

1. Welcome, Call to Order

Kevin Harris, Production Cost Data Subcommittee (PCDS) Chair, called the meeting to order at 10:07 a.m. MT on January 3, 2023. A quorum was present to conduct business. A list of attendees is attached as Exhibit A.

2. Review WECC Antitrust Policy

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

3. Approve Agenda

Mr. Harris introduced the proposed meeting agenda.

On a motion by Chifong Thomas, the PCDS approved the agenda.

4. Review and Approve Previous Meeting Minutes

The minutes from the meetings on November 29, 2023, and December 6, 2023, will be reviewed during the next meeting.

5. Review Previous Action Items

Nicole Lee, Administrative Coordinator, reviewed action items carried over from the PCDS meeting on December 13, 2023. Action items that are not closed and will be carried forward can be found [here](#).

6. Wind and Solar Capacity Factor Review

Arkadeep Das, Reliability Modeling Engineer, Associate II, presented the wind and solar capacity factor review. Further research is needed to determine the capacity factor differences. WECC will follow up with Tyler Butikofer, Energy Strategies, to discuss the differences seen with the wind and solar capacities and to clarify the mapping.

7. Prices and Costs

Mr. Jensen presented prices and costs. The PCDS discussed reviewing the different prices. Mr. Jensen will add a link to the last cycle used for IEPR fuel price presentation and will provide it to the PCDS.

Jin Zhu, Hitachi Energy, provided an update on the wheeling rate options. The PCDS discussed seeing different wheeling rates. Mr. Jensen will identify units that are exempt from wheeling.

8. BTM Storage Data—Hourly Shape or Resource

Mr. Jensen presented behind-the-meter (BTM) storage data and led the discussion on using hourly shapes or resources. Mr. Jensen, Mr. Harris, and Mr. Zhu will review all energy storage options and will provide it to the PCDS. This will include generator types “pumped storage” versus “battery and pumped storage” options.

9. Update on Resources

Mr. Das will provide an update on resources during the next PCDS meeting.

10. 2034 ADS Schedule Recap

Mr. Jensen presented the 2034 Anchor Data Set (ADS) schedule. The gas prices will need to be implemented, along with verification of hourly wind, solar shapes, and BTM energy storage before the next cycle is run.

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

11. Public Comment

No comments were made.

12. Review New Action Items

- Research the differences seen with the wind and solar capacities (contact Tyler Butikofer) and clarify the mapping
 - Assigned To: Jon Jensen and Arkadeep Das
 - Due Date: January 17, 2024
- Add a link to the last cycle used for IEPR to the fuel price presentation and provide it to the PCDS
 - Assigned To: Jon Jensen
 - Due Date: January 17, 2024
- Identify units that are exempt from wheeling
 - Assigned To: Jon Jensen



PCDS Meeting Minutes—January 3, 2024

- Due Date: January 17, 2024
- Review all energy storage options, and provide it to the PCDS. Including generator types “pumped storage” vs. “battery.” Also, pumped storage options (ex. 3-daily peak shaving, 4-daily schedule on price).
 - Assigned To: Jon Jensen, Kevin Harris and Jin Zhu
 - Due Date: January 17, 2024

13. Upcoming Meetings

January 17, 2024 Virtual
January 31, 2024 Virtual
February 14, 2024..... Virtual

14. Adjourn

Mr. Harris adjourned the meeting without objection at 11:34 a.m.



Exhibit A: Attendance List

Members in Attendance

Jamie Austin.....PacifiCorp
Jose Diaz..... Los Angeles Department of Water and Power
Jennifer Galaway Portland General Electric Company
Sylvia Gard Puget Sound Energy, Inc.
Kevin Harris Pacific Northwest National Laboratory
Eliana Ibarra Imperial Irrigation District
Jon Jensen.....WECC
Anders Johnson.....Bonneville Power Administration—Transmission
Chelsea Loomis Western Power Pool
Kimberly McClaffertyNorthWestern Energy
Effat Moussa..... San Diego Gas and Electric
Chifong Thomas Thomas Grid Advisor
Yi Zhang.....California Independent System Operator

Members not in Attendance

Lee Alter..... Tucson Electric Power
Tyler Butikofer Energy Strategies
Renchang Dai Puget Sound Energy, Inc.
Manuel Gomez..... El Paso Electric Company
Chris Hagman..... American Transmission Company
Fred Heutte..... NW Energy Coalition
Bill Hosie..... PSI Power System Innovation Corp.
Akhil Mandadi..... Arizona Public Service Company
John D. Martinsen..... Public Utility District No. 1 of Snohomish County
Christopher McLean..... California Energy Commission
Nader Samaan..... Pacific Northwest National Laboratory
Dan Schaefer.....Salt River Project



PCDS Meeting Minutes—January 3, 2024

Jonathan Stahlhut TransCo Energy, LLC
Emily Tozier Salt River Project
Stan Williams Bonneville Power Administration—Transmission
Di Xiao Southern California Edison Company

Others in Attendance

Hazel Aragon Sacramento Municipal District
Keith Ban San Diego Gas and Electric
Jose Castaneda Imperial Irrigation District
Arkadeep Das WECC
Richard Jensen California Energy Commission
Joey Jones WECC
Nicole Lee WECC
David Meyer Puget Sound Energy, Inc.
Eliana Orta Puget Sound Energy, Inc.
Melissa Villa Imperial Irrigation District
Jin Zhu Hitachi

