

1. Welcome, Call to Order

Jamie Austin, Production Cost Data Subcommittee (PCDS) Chair, called the meeting to order at 10:30 a.m. on June 22, 2021. 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 Planning Engineer, read aloud the WECC Antitrust Policy statement. The meeting agenda included a link to the posted policy.

3. Approve Agenda

Ms. Austin introduced the proposed meeting agenda.

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

4. Review and Approve Previous Meeting Minutes

Ms. Austin introduced the minutes from the meeting on May 25, 2021.

On a motion by Nadar Samaan, the PCDS approved the minutes from May 25, 2021.

5. Coincident Energy Shapes

Ms. Austin gave a presentation on coincident energy shapes and explained the purpose of having hourly energy shapes from a single year for loads, hydro, wind, solar, EE, EG, etc. Ms. Austin used information from a presentation by North West Power and Conservation Council's (NWPPCC) that supports the use of more recent energies shape year than what was used in 2030 ADS. Some of the recent impacts include climate change, WECC-wide resource buildout, and newly improved adequacy model.

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

6. CEC Demand Forecast _ Load Modifiers Data (e.g., BTM, EV, etc.)

Cary Garcia, California Energy Commission (CEC), gave a presentation on load data modifiers, including hourly forecast use cases. The CEC utilized two approaches hourly merging electric load model (HELM) and hourly load model (HLM). Mr. Garcia explained the load method,

normalized load ratios, how the peak load ratios and load ratios were used for the calendar assignment, charge and discharge behavior, the impact of climate change, and additional achievable energy. Hourly load profiles for PV generation were developed by E3 based on an analysis of California’s Solar Initiative data.

Mr. Garcia verified the information obtained was from the CEC Integrated Energy Policy Report (IEPR) model covering California. The hourly forecast covers CAISO member utilities (PG&E, SCE and PG&E); SMUD, LADWP and IID hourly loads are estimates, based on ratio of load with adjacent member utility. Ms. Austin would like to use similar technique for Balancing Authority loads outside of California. Climate change ideas were discussed for future data. There will be a subsequent conversation with extra time allocated next the next meeting.

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

7. Average Conditions Hydro from a Recent Year

Kevin Harris, Harris PCM, gave a presentation on hydro conditions, evaluating 30 years of data, using average run-off data for northwest and northern California. Kevin has concluded that hydro run-off for Northwest and Northern California are not correlated; however, determined that recent years he runoff patterns are changing. The last couple of years the trend is above the long-term average. Mr. Harris believes the model does not need to change because we are capturing changes through load minus wind and solar.

The committee will discuss if modeling changes are needed in a future meeting.

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

8. Public Comment

No comments were received.

9. Review of Previous and New Action Items

The action items will be reviewed next week due to time constraints.

Action items that are not closed and will be carried forward can be found [here](#).

10. Upcoming Meetings

July 13, 2021 Webinar

July 20, 2021 Webinar

July 27, 2021 Webinar



11. Adjourn

Ms. Austin adjourned the meeting without objection at 12:08 p.m.



Exhibit A: Attendance List

Members in Attendance

Jamie Austin..... California Energy Commission
Jose Diaz..... Los Angeles Department of Water and Power
Kevin Harris..... Harris PCM
John Liang.....Public Utility District No. of Snohomish County
Hank McIntish..... San Diego Gas and Electric
Effat Moussa..... San Diego Gas and Electric
Chifong Thomas..... Smart Wires Inc.
Stan WilliamsBonneville Power Administration-Transmission

Members not in Attendance

Michael Granados..... Los Angeles Department of Water and Power
Chris Hagman American Transmission Company
Kevin Harris..... Harris PCM
Bill Hosie..... PSI Power System Innovation Corp.
Greg Howes..... Colorado Springs Utilities
Tito Inga-Rojas..... British Columbia Hydro and Power Authority
Anders Johnson..... Bonneville Power Administration—Transmission
Harris Lee..... Salt River Project
Amy Li..... Southern California Edison Company
John Liang..... Public Utility District No. 1 of Snohomish County
Peter Mackin..... GridBright, Inc.
Akhil Mandadi Arizona Public Service Company
John D. Martinsen..... Public Utility District No. 1 of Snohomish County
Hank McIntosh..... San Diego Gas and Electric
Effat Moussa..... San Diego Gas and Electric
Ahlmahz Negash..... Tacoma Power
Daniel Ramirez..... Energy Strategies



Christa Rinehart..... NV Energy
Sirisha Tanneeru.....Public Service Company of Colorado (Xcel Energy)
Chifong Thomas..... Smart Wires Inc.
Xiaobo Wang..... California Independent System Operator
Stan Williams Bonneville Power Administration—Transmission
Di Xiao Southern California Edison Company
Yi Zhang..... California Independent System Operator

Others in Attendance

Tyler Butikofer..... WECC
Jyotsna Chatrati..... NV Energy
Paul Deaver..... California Energy Commission
Cary Garcia..... California Energy Commission
Jon Jensen..... WECC
Nicole Lee WECC
Chelsea Loomis..... Northwest Power Pool Corp.
Nadar Samaan..... Pacific Northwest Laboratory
Amanda Sargent..... WECC
Angela Tanghetti..... California Energy Commission
Rachel Smith..... WECC
Steven Wallace..... Comprehensive Power Solutions, LLC
Byron Woertz WECC
Jinxiang Zhu..... Hitachi ABB Power Grids

