

# PCDS Meeting

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*WECC*

**Electric Reliability  
& Security for the West**

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## C-PAGE Lessons Learned

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- Breakers representation
  - Breakers in power flow, incorporate jumpers representation in GV (GV doesn't show breakers)
  - Update bus types affected from disabled to an enabled type
- Verify X and R values match
  - Understand GV conversion of three winding to two winding transformers
- Fix regulating gens on busses
- Gen Placements-Check for overloads, place supply at higher kV busses
- Match topology
  - Add in added projects and generation to power flow to match the ADS PCM



# 2034 ADS Update

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- Publishing this week



## GV Enhancements – Update

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- Developing dependable capacity table for the maintenance enhancement
- Battery enhancement, Hitachi still working on testing and improving performance



# 2036 ADS V1.0



## 2036 ADS Approach – V1.0

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- Power Flow based ADS
  - The decision has been made to proceed with a power flow(pf) units-based version 1.0 of the 2036 ADS PCM (2025L&R).
    - The 2036 ADS PCM V1.0 will only use the units from the 2036HS1 pf. The other L&R units will be in the case, turned off, and identified as L&R supply units.
    - The extra L&R supply may need to be turned on to relieve unserved load.
- We are seeing unserved load in the case that only has power flow units on
  - We can provide two cases:
    - One with only power flow units
    - One with turning on some L&R units to relieve unserved load



# Implemented Tasks V1.0

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- Clean up, duplicates, etc.
- Gen Distribution clean up
- Check gens for capacity
- Extend retirement dates of wind/solar?
  - Yes, unless announced retirement date
- Convert prices to 2026 dollars
- Maintenance
- Add TWE transmission
- Hydro on area shapes
- Wind/solar PTCs
- Use shortened gen subtype names



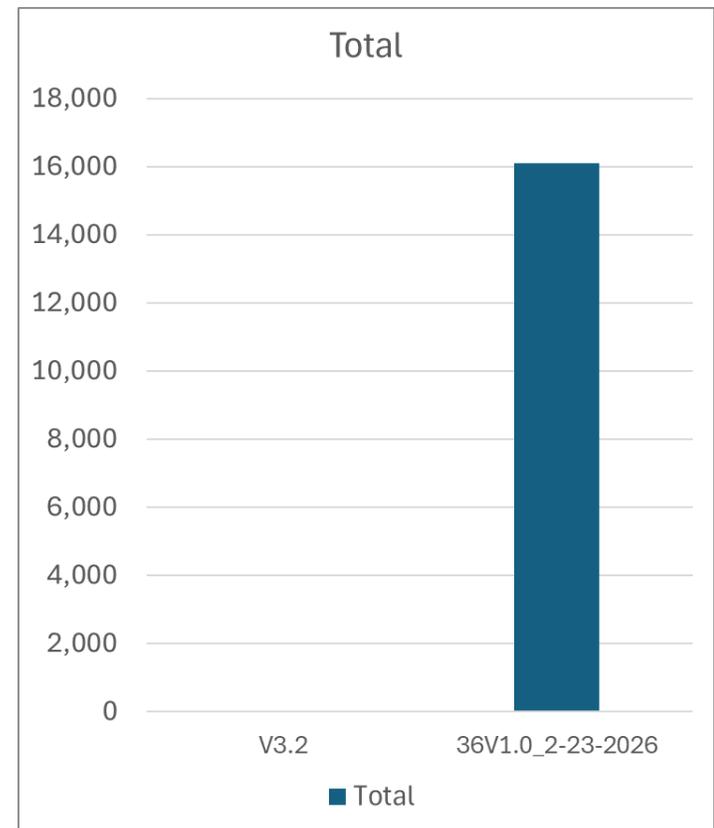
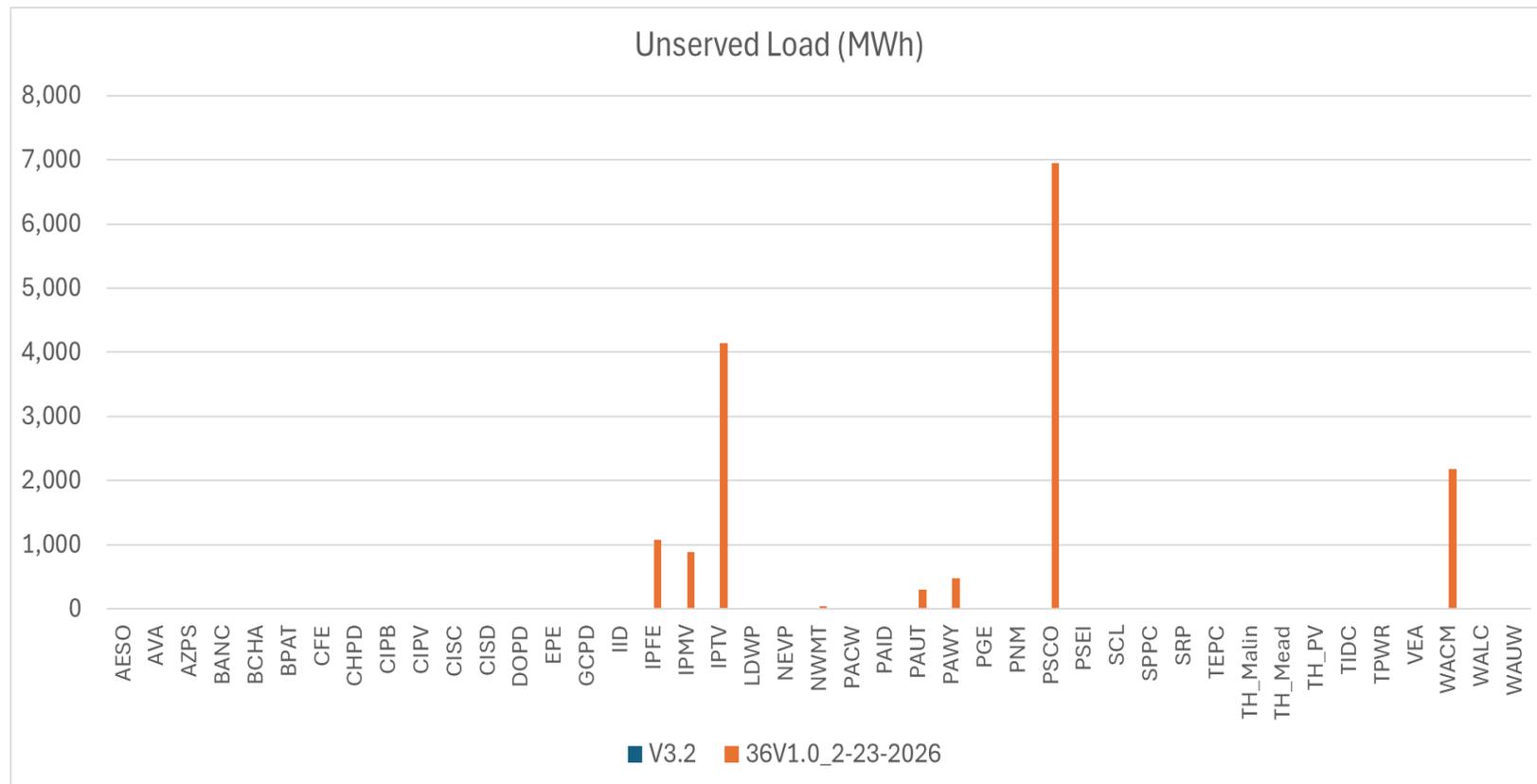
## 2036 ADS PCM V1.0

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- Publishing case on Monday March 2, 2026
- Results showing 2036 ADS with 2025LnR Existing units enabled
  - Today's results: Simulation July–December



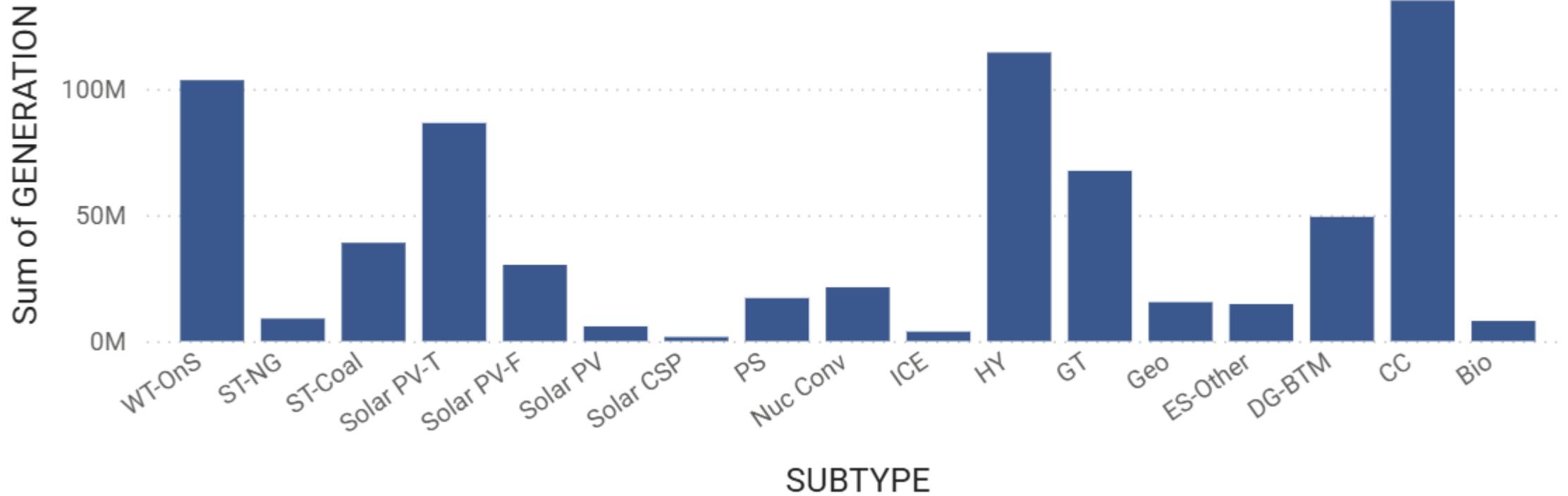
# Unserved Load





# Generation

CASENAME ● 2036\_V1.0\_2026-2-23\_All\_LnR\_Existing

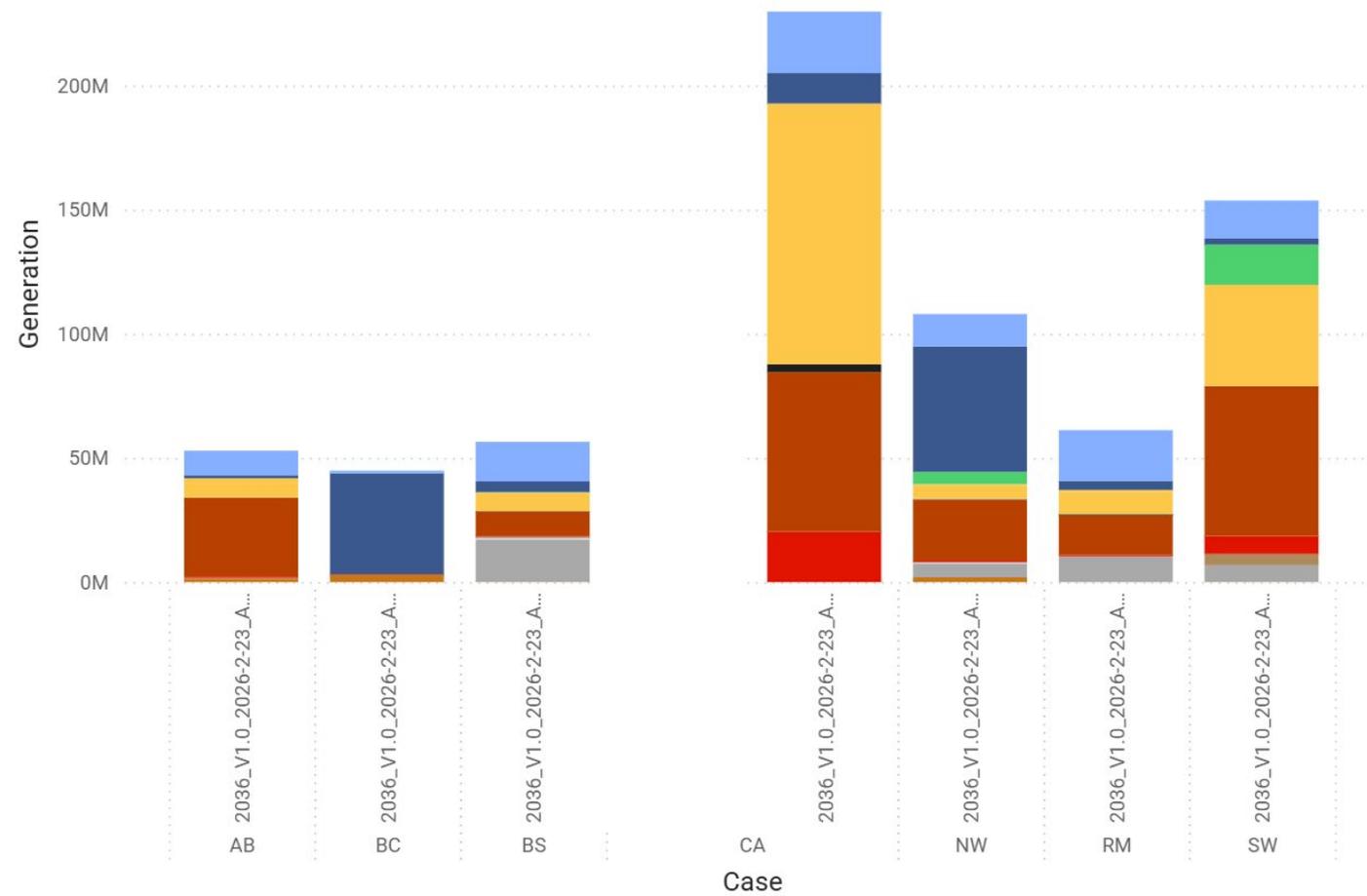




# Energy

## Generation by Fuel Type

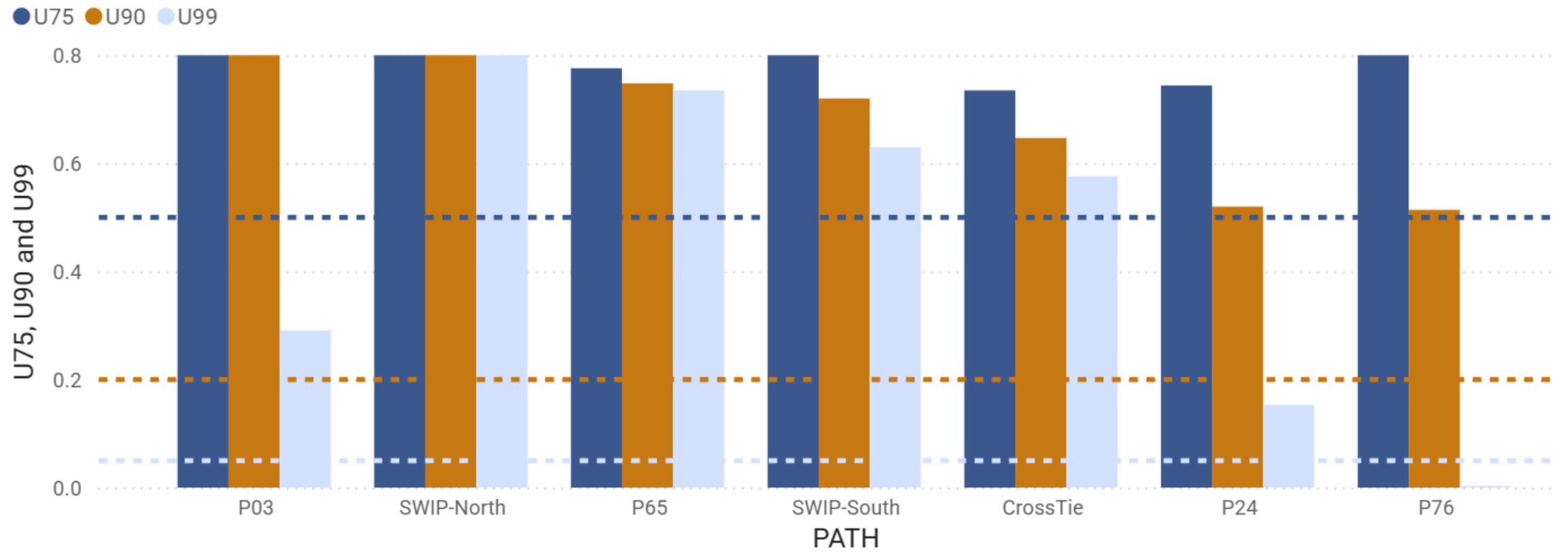
Fuel Type ● Bio ● Coal ● Diesel ● DR ● Geother... ● MWh ● Natural... ● Oil ● Other ● Petroleu... ● Steam ● Sun ● Unknown ▶





# Path Utilization

Path Utilization

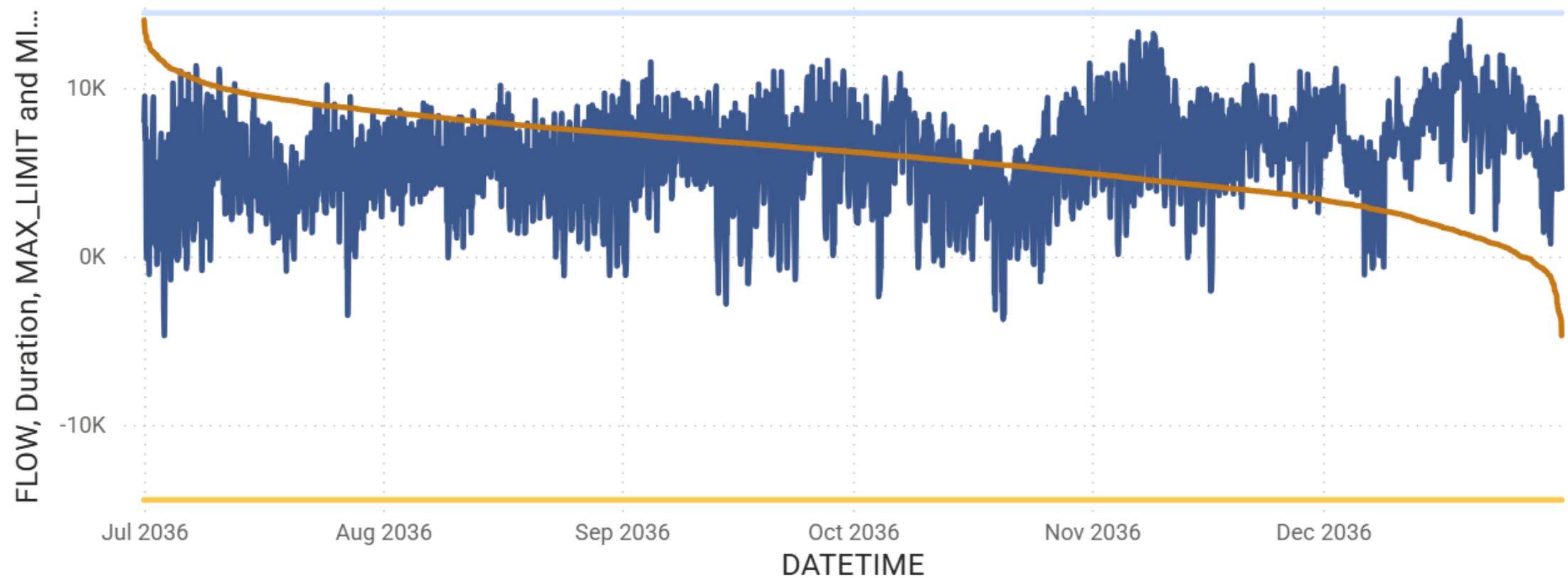




# Paths

## P46 West of Colorado River (WOR) E-W

● FLOW ● Duration ● MAX\_LIMIT ● MIN\_LIMIT

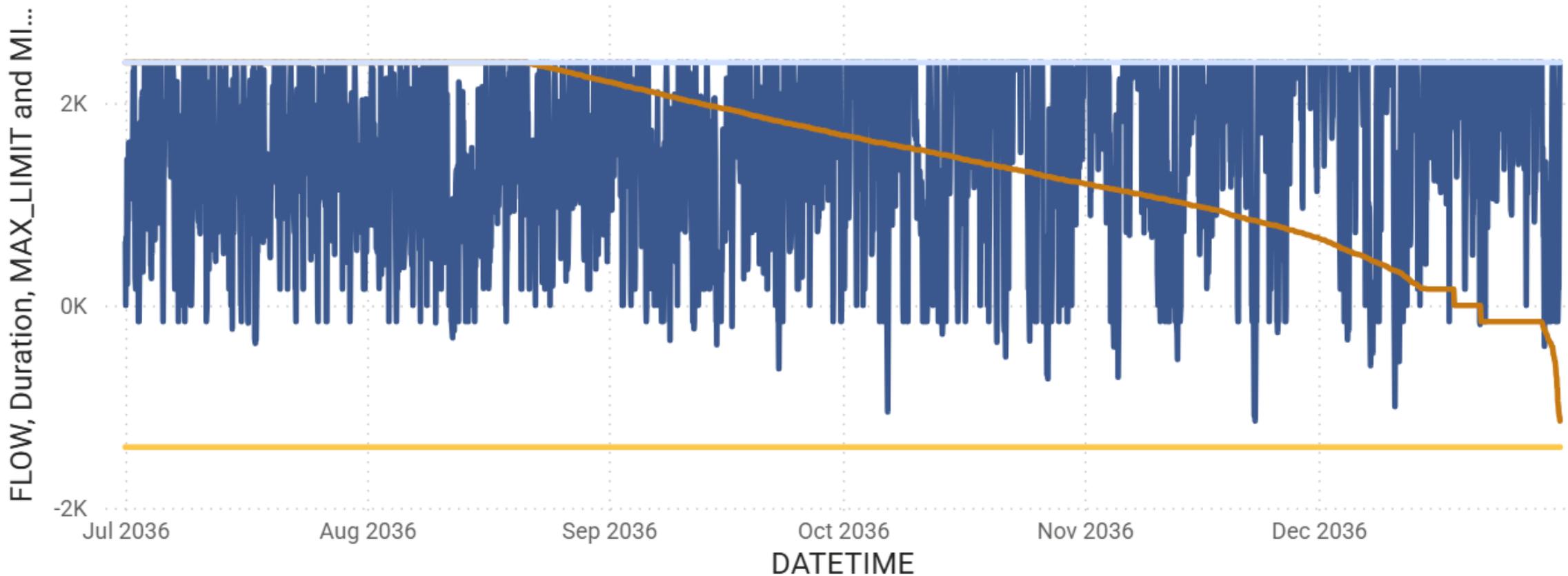




# Paths

## P27 Intermountain Power Project DC Line NE-SW

● FLOW ● Duration ● MAX\_LIMIT ● MIN\_LIMIT



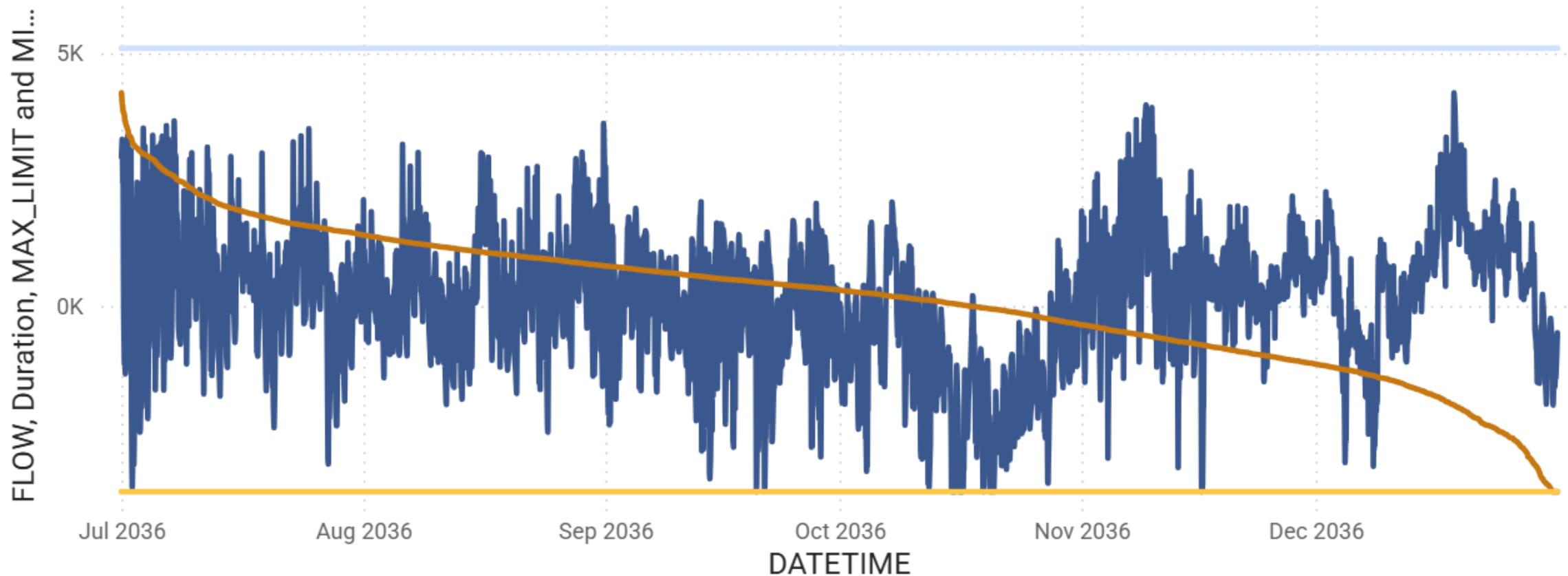


# Paths

P66 COI N-S



● FLOW ● Duration ● MAX\_LIMIT ● MIN\_LIMIT



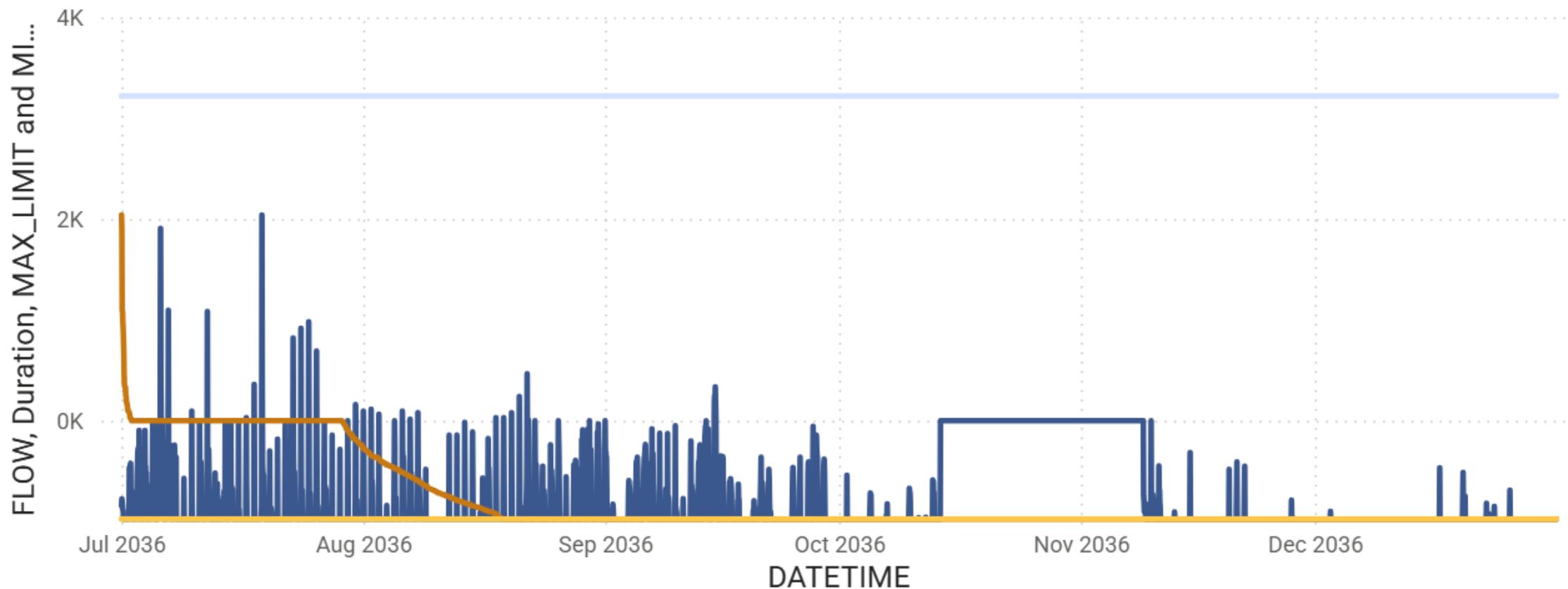


# Paths

## P65 Pacific DC Intertie (PDCI) N-S



● FLOW ● Duration ● MAX\_LIMIT ● MIN\_LIMIT





# Wind and Solar PTCs (Has 10-year period) – Final Review

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- Discussion
- Wind
  - PTCs Expired – Be used up by 2036 (Due to 10-year period)
    - Dispatch cost of -\$5 for anything with a commission date before 1/1/2026
  - Not eligible for PTCs – PTC not eligible, units come online after 1/1/2028
    - Dispatch cost of -\$5 for anything with a commission date after 1/1/2028
  - Window of PTC – Units eligible for PTCs
    - Dispatch cost of -\$27.50 for anything with a commission date between 1/1/2026 and 12/31/2027
- Solar
  - -\$5 Dispatch Cost



# Projects

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- In core case:
  - TWE – Done
  - SunZia (DC) – Generation in case on bus 15080 PINAL\_C
  - GERP (Waiting to hear from BPA), none of the GERP projects were in the 36HS1 pf – Not in core case, haven't received yet
  - CrossTie – Done
  - Cascade Renewable Transmission Project – Done
  - VEA – Done
  - SWIP (N/S) – Done
  - Harry Allen – Red Butte Corrections – Done
  - DC Line North Plains Connector (Modeled as hourly unit with "0" shape on Colstrip 500 kV– Done
    - Users may model as prices if desired
- Scenario:
  - RioSol (Old SunZia AC project), haven't received yet
  - BPA - Montana to Washington project – Include in core case, haven't received yet



# Distributed Reference Bus

- Edit Sim Control
  - Parameters for Distributed Reference Bus
    - Clarify with Hitachi

The screenshot shows the 'Simulation Control' dialog box with the 'Edit Distributed Reference Bus' sub-dialog open. The 'Transmission' tab is selected. The 'Bus Selection Filter' section has 'Area' and 'Region' both set to 'All'. The 'Voltage Level' is set to '0' KV, 'Load Level' is '0' MW, and 'Gen Capacity' is '0' MW. The 'Distributed Reference Buses: 4848' table is visible below.

BusID	BusName	BaseKV	Wt
10003	RATTLE...	115	75
10005	ALCAZAR	12.5	19
10008	ALLISON	13.8	13
10020	ASPEN	12.5	21
10022	AVILA	12.5	14
10032	BECKNER	12.5	13
10034	BEL_AIR	12.5	13
10037	FIRST_ST	12.5	15
10043	BLCKRA	12.5	27
10061	CENTRA...	12.5	11



# Projects Under Construction – Review

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- For V2



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