCorp  
Amy Sopinka..... British Columbia Ministry of Energy and Mines  
April Spacek..... Avista Corporation  
Jan Strack ..... San Diego Gas and Electric  
Eric Tang.....Salt River Project  
Angela Tanghetti..... California Energy Commission  
Khanh Thai..... Tacoma Power  
David Tovar ..... El Paso Electric Company  
Patrick Truong..... Sacramento Municipal Utility District  
Louis Vigil..... El Paso Electric Company  
Yu (David) Wang..... San Diego Gas and Electric  
Curtis Westhoff .....Idaho Power Company  
Xiaofei (Sophie) Xu..... Pacific Gas and Electric Company  
Dennis Yegorov.....PacifiCorp  
Janice Zewe ..... Sacramento Municipal Utility District  
Wenjuan (Wendy) Zhang..... Pacific Gas and Electric Company

**Others in Attendance**

Chris Corral..... El Paso Electric Company  
Alex Cortez..... Transmission Agency of Northern California  
Mar Dahl..... REU Power  
Enoch Davies..... WECC  
Jorge Gutierrez ..... Imperial Irrigation District  
Gerald Harris.....Quantum Planning Group



Nick Hatton..... WECC  
Stan Holland..... WECC  
Scott Jordan..... Southwest Power Pool  
Richard Marrs..... Quantum Planning Group  
Rafael Molano..... Bonneville Power Administration  
Kirha Quick..... WECC  
Tyson Niemann..... WECC  
Amir Sajadi..... WECC  
Jilya Shoaib..... Brtiish Columbia  
Hari Singh..... Xcel Energy  
David Wang..... San Diego Gas and Electric  
Byrom Woertz..... WECC

