

1. Welcome, Call to Order

Kevin Harris, Production Cost Data Subcommittee (PCDS) Vice Chair, called the meeting to order at 10:02 a.m. MT on September 7, 2022. A quorum was present to conduct business. A list of attendees is attached as Exhibit A.

2. Review WECC Antitrust Policy

Tyler Butikofer, System Adequacy 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 Chelsea Loomis, the PCDS approved the agenda.

4. Review and Approve Previous Meeting Minutes

Mr. Harris introduced the minutes from the meeting on July 20, 2022, July 27, 2022, August 3, 2022, and August 17, 2022.

Chifong Thomas, Thomas Grid Advisor, noticed an error on the July 27, 2022, minutes. A small change was noted on item 5.

On a motion by Steven Wallace, the PCDS approved the minutes from July 20, 2022, July 27, 2022, August 3, 2022, and August 17, 2022.

5. Review Previous Action Items

Mr. Butikofer reviewed action items carried over from the PCDS meeting on August 24, 2022. Action items that are not closed and will be carried forward can be found [here](#).

6. Inventory of PCDS Approval Items

Mr. Butikofer gave an update for the PCDS Approval Items. They are posted under the “Action Items” on the PCDS site on wecc.org.

7. Status of Northwest Hydro

Anders Johnson, Bonneville Power Administration (BPA), provided an update on the status of Northwest hydro data. Jon Jensen, System Stability Engineer, presented a spreadsheet for recommendations for power plant capacities. The committee discussed the information presented and discussed updating it within the production cost model (PCM).

On a motion by Steven Wallace, the PCDS approved the turbine generation capacity changes that are listed and proposed in the presentation and will incorporate them in the current Anchor Data Set in the change well.

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

8. Research a Solution for Modeling Oregon and Washington CO₂ in the Model

Mr. Johnson and Alisa Kaseweter, BPA, presented the carbon landscape information. The goal is to build a public data set for the transmission system for at least a decade. The committee discussed Washington's Clean Energy Transformation Act (CETA) that includes carbon reduction, Washington's goals through CETA, and how fossil fuel use mitigation is managed. Oregon's clean electricity standard does not have any fees, prices, or penalties. The committee also discussed that BPA cannot sell from a specific generation unit to a specific utility, all the sales are from BPA's system. BPA has significant generation located in Washington but that isn't dedicated to Washington load.

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

9. Managing Pmax Differences PCM vs. PF, Share List Identified Through Export-Hour

Mr. Jensen presented the Pmax information to the committee, specifying the differences in megawatts between PCM and power flow.

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

10. Status of Developing Flex Reserves Data for the 2032 ADS

Nader Samaan, Pacific Northwest National Laboratory (PNNL), presented the flex reserves data for the 2032 ADS. Mr. Samaan indicated that it would be at least another month before the reserves were ready. For the creation of the reserves, five minutes data is needed. Five-minute data has been developed by the National Renewable Energy Laboratory (NREL) for wind and solar. For native load, five-minute data is needed. There is a significant amount of variation



inter-hour for wind and solar which can also affect the load. WECC staff was asked to request five-minute native load data. WECC staff will investigate.

The NERC requirements are used as performance criteria. If those requirements are violated, you will be notified by NERC. Because of these criteria, there is much more uncertainty with forecast error with load, wind, solar, or combined due to the concern of volatility in the net load. The goal is to figure out what the volatility is and to have sufficient additional reserves on hand within the balancing area to meet that risk.

11. Process Moving Forward

Mr. Butikofer provided an update on the parking lot list of post-release issues or observations that WECC has been tracking on the WECC website.

12. Public Comment

No comments were offered.

13. Review New Action Items

- Summarize Oregon and Washington CO₂ policy and follow up with Ander Johnson
 - Assigned To: Kevin Harris and Anders Johnson
 - Due Date: September 21, 2022

14. Upcoming Meetings

September 14, 2022Virtual

September 21, 2022Virtual

15. Adjourn

Mr. Harris adjourned the meeting without objection at 11:35 a.m.



Exhibit A: Attendance List

Members in Attendance

Kevin Harris Pacific Northwest National Laboratory
 Anders Johnson.....Bonneville Power Administration—Transmission
 John Liang..... Public Utility District No. 1 of Snohomish County
 Chelsea LoomisWestern Power Pool (formerly Northwest Power Pool Corporation)
 Hank McIntosh San Diego Gas and Electric
 Effat Moussa..... San Diego Gas and Electric
 Chifong Thomas Thomas Grid Advisor
 Steven Wallace Comprehensive Power Solutions, LLC
 Stan WilliamsBonneville Power Administration—Transmission
 Yi Zhang.....California Independent System Operator

Members not in Attendance

Lee Alter..... Tucson Electric Power
 Hazel Aragon California Energy Commission
 Jamie Austin PacifiCorp
 Jose Diaz..... Los Angeles Department of Water and Power
 Christopher Fecke-Stoudt..... Arizona Public Service Company
 Jonathon Flores Los Angeles Department of Water and Power
 Monica Garcia El Paso Electric Company
 Manuel Gomez..... El Paso Electric Company
 Michael Granados..... Los Angeles Department of Water and Power
 Chris Hagman American Transmission Company
 Bill Hosie..... PSI Power System Innovation Corp.
 Eliana Ibarra Imperial Irrigation District
 Tito Inga-Rojas British Columbia Hydro and Power Authority
 Harris LeeSalt River Project
 Amy Li..... Southern California Edison Company



Peter Mackin..... GridBright, Inc.
Akhil Mandadi..... Arizona Public Service Company
John D. Martinsen..... Public Utility District No. 1 of Snohomish County
Kimberly McClaffertyNorthWestern Energy
Ahlmahz Negash Tacoma Power
Daniel Ramirez..... Energy Strategies
Matthew StajcarNorthWestern Energy
Sirisha TanneeruPublic Service Company of Colorado (Xcel Energy)
Emily TozierSalt River Project
Xiaobo Wang.....California Independent System Operator
Di Xiao..... Southern California Edison Company

Others in Attendance

Tyler ButikoferWECC
Arkadeep DazWECC
Maddy Eberhard.....WECC
John JensenWECC
Richard Jensen..... California Energy Commission
Alisa KaseweterBonneville Power Administration—Transmission
Bhavana KatyalWECC
Luba Kravchuk.....California Independent System Operator
Katie RogersWECC
Nader Samaan..... Pacific Northwest National Laboratory
Louis Vigil..... El Paso Electric Company
Byron WoertzWECC
Benjamin Rodrigues El Paso Electric Company

