



Production Cost Data Subcommittee
DRAFT Meeting Minutes
October 25, 2023
Virtual

1. Welcome, Call to Order

Kevin Harris, Production Cost Data Subcommittee (PCDS) Co-chair, called the meeting to order at 10:06 a.m. MT on October 25, 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.

By consensus of the members present, the PCDS chose to precede with the proposed agenda.

4. Review and Approve Previous Meeting Minutes

Mr. Harris introduced the minutes from the meetings on September 13, and October 11, 2023.

On a motion by Jennifer Galloway, the PCDS approved the minutes from September 13, and October 11, 2023.

5. Review Previous Action Items

Mr. Jensen, reviewed action items carried over from the PCDS meeting on October 11, 2023. Mr. Jensen provided a follow up to the action item regarding Hitachi's work on the three-year work plan and wheeling transmission model enhancements. This information is attached as [Exhibit B](#). Action items that are not closed and will be carried forward can be found [here](#).

6. MOD-031 SAR At NERC

Mr. Jensen informed the group that NERCs' System Planning Impacts of Distributed Energy Resources (DER) Work Group (SPIDERWG) has conducted a review of its current body of Reliability Standards and their relevance with increasing levels of DERs. NERC is seeking industry feedback on potential changes to the standards. In relation to this effort the



SPIDERWG has created a whitepaper. To participate, see the link [here](#). The click Unofficial Nomination Form, then you can nominate yourself or someone else.

7. CEC Hourly Load Components and Review of CEC Daily Shapes

Mr. Harris Presented the California Energy Commission's (CEC) hourly load components and review of the CEC daily shapes.

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

8. Update on Heat Rates

Mr. Jensen performed a spreadsheet mapping exercise and will update the heat rates on a unit-by-unit basis where necessary. Mr. Harris requested that plant identification numbers be include in the data set for easier filtering. Mr. Jensen will post these change files to wecc.org when available.

9. Wind and Solar Capacity Factors Analysis

Arkadeep Das, Associate Engineer, presented a wind and solar capacity factor analysis. Mr. Das reviewed observations, which included photovoltaic (PV) curtailment levels by load areas, unit types (generic or existing), and resolutions (updated bus placements) from the Anchor Power Flow Work Group buses. Also, the pending resolution items which included existing PV units with high curtailment values, and capacity factors depending on dispatch profiles were discussed. Tyler Butikofer, Energy Strategies, confirmed the original wind and solar profiles were created by National Renewable Energy Laboratory (NREL) for the ADS 2032 build. To confirm net capacity factor of operation, Mr. Harris recommended that a distribution of the capacity factors of PV and WT for units by area be looked at as well. Mr. Das will update this information and will report back at an upcoming meeting.

10. GADS PC-GAR Method for Force Outage Rates

Mr. Jensen provided an update on forced outage rates using the Generator Availability Data System (GADS) pc-GAR program. The team is still reviewing forced outage rates that represent the percentage of the year that a thermal generator is offline for an unplanned outage. Mr. Jensen reviewed the data development and validation process of using GADS pc-GAR.

For the data development and validation process, GADS data is considered confidential information at the unit or single regional level. Pc-GAR will provide the required data and requires a minimum of two regions, seven units and at least three utilities information to be included in the data set. Mr. Jensen will review the files from the previous data set to understand what was included. The team will also use the equivalent forced outage rate demand statistics in the production cost model for the forced outage rates.

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Mr. Jensen also reviewed several outstanding items for ADS 2034 build, such as transmission contingencies, phase shifter transformer modeling, hourly utility scale solar shapes and hourly wind shapes which are being reviewed in the 2032 ADS, V2.4.2.

11. Next Items

Mr. Jensen reviewed the items for discussion at the next meetings. These include heat rates, forced outage rates, path ratings, phase shifter analysis, transmission nomograms, and megawatt limits on El Paso and Tucson Electric Power Company's load and generation balance nomograms.

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

12. Keeping Track of GridView Issues

There are no new GridView issues at this time.

13. Public Comment

Mr. Butikofer suggested that Mr. Jensen reach out to Jonathan Young at Bonneville Power Administration regarding the Path 8 nomogram.

Mr. Harris noted that there are more nomograms in the current iteration of the Path Rating Catalog; the group will review what paths to include in the 2034 Anchor Data Set at its next meeting.

14. Review New Action Items

- Ask NREL if they have an automated process to pull wind and solar profiles from a site or point basis geographically. Ensure that the wind and solar data versions are the same type as what was used in the past, base year 2018. See if wind data is refreshed from what was received with the last cycle.
 - Assigned To: Arkadeep Das
 - Due Date: November 8, 2023

15. Upcoming Meetings

November 8, 2023	Virtual
November 22, 2023	Virtual
December 6, 2023	Virtual

16. Adjourn

Mr. Harris adjourned the meeting without objection at 11:23 a.m.



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Exhibit A: Attendance List

Members in Attendance

Tyler Butikofer Energy Strategies
Jose Castaneda Imperial Irrigation District
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
Kimberly McClafferty Northwestern Energy
Effat Moussa..... San Diego Gas and Electric
Yi Zhang..... California Independent System Operator

Members not in Attendance

Renchang Dai Puget Sound Energy, Inc.
Manuel Gomez..... El Paso Electric Company
Chris Hagman American Transmission Company
Anders Johnson..... Bonneville Power Administration
Chelsea Loomis Western Power Pool
Akhil Mandadi..... Arizona Public Service Company
Christopher McLean..... California Energy Commission
Nader Samaan..... Pacific Northwest National Laboratory
Jonathan Stahlhut TransCo Energy, LLC
Chifong Thomas Thomas Grid Advisor
Emily Tozer Salt River Project
Stan Williams Bonneville Power Administration
Di Xaio..... Southern California Edison Company

Others in Attendance

Peter Ashcroft..... WECC



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Arkadeep Das.....WECC

Ashton Davis.....WECC

Kirha QuickWECC

Matt Zapotocky.....WECC

