

PCDS Meeting

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WECC

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Action Items

- L&R Loads
 - It is supposed to include system losses, at least that's how they are instructed
 - We try to stay consistent with NERC: "total generation within a Balancing Authority Area, plus energy received from other systems, minus energy delivered to other systems, including system losses. It represents the total demand required by a system, excluding energy used for storage."

Action Items

- For transmission losses, GridView will calculate marginal loss factor hourly and account the marginal loss factor in the UC/ED energy balance equation. It can calculate area/region losses based on Area/region generation – load – net export = losses.
- $\text{Generation} = \text{Load} + \text{Losses}$
- The losses are changed hourly based on generation dispatch and load distribution. Transmission upgrades could reduce the area/region losses, which can be quantified as transmission losses benefits of transmission upgrades.
- If model transmission losses, remote resources will be discounted by marginal losses in energy balance equation. For same-cost units, local unit will have a better opportunity to serve the local loads.



Action Items

- For WECC case, it uses PS 4 for energy storage, then the pumping and generating price is determined by MIO, not user defined nor program estimated before MIO.
- If we move to Battery model, there is option to use user defined charging and discharging prices. Normally, we do not recommend using user defined prices. If unchecked to use prices in MIO, MIO will determine the price for ES operations.

The screenshot shows a 'Battery' configuration dialog box with the following fields and values:

Generator Name:	BS8_TROUT-BESS_	Commission Date:	1 / 1 /2023
Long Name:	NA	Retirement Date:	12/31/2050
Long ID:	NA		
Bus ID:	189513	<input checked="" type="checkbox"/> In service	
Generator ID:	E8	<input checked="" type="checkbox"/> Save to Binary	
Initial Dispatch:	0	<input checked="" type="checkbox"/> Use Charge and Discharge Price for MIO	
Max Energy:	1040	MWh	
Yearly Max Energy Deteriorate Rate:	0	%	
Initial Energy:	0	MWh	

Charge Mode:

Max Recharge Load:	130	MW
Charge Ramping Rate:	7800	MW/minute
Max Charge Price:	20	\$/MWh
Charge Efficiency:	0.85	

Discharge Mode:

Max Depth Of Discharge:	100	%
Max Discharge:	130	MW
Min Discharge Price:	60	\$/MWh
Discharge Ramping Rate:	7800	MW/minute

Buttons: OK, Cancel



Median Hydro Modeling Representation

- Median Hydro Modeling Representation
 - Considering the following (Not finalized):
 - Chelan County PUD – Year 2000 representation
 - Rocky Reach
 - Rock Island
 - Douglas County PUD – Year 2020 representation
 - Wells
 - Grant County PUD – Year 2000 representation
 - Priest Rapids
 - Wanapum
 - BPA – Year 2000 representation
- PNNL will be doing comparisons with this data with the 2034 ADS case and presenting to the PCDS on June 3.



2036 ADS V1.0



2036 ADS V1.0 Updates

- Posted to PCDS Team Site
 - Updates – L&R units deleted, some unit statuses were adjusted

The screenshot shows a OneDrive interface for a folder named 'Production Cost Data Subcommittee (PCDS) Team Site'. The breadcrumb path is 'Documents > 2036 ADS Files > Version 1.1 Draft'. The folder contains three zip files:

Icon	Name
Folder icon	2036 ADS PCM V1.1 PF Units Only (1a)_Updated_2026-4-27_PF_Only_PCM.zip
Folder icon	2036 ADS PCM V1.1_BIN_Files_2026-4-27_1.zip
Folder icon	2036 ADS PCM V1.1_BIN_Files_2026-4-27_2.zip



2036 ADS V2.0



2036 ADS PCM V2.0

- Comparing 2025 L&R to 2026 L&R to PCM
 - Identified units to add, delete, modify; Working on incorporating those edits
- Generator location review for APFTF and PCDS
 - Spreadsheet has been posted on the APFTF and PCDS team sites
- WECC cleaning up generation
 - Duplicates, distributions, mapping etc.
 - Added PNNL's EIA information
 - Aligned more L&R to PF units
- Added projects:
 - Cutoff Date – May 6



Changes from 1a(1P) to 2P

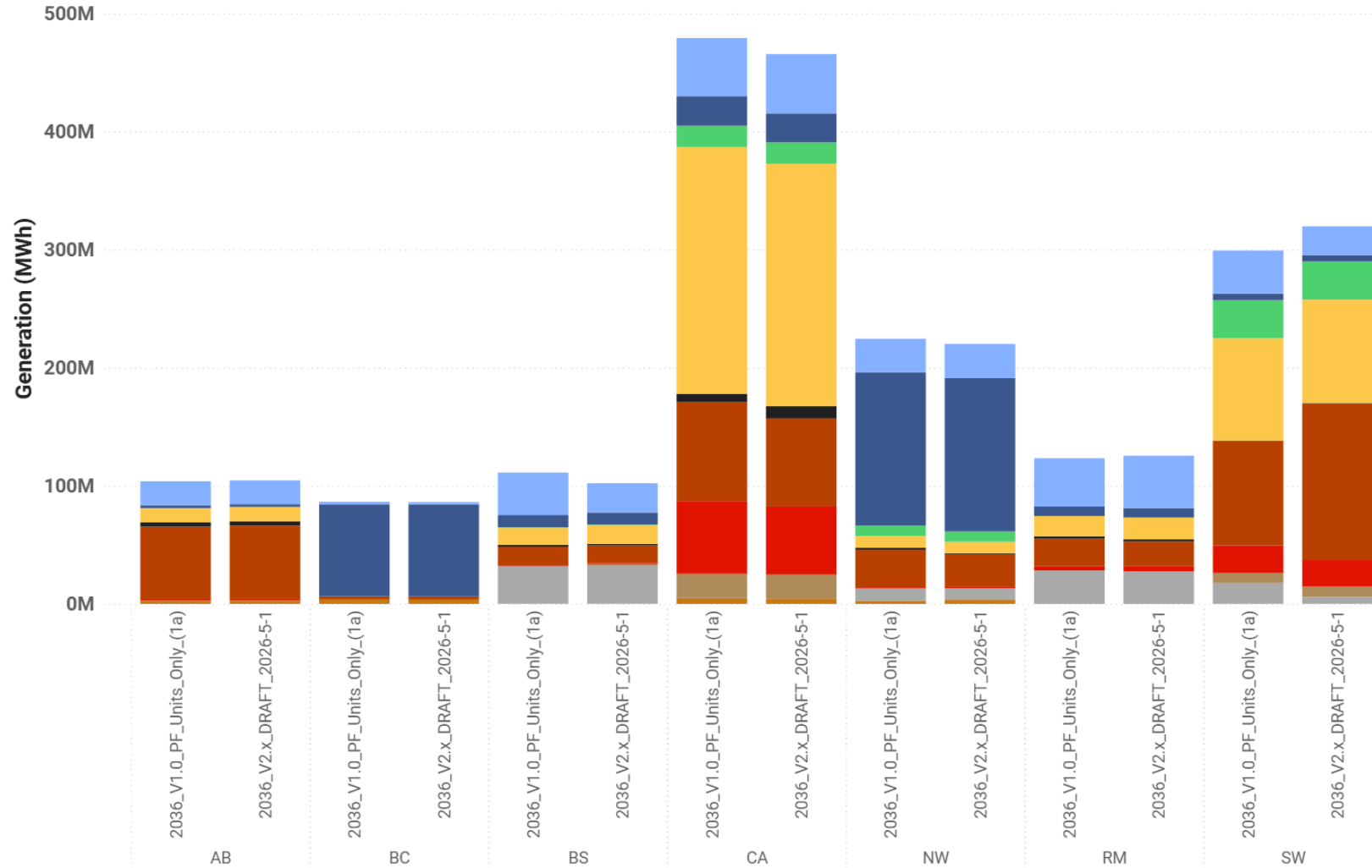
- Loads are different
- Aligned more PF units in L&R
 - Need to double-check all PF units



2036 ADS 2P-Draft

Generation by Fuel Type

Fuel Type ● Bio ● Coal ● Geothermal ● MWh ● NaturalGas ● Other ● Sun ● Uranium ● Water ● Wind

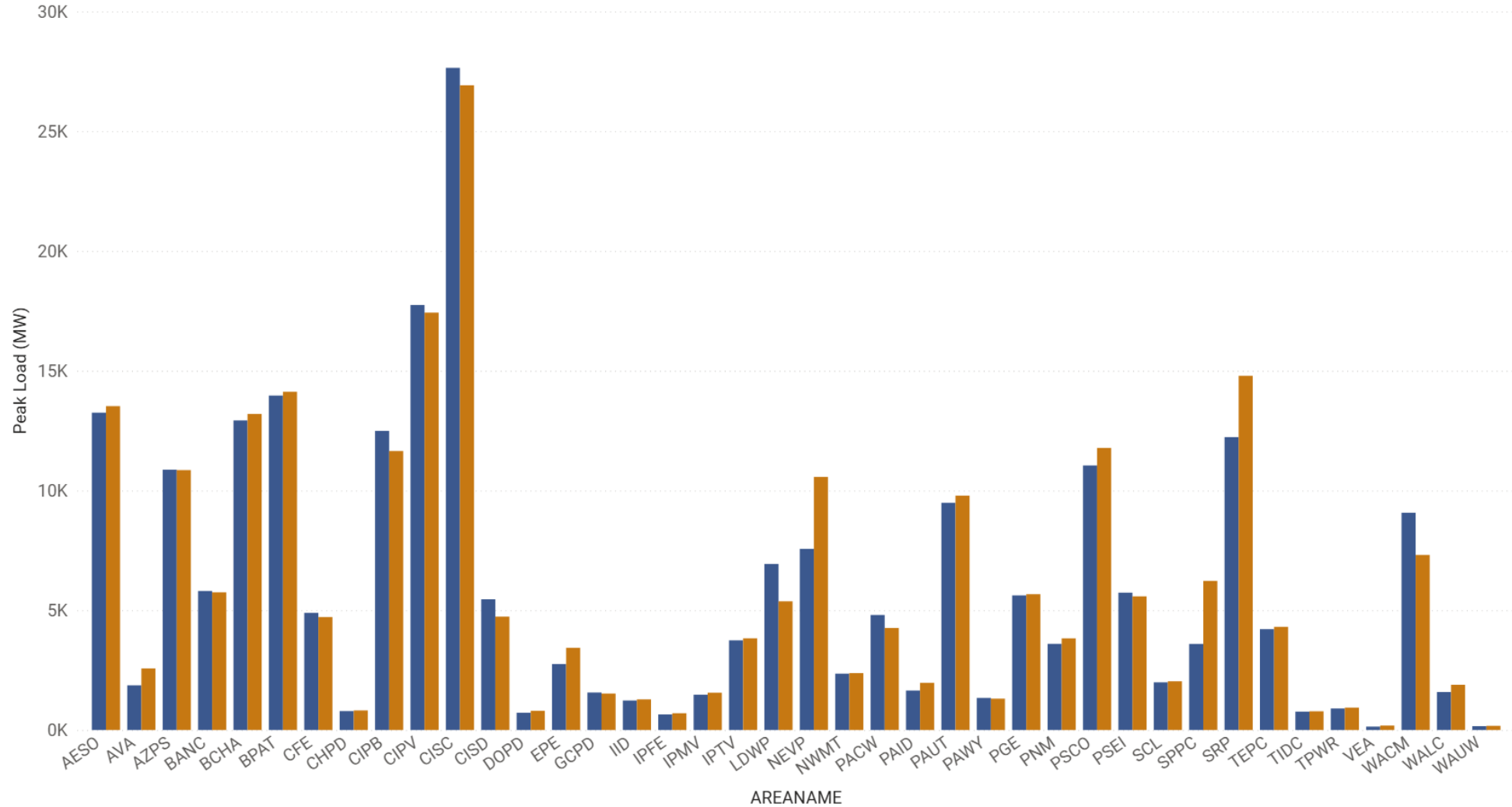




2036 ADS 2P-Draft

Peak Load by Area

CASENAME ● 2036_V1.0_PF_Units_Only_(1a) ● 2036_V2.x_DRAFT_2026-5-1

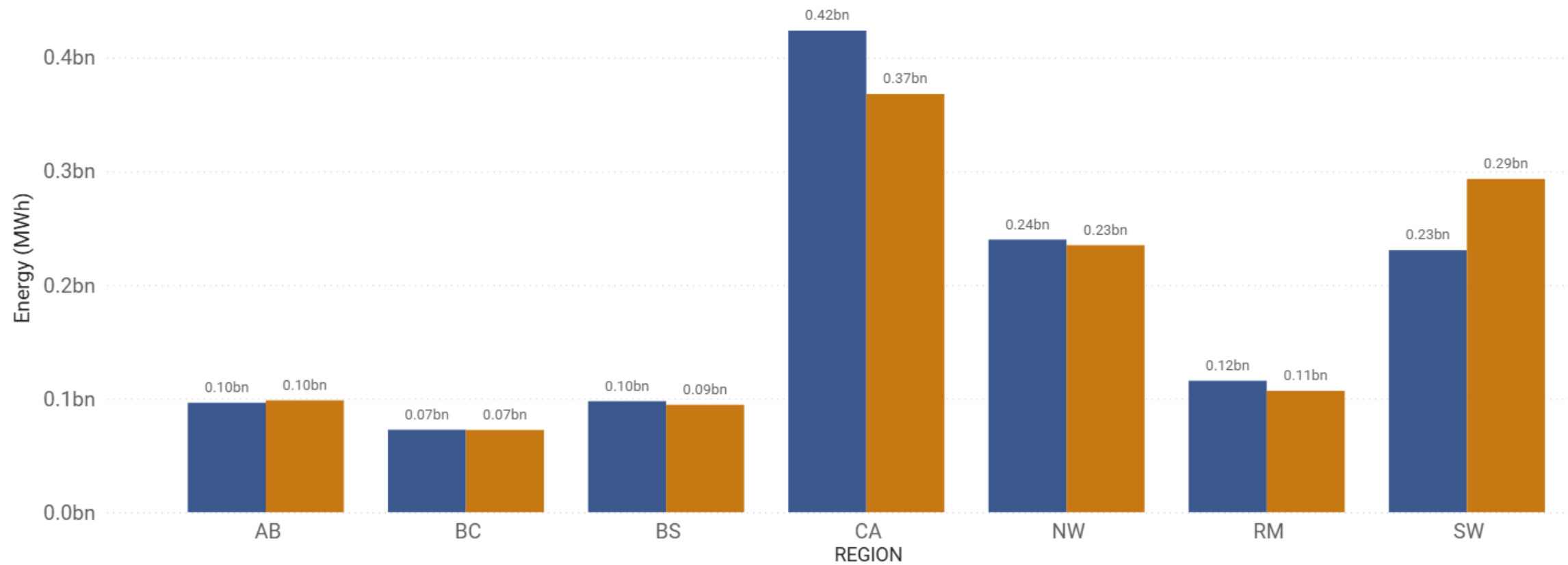




2036 ADS 2P-Draft

Annual Energy by Subregion

CASENAME ● 2036_V1.0_PF_Units_Only_(1a) ● 2036_V2.x_DRAFT_2026-5-1

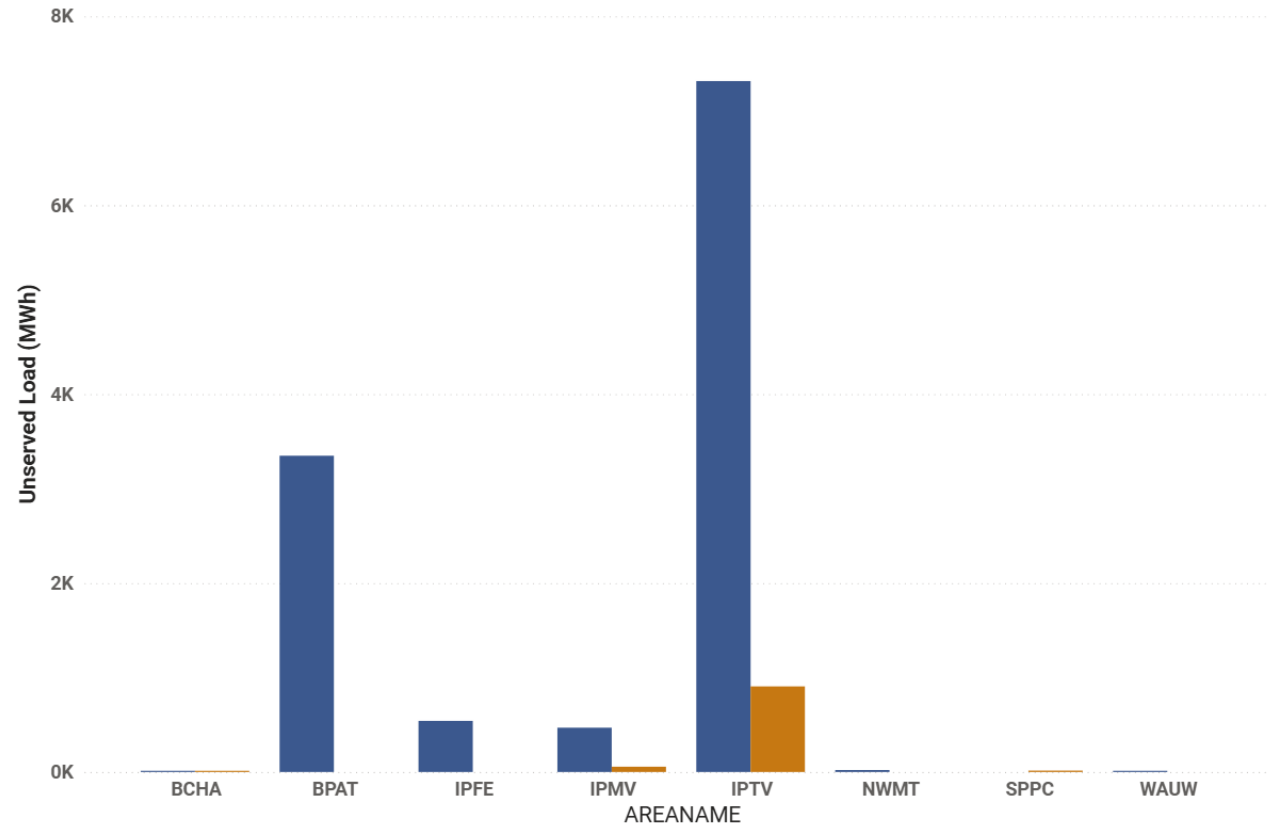




2036 ADS 2P-Draft

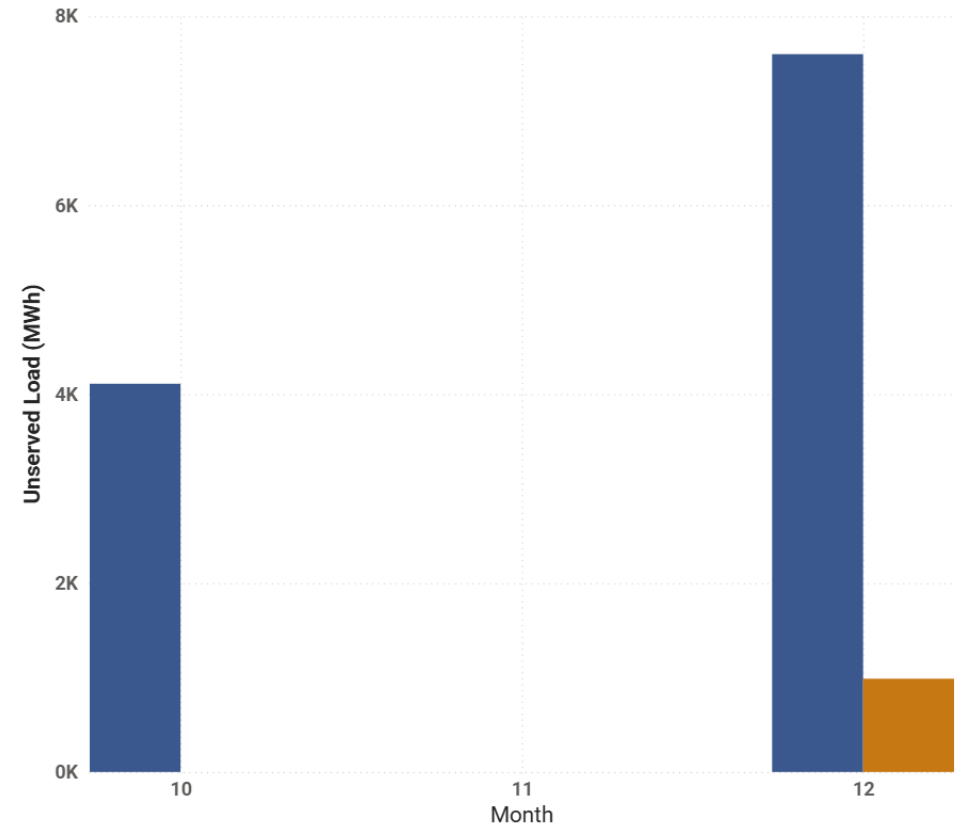
Unserved Load by Area

CASENAME ● 2036_V1.0_PF_Units_Only_(1a) ● 2036_V2.x_DRAFT_2026-5-1



Unserved Load by Month

CASENAME ● 2036_V1.0_PF_Units_Only_(1a) ● 2036_V2.x_DRAFT_2026-5-1

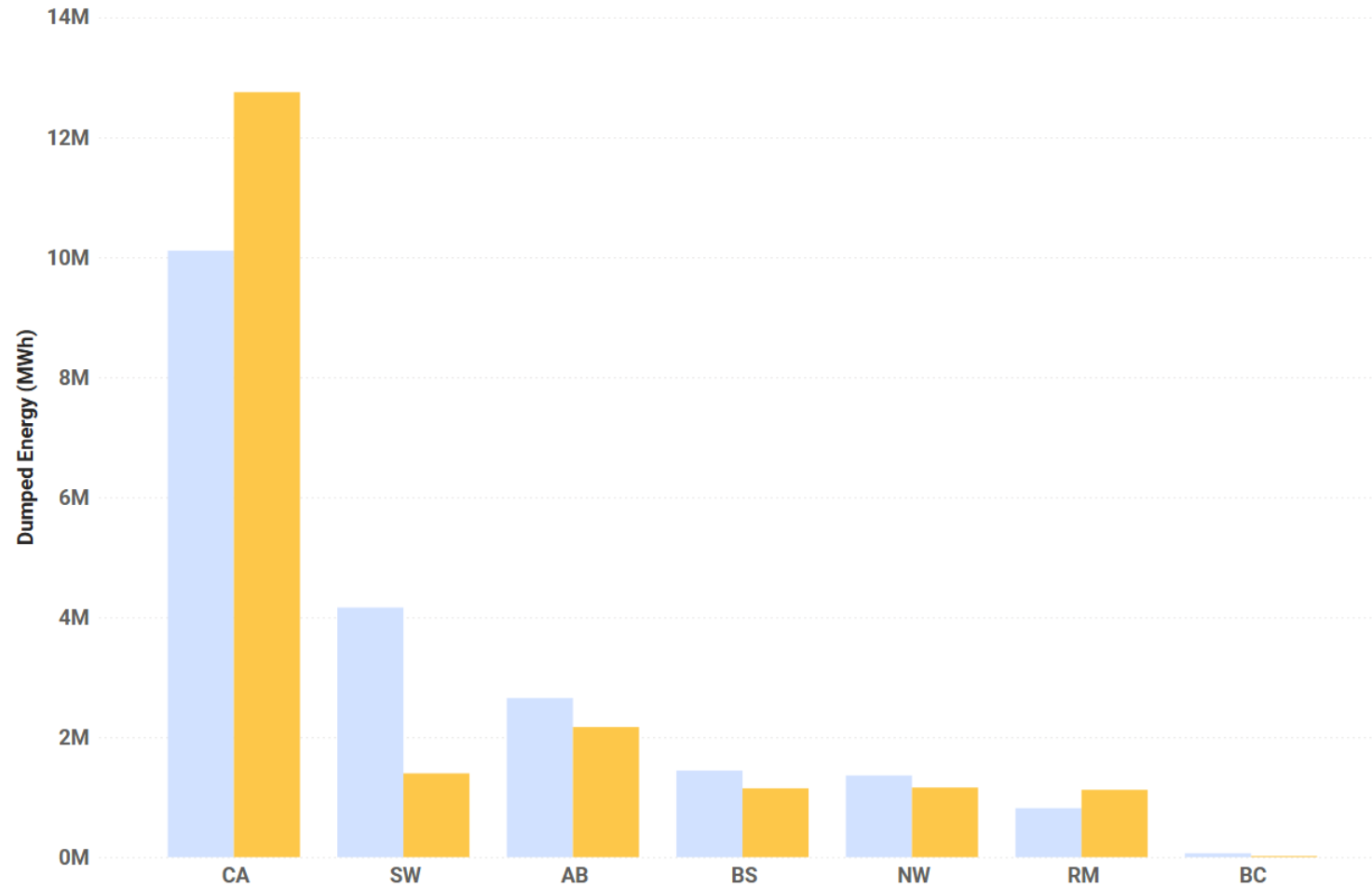




2036 ADS 2P-Draft

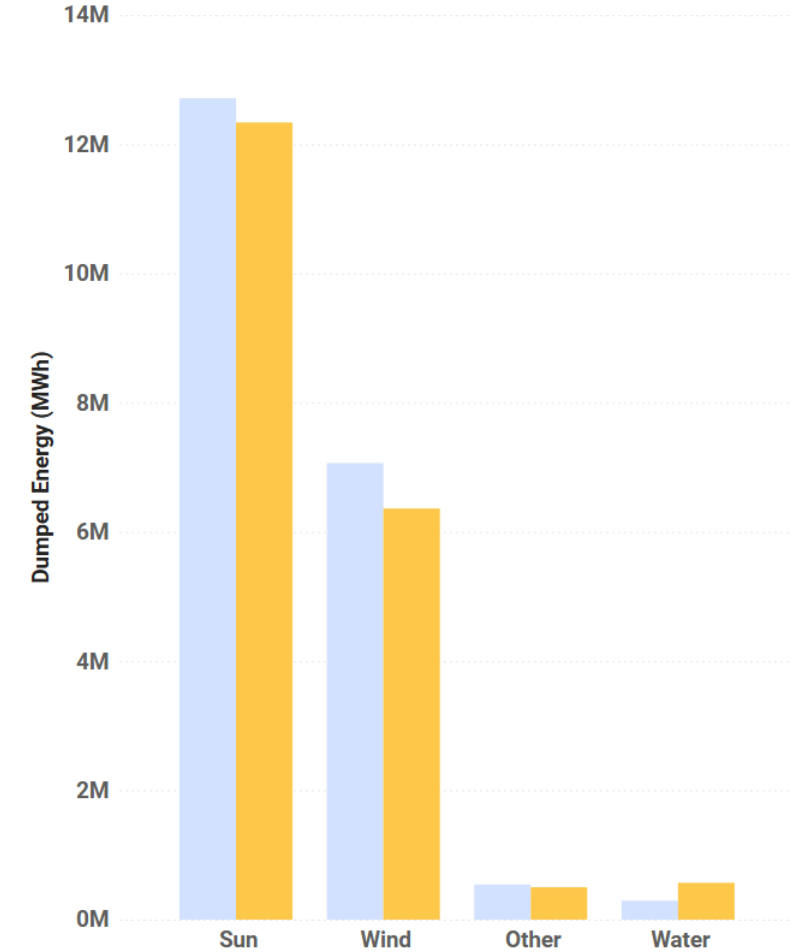
Dumped Energy by Sub Region

CASENAME ● 2036_V1.0_PF_Units_Only_(1a) ● 2036_V2.x_DRAFT_2026-5-1



Dumped Energy

CASENAME ● 2036_V1.0_PF_Units_Only_(1a) ● 2036_V2.x_DRAFT_2026-5-1



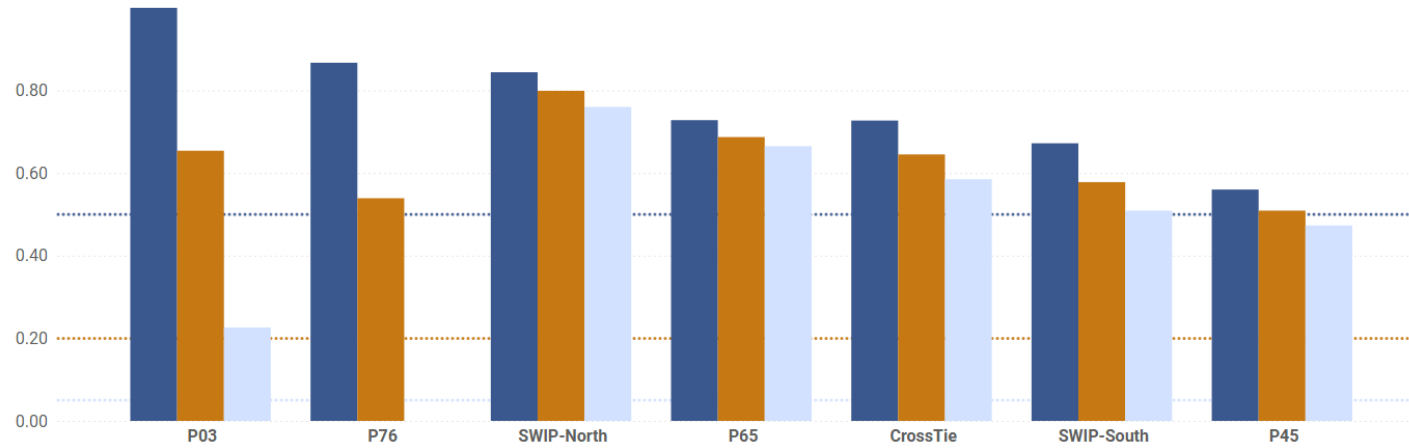


2036 ADS 2P-Draft

Path Utilization

2036_V1.0_PF_Units_Only_(1a)

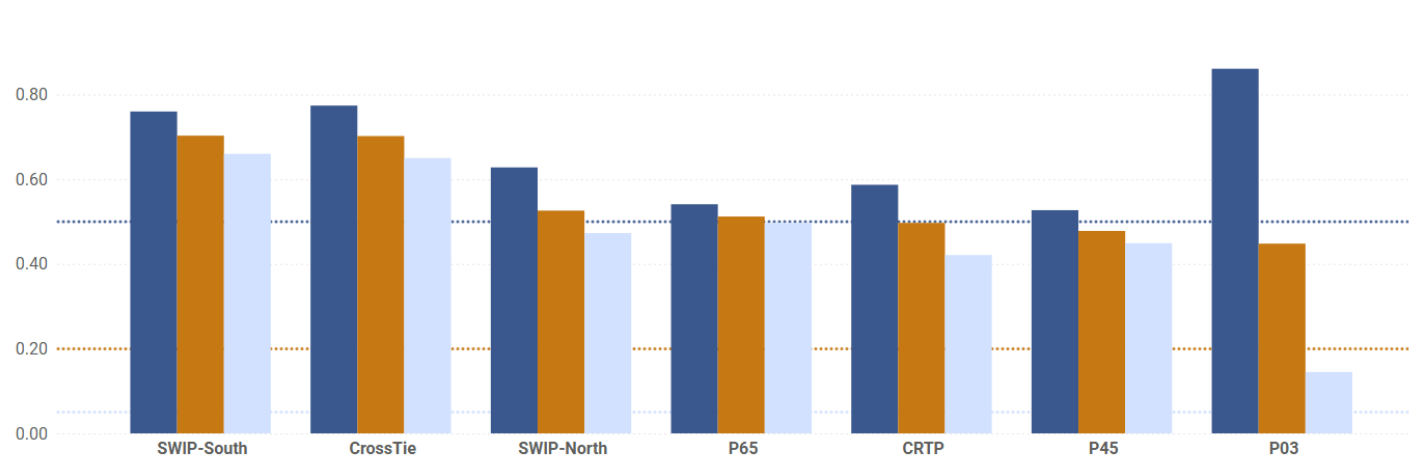
● U75 ● U90 ● U99



Path Utilization

2036_V2.x_DRAFT_2026-5-1

● U75 ● U90 ● U99

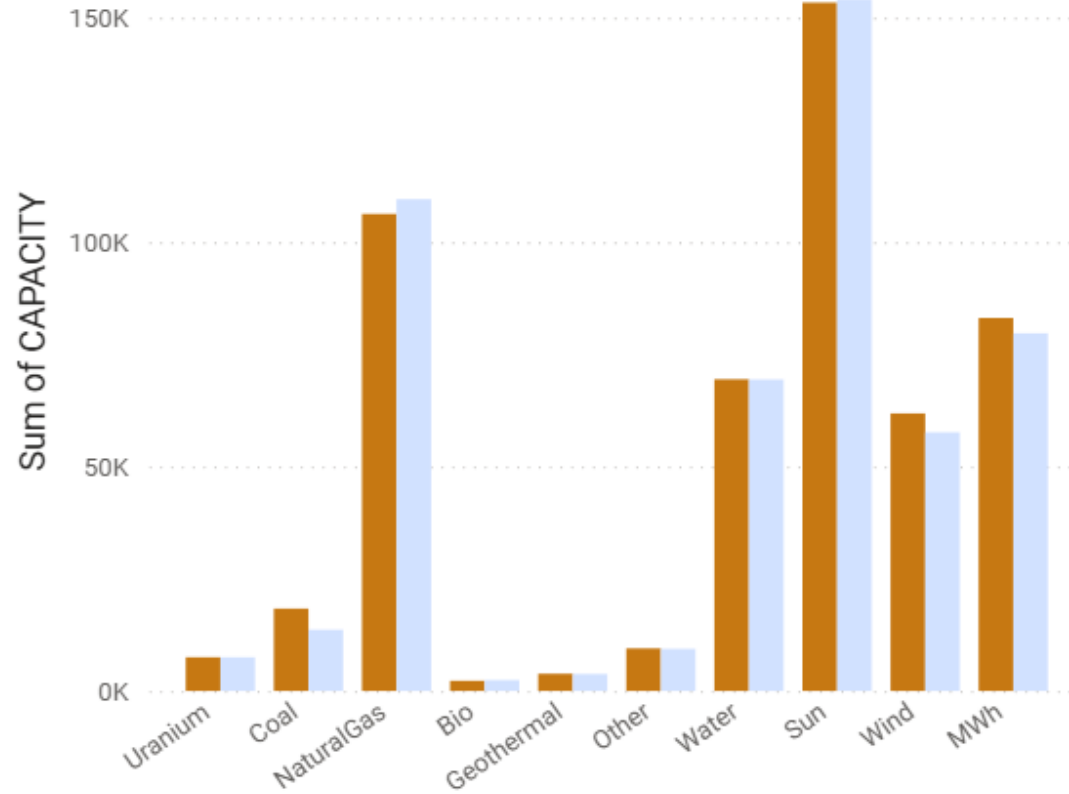




2036 ADS 2P-Draft

Sum of CAPACITY by FUELTYPE and CASENAME

CASENAME ● 2036_V1.0_PF_Units_Only_(1a) ● 2036_V2.x_DRAFT_2026-5-1



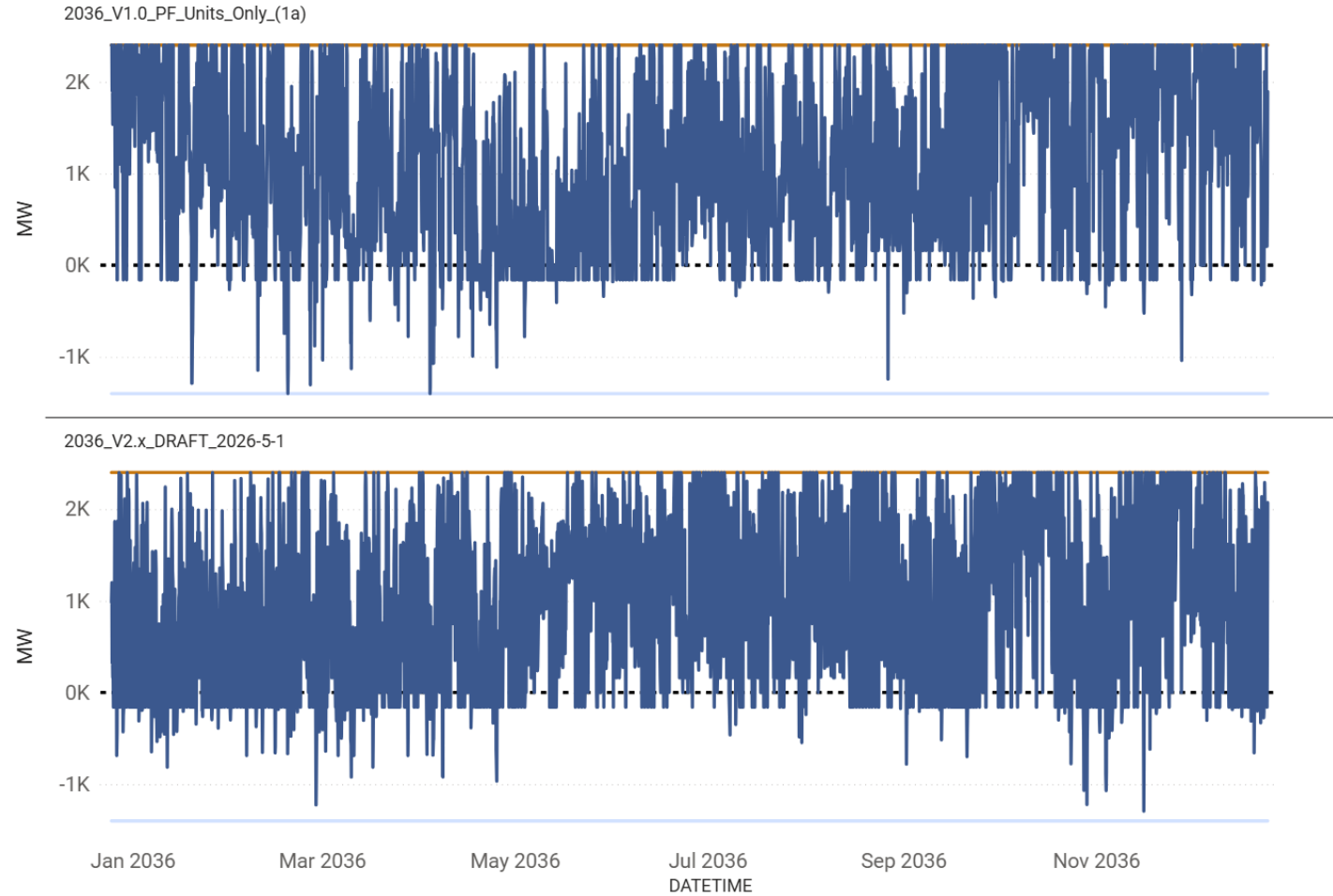
CASENAME	25LnR Existing	25LnR T1	25LnR T2	Existing	T1	T2	T3	Total
2036_V1.0_PF_Units_Only_(1a)				473.3K	26.7K	10.7K	4.6K	515.3K
2036_V2.x_DRAFT_2026-5-1	0.7K	3.3K	0.1K	459.1K	30.3K	9.4K	3.7K	506.7K



2036 ADS 2P-Draft

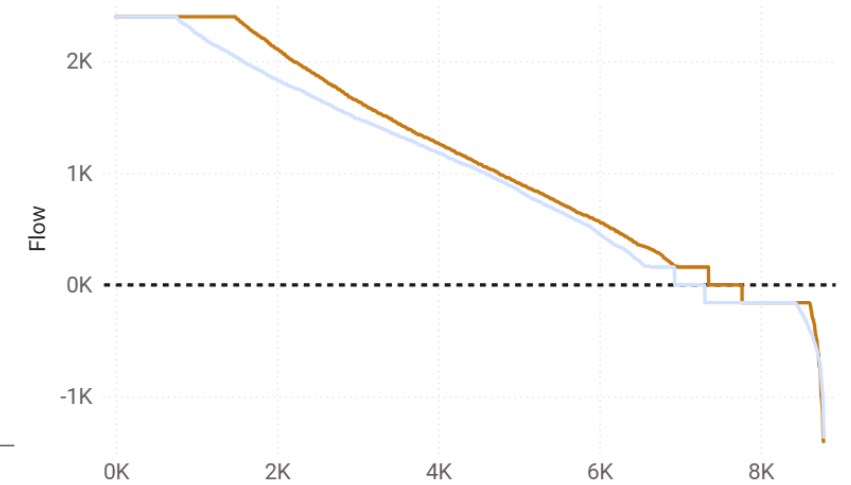
P27 Intermountain Power Project DC Line NE-SW

● MAX_LIMIT ● MIN_LIMIT ● FLOW



P27 Intermountain Power Project DC Line NE-SW

CASENAME ● 2036_V1.0_Pf_Units_Only_(1a) ● 2036_V2.x_DRAFT_2026-5-1



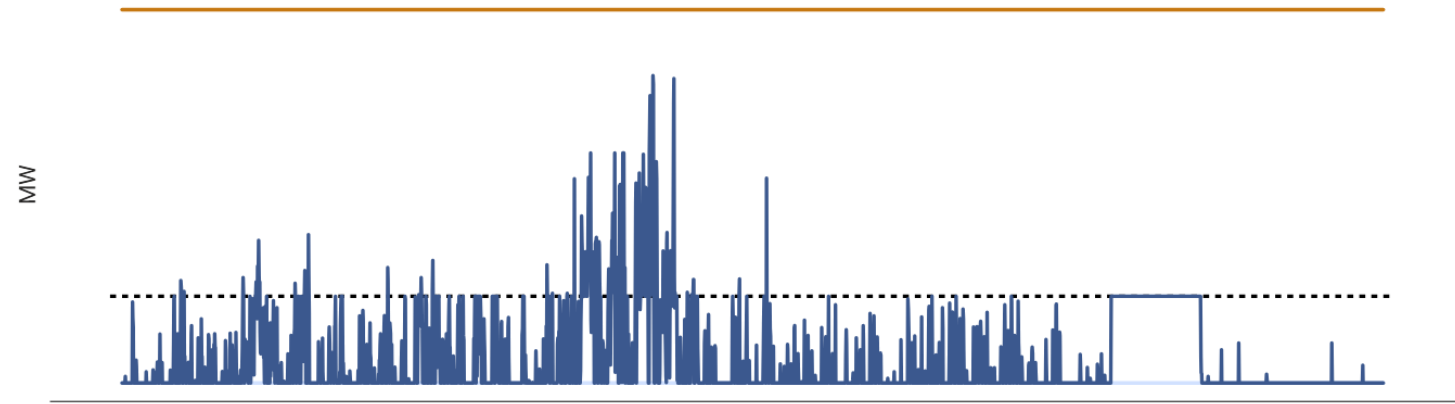


2036 ADS 2P-Draft

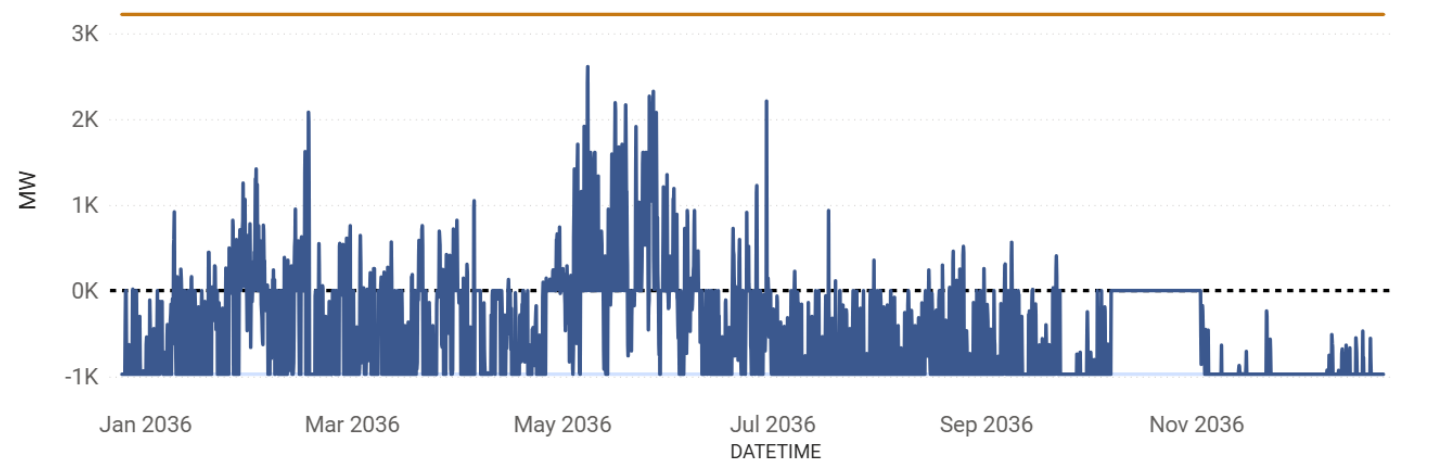
P65 Pacific DC Intertie (PDCI) N-S

● MAX_LIMIT ● MIN_LIMIT ● FLOW

2036_V1.0_PF_Units_Only_(1a)

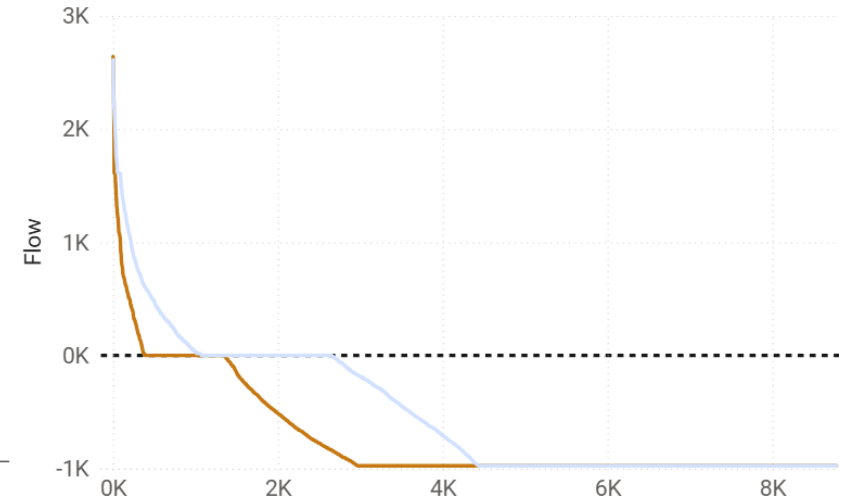


2036_V2.x_DRAFT_2026-5-1



P65 Pacific DC Intertie (PDCI) N-S

CASENAME ● 2036_V1.0_PF_Units_Only_(1a) ● 2036_V2.x_DRAFT_2026-5-1

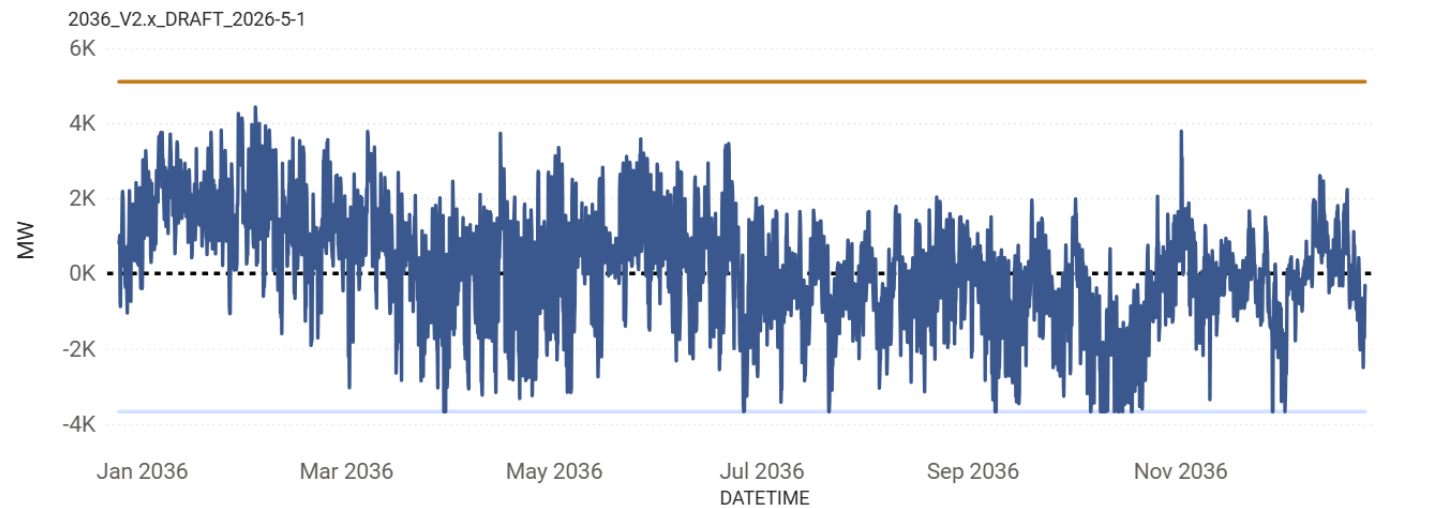
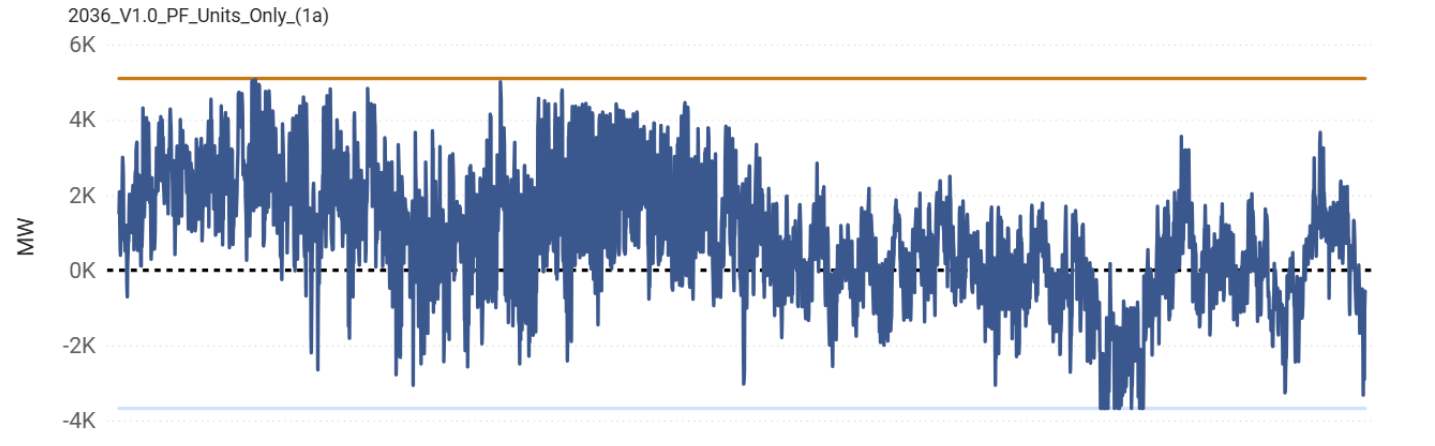




2036 ADS 2P-Draft

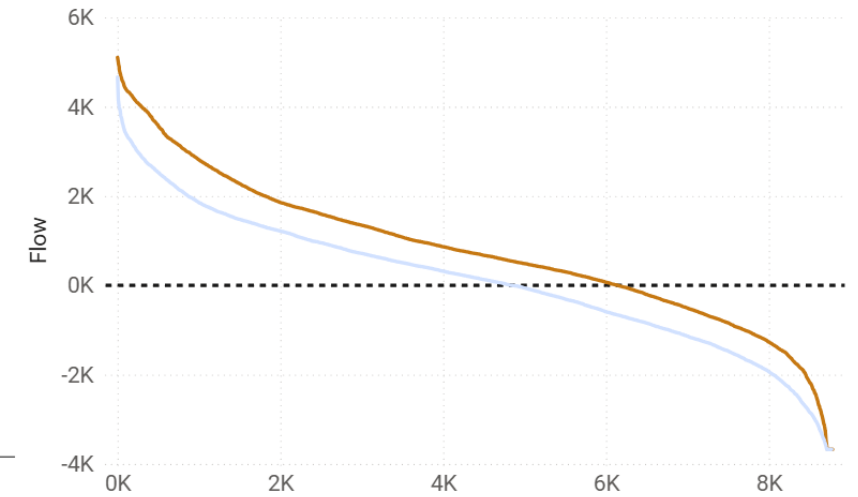
P66 COI N-S

● MAX_LIMIT ● MIN_LIMIT ● FLOW



P66 COI N-S

CASENAME ● 2036_V1.0_PF_Units_Only_(1a) ● 2036_V2.x_DRAFT_2026-5-1

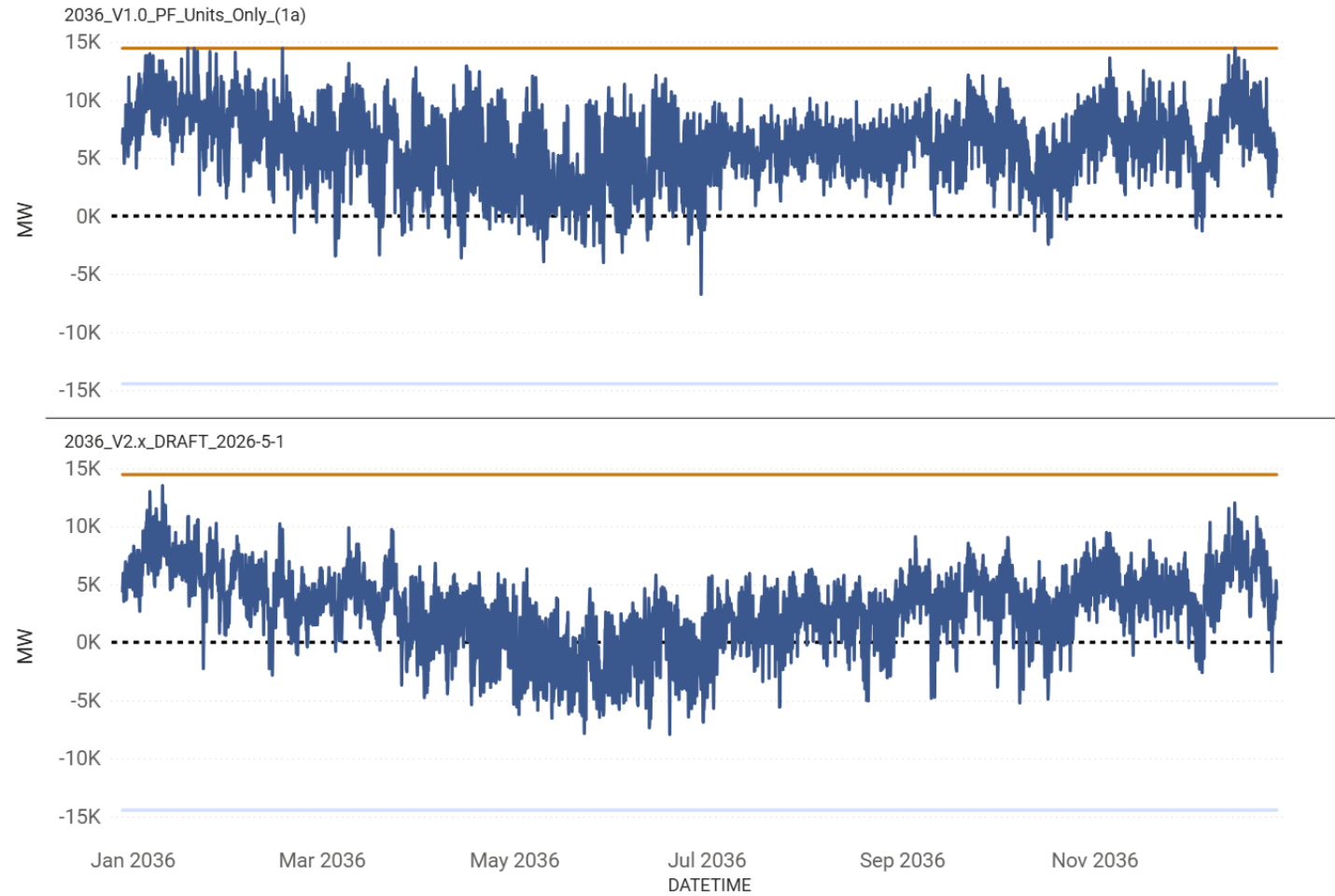




2036 ADS 2P-Draft

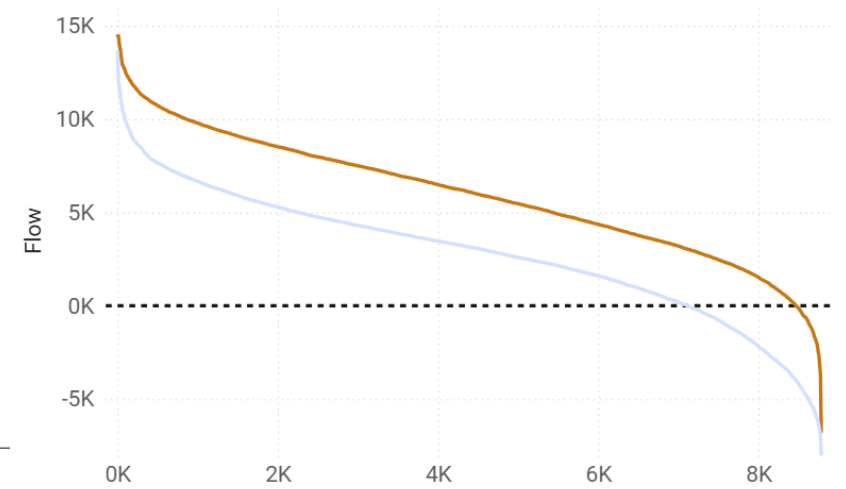
P46 West of Colorado River (WOR) E-W

● MAX_LIMIT ● MIN_LIMIT ● FLOW



P46 West of Colorado River (WOR) E-W

CASENAME ● 2036_V1.0_PF_Units_Only_(1a) ● 2036_V2.x_DRAFT_2026-5-1





2036 ADS V2.0 Definitions

- 2L – L&R Based, Only LnR units enabled
 - “2036 ADS PCM V2.0 LnR (2L)”
- 2P – Only PF enabled
 - “2036 ADS PCM V2.0 PF Only (2P)”
- 2PL – PF units enabled with some L&R units turned on to relieve USE
 - “2036 ADS PCM V2.0 PF Only with L&R for USE (2PL)”



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