

## **Welcome, Call to Order**

### **1. Welcome, Call to Order**

Jamie Austin, Production Cost Data Subcommittee (PCDS) Chair, called the meeting to order at 10:35 a.m. on July 13, 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.

A few items were modified.

**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 June 15, 2021, and June 22, 2021.

Modifications were made to both sets of minutes.

**On a motion by Chifong Thomas, the PCDS approved the minutes from June 15, 2021, and June 22, 2021.**

### **5. Load Shapes Analyses**

Kevin Harris, Harris PCM, presented load shapes analyses. Mr. Harris calculated average weekday, hour ending load shape by area and month, using the data source FERC-714 historic hourly load from 2006-2019. Load shape was calculated by area for:

- California Independent System Operator (CAISO);
- Bonneville Power Association (BPA);
- Public Service Company of Colorado (PSC); and
- Salt River Project (SRP).

Mr. Harris mentioned the summer load shapes are changing for CAISO, BPA, PSC and SRP even after accounting for the behind-the-meter (BTM) photovoltaic (PV). He presented that load shifts are increasing in the evening and the summer average daily load factor is decreasing. Maintaining the 2009 load shape tends to lower the off-peak. Mr. Harris said that after reviewing the intra-day load shifts from 2009 to 2019, moving to the 2018 shape loads is warranted. Ms. Austin verified that we will be able to obtain BTM data needed for year 2018.

Mr. Harris mentioned that we are not requesting incremental BTM-PV data. Ms. Austin agreed that it would be helpful but won't be available until March 2022. In the meantime, we're working with NREL using State – BTM capacity data that will help us shape from capacity to hourly. Ms. Austin said National Renewable Energy Laboratory (NREL) will be presenting details of this process during the PCDS meeting on July 27<sup>th</sup>. She verified that using the 2018 data will change the load shapes.

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

## 6. Coincident Energy Shapes Year

Ms. Austin presented the coincident energy shapes year. The production cost model (PCM) Anchor Data Set (ADS) must have hourly energy shapes from a single year for loads, hydro, wind, solar, energy efficiency, distributed generation, etc. for a coincident dispatch of the western power system. Ms. Austin proposed using year 2018 for the coincident energy shapes year in the 2032 ADS PCM, as it represents average conditions for hydro run-off in the Northwest (see analysis Kevin – 6/22/2021 meeting). In addition to average hydro conditions, NREL has confirmed having wind and solar data for year 2018. She spoke about changing hydro operation to accommodate greater penetration and renewables and changing load shapes as demonstrated by Kevin are main drivers for making the change. The decision to use a recent year is supported by subject matter experts from National Labs, BPA, CAISO and PNWPCC. Ms. Austin shared documents from Nathalie Voisin, Pacific Northwest National Laboratory (PNNL), that reviewed regional considerations for choosing a normal hydropower year.

**On a motion by Ms. Austin, the PCDS approved the following:**

**Use of year 2018 for a coincident energy shapes year in the 2032 ADS PCM, as is supported on multiple levels. It represents close to average hydro run-off conditions in the Northwest and meets the call for capturing most recent years' changes to the following:**

- Captures recent changes to generation portfolio
- Changes to load modifiers, including the higher penetration of BTM – PV and their impacts on load
- Changes to hydro operations, impacted by latest environmental regulation and markets



- **Has matching year for wind and solar Profiles**

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

## 7. **CEC Demand Forecast – Load Modifiers Data (e.g., BTM, EV, etc.)**

Paul Deaver, California Energy Commission (CEC), presented on load data modifiers. He reviewed how the CEC utilizes load modifiers in publicly owned utilities (POU) load forecasts. He also presented how the CEC estimates behind-the-meter for non-CASIO entities.

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

## 8. **Finalize schedule for the 2032 ADS with PCDS**

Bhavana Katyal, Senior System Adequacy Engineer, presented the finalized schedule for the 2032 ADS. She showed the changes made to the proposed schedule and to the proposed 2032 ADS high-level schedule 2022 tasks. Jamie asked to list missing “Hourly Load Forecast” under Develop Other Data Jan-Mar 2022, slide 3, as it is data developed by PCDS; the definition of “Other Data” includes all data not coming from the reference power flow that is required to create the hourly dispatch of the western interconnect for a year. Steven Wallace agreed, asking that we need to show the load files on the 2022 High Level Schedule. After a brief discussion and a few modifications to the schedule, Saad Malik, Director of Reliability Planning, asked that this item be added to a future agenda to discuss what documentation needs to be produced and when.

Jon Jensen, System Adequacy Engineer, has reviewed the structure and intent of the ADS guide document and he would like PCDS to start thinking about it.

**On a motion by Jamie Austin, the PCDS approved use of the 2022 high level schedule. The schedule will be reviewed and modified as needed.**

This documentation will be open for monthly discussions and is located on the [WECC website](#).

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

## 9. **Public Comment**

No comments were received.

## 10. **Review of Previous and New Action Items**

Previous action items will be discussed in the next meeting. Action items that are not closed and will be carried forward can be found [here](#).

- Review and update ADS documentation.
  - Assigned To: Task Group (Ad hoc)



- Due Date: July 20, 2021
- Add to agenda: Discuss load shape analysis documentation.
  - Assigned To: Tyler Butikofer
  - Due Date: July 20, 2021
- Add to monthly agenda: Review 2032 case build.
  - Assigned To: Tyler Butikofer
  - Due Date: July 20, 2021

**11. Upcoming Meetings**

July 20, 2021 ..... Webinar  
 July 27, 2021 ..... Webinar  
 August 3, 2021..... Webinar

**12. Adjourn**

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



## Exhibit A: Attendance List

### Members in Attendance

Hazel Aragon..... California Energy Commission  
Jamie Austin.....PacifiCorp  
Tyler Butikofer..... WECC  
Kevin Harris..... Harris PCM  
Hank McIntosh..... San Diego Gas and Electric  
Effat Moussa..... San Diego Gas and Electric  
Chifong Thomas..... Smart Wires Inc.  
Yi Zhang..... California Independent System Operator

### Members not in Attendance

Lee Alter.....Tucson Electric Power  
Ben Brownlee..... Energy Strategies  
Jose Diaz..... Los Angeles Department of Water and Power  
Christopher Fecke-Stoudt..... Arizona Public Service Company  
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.  
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  
Ahlmahz Negash.....Tacoma Power  
Daniel Ramirez.....Energy Strategies  
Christa Rinehart.....NV Energy  
Sirisha Tanneeru.....Public Service Company of Colorado (Xcel Energy)  
Xiaobo Wang.....California Independent System Operator  
Stan Williams .....Bonneville Power Administration—Transmission  
Di Xiao.....Southern California Edison Company

**Others in Attendance**

Paul Deaver.....California Energy Commission  
Irina Green .....California Independent System Operator  
Jon Jenson.....WECC  
Richard Jenson.....California Energy Commission  
Bhavana Katyal.....WECC  
Nicole Lee .....WECC  
Saad Malik.....WECC  
Kirha Quick.....WECC  
Dick Simmons .....WECC  
Steven Wallace.....Comprehensive Power Solution  
Byrom Woertz .....WECC

