

1. Welcome, Call to Order

Jamie Austin, Production Cost Data Subcommittee (PCDS) Chair, called the meeting to order at 9:02 a.m. MT on July 27, 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

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 31, 2022.

On a motion by Chifong Thomas, the PCDS approved the minutes from May 31, 2022.

5. Finalize the Comparison of BAA level Generators by technology, L&R versus 2032 ADS

Mr. Butikofer presented the finalized loads and resources (L&R) comparison to the 2032 Anchor Data Set (ADS) of the balancing authority area (BAA) level generators by technology. There are a few capacity differences. WECC is looking at specific generator types.

Jon Jensen, System Adequacy Engineer, presented the hydro capacity differences between the Production Cost Model (PCM) and the L&R submittals by area. There are four units with the largest differences. The L&R has not been adjusted yet. The hydro will be looked at further.

BK Ketineni, System Adequacy Engineer, presented the capacity differences for the combined cycle. There are nine areas with capacity differences. California Independent System Operator (CAISO) has several units that are not matching the L&R. The combined cycles match the exact capacities in the L&R but when looked at separately there are discrepancies. The PCDS

discussed that the duct firing capability is not always addressed in the data as a separate item and that could be causing buried capacity that is not in the L&R.

Bhavana Katyal, Senior System Adequacy Engineer, presented that the L&R was 9% lower than the PCM for the gas turbine (GT). The differences need to be researched to see what capacity should be applied. The PCDS discussed that the objective is to ensure the load forecast coming from the L&R is accurate. The discrepancies will be discussed offline.

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

6. Addressing Unserved BAA Loads: PSCO, WACM and CFE

Mr. Butikofer presented the unserved BAA loads for Public Service Company of Colorado (PSCO), Western Area Power Administration (WACM), and Comisión Federal de Electricidad (CFE). The retirement and commission dates were updated. Raising the max capacities to the level of the Pmax for CFE in the power flow (PF) to correct the unserved load will be discussed offline. The forced outages might be causing some of the issues.

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

7. Review Results peak and energy for LDWP

Mr. Butikofer presented the results of the updated forecast peak and energy for Los Angeles Department of Water and Power (LDWP) compared to the California Energy Commission (CEC) forecast. The hourly load shapes look ok. The PCDS discussed the differences between the June and July 2018 peak hours. This will be discussed further offline.

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

8. Addressing sustained Congestion on Transmission Paths and Branches

Mr. Butikofer presented the sustained congestion on transmissions paths and branches. The PCDS discussed the Alberta Electric System Operator (AESO) CO₂ price having an impact on the path flows into Alberta.

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

9. Result of Analyses, Fixing BC Hydro\BPA Hydro issues

Mr. Butikofer presented the result of analyses fixing British Columbia Hydro (BC Hydro) and Bonneville Power Administration (BPA) hydro issues. The PCDS discussed looking at the British Columbia (BC) load minus the hydro generation to verify operations of hydro in BC.

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



10. Discuss Approval of the ADS

Ms. Austin presented the 2032 ADS dispatch results. Concern was expressed about assumptions that have been made and there still being issues that need to be researched with loads, BC hydro modeling, BC hydro dispatch, resulting in congested paths flows. The BC hydro data unit issues that were fixed need to be shared with the PCDS. Alberta imports need to be consistent with recent operating trends. Concern was expressed about the 2032 ADS version 1.0 not being creditable due to a need to resolve the issues and do more validation.

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

Yi Zhang, CAISO, presented issues identified in the ADS PCM and offered suggestions about resolving the issues. The WECC staff suggested that this is a reference case and a starting point as the data have been entered according to the PCDS approval process. A suggestion was made to publish version 1.0 Beta with observations and upload new cases as needed. The needed capacity will need to be discussed further.

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

11. Approval of the 2032 ADS, Version 1.0

By consensus, the PCDS approved posting the 2032 ADS version 1.0 Beta that will be accompanied with materials listing unresolved issues.

12. Public Comment

No comments were offered.

13. Review New Action Items

- Hold an offline discussion about the L&R differences.
 - Assigned To: Bhavana Katyal, Jamie Austin, Tyler Butikofer, Yi Zhang, and Steven Wallace
 - Due Date: August 3, 2022
- Hold an offline discussion of the results of peak and energy for LDWP.
 - Assigned To: Tyler Butikofer, Jamie Austin, Steven Wallace, and Jose Diaz.
 - Due Date: August 3, 2022
- Post the ADS 1.0 Beta dataset with the issues that still need to be resolved.
 - Assigned To: Tyler Butikofer
 - Due Date: August 3, 2022
- Hold an offline discussion about the unserved BAA loads.
 - Assigned To: Tyler Butikofer, Jamie Austin, Jin Zhu, Steven Wallace, and Yi Zhang.



- Due Date: August 3, 2022

14. Upcoming Meetings

August 3, 2022.....Virtual
 August 10, 2022.....Virtual
 August 17, 2022.....Virtual

15. Adjourn

Ms. Austin adjourned the meeting without objection at 10:45 a.m.



Exhibit A: Attendance List

Members in Attendance

Jamie Austin PacifiCorp
Jose Diaz..... Los Angeles Department of Water and Power
Michael Granados..... Los Angeles Department of Water and Power
Kevin Harris Pacific Northwest National Laboratory
Anders Johnson.....Bonneville Power Administration—Transmission
Chelsea LoomisWestern Power Pool
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
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
Chris Hagman..... American Transmission Company
Bill Hosie..... PSI Power System Innovation Corp.
Tito Inga-Rojas British Columbia Hydro and Power Authority
Harris LeeSalt 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
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
Jon Jensen.....WECC
Bhavana Katyal.....WECC
BK Ketineni.....WECC
Lyubov Kravchuk..... California Energy Commission
Nicole LeeWECC
Katie RogersWECC
Louis Vigil..... El Paso Electric Company
Byron WoertzWECC
Milena Yoranova..... El Paso Electric Company
Jin Zhu..... Hitachi-ABB

