

1. Welcome, Call to Order

Hari Singh, Under Frequency Load Shedding Work Group (UFLSWG) Chair, called the meeting to order at 11:02 a.m. on October 27, 2021 MT. A quorum was present to conduct business. A list of attendees is attached as Exhibit A.

2. Review WECC Antitrust Policy

Kent Bolton, Senior System Stability Planning Engineer, read aloud the WECC Antitrust Policy statement. The meeting agenda included a link to the posted policy.

3. Approve Agenda

Mr. Singh introduced the proposed meeting agenda.

By consensus, the UFLSWG approved the agenda.

4. Review and Approve Previous Meeting Minutes

Mr. Singh introduced the minutes from the meeting on October 29, 2020.

By consensus, the UFLSWG approved the minutes from October 29, 2020.

5. Review Previous Action Items

Nicole Lee, Administrative Services, reviewed action items carried over from the UFLSWG meeting on October 29, 2020. Action items that are not closed and will be carried forward can be found [here](#).

6. WECC Coordinated Plan Document

Mr. Singh presented the WECC coordinated plan document. The document needs to be reviewed and updated. Mr. Bolton will determine which entities are subscribing to the northwest power pool subarea plan and the WECC plan. A subgroup will be created to review and edit the document. Contact Mr. Singh or Mr. Bolton if you would like to be part of the subgroup. The charter will also need to be updated to reflect the Operation Committee (OC) is merging with Market Interface Committee (MIC) and UFLSWG will be listed under the Reliability Risk Committee (RRC).

7. UFLSWG Assessment Methodology Document

Mr. Bolton presented the UFLSWG assessment methodology document. He will email the document to the UFLSWG. The work group will review it and submit edits, comments, and suggestions to Mr. Bolton. Scott Beyer, Northwest Power Pool (NWPP), offered to assist Mr. Bolton with finalizing the document.

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

8. Preliminary Results for 10% Imbalance

Mr. Bolton presented the preliminary results for the 10% imbalance. More generators were tripped in the northwest than other areas in the system. There were errors encountered while running the 20% imbalance. The simulation will not go past 15 seconds. GE researched the issue and said the PSLF program frequency is calculated from the bus voltage angle.

Tyson Niemann, System Stability Engineer, said several different attempts were made but it would not go above six to seven seconds. After lowering the threshold imbalance, it improved to sixteen seconds. The 20% imbalance takes up to two days to run. When using the older version, it increased the speed, but stayed at six to seven seconds. GE offered to meet and help research this issue. Irina Green, California Independent System Operator (CAISO), suggested removing old models to increase the speed. Ms. Green offered to try running it. Mr. Niemann will send her the information.

9. PRC-006 Attachment A Reporting Form.

Mr. Niemann will email the document to the UFLSWG. The work group will review it and submit edits, comments, and suggestions to Mr. Niemann. It will be reviewed during the next meeting.

10. Vice Chair Opportunity

The vice chair opportunity will be discussed during the next meeting.

11. Public Comment

No comments were offered.

12. Review New Action Items

- Create a subgroup to review and edit the WECC Coordinated Plan Document. Email Kent Bolton or Hari Singh if you would like to participate.
 - Assigned To: Kent Bolton and Hari Singh
 - Due Date: Next Meeting



- Determine which entities are subscribing to the northwest power pool subarea plan and the WECC plan. Email information back to UFLSWG.
 - Assigned To: Kent Bolton and Tyson Niemann
 - Due Date: December 31, 2021
- Email the UFLSWG the assessment methodology document. The work group will review and submit comments.
 - Assigned To: Kent Bolton and Scott Beyer
 - Due Date: December 31, 2021
- Email the preliminary results for 10% imbalance to UFLSWG
 - Assigned To: Kent Bolton
 - Due Date: October 28, 2021

13. Upcoming Meetings

TBD.....Virtual

14. Adjourn

Mr. Singh adjourned the meeting without objection at 12:44 p.m.



Exhibit A: Attendance List

Members in Attendance

Desmond Chan Seattle City Light
 Tuan Dang Puget Sound Energy, Inc.
 Alex Ford NV Energy
 Robert Gerdes..... Arizona Public Service Company
 Irina Green..... California Independent System Operator
 Eric Hy Los Angeles Department of Water and Power
 Jay Largo Bonneville Power Administration
 Todd Lichtas..... Tucson Electric Power
 Nik Mikelsons Portland General Electric Company
 Hari Singh..... Public Service Company of Colorado (Xcel Energy)
 Prabal Singh..... Sacramento Municipal Utility District
 Nathan Wilson PacifiCorp

Members not in Attendance

Kevin Brooks Southern California Edison Company
 Dennis Chesnakov Public Utility District No. 2 of Grant County
 Fangfang Du PacifiCorp
 David Franklin Southern California Edison Company
 Jennifer Galaway Portland General Electric Company
 Mark Hanson..... Idaho Power Company
 Ying He Southern California Edison Company
 Richard Hydzik..... Avista Corporation
 Daniel Johnson..... California Independent System Operator
 Gary Keenan..... Northwest Power Pool Corporation
 Grace Martinez..... Southern California Edison Company
 Daniel McGuire..... Salt River Project
 Atique Rahman Los Angeles Department of Water and Power



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Faranak Sarbaz..... Los Angeles Department of Water and Power
Milton Savier Pacific Gas and Electric Company
Dede Subakti California Independent System Operator
Gary Trent..... Tucson Electric Power
GuiHua Wang British Columbia Hydro and Power Authority
Janice Zewe..... Sacramento Municipal Utility District
Songzhe Zhu..... GridBright, Inc.

Others in Attendance

Robby Anderst Puget Sound Energy, Inc.
Steve Ashbaker WECC
Scott Beyer Northwest Power Pool Corporation
Kent Bolton WECC
Daniel Cervantes..... Los Angeles Department of Water and Power
Ellen Cook..... Southwest Power Pool
Christopher Feck Stoud Arizona Public Service Company
Mensur Haskovic..... Western Area Power Administration
Scott Jordan Southwest Power Pool
Nicole Lee WECC
Ralph Liu AESO
Tyson Niemann..... WECC
Matthew Truscott Public Utility District No. 2 of Grant County

