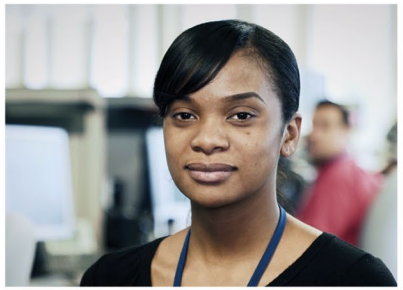
2027 Integrated Resource Plan
Public Input Meeting
December 17, 2025



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Purpose Statement

The primary focus is the customer

- Transparency
  - Assumptions & constraints
- Completeness
  - Topics discussed early and often
- Dynamic planning and implementation
- Agnostic to technology
  - Cost driver
  - Reliability driver

Multi-State Approach

- Stakeholder feedback for quality and relevance
- Delivery milestones follow the most restrictive state timing
- Abide by all state policies

Agenda

– This meeting will be recorded and made publicly available –

November 12 Schedule*	Agenda
9:00am – 9:15am	Introduction
9:15am – 9:45am	Follow-up Discussion
9:45am-10:30am	Stakeholder Feedback
10:30am –11:00am	Modeling and Assumptions
11:00am-11:30am	Inputs
	Load Forecast
	Price Curve
	Qualifying Facility Renewals
11:30am-12:15pm	Break
12:15pm-1:00pm	Transmission Modeling Overview
	Grid Enhancing Technologies Overview (GETs)
1:00pm –1:30pm	Supply-side Resources
1:30pm-2:15pm	
2:15pm-2:30pm	CPA Update
2:30pm-2:45pm	Distributed Generation Study Overview
2:45pm – 3:00pm	Next Steps / Wrap-up

* Timing and arrangement are approximate and subject to change.

Follow-up Discussion

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Procurement

- The 2025 IRP indicated significant resource needs on the West side of the system. PacifiCorp issued two RFPs in Oregon and one in Washington.
- The 2025 IRP did not indicate a near-term need on the East side.
- Various arenas in Utah offer opportunities for PacifiCorp to acquire new resources including the URC RFP (24-025-55), SB 132, Schedule 32 (14-035-T02), Schedule 34 (20-035-37) and Schedule 37 (17-035-T07).
- As directed by the Utah Commission in Docket No. 25-025-52, PacifiCorp will “include a detailed explanation in its next IRP Update of the analysis and actions it undertook to evaluate and pursue any opportunities to procure needed resources that qualified for the expiring tax credits.”

Stakeholder Feedback

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Stakeholder Feedback Form Update

Status

- Nine feedback forms submitted to date
- Feedback forms can be located at: IRP Stakeholder Feedback (pacificpower.net)
- Depending on the type and complexity of the feedback, responses may be provided in a variety of ways including, but not limited to, a written response, a follow-up conversation, or incorporation into subsequent public-input meeting material
- Generally, written responses are provided with the feedback form and posted online at the link above

HB 2021 Modeling

- Stakeholders have asked PacifiCorp to use an annual emissions constraint to model HB 2021 compliance

2030	Emissions (a)	Energy (b)	Rate (c) = (a) / (b)	Reduction
Category	**MT CO_2e (000s)**	**GWh**	**MT CO_2e / MWh**	**%**
Coal	0	0	0.000	
Coal to Gas Conversion	64	100	0.637	
Natural Gas	583	1,488	0.392	
Existing	0	5,788	0.000	
Proxy	0	5,929	0.000	
Sub-total	***647***	***13,305***	***0.049***	
Market (System)	786	1,837	0.428	
Market (OR Energy Shortfall)	0	0	0.000	
Total	**1,433**	**15,142**	**0.095**	
Retail Sales w/ 2% Losses	**1,400**	**14,794**	**0.095**	84.4%
2030 Target 80% Reduction	1,799		**0.122**	80.0%

The HB 2021 emissions compliance position includes imputed emissions

PLEXOS Annual Emissions Constraint

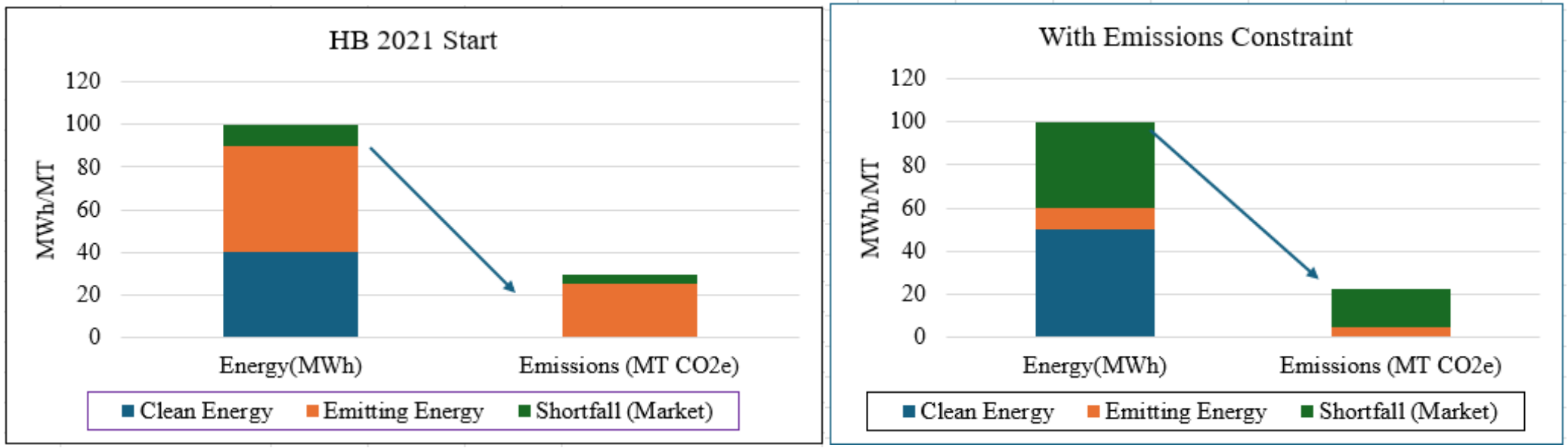
- It is possible to set up annual emissions constraints in PLEXOS…

Collection	Parent Object	Child Object	Property	Value	Data File	Units	Band
Emissions	System	OR_CE_GHG	Max Production Year	1,799,000		ton	1
Emission.Generators	OR_CE_GHG	GCV.EX.NTN._.___.Naughton 3 OR	Production Rate	XXXX		lb/MWh	

- But this does not include imputed emissions…

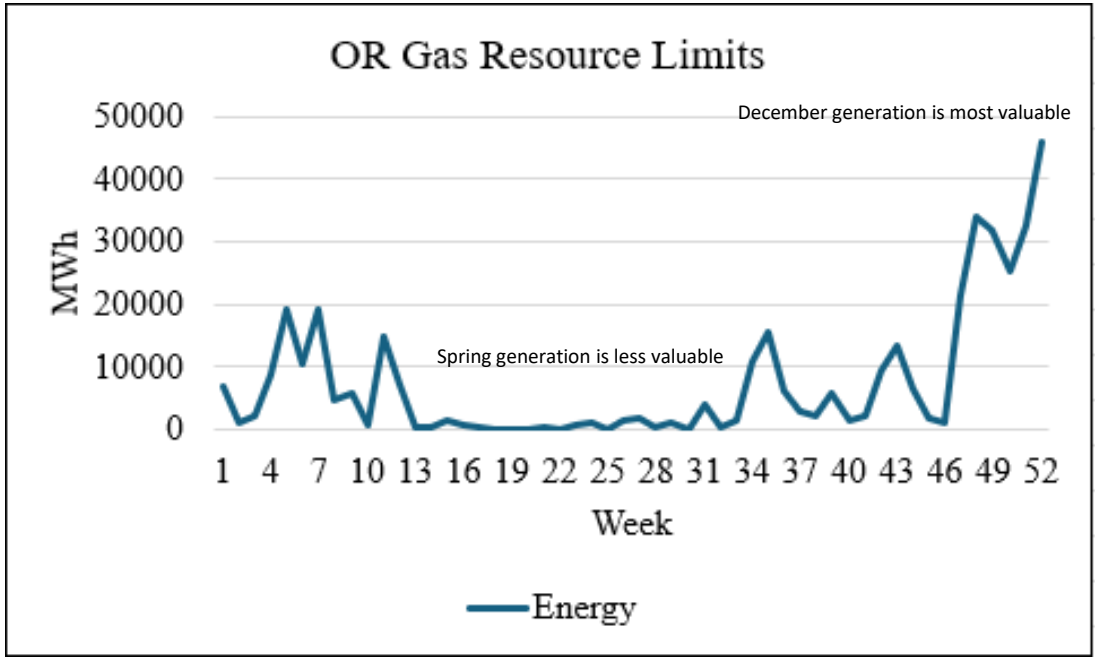
- Reducing ODEQ-calculated emissions requires that we (a) reduce raw emissions from gas generation and market purchases and (b) increase non-emitting generation to avoid imputed emissions

Example: Annual Emissions Constraint



Constraining emitting energy is necessary but does not guarantee compliance

HB 2021 Compliance in the Update



- Weekly generation limits calculated based on the value of energy in 2035
- Higher limit means that generation in a given week is more valuable

- We plan to continue to incentivize the model to (a) reduce emitting dispatch and (b) increase clean generation
- In the Clean Energy Plan, we calculated resource-specific weekly emissions constraints for the ST Model
- Why use resource-specific weekly emission constraints instead of an annual emissions constraint?
  - The ST model dispatches weekly
  - Not all emissions are equally valuable

Modeling and Assumptions

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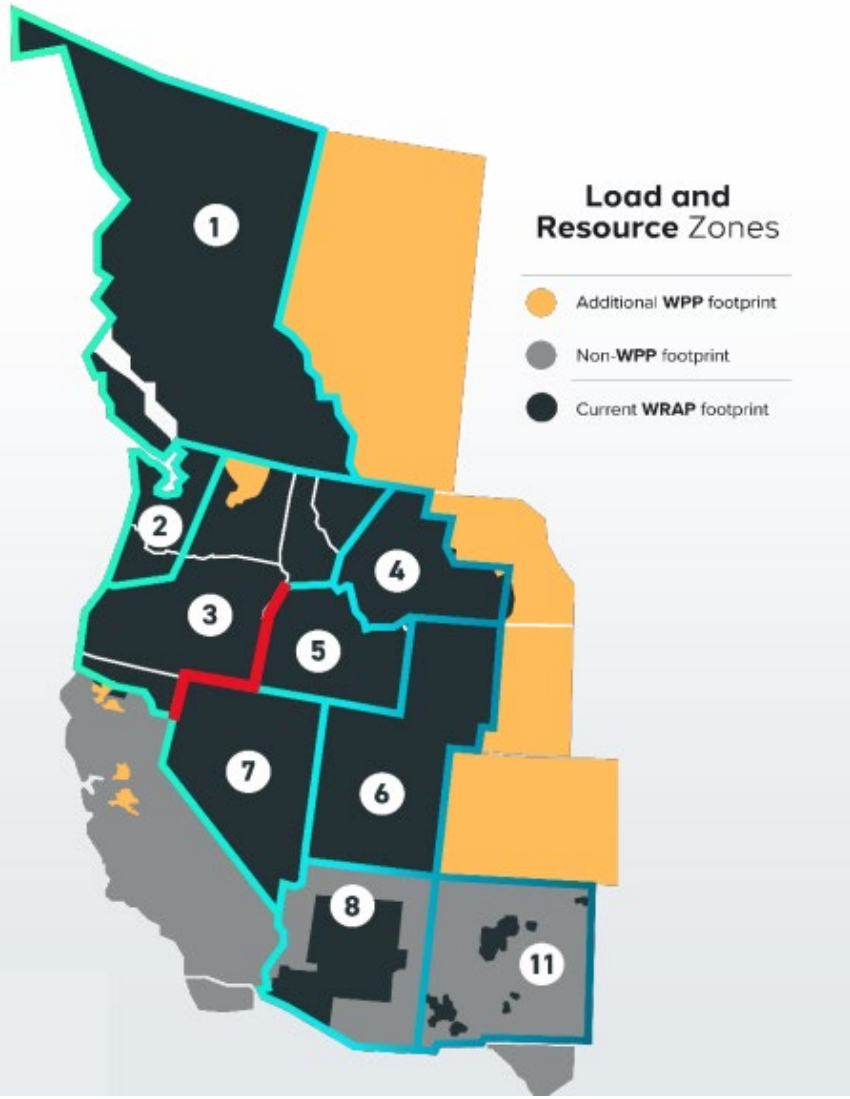
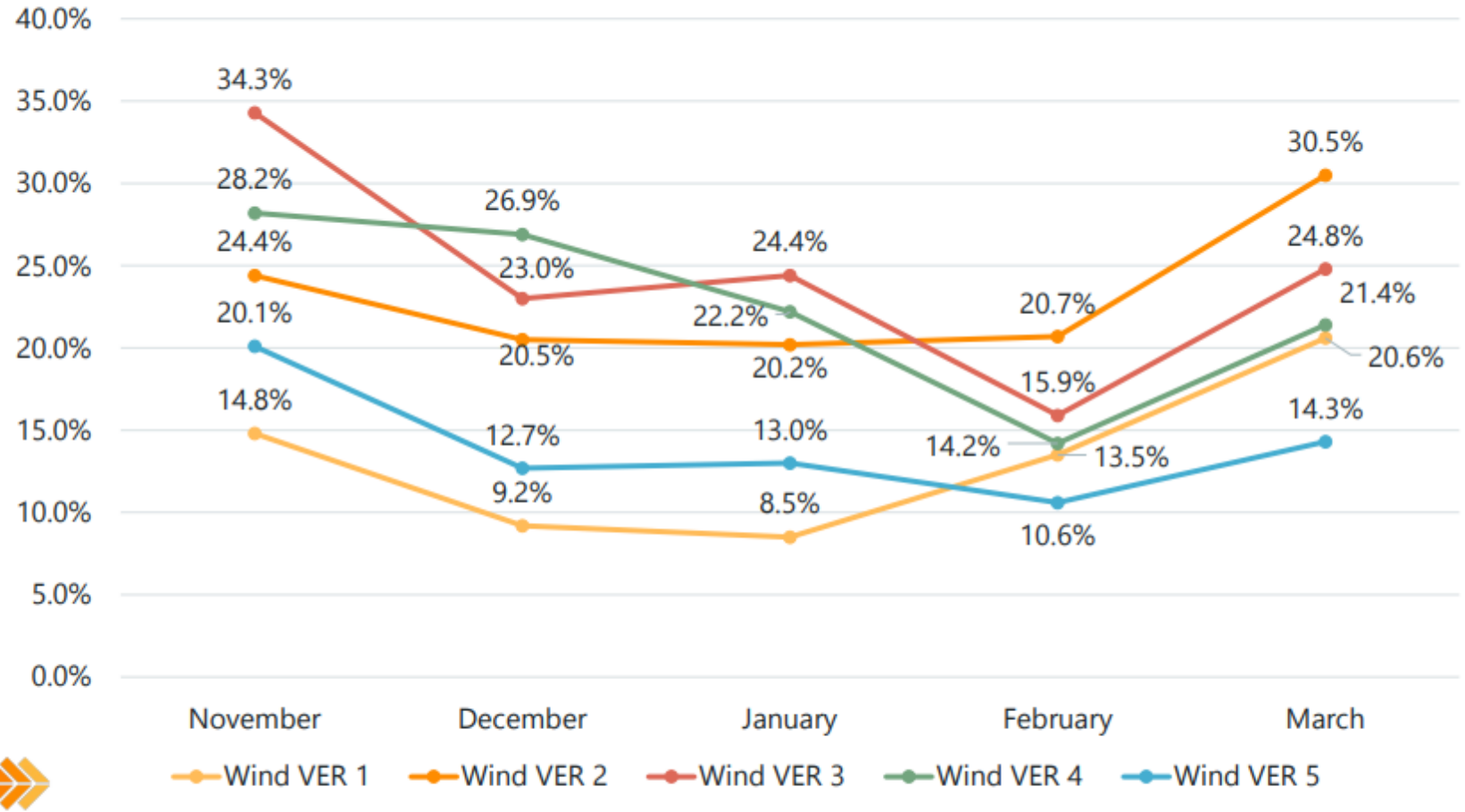
WRAP Metrics

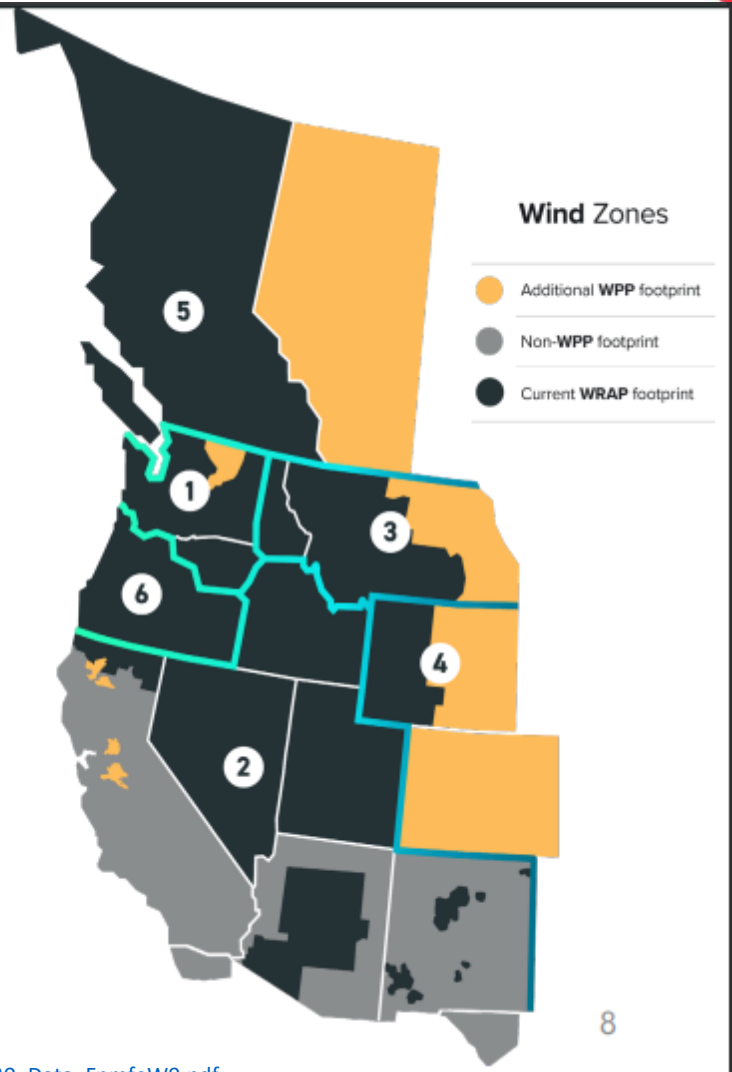


- WRAP performs loss of load expectation (LOLE) studies to forecast planning reserve margins PRMs) and effective load carrying capability/qualifying capacity contribution values by resource type
- PacifiCorp has used WRAP capacity contribution values for our existing resources
- PacifiCorp has also used WRAP zonal average contributions as part of its forecasted future capacity contributions for proxy resources

The WRAP Winter 2026-2027 presentation is available online at https://www.westernpowerpool.org/private-media/documents/2025-06-25_Webinar_Winter_2026-2027_and_2029-2030_Data_FnmfeW9.pdf

Example: WRAP Winter Wind ELCC





WRAP

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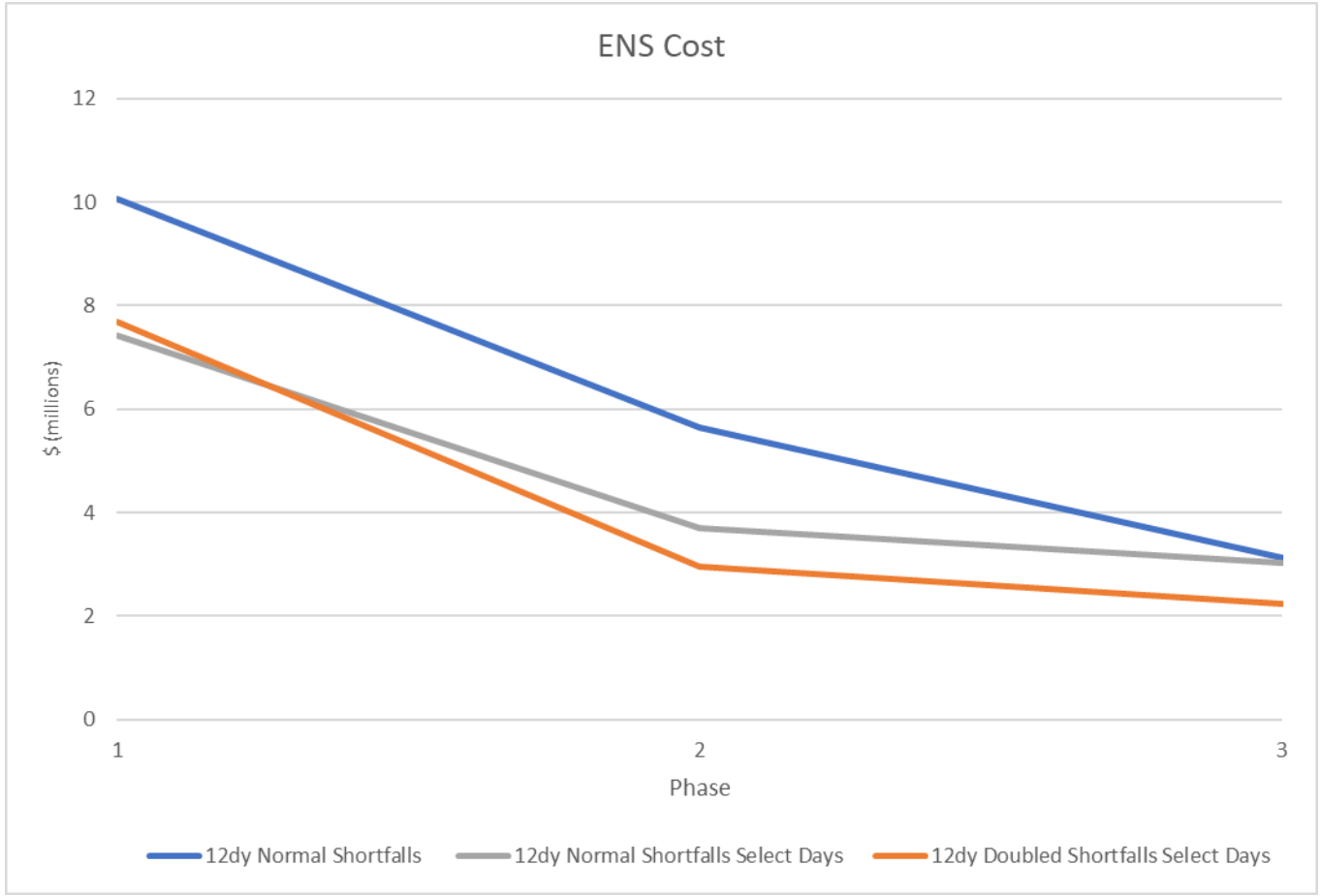
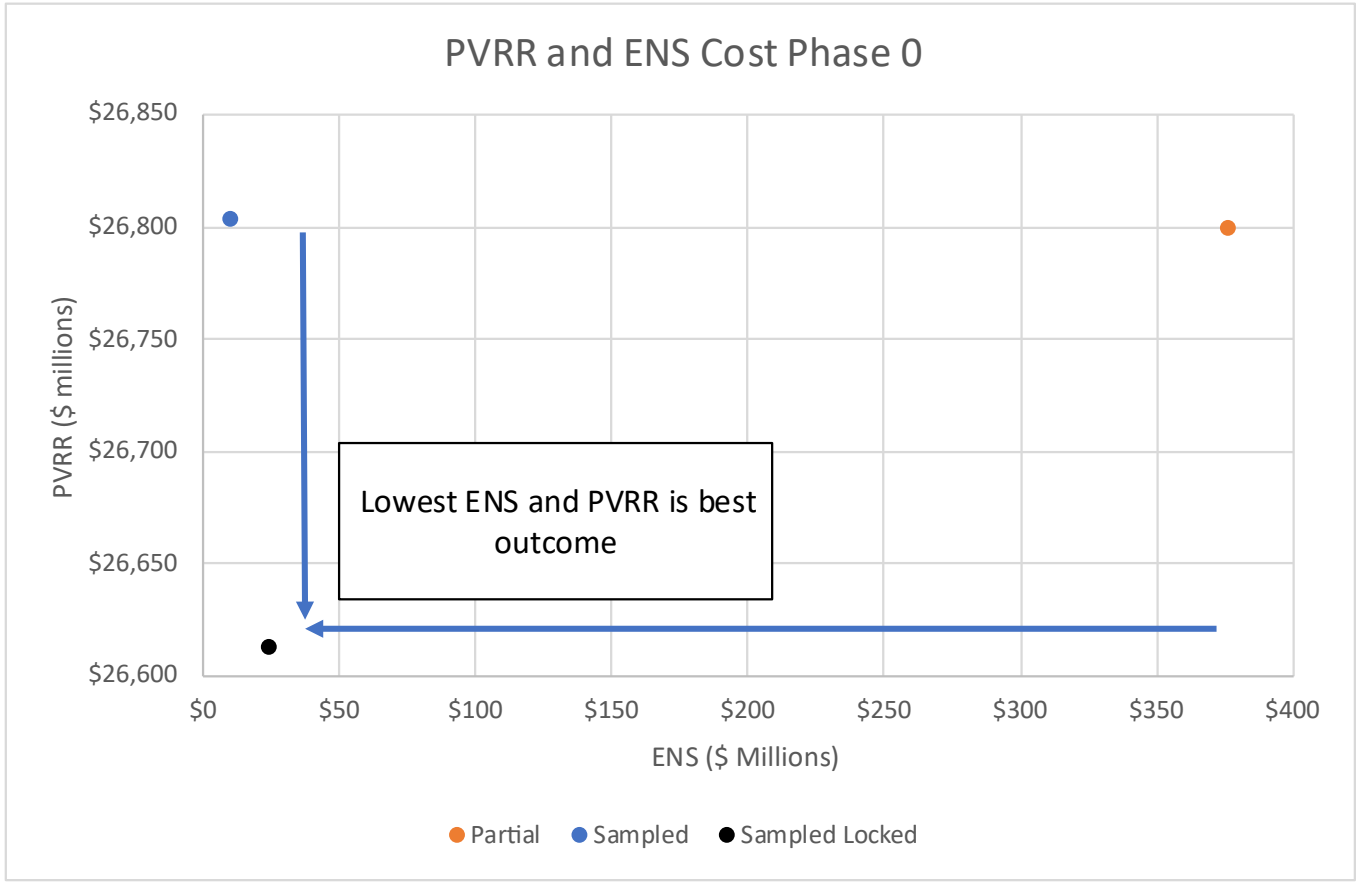
LT Sampled Chronology Shortfalls

- As with partial chronology, initial LT runs have a significant volume of unserved energy
- Initial methodologies for adding shortfalls did not sufficiently reduce unserved energy
- After testing many setups for applying shortfalls in LT sampled chronology runs and different methods for selecting sampled days, PacifiCorp identified a methodology that achieved a reasonable level of unserved energy in the ST model



LT Sampled Chronology Shortfalls

- The dots represent the system cost and unserved energy for initial phase zero portfolios, before granularity or reliability adjustments are applied
- An LT model using sampled chronology selects a portfolio that is both lower cost and more reliable than an equivalent LT model that uses partial chronology
- PacifiCorp intends to use sampled chronology for endogenous modeling in the 2025 IRP Update. However, all PLEXOS model settings are subject to change as dictated by our evolving experience with PLEXOS



Inputs

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Load Forecast

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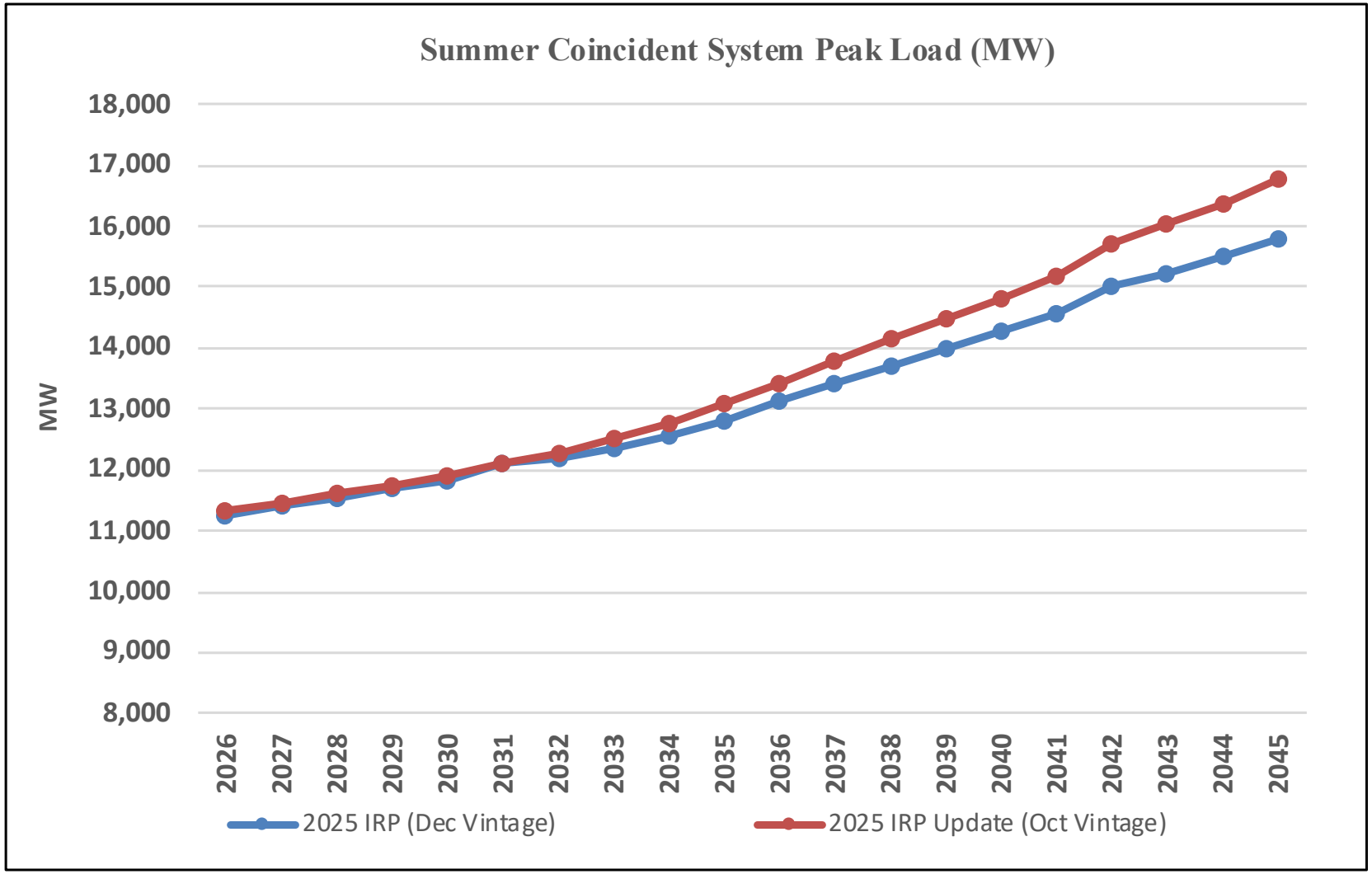
Load Forecast Comparison



Price Curve

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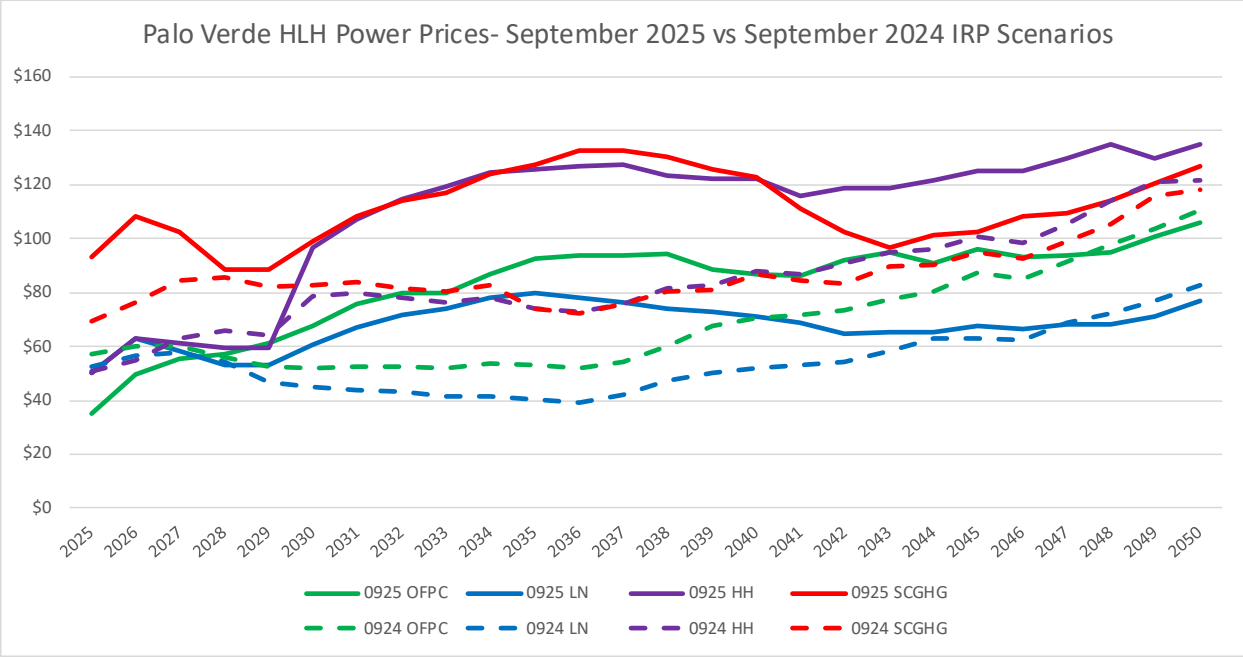
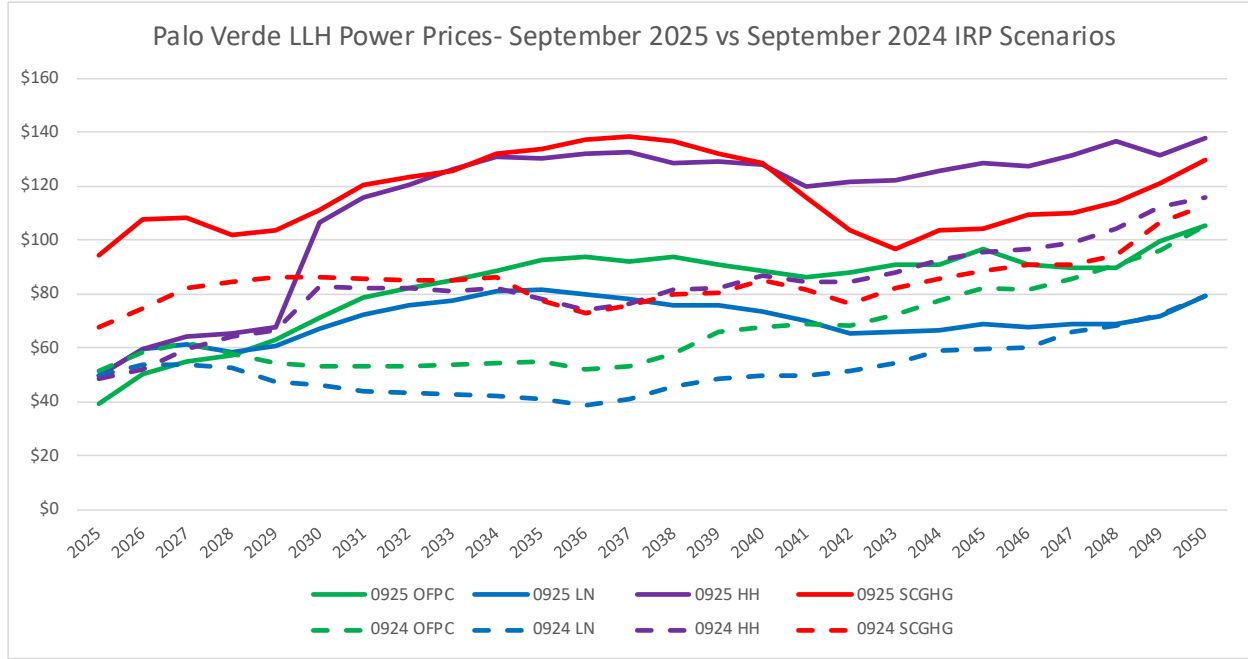
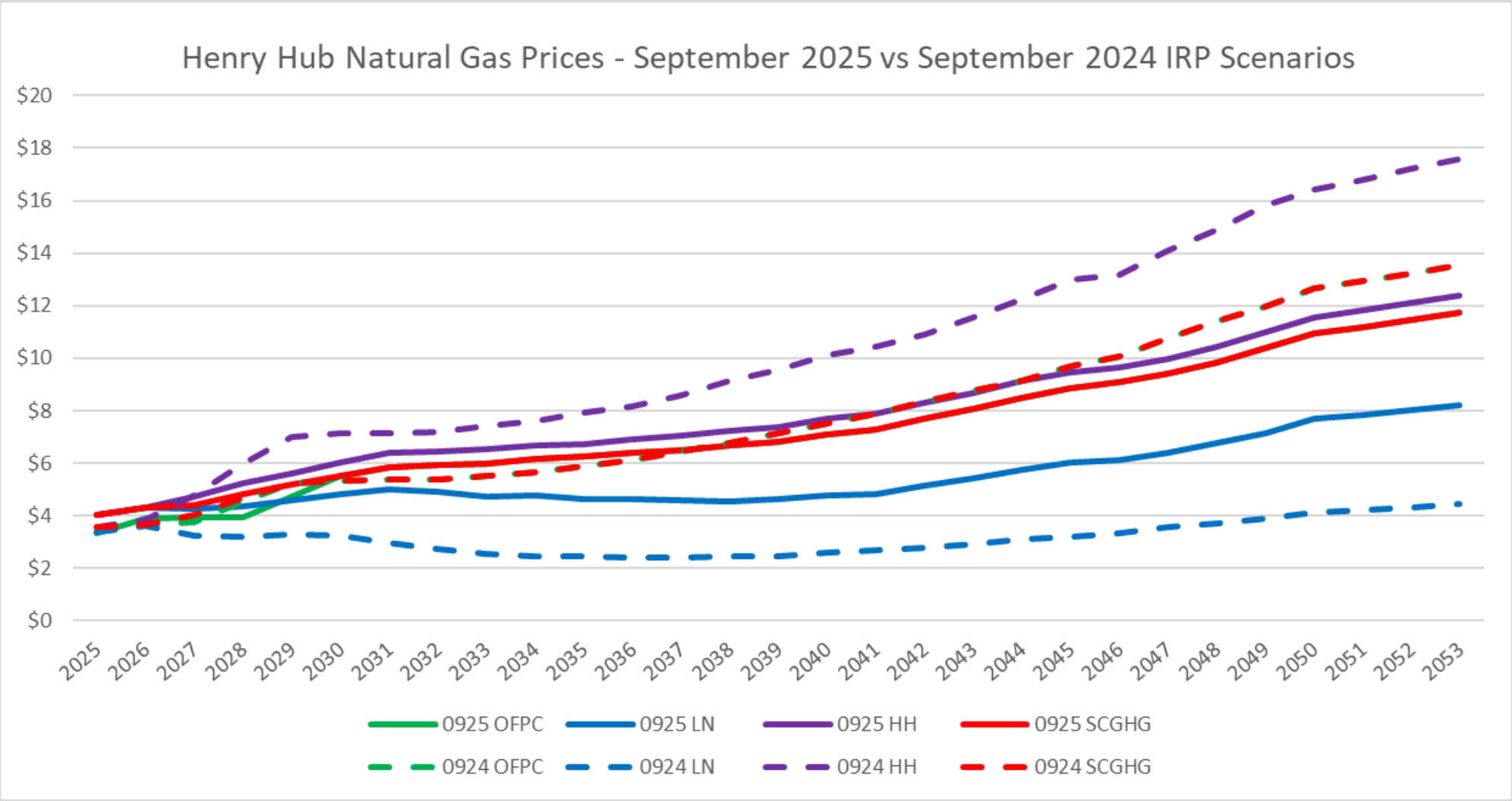
Price Curve Development Update

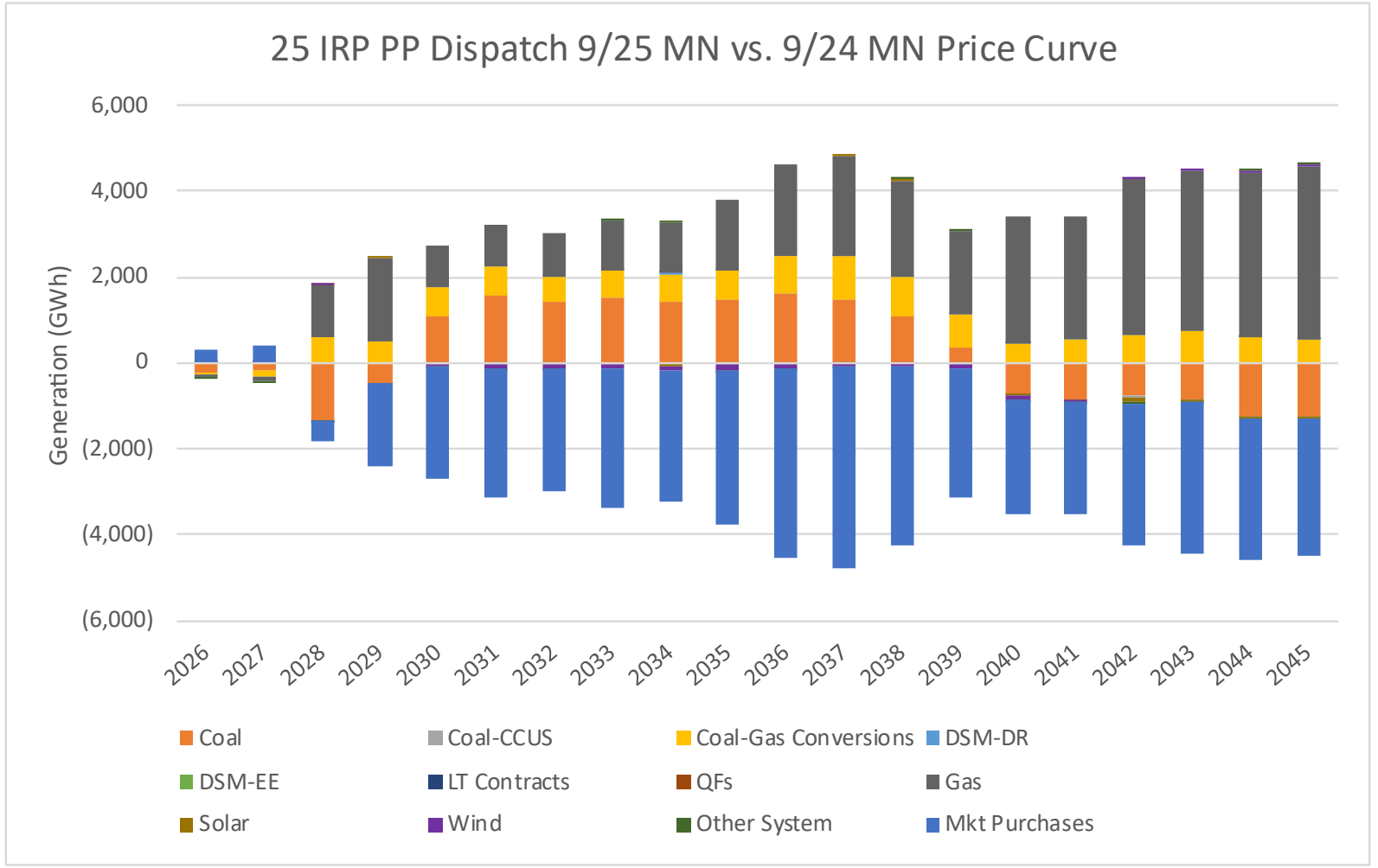




Price Curve Development Update



Comparison: 25IRP PP under 2024 vs 2025 MN



*This chart was updated following the December 17, 2025, public input meeting

Qualifying Facility Capacity

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QF Capacity Change

QF Installed Capacity (MW) by resource type and location, 25 IRP Update less 25 IRP

Resource Type	OR	WY	UT	ID	CA	WA
Solar	11	0	0	0	0	0
Hydro	1	0	1	0	0	0
Other Renewable	-6	0	0	0	0	0
Biogas	0	0	-2	2	0	0

*Positive values indicate an increase in the 2025 IRP Update relative to the 2025 IRP

Lunch Break
Returning 12:15/1:15 PM PT/MT

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Transmission Modeling Overview

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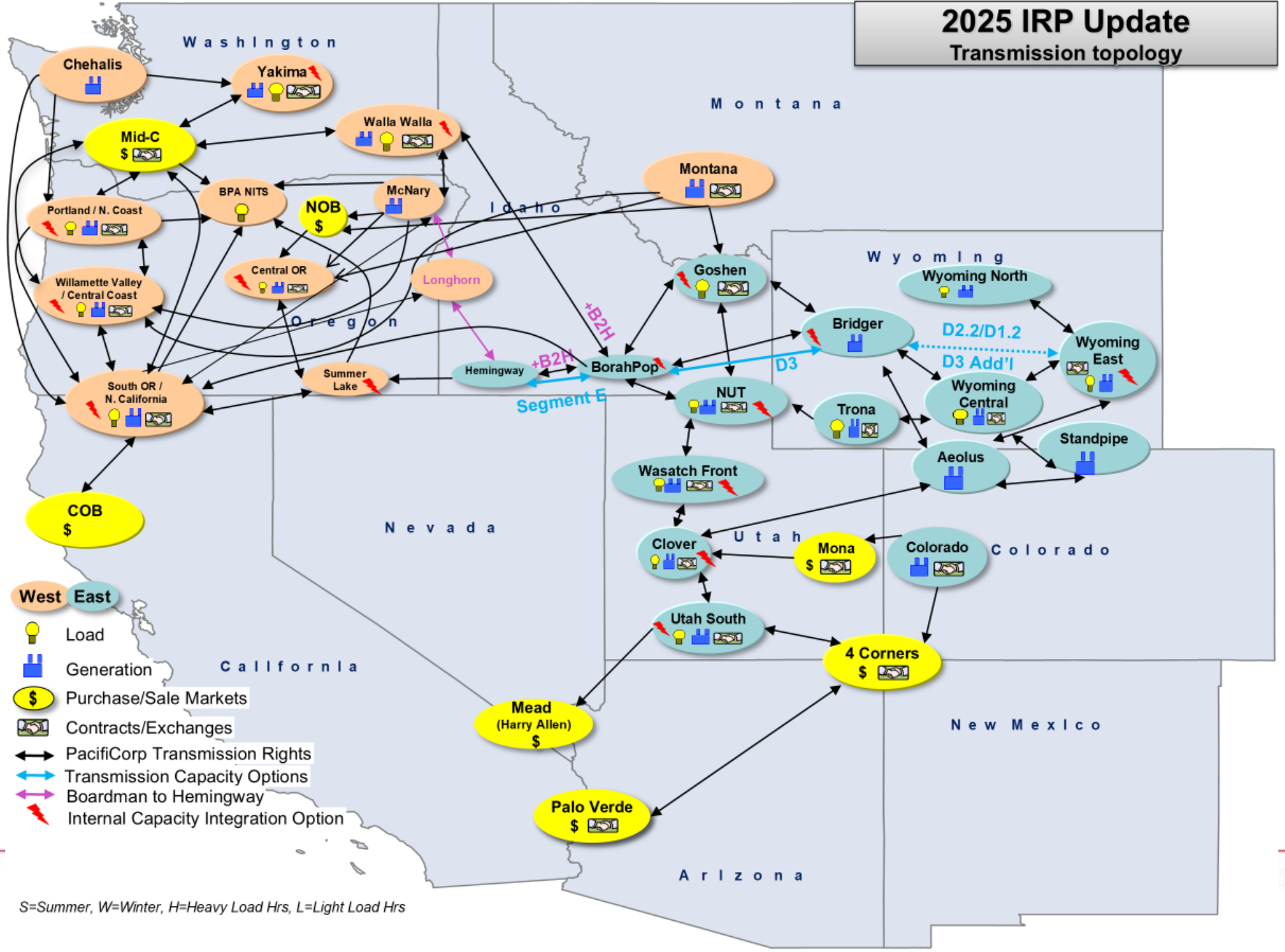
History and Feedback

- Assumptions
  - New transmission options should be selected by the model
  - Multiple types of transmission upgrade must be included
  - Resources and transmission should be appropriately linked
- Challenges
  - Modeling transmission expansion is resource intensive
  - Linkages between lines and resources greatly increase the size of the problem for PLEXOS
- Feedback and Responses (details on next slide)
  - Stakeholder requests related to B2H
  - Interwest Report on Transmission Planning in IRPs

Feedback

- B2H requests
  - Make sure to include the east-west transfer in the IRP Update and IRP
  - Transfer will be included from Borah to Hemingway and Longhorn
  - A study including re-directs only makes sense as a sensitivity
    - Although PacifiCorp will be granted rights at some point, it is unknown what the cost will be and whether the costs will outweigh benefits
- Interwest Report
  - PacifiCorp transmission modeling was generally held as a best in class example
  - High praise was given to allowing the model to endogenously choose lines independent of resources
  - Opportunities to improve:
    - Do more in/out type studies
    - Have more in-depth conversations about future options and how they're identified/chosen

2025 IRP Update
Transmission topology



S=Summer, W=Winter, H=Heavy Load Hrs, L=Light Load Hrs

Transmission Modeling Overview

- PacifiCorp models 2 types of transmission upgrade
  - Interconnection upgrades
  - Incremental upgrades
- As in the 2025 IRP, all new generators are behind transmission constrained generation bubbles
  - Resources can be built in the generator bubble without transmission, but cannot reach load unless transmission enables them
  - Interconnection upgrades have a cost tied to enabling resources
  - For incremental upgrades have a cost tied to transfer capability between lines
    - For incremental lines that also enable new resources, the transmission from the generation bubble to load comes at no cost

What is Interconnection?

- Modifications, additions, and upgrades necessary to physically and electrically connect a generating facility to the transmission system.
  - Essentially: "plugging in" while maintaining the reliability of the transmission system.
- Requirements can be impacted by:
  - Generation facility type and detailed project specifications
  - Location
  - Prior/existing generation facilities and load
  - The existing transmission system and planned or pending upgrades.
- Studies needed to identify interconnection requirements are interdependent and extensive.
- In 2020, PacifiCorp transitioned from a serial queue study process (one generator at a time) to an annual cluster study process (one study for all new requests in a given area).
- Details on signed interconnection agreements and pending requests are available at:
  - https://www.oasis.oati.com/ppw/ (select Generation Interconnection in the sidebar)

Transmission Properties and Constraints

- Properties
  - “Max Flow” - sets the maximum allowable flow (in megawatts) on the line between two transmission bubbles, i.e., from A to B
  - “Min Flow” - sets the limit on flow in the opposite direction, i.e., from B to A. It can also be zero, if flow is uni-directional.
- Constraints
  - Because new resources are limited to being built in generation bubbles, PacifiCorp has reduced the need to rely on constraints to limit the model building excess resources on a generating basis
  - Transmission constraints are used primarily to link transmission path pre-requisites
    - i.e. the model must build line “A” in a location if it later sees a benefit to line “B”

Transmission Properties Example

Child Object	Property	Value	Units
CON Goshen Gen > Goshen 2029	Units	0	-
CON Goshen Gen > Goshen 2029	Max Flow	550	MW
CON Goshen Gen > Goshen 2029	Min Flow	0	MW
CON Goshen Gen > Goshen 2029	Project Start Date	1/1/2029	-

- Units = 0
  - This flag tells Plexos that it is a selectable option and not planned or existing
- Project Start Date = 1/1/2029
  - This is the earliest year for the model to choose this option
- Max Flow = 550
  - As an Interconnection option, flow is between the generator bubble and Goshen
- Min Flow
  - This is the capacity in the opposite direction, from Goshen to the generation bubble, not relevant currently.

Transmission Option Updates

- Meaningful Expansion Option Timing Changes
  - All west side options pushed out a minimum of 2 years
    - Major projects are now better aligned so part of an integrated project can no longer be selected prior to the earliest possible date of another portion of the project
  - Large east side options pushed out 1 year.
    - D2, D3 and Gateway South 2 all one year later
    - Segment E remains the same
- Utah Cost Updates
  - Transmission tax based on mileage is being incorporated
    - Understanding is the tax applies ONLY to new lines over 340 kV
    - Tax is based only on the miles built in Utah
    - Adding $6,400 per mile per year to applicable miles of transmission options

Grid Enhancing Technologies (GETs)

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GETs Modeling Requirements for the IRP

Oregon HB 3336 was enrolled July 25, 2025, and took effect September 26, 2025

HB 3336 relates to electric transmission systems and requires electric companies:

- When an electric company propose additions, improvements or modifications to a transmission system, the company conduct an analysis of alternatives including strategies that use grid enhancing technologies to:
  - Increase transmission capacity
  - Increase transmission reliability
  - Reduce transmission system congestion
  - Reduce curtailment of renewable and non-emitting energy resources
  - Increase capacity to connect new renewable and non-emitting energy resources

Additionally, HB 3336 requires that as part of a company's clean energy plan and integrated resource plan, the company provide a section that provides a strategic plan for using GETs where doing so is cost effective

GETs in PacifiCorp's IRP

PacifiCorp's IRP portfolio development includes a variety of transmission upgrade options that can be endogenously selected in combination with various resource options. The 2025 IRP directly evaluates the following aspects of transmission, that can be influenced by GETs:

- **Upgrade cost:** IRP uses annualized values to spread cost over life of the transmission.
- **Transfer capability:** increases transfers between modeled IRP transmission areas.
- **Interconnection capability:** upgrades to physically and electrically connect additional resources. This may involve increased transfer capability on specific constrained elements within an IRP transmission area (IRP model assumes no restrictions within an area).

GETs Type	IRP Modeling
Advanced Conductors – ACCC	These GETs can increase transfer capability, potentially by avoiding overloading key system elements. Primary benefit is typically from achieving a required level of transfer capability at a lower cost than other solutions. IRP modeling only uses the lowest-cost transmission solution for a given location.
Advanced Conductor – ACSS	
FACTS Devices – Series Capacitors	
FACTS Devices - Static VAR Compensators (SVC) & STATCOM	
Phase Shifting Transformers	
Dynamic Line Rating	Provides incremental transfer capability, but only under specified conditions. Could be modeled in IRP, but might need to be aligned with weather conditions represented by the load, wind, and solar forecasts.
Transmission Optimization – Automated Switching Schemes and Remedial Action Schemes	IRP modeling does not include contingent operations (with transmission elements out of service), but can include any increase in the normal operating capability enabled by these practices.

Grid Enhancing Technologies (GETs) in Transmission Planning Processes

Pacific Power includes GETs evaluation as part of the transmission solutions development process in its local and regional planning processes:

- NERC TPL Standard annual assessment
- Attachment K Local Transmission System Plan (LTSP)
- Local 5-year planning studies
- Generation interconnection studies
- Transmission service request studies
- Other transmission planning studies

There are three natural stages in transmission project development where alternatives analyses are conducted:

- Initial identification of system need
- Investment planning and initial scope development, and
- Detailed engineering design

Transmission Planning Solution Evaluation

If a system deficiency is identified in a transmission planning study:

Step 1: Identify solution options. For example, if the constraint is related to overload of an existing transmission line:

- Reconductor line (could use an advanced conductor)
- Install dynamic line rating sensors on the line to maximize rating
- Replace substation terminal equipment limiting rating to utilize full line capability
- Determine if transmission switching (RAS or operational) can eliminate the overload
- Install an advanced power flow control device on the line and/or other parallel lines and transformers
- Construct a new transmission line

Step 2: Apply each option to power flow case(s) to determine if the option will mitigate the overload within the time horizons of identified constraint

Step 3: If multiple options mitigate the overload, evaluate costs and benefits of the options

Step 4: Provide budgetary recommendation to Capital Planning process for inclusion in 10-year plan

Transmission upgrades that include GETs identified in any of the Local, OATT and Regional transmission planning processes are made available for selection by the IRP model as Transmission Options.

Existing Installations of GETs

PacifiCorp, across our six states, has successfully implemented various forms of GETs across its system as solutions for existing concerns and constraints

GETs Type	# of existing installations	Capacity Increase
DLR	2	Approximately 1.5 time to 2 times based on the location of the DLR and prevailing wind.
Advanced Conductors – ACCC	12 (approximately 49 miles)	Depends on the conductor size but an ACCC conductor provides almost 1.9 times the capacity of a conventional ACSR conductor.
Advanced Conductor – ACSS	30 (approximately 256 miles)	Depends on the conductor size but an ACSS conductor provides almost 2.1 times the capacity of a conventional ACSR conductor.
FACTS Devices – Series Capacitors	15	N/A – Generally maximizes path capacity by controlling interactions with other major paths
FACTS Devices - Static VAR Compensators (SVC) & STATCOM	5 (4 SVC and 1 STATCOM)	N/A
Phase Shifting Transformers	9	N/A – Directly controls path flows to maximized capacity on multiple paths in simultaneous interaction.
Transmission Optimization – Automated Switching Schemes and Remedial Action Schemes	Widespread	Often used to maximize transfer capability, load serving capability and generation interconnection during normal operation with automatic mitigation of contingency risks

Currently Proposed GETs in Local Transmission System Plan (LTSP)

The most common form of GETs in the current LTSP involves reconductoring existing transmission lines with advanced conductors.

Primarily a network mitigation to resolve reliability issues identified in different forms of network analysis:

- Reconductor approximately 5 miles of 138 kV line with 530 kcm ACCC
- Reconductor approximately 49 miles of 345 kV line with bundled 2x1222 kcm ACCC
- Reconductor approximately 9.5 miles of 138 kV line with 1026 kcm ACCC
- Reconductor approximately 60 miles of 345 kV line with bundled 2x1026 kcm ACCC
- Reconductor approximately 76 miles of 230 kV line with 1511.3 kcm ACCC

PacifiCorp also evaluated implementation of Advanced Power Flow Controllers (APFC) at two separate locations and identified one location where APFC would provide short term benefits

- Currently engaged with vendor to develop detailed scope for the feasible location and performing cost benefit analysis as compared to the conventional solution.

Technologies Integrated with Main Grid Transmission Facilities

Regional transmission projects in the west typically cover long distances and require extensive usage of GETs (series capacitors and/or phase shifters) as a baseline consideration to encourage or control flow on lines.

Gateway South

- 416-mile, 500 kV transmission line between Aeolus substation in Wyoming and Clover substation in Utah. Completed in November 2024
- Two controllable series capacitor bank stations to adjust flow on the line
- Remedial Action Scheme (RAS) to reduce wind generation limits and drop generation for certain system conditions
- Phase shifting transformers at Anticline to directly control flow in SE Wyoming

B2H

- 300-mile, 500 kV transmission line between Hemingway substation in Idaho and Longhorn substation in Oregon. Planned in-service 2027.
- Three controllable series capacitor bank stations to adjust flow on the line
- Two Remedial Action Schemes (RAS) will also insert and bypass series capacitor banks on B2H and interacting paths automatically in response to system outages allowing regional transmission to be optimally utilized.

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Typical GETs Qualitative Benefits for Transmission Planning

- Provides enhanced operational flexibility
- Provides short term solution where implementing a long term solution may take time (such as building a new line)
- Reduced community, environmental and visual impacts
- Additional tools for balancing system during normal and emergency operating conditions
- Avoids congestion of lower magnitudes
- Potential for enhanced real-time situational awareness and condition data

Potential GETs Qualitative Challenges

- Implementation and effectiveness varies on system location/strength (e.g. DLR in wind rich area)
- Transfer capability in the “rated path” non-RTO west potentially limits dynamic capacity of facilities even with GETs
- Vendor-specific and proprietary software, hardware, tooling and replacement parts
- Modeling considerations in planning studies due to absence of futuristic forecast data 10 and 20 years out or regulation that allow transmission planner to use historical data for lines equipped with GETs
- Warranty, lifespan and replacement guarantees for new technologies, particularly when operating at high temperatures and durations
- For advanced reconductors: vintage and design of existing transmission often results in significant amount of tower replacements potentially negating cost benefits

Supply-side Resources

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Overview

Today's Meeting

- Wind: on-shore and off-shore
- Solar
- Energy Storage: lithium ion, iron-air, CAES, gravity
- Carbon capture for coal and gas
- Nuclear

Prior Topics (November 12, 2025)

- Data Sources and References
- Technologies Under Consideration
- Details on Selected Technologies
  - Hydrogen and Ammonia
  - Geothermal
  - Biomass

Supply-Side Resources General Assumptions

- 2026$
- Interconnection Costs
  - Study
  - Direct Assigned
  - Network Upgrade Costs
- ATB Financial Assumptions (instead of Company specific financial assumption)
  - NREL or EIA location modifiers may be applied as they were in the 2025 IRP

Source:

National Renewable Energy Laboratory, Annual Technology Baseline, 2024 Index | Electricity | 2024 | ATB | NREL https://atb.nrel.gov/electricity/2024/index

- **ATB's "R&D Only Case"**
  - Estimates technology-specific debt interest rates, return on equity rates, and debt fraction to reflect technological risk perception but with consistent assumptions around sources of capital and ownership across technologies (i.e., independent power producer, financed with a tax equity partnership)
  - Holds tax and inflation rates constant at assumed long-term values: 21% federal tax rate, 6% state tax rate (though actual state tax rates vary), and 2.5% inflation rate
  - Excludes effects of tax credits.

ATB's Methods for Developing Financial Assumptions

Technology-specific financial assumptions:

- Capture more granularity of current and future energy markets
- Show changes in financing rates that are attributable to the reduction or elimination of tax credits for eligible technologies

General Methodology and Assumptions

- Renewable Generators
- Financing Structure
- Conventional Generators
- Risk Assessment
- Domestic Focus
- Constant Technology Risk
- Cost Recovery Period

Source: *The information on this and the next slide is available on the ATB's "Financial Cases & Methods" page*

ATB's Methods for Developing Financial Assumptions

Each technology has specific risk factors that might influence the underlying cost of financing. However, a multitude of other factors determines a project's cash flow risk, including the following:

- Political risk
- Regulatory uncertainty
- Project development risk (i.e., risks associated with project cost overruns or the project being behind schedule or not completed at all)
- Government support (if any)
- Ownership risk, including creditworthiness (IPP versus investor-owned utility versus public utility)
- Creditworthiness of the electricity off taker and the length of the contract (if any)
- Whether the electricity price is firm or changes with the market
- Supply and demand of competing electricity and sources of financing (plants with electricity contracts can still be exposed to supply-and-demand risk if financing is at all tied to value after the end of a contract or any risks associated with curtailment)
- Underlying inflation rate and the cost of the base rate (e.g., London Inter-Bank Offered Rate, or LIBOR)

Additional discussion is available on the "Financial Cases & Methods" page of the ATB website.

Storage

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Energy Storage - Battery

	Lithium-Ion	Iron-Air
Configuration:	60 MW, 240 MWh 4 hr system (ATB)	100-hour batteries
Design life:	20 years depending on augmentation	20 Years
Operating characteristics:	Round-trip efficiency: 85% (ATB) Capacity Factor: (Plexos)	Round Trip Efficiency: 40-50% (Form)
Deployment:	Technology available now 2-3 years construction timeline (ATB)	Available 2030+ 2-3 years construction timeline
Decommissioning:	1-3% of original construction cost	
Key Notes:	Tariff/Supply chain uncertainty	Technology and production readiness Not yet proven at scale

Cost Projections for Utility-Scale Battery Storage: 2025 Update (https://docs.nrel.gov/docs/fy25osti/93281.pdf)

Energy Storage – Gravity/Pumped Storage Hydro

	Compressed Air (CAES)	Gravity/Pumped Storage
Configuration:	Tank or salt cavern systems 10 – 100 hr storage duration	400 MW (single and double reservoirs)
Design life:	60 years	100 years
Operating characteristics:	Round trip efficiency: 55-75%	Round trip efficiency: 80% POR: 4% EOR: 2%
Deployment:	Limited availability now 4-6 years permitting/construction	Technology available now 7-10 years permitting/construction
Decommissioning:	5-8% of original construction cost	5% of original construction cost
Key Notes:	Technology readiness	

Solar

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PV and PV+BESS

	PV	+ Battery Energy Storage System (BESS)
Configuration:	Single axis tracking PV systems	Li-Ion Batteries, separate inverter, shared transformer
Power capacity:	per ATB (200 MW?) • Utility scale (200 MW?) • Commercial scale (20 MW?)	per ATB (200 MW?) • Same as PV • Limited to PV LGIA
Design life:	per ATB (25 years?)	per ATB (25 years?)
Operating characteristics: CF, POR, EFOR	per ATB	per ATB
Variation by location:	depending on site global horizontal irradiance	
Deployment:	Technology available now Construction duration: per ATB	Technology available now Construction duration: per ATB
Decommissioning:	2%? of base capital cost	2%? of base capital cost

U.S. Solar Photovoltaic System and Energy Storage Cost Benchmarks, With Minimum Sustainable Price Analysis: Q1 2023 (https://docs.nrel.gov/docs/fy23osti/87303.pdf)

Wind

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Wind

	Onshore	Offshore
Configuration:	Horizontal-axis wind turbines (HAWT)	Horizontal-axis wind turbines (HAWT)
Power capacity:	per ATB (200 MW?) • Per turbine: >= 4 MW	per ATB (200 MW?) • Per turbine: >= 6 MW • Considering 1 GW minimum
Design life:	per ATB (30 years?)	per ATB (30 years?)
Operating characteristics: CF, POR, EFOR	per ATB	per ATB higher CF than onshore
Variation by location:	depending on site wind profile (wind speed, turbulence, etc.)	depending on site wind profile (wind speed, turbulence, etc.)
Deployment:	Technology available now Construction duration: per ATB	Technology available now Construction duration: per ATB
Decommissioning:	3%? of base capital cost	4%? of base capital cost

Nuclear

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Nuclear

	Small Modular Reactor (SMR) / Advanced Reactor (AR)	Large Light Water Reactor (LLWR)
Configuration:	Dual Unit Site	Dual Unit Site
Power capacity:	600 MW	2220 MW
Design life:	60 years with potential for longer operations in the future	60 years with potential for longer operations in the future
Operating characteristics: CF, POR, EFOR	Likely capacity factor, or range (CF): 93% Planned outage rate (POR): 5% Equivalent forced outage rate (EFOR): 2%	Likely capacity factor, or range (CF): 93% Planned outage rate (POR): 5% Equivalent forced outage rate (EFOR): 2%
Variation by location:	Applicable if air cooled or hybrid condensers are utilized	Applicable if air cooled or hybrid condensers are utilized
Deployment:	Technology available 2030 Construction duration: per ATB	Technology available now Construction duration: per ATB
Decommissioning:	TBD, ~2%	TBD, ~1%

Natural Gas

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Combustion Turbines (CT's)

From the 2024 ATB:

- Cost and performance estimates representative of current commercial offerings or projects that began commercial service in the past 10 years.
- Natural gas-fueled options based on commercially available F- and H-class technologies, including both SCCT and CCCT options for SOA F-class turbine technology.
- Hydrogen Capability in the 25 to 30% range with development to reach 100%

- Acronyms:

AUSC	Advanced Ultra-Supercritical
CCCT	Combined Cycle Combustion Turbine
SCCT	Simple Cycle Combustion Turbine
HRSG	Heat Recovery Steam Generator
NETL	National Energy Technology Laboratory
NG	Natural Gas
PCCC	Post Combustion Carbon Capture
RD&D	Research, Development and Demonstration
SOA	State of the Art

Natural Gas Combustion Turbines (CT)

	F Class	H Class
Configuration:	SCCT / CCCT 2x1	SCCT / CCCT 2x1
Power capacity:	233 MW net / 727 MW net (per 2024 ATB)	374 MW net / 992 MW net
Design life:	40 years with potential for longer operations in the future	40 years with potential for longer operations in the future
Operating characteristics: CF, POR, EFOR	Likely capacity factor, or range (CF): 93% Planned outage rate (POR): 5% Equivalent forced outage rate (EFOR): 2%	Likely capacity factor, or range (CF): 93% Planned outage rate (POR): 5% Equivalent forced outage rate (EFOR): 2%
Variation by location:	Applicable if air-cooled or water-cooled condensers are utilized	Applicable if air-cooled or water-cooled condensers are utilized
Deployment:	Technology available now Construction duration: per 2024 ATB	Technology available now Construction duration: per 2024 ATB
Decommissioning:	TBD, ~9%	TBD, ~7%

Carbon Capture

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Carbon Capture Retrofits - Information Sources

- Cost and performance estimates derived from the Jim Bridger Carbon Capture FEED Study.
  - Currently at a -20%/+35% accuracy level for the capture facility and will be further refined as the study progresses.
- Capital cost estimates for PCCC retrofits include all necessary process equipment and infrastructure to capture and process CO_2 for suitable conditions (i.e., pressure, temperature, and composition) for pipeline transport.
- O&M: labor, materials, and other expenses required to operate the facility, as well as offtake fees for CO_2 transport and storage.
- Appropriate scaling to other PCCC retrofit resources
- Reflect currently available state-of-the-art (SOA) amine-based solvent technology and do not consider other developing carbon capture technologies
- Assume the "host" plant supplies the electric and steam requirements of the carbon capture facility.

Carbon Capture Retrofit

Pulverized Coal (PC) Boiler Carbon Capture Retrofit

- Resource Description:
  - Carbon Capture Technology: Amine solvent-based post combustion carbon capture system CO_2 capture rate: 95%
  - Steam Sourcing: Host Plant
  - Electric Sourcing: Host Plant
  - Host Plant Output Derate: 41%
  - Design life: 30 years
- Operating characteristics:
  - Net Plant Efficiency: 16-19% (HHV)
  - Planned-Capacity factor (CF): 85%
  - Planned outage rate (POR): 7.5%
  - Equivalent forced outage rate (EFOR): 7.5%
- Limitations:
  - Post combustion carbon capture estimated to reduce plant output by 41% or more
  - Limited commercial-scale demonstrations
  - Access to economically viable CO_2 transportation and storage solutions
  - Increased water consumption (1,295 gpm or 1,940acre-ft/yr)
- Deployment:
  - Technology is currently available
  - Soonest commercial operation date possible: 2031

Conservation Potential Assessment

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2027 CPA Scope of Work

Applied Energy Group, now part of ICF Resources, L.L.C. (ICF), won the 2025 RFP and will continue to manage the overall project and perform the energy efficiency (Class 2 DSM) analysis. The Brattle Group (Brattle) has joined the ICF Team to conduct the modeling of demand response and demand-side rates (Class 1 and 3 DSM) resources. Energy efficiency potential in Oregon will continue to be assessed by Energy Trust of Oregon for PacifiCorp.

The CPA will follow the same core methodology as in recent past cycles, with interim deliverables made public for stakeholder review and comment:

Core 2027 CPA Scope

- Task 1: Develop Potential Study Work Plan
- Task 2: Conduct Research to Develop Study Plan Inputs
- Task 3: Perform Analysis of Demand-Side Resource Potential
- Task 4: EE & DR Scenario and Sensitivity Analysis
- Task 5: Data Presentation and Reporting
- Task 6: Stakeholder Support

2027 CPA General Draft Timeline

Task	Q4 2025	Q1 2026	Q2 2026	Q3 2026	Q4 2026	Q1 2027	Q2 2027
Task 1: Develop Work Plan*	Nov 2025						
Task 2: Research and Study Inputs*			May 2026				
Task 3: Analysis of DSM Potential*			*Initial Results* June 2026	*Final Results* July 2026	(Addtl QC & Feedback)	(Addtl QC & Feedback)	
Task 4: Scenario and Sensitivity Analysis				Sept 2026			
Task 5: Present Data and Reporting*					*Draft Report* Nov 2026	*Final Report* Mar 2027	
Task 6: Stakeholder Support*							Final Q&A

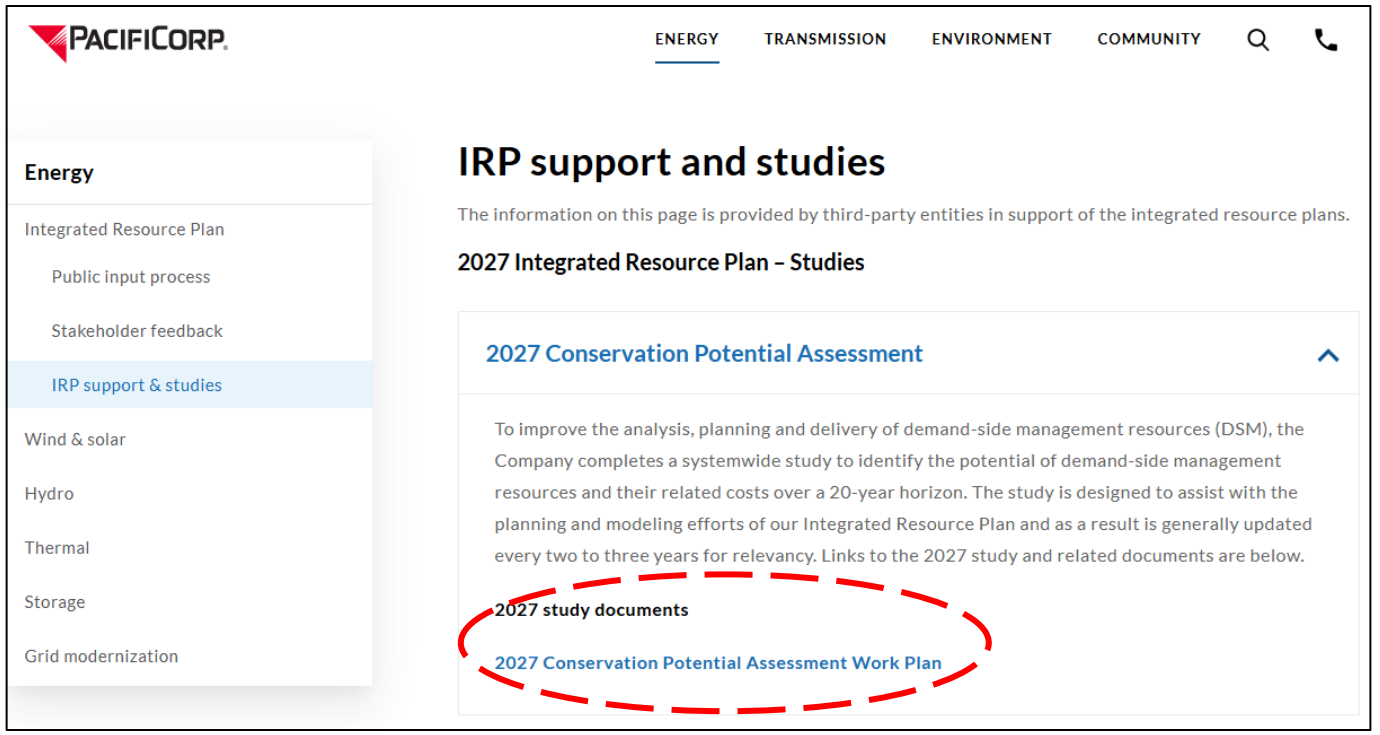
* Places in the study where stakeholders will be able to review and comment on interim deliverables

Key Updates for 2027 Study

- **Faster Timeline**. Working under an accelerated schedule for all states and resource classes during this cycle.
- **Refreshed Costs**. Conducting re-review of incentive and non-incentive program costs to ensure they continue to accurately reflect program delivery realities.
  - Prior studies applied costs as a percentage of measure incremental cost.
  - ICF will work with PacifiCorp to determine if an alternate method (e.g., $/kWh saved) may be a better representation of program experience.
- **Baseline Investigations**. Looking into the impact of increasing dual-fuel heat pump penetrations within the baseline projection.
- **Policy Updates**. Due to recent changes and uncertainty at the federal level, the Class 2 DSM analysis will revert to non-accelerated, pre-Inflation Reduction Act (IRA) adoption assumptions.
- **Expanded segmentation**. Segmenting residential potential for demand response and demand-side rate analysis by income level, consistent with energy efficiency side.

Continued Opportunities for Stakeholder Input

- PacifiCorp published the 2027 CPA Work Plan on 11/13/25
- Feedback forms can be located at: [IRP Stakeholder Feedback (pacificpower.net)]
- In the IRP PIM #4 (Jan 2026), PacifiCorp plans to cover:
  - Emerging technologies
  - Draft resource list



2027 CPA Work Plan posted online: https://www.pacificorp.com/content/dam/pcorp/documents/en/pacificorp/energy/integrated-resource-plan/2027-irp/studies-support/PacifiCorp_2027_IRP_CPA_Work_Plan.pdf

Distributed Generation Study Overview

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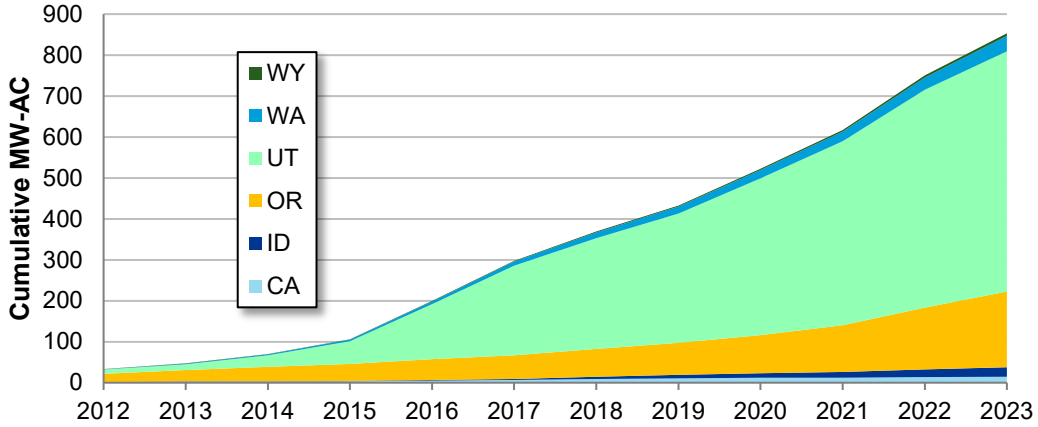
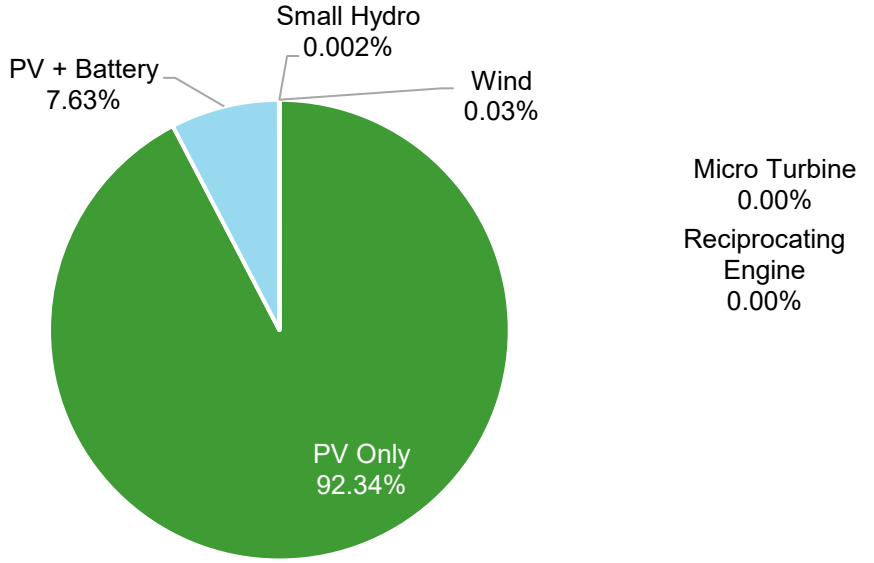
Introduction and Background

- DNV is preparing the 2026 Long-Term Distributed Generation Resource Assessment (“DG Study”) for PacifiCorp covering the service areas in Utah, Oregon, Idaho, Wyoming, California, and Washington.
- This study evaluates the expected adoption of behind-the-meter (BTM) technologies including photovoltaic solar, photovoltaic solar coupled with battery storage, small scale wind, small scale hydro, reciprocating engines, and microturbines for a 20-year forecast horizon.
- DNV will provide projections for 3 cases: base, high, and low adoption.
- Consistent with past planning cycles, the distributed generation projections will be used in support of PacifiCorp’s 2027 Integrated Resource Plan.
- DNV develops its assumptions, inputs, methodologies, and forecasts independently from prior Distributed Generation Assessments that have been previously performed for PacifiCorp.

PacifiCorp Historic* Cumulative Installed PG Capacity by State



PacifiCorp Historic* Cumulative Installed PG Capacity by Technology, YTD



*PacifiCorp interconnection data as of December 2023

Planned DG Study Schedule

Activity	Timeline
Project Initiation	November 2025
Data development & modeling inputs *	November to December 2025
IRP Public Stakeholder Meeting – overview presentation	December 2025 (today's presentation)
Forecast modeling	January to March 2026
IRP Public Stakeholder Meeting - methodology presentation *	Jan 2026 (PIM #4)
IRP Public Stakeholder Meeting - results presentation *	April 2026 (PIM #6)
DG Study report publication *	October 2026
Stakeholder comments and Pacificorp responses*	Through June 2027

* Places in the study where stakeholders will be able to review and comment on interim deliverables

Next Steps

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Upcoming Public Input Meetings

Tentative Agendas

January 28-29, 2026

- Draft 2025 IRP Update
- Federal Policy Updates
- Hydro Forecast Update
- Distributed Generation Update
- Reliability and Resource Adequacy
- Supply Side Resources Update
- Transmission Interconnection Options

March 11-12, 2026

- 2025 IRP Update Status
- Distributed System Planning Update
- Renewable Portfolio Standards
- Price-Policy Scenarios
- Market Reliance
- Volatility and Stochastics
- 2027 IRP Initial Studies List
- Emissions Modeling
- DSM Bundling Portfolio Methodology

April 22-23, 2026

- Generation Transition, Equity & Justice
- Regional Haze Update
- State Updates
- Existing Thermal Options
- Daily Shapes Resource
- Transmission Option Dependencies
- Customer Preference
- Supply Side Resource Table Update
- Local Load Study

2025 IRP Update/2027 IRP Schedule

Preliminary 2027 IRP Public Input Meeting (PIM) Schedule		
	Event	**Date**
2025	Meeting #1	October 1, 2025
	Meeting #2	November 12, 2025
	Lockdown for 2025 IRP Update	November 30, 2025
	Meeting #3	December 17, 2025
2026	Meeting #4	January 28-29, 2026
	Publish Draft 2025 IRP Update	January 30, 2026
	Meeting #5	March 11-12, 2026
	Distribute 2025 IRP Update	March 31, 2025
	Meeting #6	April 22-23, 2026
	Meeting #7	June 3-4, 2026
	Meeting #8	July 15-16, 2026
	Input Review	**July 15, 2026**
	Meeting #9	August 26-27, 2026
	Meeting #10	October 14-15, 2026
	Indicative Portfolios [UT 3.3, 3.4]	**October 14, 2026**
	Meeting #11	November 18-19, 2026
	Draft 2027 IRP [WA (3)]	**November 30, 2026**
2027	Meeting #12	January 28-29, 2027
	Present final evaluations [UT 3.5]	**January 28, 2027**
	Meeting #13	February 25-26, 2027
	File 2027 IRP	**March 31, 2027**

Utah DOCKETNO. 23-035-10 September 24, 2024 Order

UT 3.3 For Future IRP cycles, PacifiCorp shall, prior to ranking resource portfolios, present indicative resource portfolios to stakeholders at a PIMat least five months before the planned filing date of PacifiCorp's (final) IRP.

UT 3.4 For Future IRP cycles, the deadline established, in the third ordering paragraph above (3.3), for presenting indicative resource portfolios shall also function as the Data Lockdown Date; PacifiCorp shall not further alter modeling inputs after presenting indicative resource portfolios as the third ordering paragraph above requires and must wait to incorporate anylate-breaking data until, at least, the subsequent IRP Update filing.

UT 3.5 For Future IRP cycles, PacifiCorp shall present updated modeling results, including final evaluations and preferred portfolio selections, to stakeholders at a PIMmeeting to be held at least two months before the planned filing date of PacifiCorp's (final) IRP.

Washington WAC 480-100-625

WA(3) Draft IRP. No later than four months prior to the due date of the final IRP, the utilitymust file its draft IRP with the commission. At minimum, the draft IRP must include the preferred portfolio, CEAP, and supporting analysis, and to the extent practicable all scenarios, sensitivities, appendices, and attachments.

(a) The commission will hear public comment on the draft IRP at an open meeting scheduled after the utility files its draft IRP. The commission will accept public comments electronicallyand in anyother available formats, as outlined in the commission's notice for the open public meeting and opportunityto comment.
(b) The utilitymust file with the commission completed presentation materials concerning the draft IRP at least five business days prior to the open meeting.

Additional Information

- Public Input Meeting and Workshop Presentation and Materials:
  - pacificorp.com/energy/integrated-resource-plan/public-input-process
- 2027 IRP Stakeholder Feedback Forms and Responses:
  - pacificorp.com/energy/integrated-resource-plan/comments
- IRP Email / Distribution List Contact Information:
  - IRP@PacifiCorp.com
- IRP Support and Studies:
  - pacificorp.com/energy/integrated-resource-plan/support