## Welcome, Call to Order

Philip Augustin, Studies Subcommittee (StS) Chair, called the meeting to order at 1:00 p.m. on September 15, 2022, MT. A quorum was present to conduct business. A list of attendees is attached as Exhibit A.

## Review WECC Antitrust Policy

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

## Approve Agenda

Mr. Augustin introduced the proposed meeting agenda.

**On a motion by Karen Reedy, the StS approved the agenda.**

## Review and Approve Previous Meeting Minutes

Mr. Augustin introduced the minutes from the meeting on July 12, 2022.

**On a motion by Peter Mackin, the StS approved the minutes from July 12, 2022.**

## Review Previous Action Items

Mr. Augustin reviewed action items carried over from the StS meeting on July 12, 2022. Action items that are not closed and will be carried forward can be found [here](https://www.wecc.org/Administrative/StS%20Action%20Items.xlsx).

## Study Program Process

Saad Malik, Reliability and Planning Director, presented the study program process and schedule. Study ideas are gathered and then presented to the StS. After the StS reviews them, an advisory group will be formed. The reports will be published online for review. The StS discussed adding a timeline to the study assessment.

The presentation is posted to the [WECC website](https://www.wecc.org/Reliability/Visio-2022_StudyProgramProcess_2.pdf).

## GMD Vulnerability Assessment Update

Doug Tucker, Senior System Stability Engineer, gave an update on the Geomagnetic Disturbance (GMD) vulnerability assessment. The heavy summer case is complete. Data is being added to the 2023 light winter case. There is a list of 500 transformers that are missing location data. The estimation tool is being used to correct the missing location data, then the data will be posted online.

## EDTF update

Fred Heutte, Environmental Data Task Force (EDTF), gave an update on the task force. There were three presentations given during the EDTF’s July meeting. The Bureau of Land Management (BLM) presented on Section 368—Siting review and BLM is setting up renewable energy coordination offices. Teton Raptor Center presented the integrated modeling and habitat prioritization map tool for golden eagles. PacifiCorp presented on environmental risks.

## SWG Update

Amy Mignella, Scenarios Work Group (SWG) Chair, and Rafael Molano, SWG Vice Chair, gave an update on the work group. The SWG is reviewing study topics that align with WECC’s list of priorities. The SWG will be presenting the study results using the 20-year forecast during the Long-term Planning Discussion on October 6, 2022.

## UFLSWG Update—Collection of study ideas

Robby Anderst, Underfrequency Load Shedding Work Group (UFLSWG) Chair, presented the work group’s study ideas for developing the assessments for the 2022-2023 Study Program. WECC will no longer be doing assessments after the current one is complete. Volunteers from organizations will be needed for future assessments. UFLSWG is creating a team site to access the current assessment results.

The presentation is posted to the [WECC website](https://www.wecc.org/Administrative/UFLSWG%20Update.pdf).

Mr. Jensen presented a list of future study program ideas. The topics are from the previous 2020-2021 study program and the four reliability risk priorities. They will be reviewed, and further work will be done with the list during an upcoming SRS study workshop on October 12, 2022. The STS discussed coordinating with other groups to ensure that studies are not duplicated and that everything is covered.

The presentation is posted to the [WECC website](https://www.wecc.org/Administrative/2022-2023%20Future%20Study%20Program%20Ideas.xlsx).

## Public Comment

No comments were offered.

## Review New Action Items

* Post the collection of the study ideas to the StS September 15, 2022, WECC calendar.
  + Assigned To: Jon Jensen
  + November 14, 2022

## Upcoming Meetings

November 14, 2022 Virtual

## Adjourn

Mr. Augustin adjourned the meeting without objection at 3:44 p.m.

## **Exhibit A: Attendance List**

### Members in Attendance

Robby Anderst Puget Sound Energy, Inc.

Brenna Andrews NorthWestern Energy

Philip Augustin Salt River Project

Scott Beyer Western Power Pool (formerly Northwest Power Pool Corporation)

David Cathcart Bonneville Power Administration—Transmission

Ken Che Public Utility District No. 1 of Snohomish County

Jeff Hanson Colorado Springs Utilities

Fred Heutte NW Energy Coalition

Jon Jensen WECC

David Le California Independent System Operator

Todd Lichtas Tucson Electric Power

Peter Mackin GridBright, Inc.

Jake Maxfield PacifiCorp

Eepsita Priye Puget Sound Energy, Inc.

Karen Reedy Public Service Company of New Mexico

Chifong Thomas Thomas Grid Advisor

### Members not in Attendance

Nayeem Mohammad Abdullah Metropolitan Water District of Southern California

Waseem Arif FortisBC, Inc.

Aseem Bhatia California Department of Water Resources

Ron Calvert Utility System Efficiencies, Inc.

Shawn Carlson Basin Electric Power Cooperative

Thomas Carr Western Interstate Energy Board

Desmond Chan Seattle City Light

Tom Christensen Basin Electric Power Cooperative

Patrick Corrigan Public Service Company of Colorado (Xcel Energy)

Tuan Dang 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

Jennifer Galaway Portland General Electric Company

Chris Gilden Tri-State Generation and Transmission—Reliability

Laurie Hammack Seattle City Light

Scott Harding Black Hills Corporation

Kody Heppner Turlock Irrigation District

Bryant Hicks Salt River Project

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

May Le Public Utility District No. 2 of Grant County

Chelsea Loomis Western Power Pool (formerly Northwest Power Pool Corporation)

Richard Maguire Public Utility District No. 2 of Grant County

Daniel McGuire Salt River Project

Pete Mensonides Turlock Irrigation District

Mitchell Miller NorthWestern Energy

Patrick MontPlaisir Western Area Power Administration

Valeriy Jr. Oleshko Western Area Power Administration

Mark Pigman Tacoma Power

Bradley Postovoit Southern California Edison Company

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

Erik Schellenberg Idaho Power Company

Masoud Shafa California Department of Water Resources

Rikin Shah PacifiCorp

Alejandro Solis El Paso Electric Company

Amy Sopinka British Columbia Ministry of Energy and Mines

April Spacek Avista Corporation

Jan Strack San Diego Gas and Electric

Spencer Tacke Auriga Corporation

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

Di Xiao Southern California Edison Company

Xiaofei (Sophie) Xu Pacific Gas and Electric Company

Dennis Yegorov PacifiCorp

Janice Zewe Sacramento Municipal Utility District

Kevin Zhang British Columbia Hydro and Power Authority

Wenjuan (Wendy) Zhang Pacific Gas and Electric Company

**Others in Attendance**

Brenna Andrews NorthWestern Energy

Hasson Baklou San Diego Gas and Electric

Chris Corral El Paso Electric Company

Arkadeep Das WECC

Enoch Davies WECC

Donna Enriquez El Paso Electric Company

David Frederick Zglobal

Mark Hesters California Energy Commission

Nicole Lee WECC

Kevin Lindquist Tri-State Generation and Transmission—Reliability

Saad Malkik WECC

Christopher Mclean California Energy Commission

Rafael Molano Bonneville Power Administration—Transmission

Tyson Niemann WECC

Patrick Perry Idaho Power Company

Kirha Quick WECC

Doug Tucker WECC

Byron Woertz WECC

Richard Marrs Quantum Planning Group