

PCDS Meeting

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WECC

**Electric Reliability
& Security for the West**

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2034 ADS

- Profile review with EIA annual capacity factor
 - Issue—The new hourly shapes annual capacity factor seem too high or too low for some units
- Approach
 - Use older shapes and reserve calculations and post 2034 ADS
 - Continue to review new hourly shapes for 2036 ADS
 - Ask PNNL to present on base assumptions/parameters of the new shapes (Ex. Hub height, etc.)

2034 ADS Updates 11-14-2025 Case

- Updates from the 11-7-2025 case:
 - 56-CAISO_HY_Dispatch_0dollars.mdb
 - 57-GenAreaPoint.mdb
 - 58-HY_Drum_fix.mdb
 - HY_Drum2_2028[05].dat
 - HY_Drum2_2034[05].dat



2036 ADS

2036 ADS

- Have PCDS review bus load area
- Model Kemano Aluminum Smelter in 2036, same at the 2034 case?
 - PCDS Decision-Yes
- Net Station Service loads in 2036 from gen on bus, just like 2034 case, Bus Load→Station Service Load Table
 - PCDS Decision-Yes

2036 ADS Tasks

- Import Transmission from 2036 HS1 PF—Done
- Review pumping loads
- Energy Efficiency—CEC
- Hydro Data—PNNL and Canada
- Develop Load Shapes from (2025L&R)—In progress
- Review Conforming, Non-conforming, and clipping (2025L&R)—In progress
- Compare 2025L&R with 2024 L&R resources—In progress
- Align L&R resources with power flow (2025L&R)—In progress
- Place new units from L&R that were not in power flow (2025L&R)—In progress
 - Final review of generation topology
- BTM
- Hourly shapes for new units
- Pump Storage—Review charge time duration, rates, etc. Review assumptions
- Thermal Data for new units
- Path definitions/ratings—WECC Paths
- Nomograms
- Wheeling Rates (from utility tariffs)
- Fuel Prices
- Deflator/Inflator rates
- CO2 Prices
- Dispatch price for wind, solar, and hydro (Also called opportunity cost)
- Phase Shifter Transformers—How to treat, and review
- Load-Following and Regulation reserve calculations
- Maintenance Schedule
- Congestion and C-PAGE Checks
- ADS Case Review
- Post 2036 ADS PCM V1

Generator Names and Fields

- Example:
 - Gen Name—Brooks Solar 2 PV-NT
 - Proposed Gen Name—AESO_T1_Brooks Solar 2 PV-NT
- Standardize subtype names
- Update development status (check simulation control screen order)



Generator Placement Assumptions

Background—Generator Placement

- L&R submittal—Generation
 - $\approx 6,000$ generators
 - $\approx 1,000$ are submitted without a bus number (location)
 - Where do we put them?

Generator Placement Tool Methodology

- General rule
 1. Check with area representative, what busses can we use
 - a. Check interconnection queue—Check POI
 - b. Note identified as contracts-check if already in case, don't double count
 - i. Check if contract is already executed. Model resources, not contracts
 2. Consider total transfer capability vs capacity at bus level
 - a. Preselect busses that are available

Generator Placement Tool Methodology

- Proposed MW ranges per kV—general rule

Interconnection Voltage	Resource Capacity
230 kV	0 to 125 MW
345 kV	125 to 250 MW
500 kV	Greater 250 MW

Generator Placement Tool Methodology

- Methodology order for generators without locations:
 1. Latitude/longitude
 2. County/state/BA
 3. State and BA
 4. Remaining
- * Bus names—Generators with a bus/substation name in the generator name
 - Ex., (Generic_SolarA_Bus_23456_230kV)

Generator Placement Tool Methodology

- Latitude/longitude—Generators without a location:
 - Closest bus that is 230 kV and above (Preselected busses)
 - Bus in submitted BA
 - If close, but perhaps far away
 - How far is too far?
 - Bus in different BA which is closer to lat./long. of the generator and point back to original BA
 - Ex., NorthWest—PACW/BPA
 - Reserve Distribution—Specify area if outside BA

Generator Placement Tool Methodology

- County/state/BA
 - Use bus within the submitted county/state/BA
- State and BA
 - Use bus within the submitted state/BA

Placing Single Large Units

- Placing single large units (Ex., Single 2,000 MW unit):
 - Distribute to area?
 - Distribute to discrete busses?
 - Keep whole?
 - PCDS decision—Case by case
 - Check how pf is modeled, if single unit or distributed to known busses

Placement Tool by Development Status—To think about

- Existing
 - Match. Exceptions include netted, aggregates, etc.
- Tier 1
 - Use placement tool
- Tier 2
 - Use placement tool
- Tier 3
 - Use placement tool or distribute by area by load bus?
 - PCDS Decision—Revisit after we find out how much we have
 - Depends how much we have, supply stack chart to help decide



Core Data—PF or L&R

PCDS—To Be Aware of

- Future item of discussion during additional (January 8) meeting
 - Core data for the ADS—PF or L&R
 - 2036 ADS V1 (March 1, 2026)—Use 2025 L&R data, 2036 HS1 PF
 - 2036 ADS V2 (June 30, 2026)—Use decided-upon data

PF as starting point for 2036 ADS PCM?

- Suggestion: Use Power flow (PF) as a starting point to model the 2036 ADS PCM

Topology	Present	Future
Generation	L&R—Align L&R units with PF	PF, and L&R to support unit related data?
Loads	PF—Load location, ratio of load on bus, Non-Conforming load status L&R—Load values for year 10	Same as before
Transmission	PF	Same as before

PF as starting point for 2036 ADS PCM?

Considerations:

- Burden of accurate Gen placement would be on PF/Area Coordinators
- Easier use of round-trip study
- Gaps in gen data would need to be filled in with L&R or PCDS
- Less alignment of 2034 ADS PCM with 2036 ADS PCM
- Treatment of T3 resources?
 - Layering in L&R data if needed, how to handle?



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