

2026 Integrated Resource Plan

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Agenda

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 - 3** Primary Needs: Energy, Clean Energy, and Capacity
 - 4** Planning Under Uncertainty
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Executive Summary

- **Project Purpose:** Develop an actionable resource plan that ensures long-term affordable rates, service reliability, and regulatory compliance for 2027-2046
- **Regulatory Basis:** [RCW 19.280](#) sets the minimum requirements for an IRP, but utilities have discretion in how to design the 2-year cycle planning process
- **Current Business Actions:**
 - Identify resource strategies aligned with customer need and that address key challenges and uncertainties
 - Evaluate financial impacts of future resource decisions
 - Incorporate stakeholder feedback through public engagement and Commission review
- **Future Business Actions:** Deliver a final IRP for Commission adoption August 25, 2026, and submission to the WA Dept. of Commerce before September 1, 2026

Cross-Functional Project Team



External Staffing: Ascend Analytics for PowerSIMM modeling support

Resource Updates:

- Cross-functional, internally led effort kicked off in January 2025
- Internal staff contributed through participation in 16 working groups
- Expected total consultant spend ~\$100k; currently \$67k
- Spend is less than 2022 and 2024 IRP projects (\$175k and \$142k respectively)

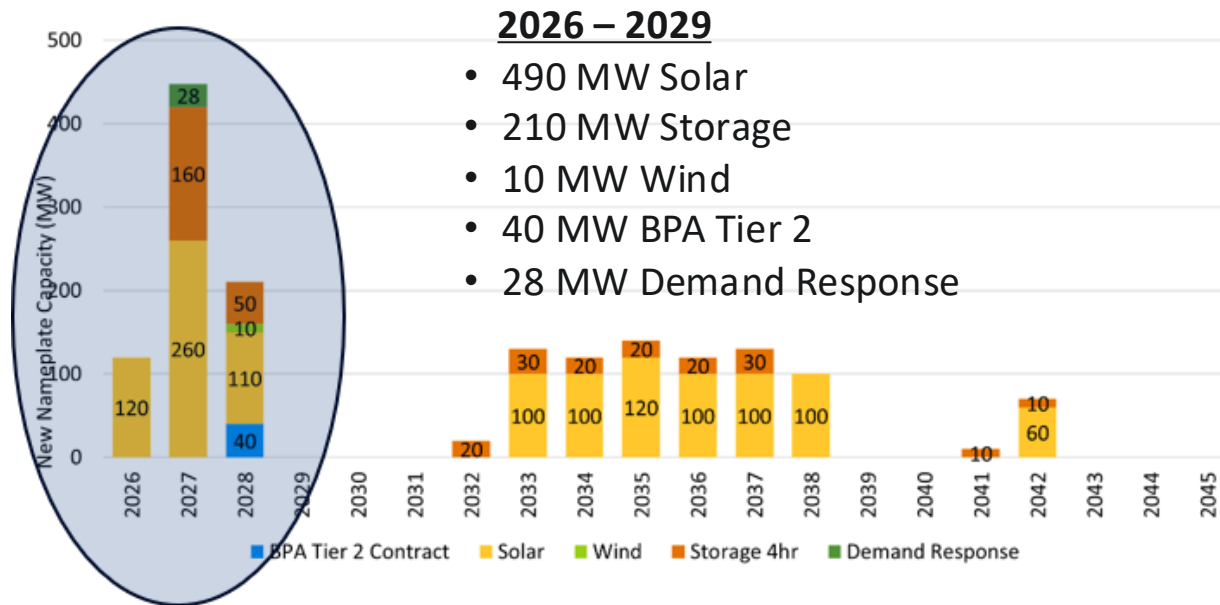
2026 IRP Builds on the 2024 IRP

Near-term acquisitions, 2026-2029, are largely consistent with 2024 IRP recommendations

Acquisitions following 2024 IRP:

- Goose Prairie Solar 80 MW (2025 – 2029 only)
- Quincy Solar 120 MW (in-service Nov 2027)
- Royal Slope Solar 260 MW (in-service Mar 2028)
- Royal Slope Storage 260 MW (in-service Mar 2028)
- **Total 460 MW Solar**
260 MW Storage

2024 IRP Recommended Acquisition Plan



2026 Planning is Consistent with 2024 Priorities

We remain focused on three key priorities:

- **Energy** to meet growing and changing customer need
- **Clean Energy** to comply with the Clean Energy Transformation Act (CETA) 80% in 2030-2044 and 100% by 2045
- **Capacity** to meet Western Resource Adequacy Program requirements and to ensure reliability during challenging periods

Key Changes in 2026 Planning

- WRAP Qualifying Capacity Contribution (QCC) values are declining as similar resources increase, reducing marginal reliability benefits
- Federal policy shifts are reducing or phasing out renewable and storage tax incentives
- BPA contract expectations have decreased, affecting resource availability assumptions
- Lower load forecasts are reducing projected CETA and WRAP capacity requirements

Planning approach is being adjusted to reflect these changing conditions

Where We Stand for 2027-2046

Energy

- Our existing portfolio meets about 81% of customer's expected energy need over the 20-year planning horizon
- That may be sufficient; it's not practical or cost-effective to self-supply every hour

Clean Energy

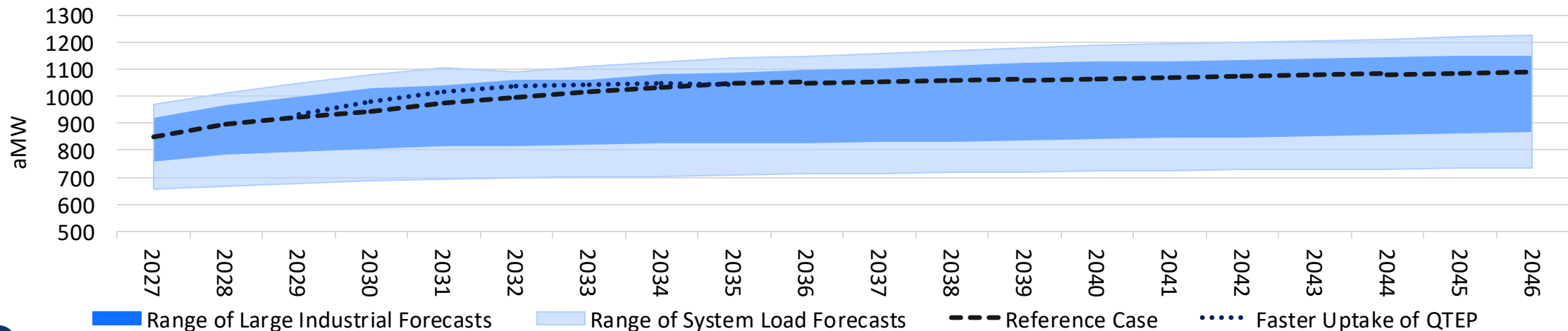
- With use of Renewable Energy Credits, our existing portfolio provides enough clean energy to satisfy expected CETA requirements until the 2040's
- No additional clean energy required until nearing the 2045 CETA 100% clean requirement

Capacity

- After using short-term purchases to fill deficit thru 2028, existing portfolio is short summer capacity 2030 - 2035. Then the deficit grows to include winter months
- **Additional capacity is needed beginning in 2030**

20-Year Planning Horizon Holds Much Uncertainty

- Asset costs, performance, siting & commercial availability
- Columbia River water flow
- Clean energy policy and carbon pricing
- Market energy prices, Markets+ operation
- Transmission cost and availability
- **WRAP capacity value** (capacity is our most immediate need)
- **Customer energy needs** (there's a wide range of plausible load futures, impacting clean energy and capacity needs)



Approach to Planning Under Uncertainty

We're looking for solutions that preserve flexibility, manage cost, increase reliability, and lower exposure to non-compliance

Key elements of planning approach include:

- Capacity expansion, dispatch, and loss of load modeling to identify least-cost, least-risk portfolios under defined constraints
- Stochastic simulation of future conditions, capturing variability in hydrology, load, weather, and market prices
- Evaluation of resource adequacy consistent with WRAP policy, with additional loss of load analysis where applicable
- Integration of policy and regulatory requirements with consideration of compliance risk and implementation uncertainty
- Portfolio-level financial look to evaluate exposure to unfavorable outcomes

Resources Considered

Generation Resource	Relative Energy Cost	Relative Capacity Cost	Resource Adequacy Value	Reliability	Carbon Emissions	Land Usage	Dispatchable
Solar Photovoltaic (PV)	Low	High	Low-Medium	Weather-dependent	None	Medium-High	No
Onshore Wind	Low-Med	High	Low	Weather-dependent	None	High	No
4-hr Battery Energy Storage	N/A	Low-Med	Medium	Medium	None	Low	Yes
100-hr Battery Energy Storage	N/A	High	Medium	Medium	None	Low-Medium	Yes
Natural Gas Combined Cycle	Med-High	Low	High	High	Significant	Low	Yes
Natural Gas Combustion Turbine*	Med-High	Low	High	High	Significant	Low	Yes
Natural Gas Linear Generator	High	Medium	High	High	Significant	Very Low	Yes
Pumped Storage Hydropower	High	Low	Medium-High	High	None	Very High	Yes
Small Modular Reactors (SMR)*	Very High	Medium	High	Very High	None	Low	Yes

Other Resources:

- Wholesale Market
- Renewable Energy Credits
- Conservation and Efficiency
- WRAP

** Analysis includes additional quantitative evaluation of these resources in consideration of ongoing investigative research efforts*

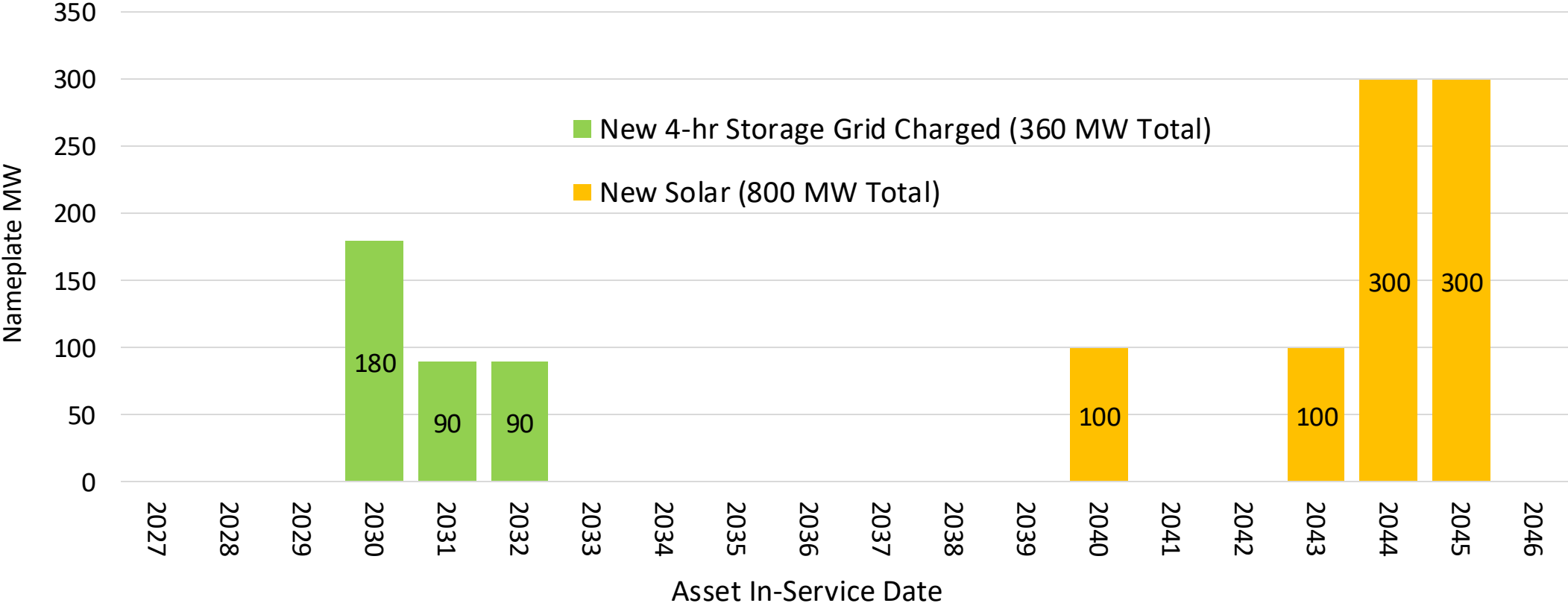
Preliminary Recommendations

We recommend utilizing the following resources to preserve flexibility, manage cost, increase reliability, and lower exposure to non-compliance

- **Wholesale Market:** Neither practical nor cost-effective to self-supply every hour
- **Renewable Energy Credits:** Legislated compliance tool provides cost-effective compliance and preserves flexibility under uncertainty
- **Conservation and Efficiency:** Ten-year cost-effective potential of 37.18 aMW and two-year target of 8.83 aMW approved by Commission in November 2025
- **WRAP:** Regional diversity, sharing, and coordinated regional planning reduce investment need while maintaining adequacy

Preliminary Recommended Acquisition Plan

- Prioritize near-term storage additions and delay further solar deployment
- Build ahead on storage and build with margin to be prepared for uncertain near-term capacity needs, solar integration, and project in-service dates
- Leave opportunity in the mid-term to evaluate appropriate diversity additions



Benefits of Recommended Acquisition Plan

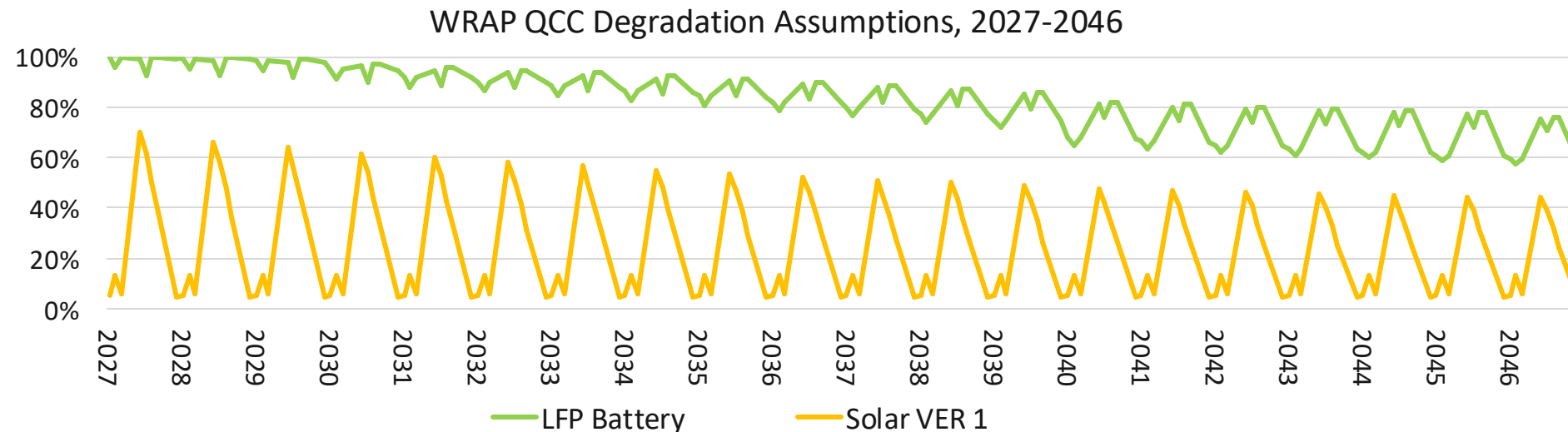
- Advances near-term storage to address capacity uncertainty, integrate solar resources, and align with project timing
- **Leaves time between 2033 and 2042 to monitor developments** in customer load requirements, technology evolutions, and carbon policy before committing to long-term decisions.

This includes ongoing evaluation of SMR, Natural Gas, and Geothermal resources

- Avoids immediate new solar additions
- Storage uses less land than alternatives, reducing potential for siting conflicts
- Storage can be deployed incrementally

Trade-Offs of Only Storage Near-Term

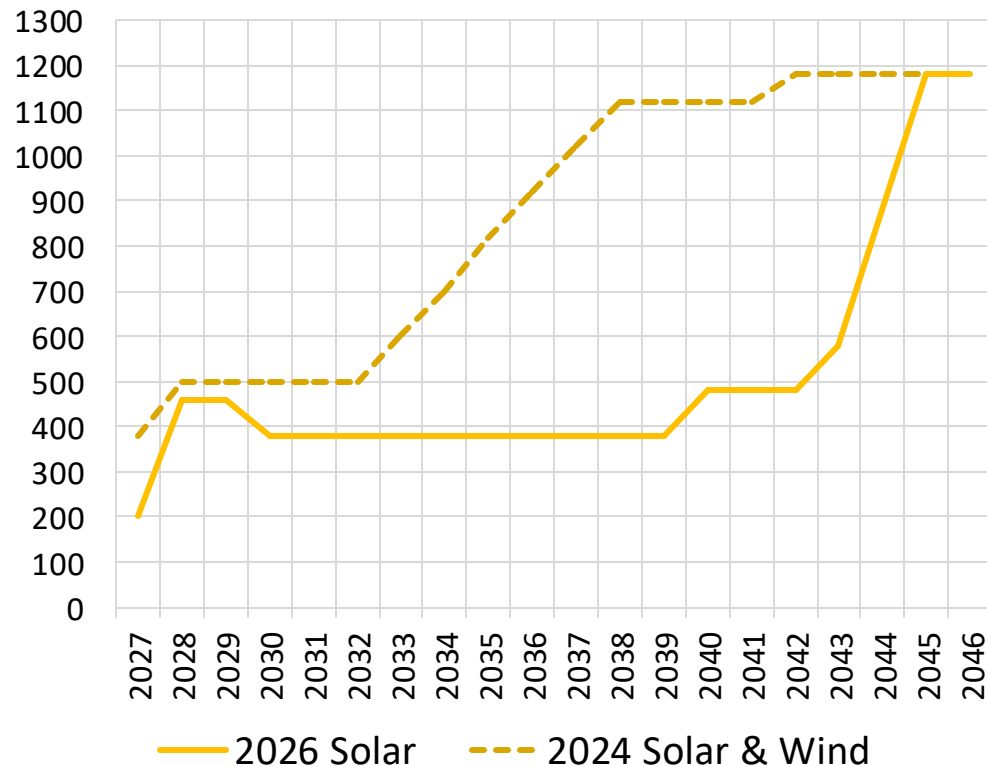
- Storage is not energy supply
- 4-hour duration storage provides limited benefit during extended events
- Storage value depends on charging availability
- Regional correlation risk with synchronized charge and discharge
- WRAP capacity value declines as the region adds more storage
- Interconnection risk still exists



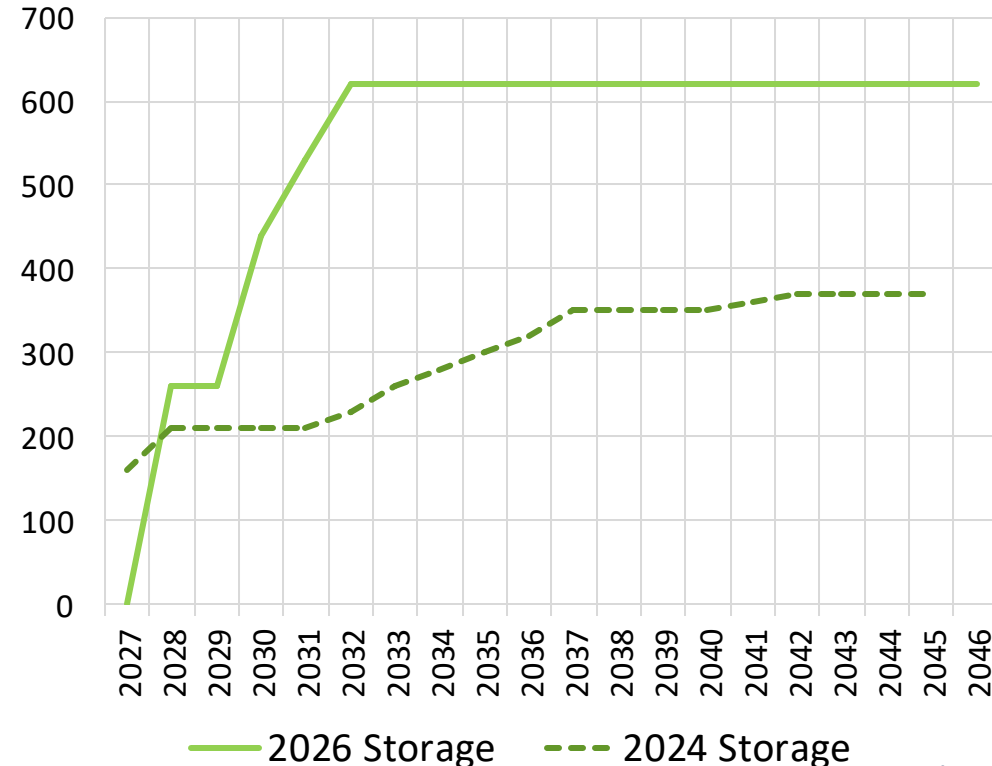
Current Recommendations Differ from 2024 IRP

- Solar additions by end of horizon are the same; 2024 plan assumed solar tax credits; 2026 plan assumes current Federal policy of no solar tax credits
- 2024 plan assumed no degradation in capacity value under WRAP, while 2026 plan does
- 2026 plan incorporates margin for near-term uncertainty

Cumulative Solar Expansion (Nameplate MW)



Cumulative Storage Expansion (Nameplate MW)



Preliminary Recommendation Summary

- When selecting a plan, we must consider a range of plausible futures
- We must select solutions that **preserve flexibility, manage cost, increase reliability, and lower exposure to non-compliance**
- Those solutions include utilizing wholesale energy markets, renewable energy credits, conservation and efficiency, and WRAP
- Gaining access to WRAP and Markets+ is a key step
- **Our near-term need is capacity, not energy** and our plan reflects that with recommended acquisition of 360 MW near-term (2030-2032)
- Recommendations allow time and flexibility to determine the best long-term answer for reliability and CETA goals in the mid-term (post-2030, pre-2045)
- **Core customers receive first access to the lowest rates, based on the low-cost hydropower from Priest Rapids Project**

IRP Timeline and Closing Summary



Public Comments

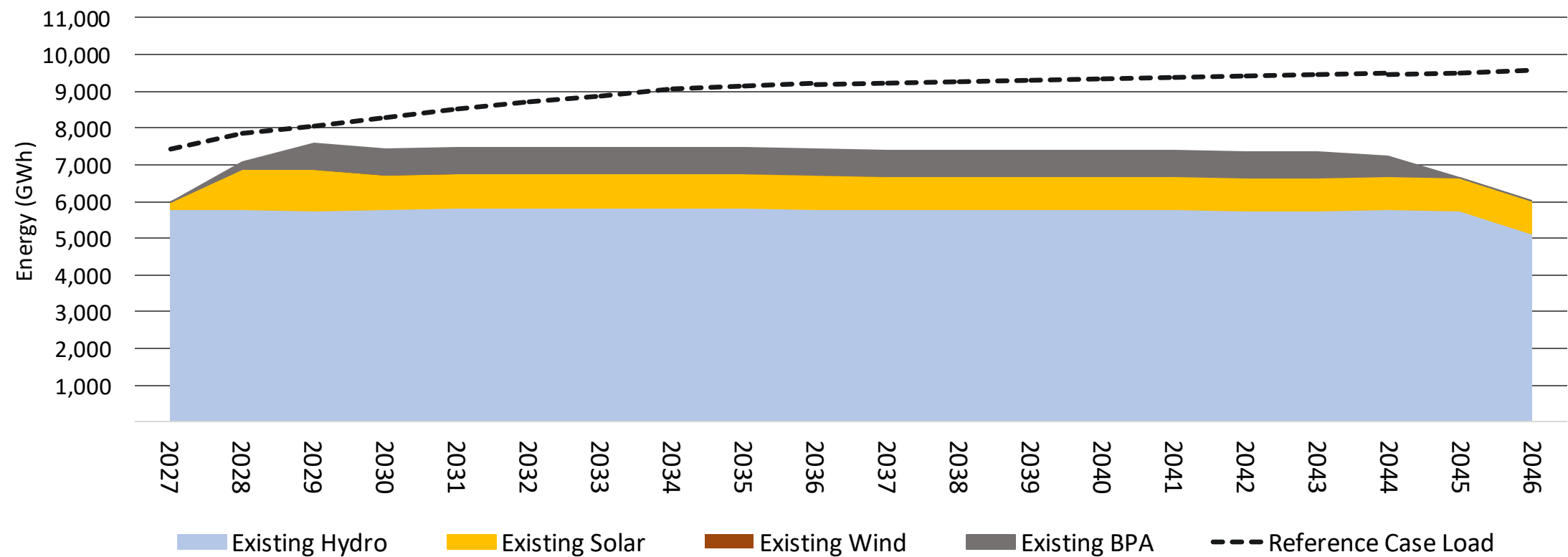
Thank you!



Grant PUD's Energy Needs

Energy

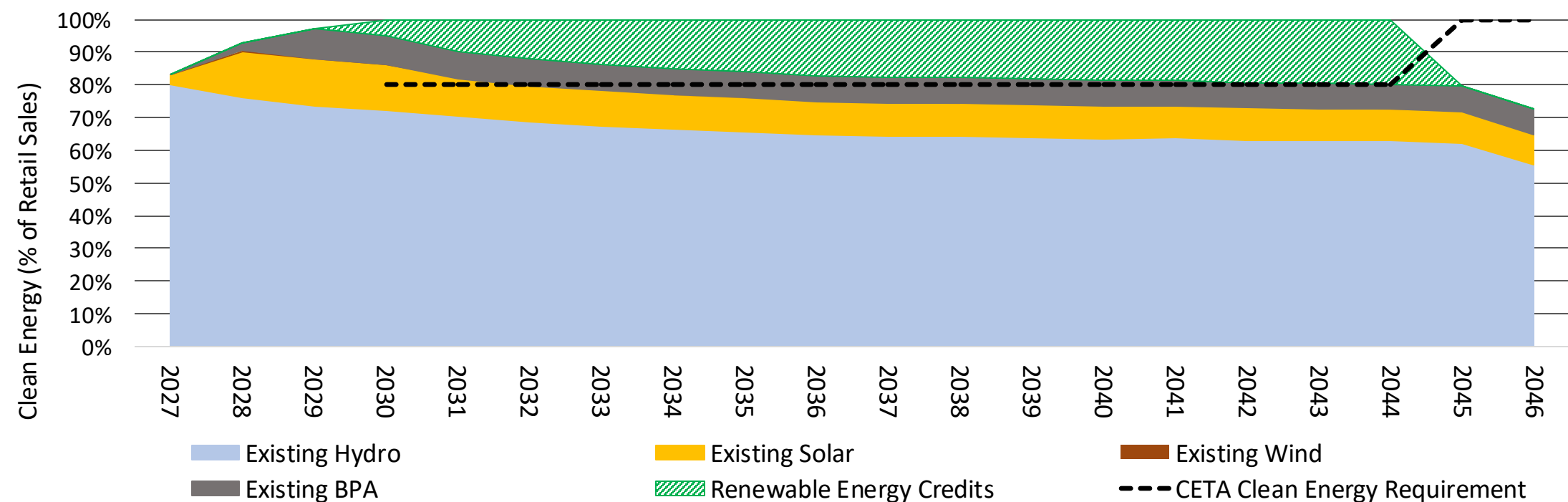
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Grant PUD's Clean Energy Needs

Clean Energy

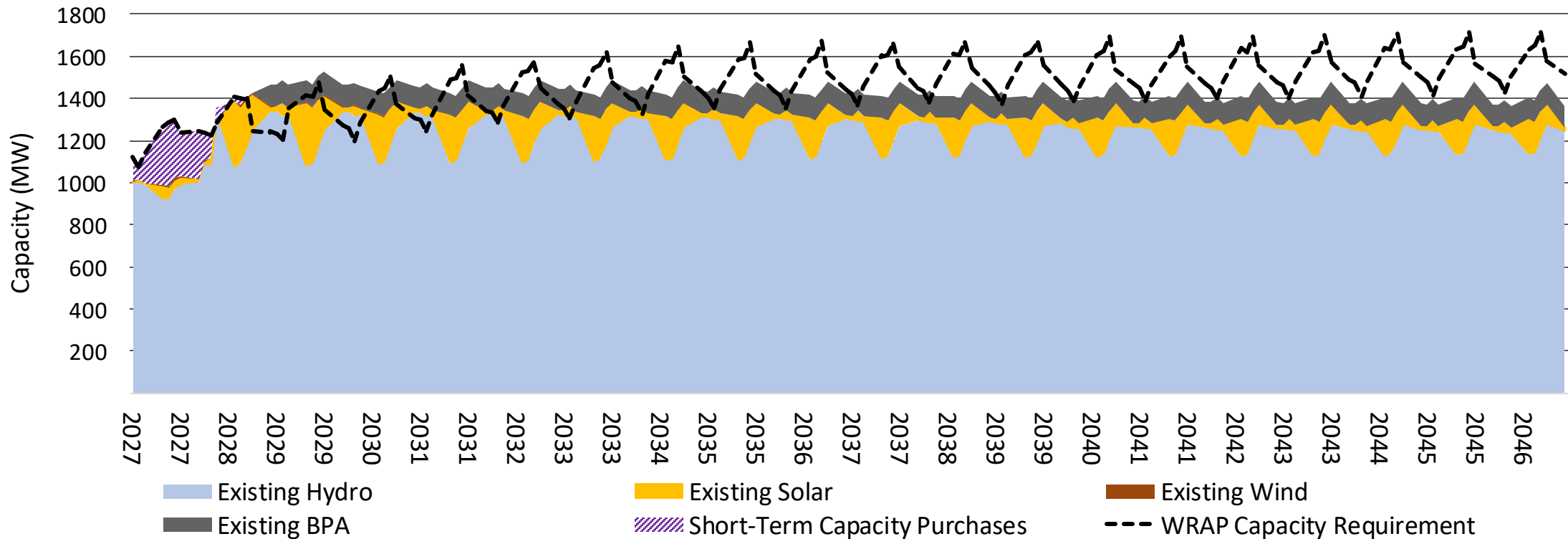
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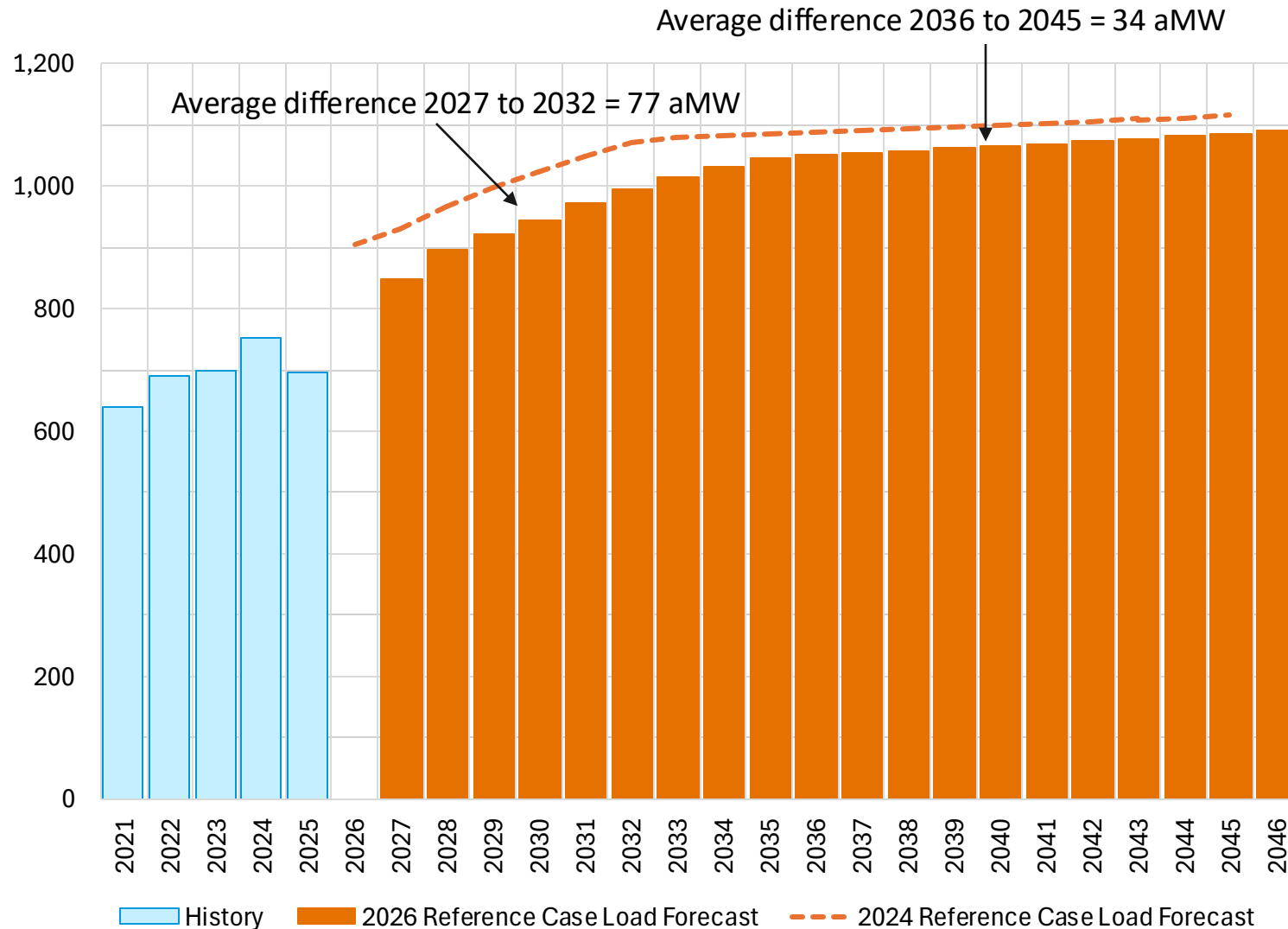
Grant PUD's Capacity Needs

Capacity

- After current deficit filled by short-term purchases, our existing portfolio is short summer capacity 2030 - 2035. Then the deficit grows to include winter months
- Additional capacity is needed beginning in 2030



2026 Load Forecast is Reduced from 2024 Version



- A 71 aMW reduction in the load expectations of three large customers explains much of the gap between the two forecasts from 2027 to 2032
- **Lower load translates to lower CETA clean energy and WRAP capacity needs**