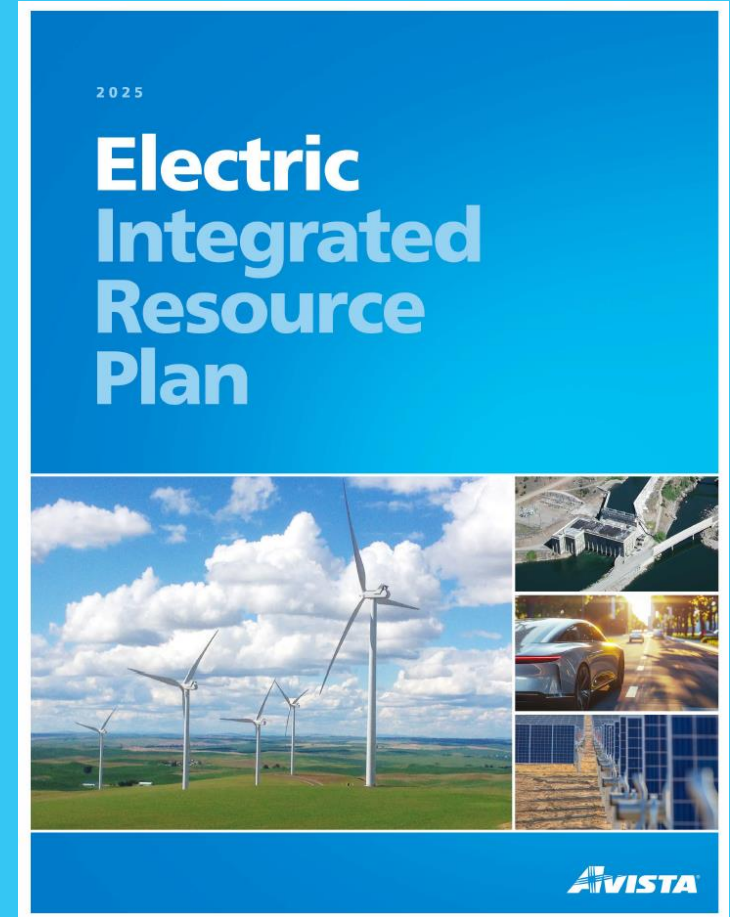




2025 Electric Integrated Resource Plan

James Gall | Manager of Resource Analysis

November 26, 2024



Integrated Resource Planning Requirements

- Public plan outlining a **resource strategy** to meet **future customer energy needs** – a direction of what the Company currently sees as the best path.
- Must consider public input
- Account for future risks
- Meet state policy objectives
- Conducted every 2 years
- Filed with Washington and Idaho state commissions



<https://www.myavista.com/about-us/integrated-resource-planning>

2025 IRP Public Engagement

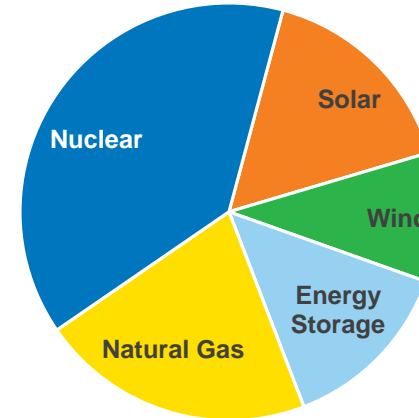
- 13 Technical Advisory Committee Meetings
- 1 Technical Modeling Workshop
- 4 Customer Meetings via CEIP Process
- 2 Equity Advisory Group Meetings
- 2 Customer Meetings on IRP (130+ Participants)
- 20+ Customer Question and Comment Emails

Common Questions & Comments Themes

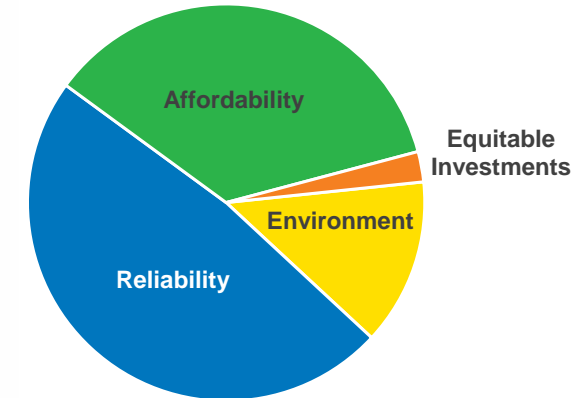
- Concern over losing natural gas in the home
- Concern of affordability of the plan
- Support for DERs (EE and Solar/BESS)
- Support for considering nuclear energy
- Concern with land use of wind/solar

Customer Participation Poll Results

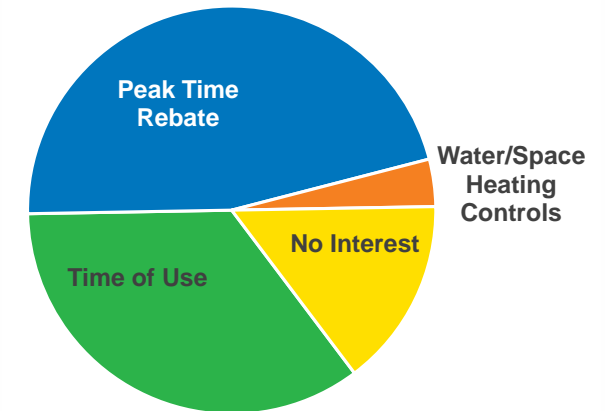
Resource Preference



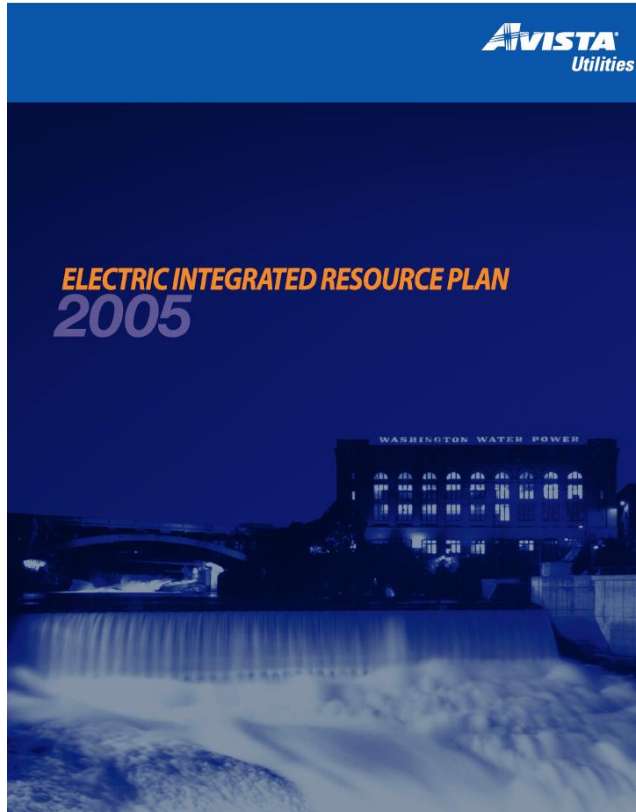
Planning Priorities



Demand Response Preference



Retrospective: Today's outlook back in 2005



2024 Forecasted Load

- 1.5% growth
- Energy: 1,641 aMW
- Peak: 2,402 MW

Resources Added by 2025

- 550 MW Coal
- 650 MW Wind
- 80 MW Landfill gas
- 80 MW Bio-methane

Energy Efficiency

- ~130 aMW

2024 Actual Load

- 0.3% growth
- Energy: ~1,120 aMW
- Peak: 1,981 MW (adjusted actual)

Resources Added (through 2025)

- 305 MW Natural Gas (Lancaster/CS2)
- 365 MW Wind
- 20 MW Solar
- 14 MW Waste to Energy
- 114 MW Columbia Basin Hydro
- 192 MW Mid-Columbia Hydro

Energy Efficiency

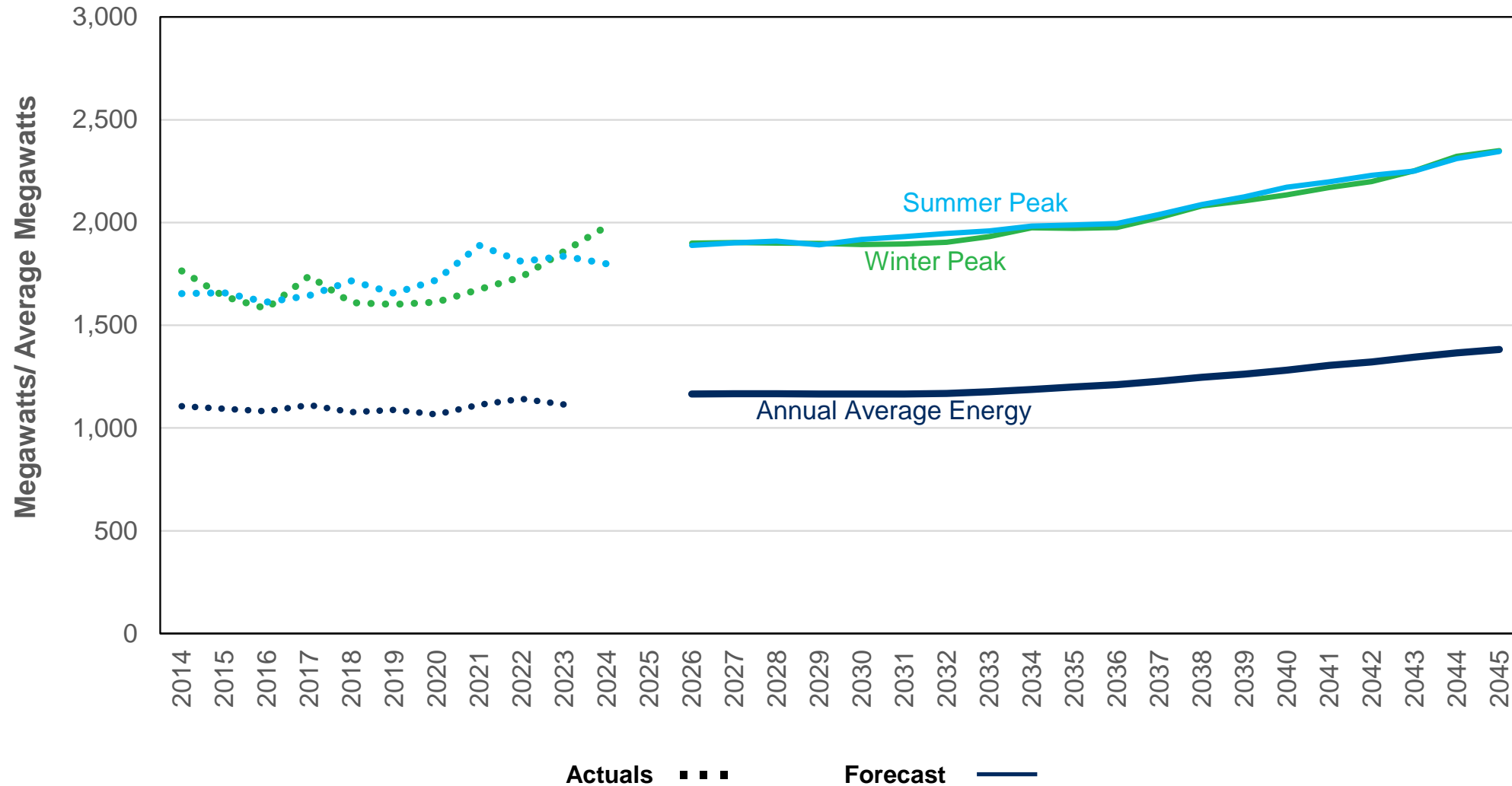
- ~159 aMW

Market & Utility Specific Changes Since 2023 IRP

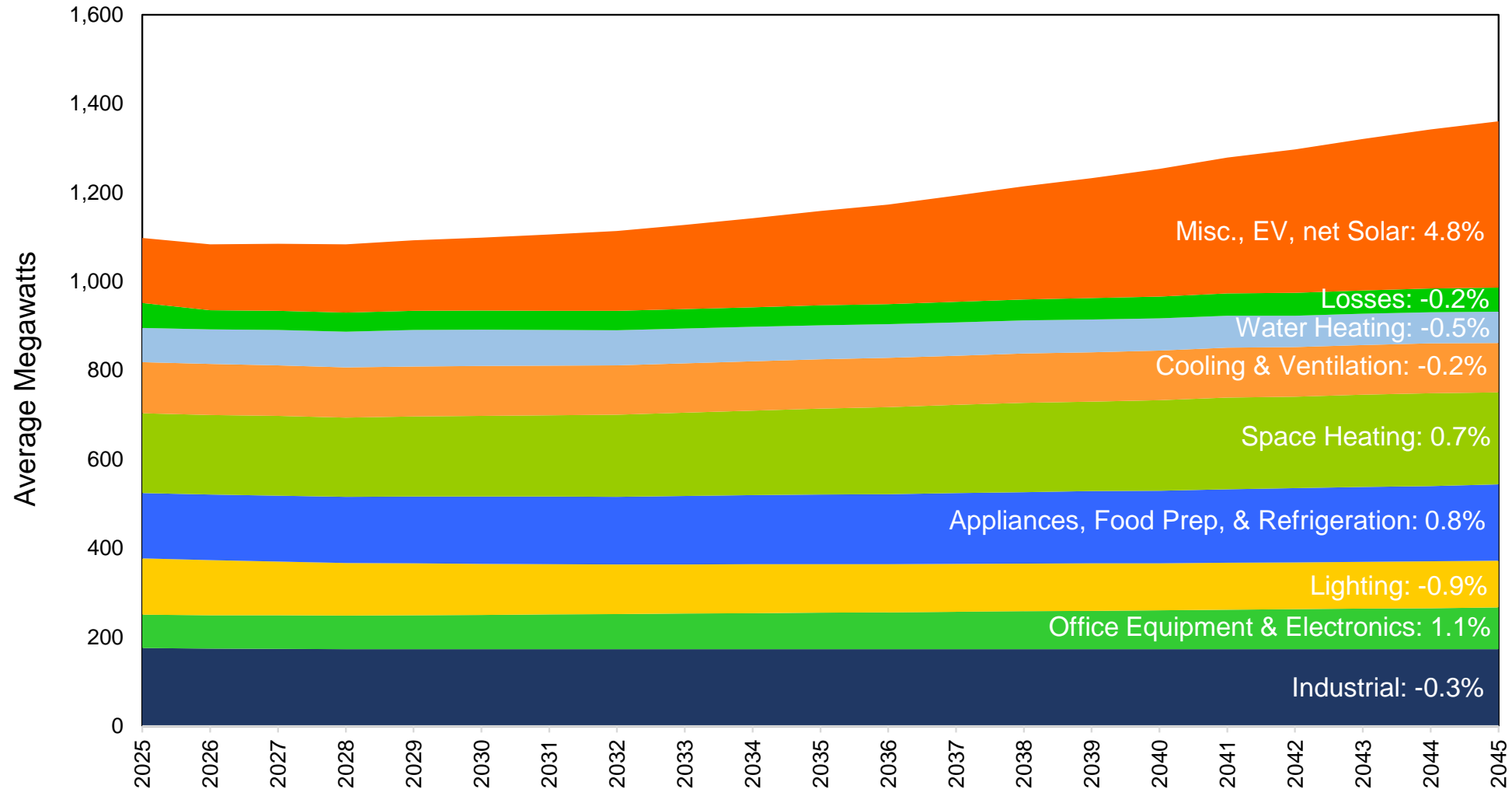
- Peak load growth
- New large customer load (+35 MW)
- Need resources sooner
- Wholesale electric prices are higher
- Transmission congestion is occurring
- Northeast CTs estimated retirement moves from 2035 to 2030



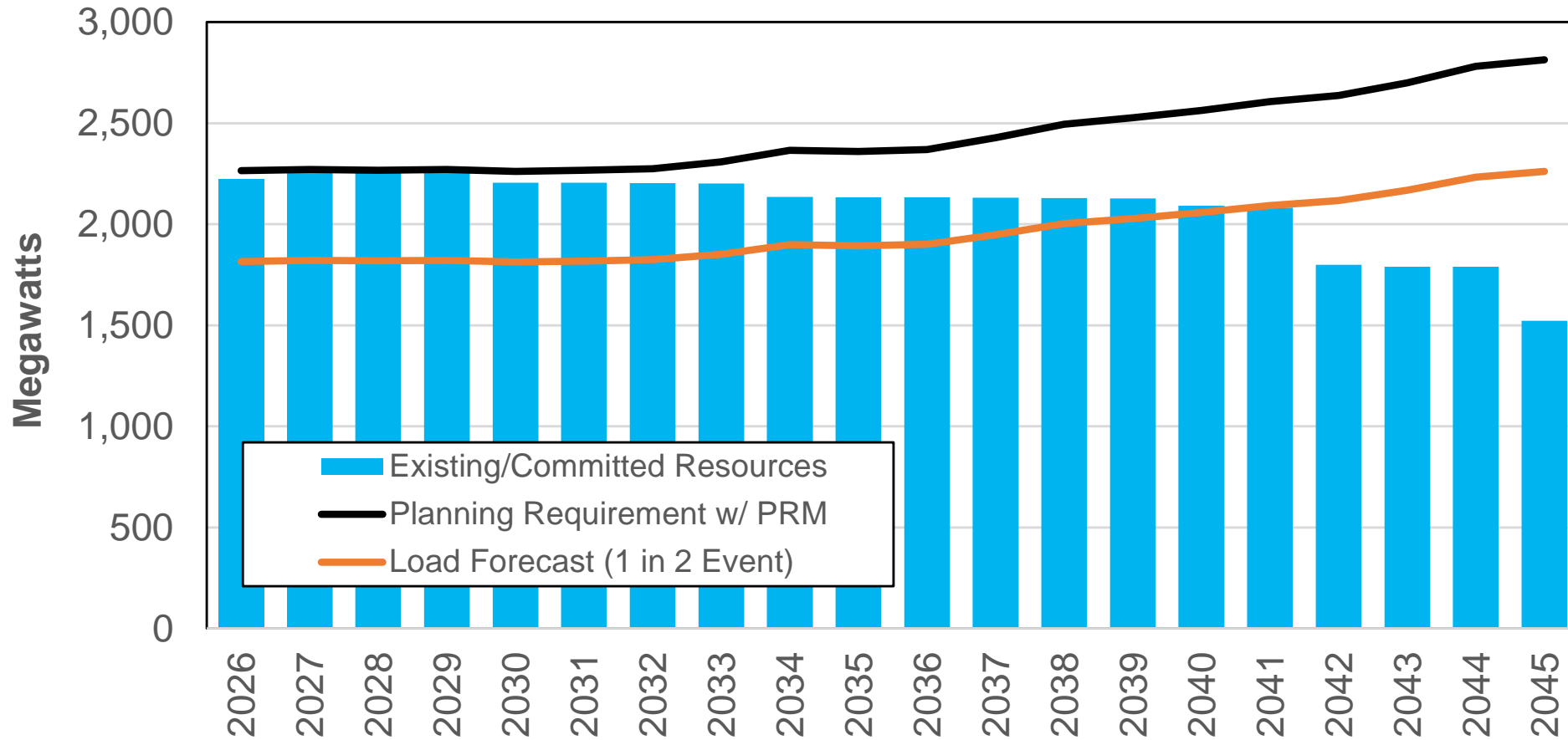
History of Customer Energy Use & Forecast



Customer Electric End Usage Forecast

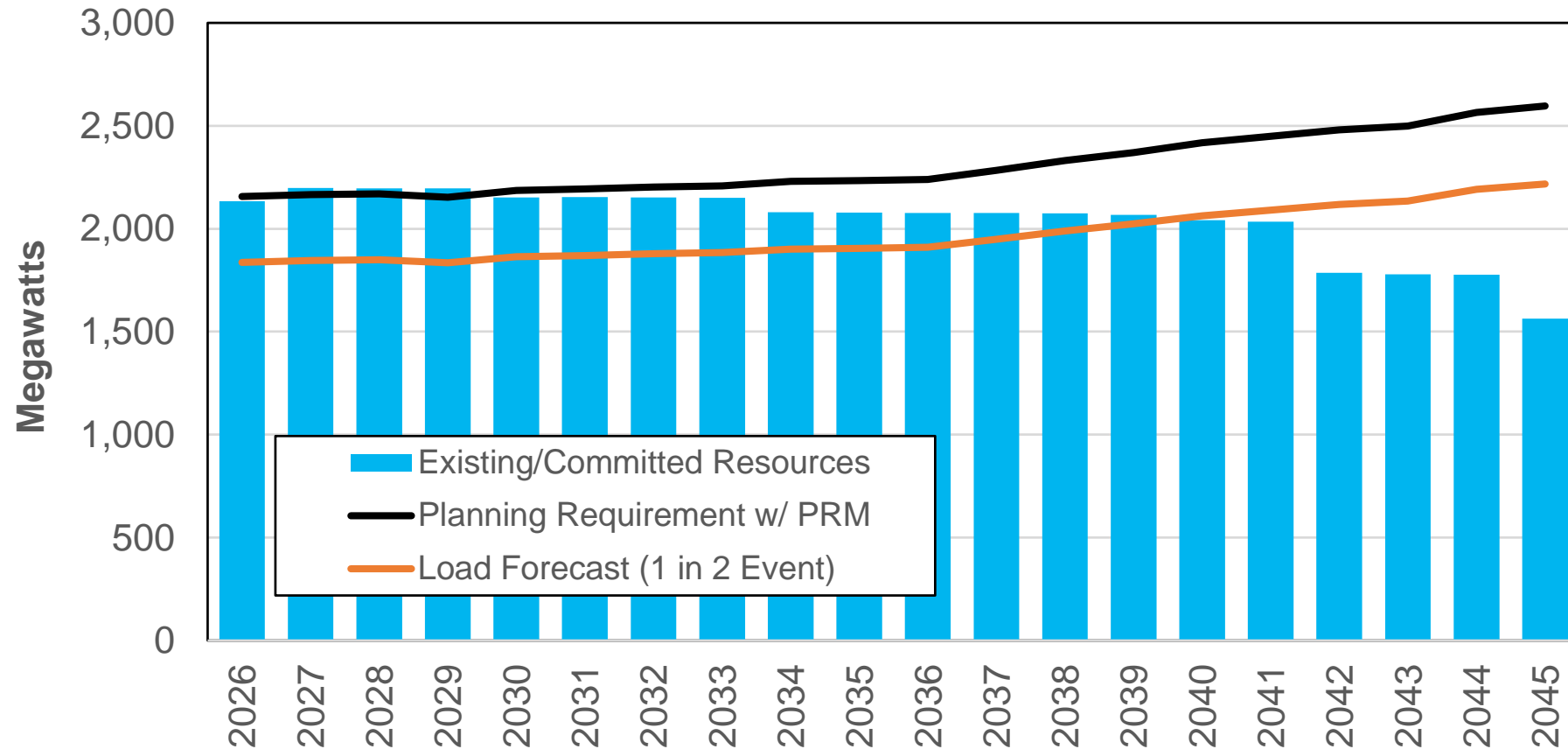


Winter Peak Generation Need



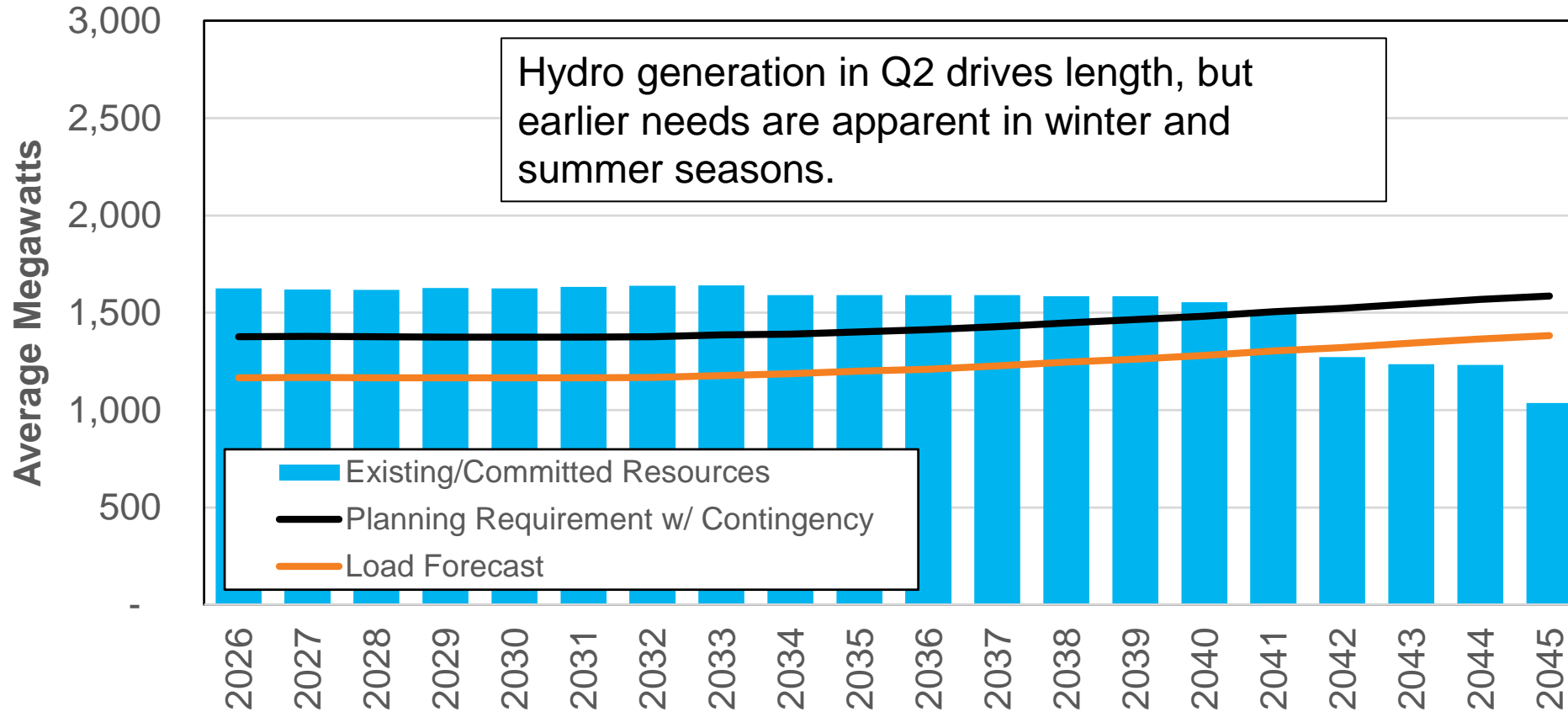
January Peak Load
PRM: Planning Reserve Margin: 24%

Summer Peak Generation Need



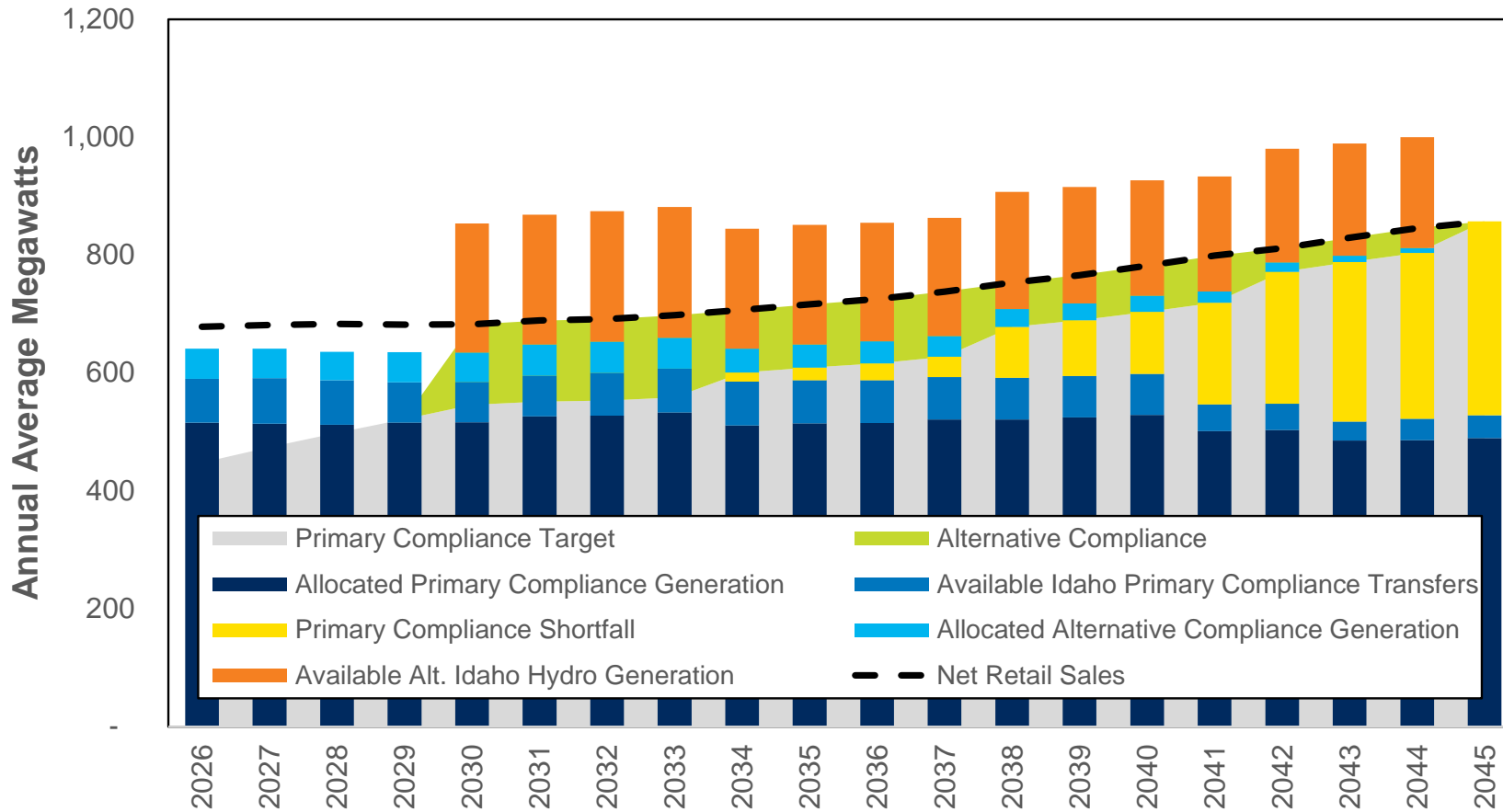
August Peak Load
PRM: Planning Reserve Margin: 16%

Annual Energy Generation Need



Contingency reflects load and generation risks at a combined 95th percentile

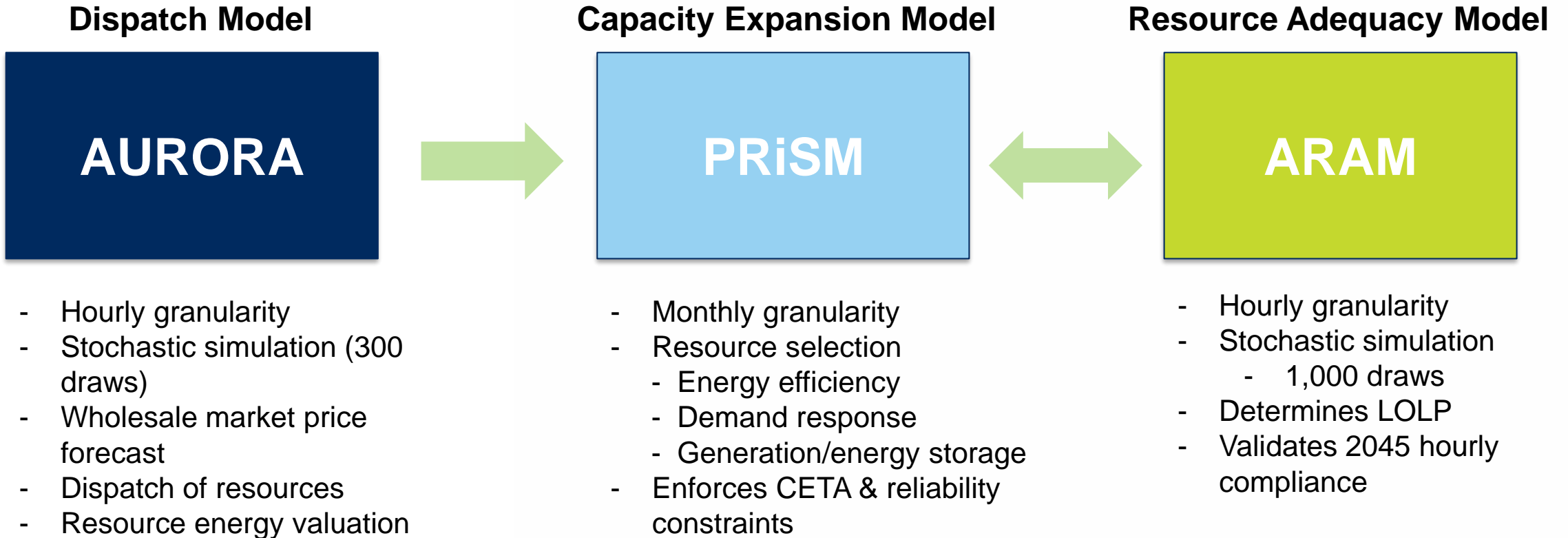
CETA Targets



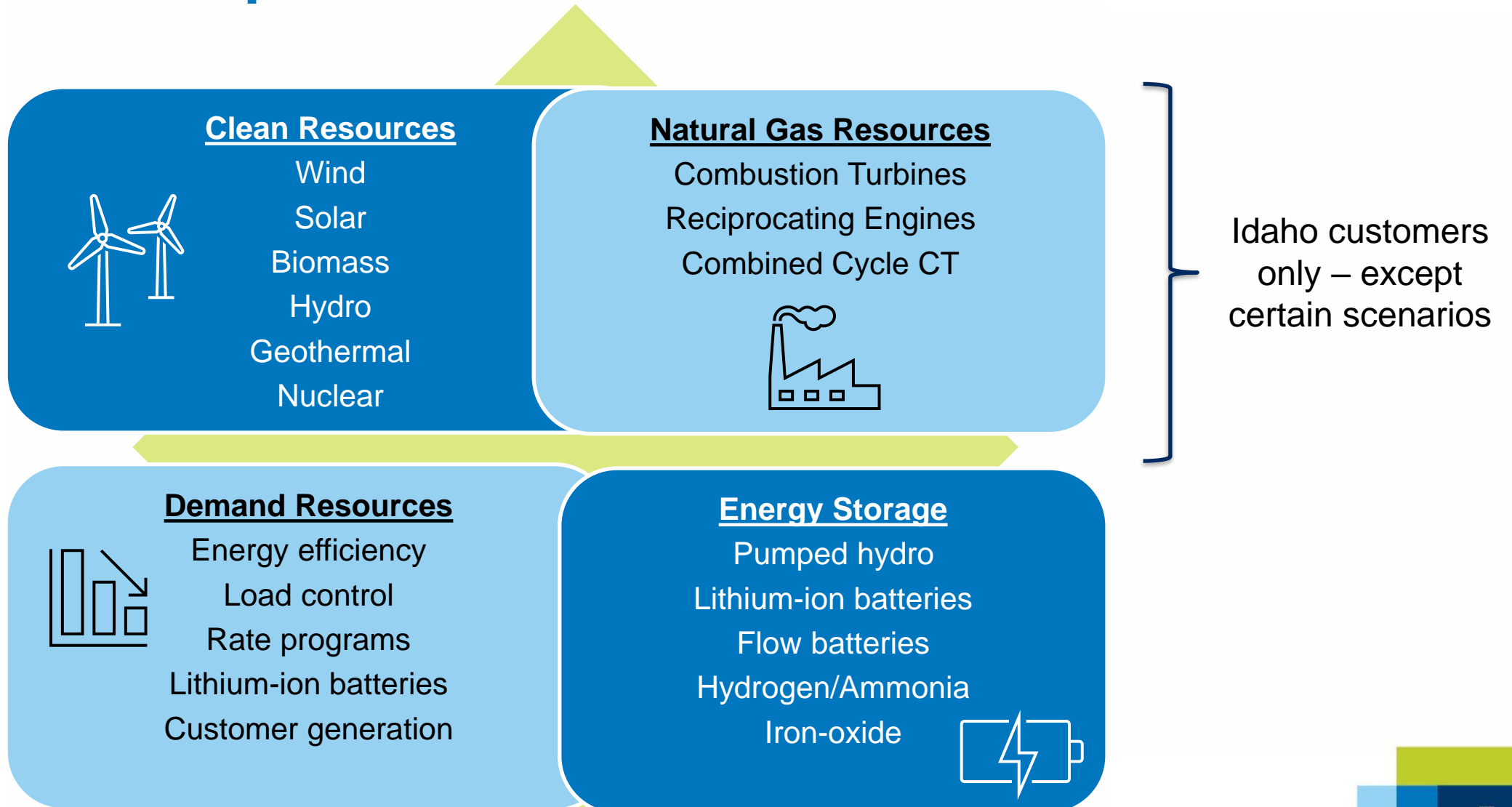
Period	Compliance Target	Alternative Compliance
2022	40.0%	0%
2023	47.5%	0%
2024	55.0%	0%
2025	62.5%	0%
2026	66.0%	0%
2027	69.5%	0%
2028	73.0%	0%
2029	76.5%	0%
2030 – 2033	80.0%	20%
2034 – 2037	85.0%	15%
2038 – 2041	90.0%	10%
2041 – 2044	95.0%	5%
2045	100.0%	0%



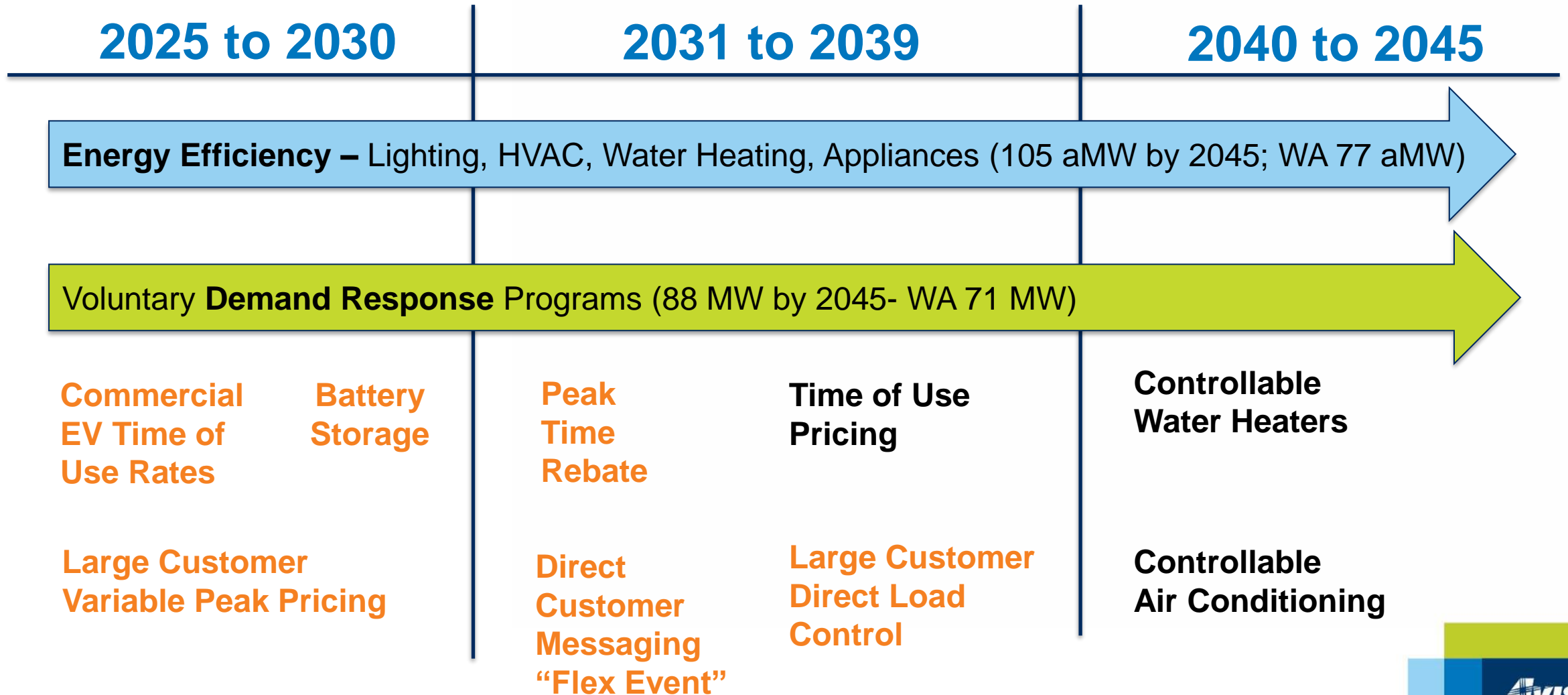
Modeling Methodology



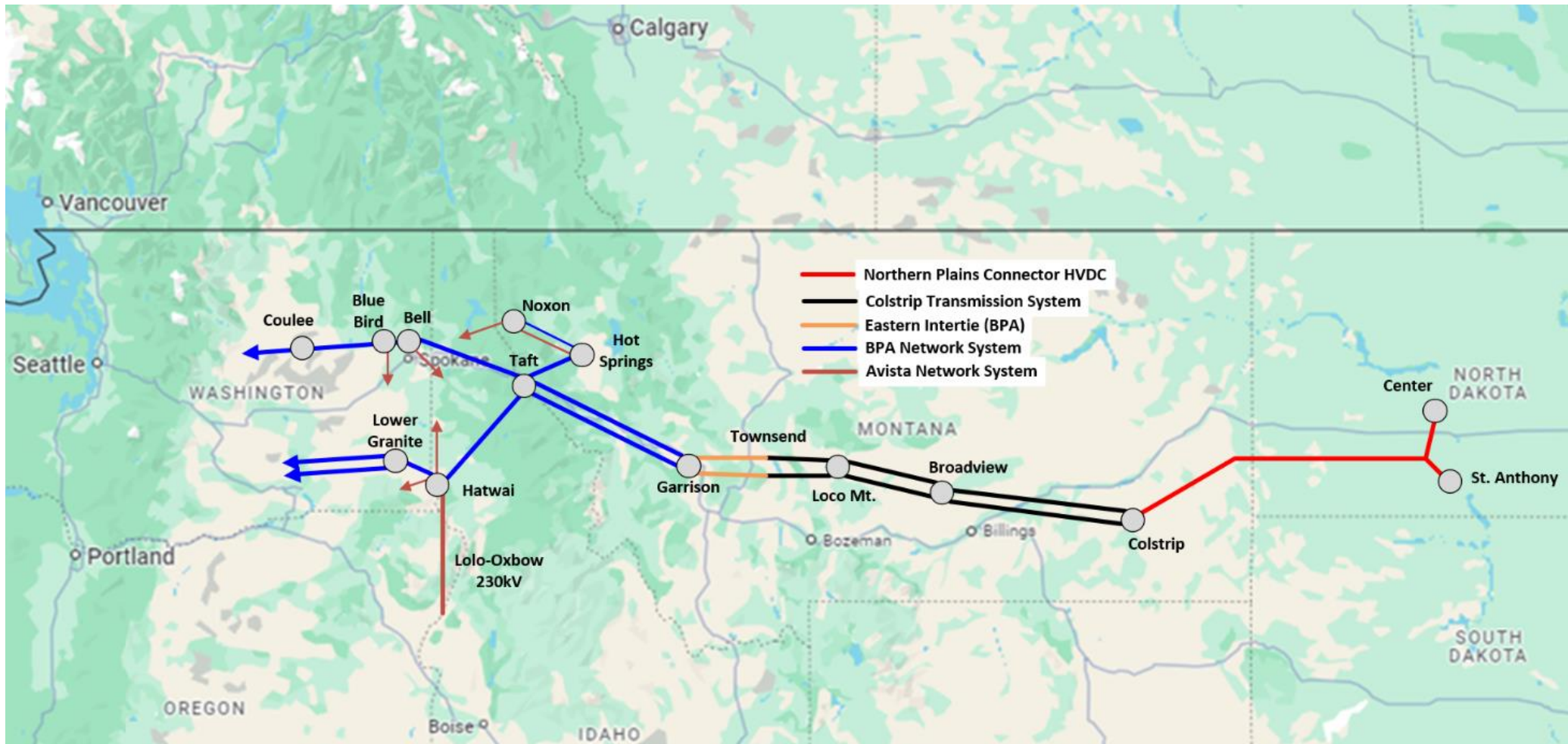
Generation Options



Customer Solutions Selection



Transmission Expansion



Does not include transmission necessary to deliver new generation

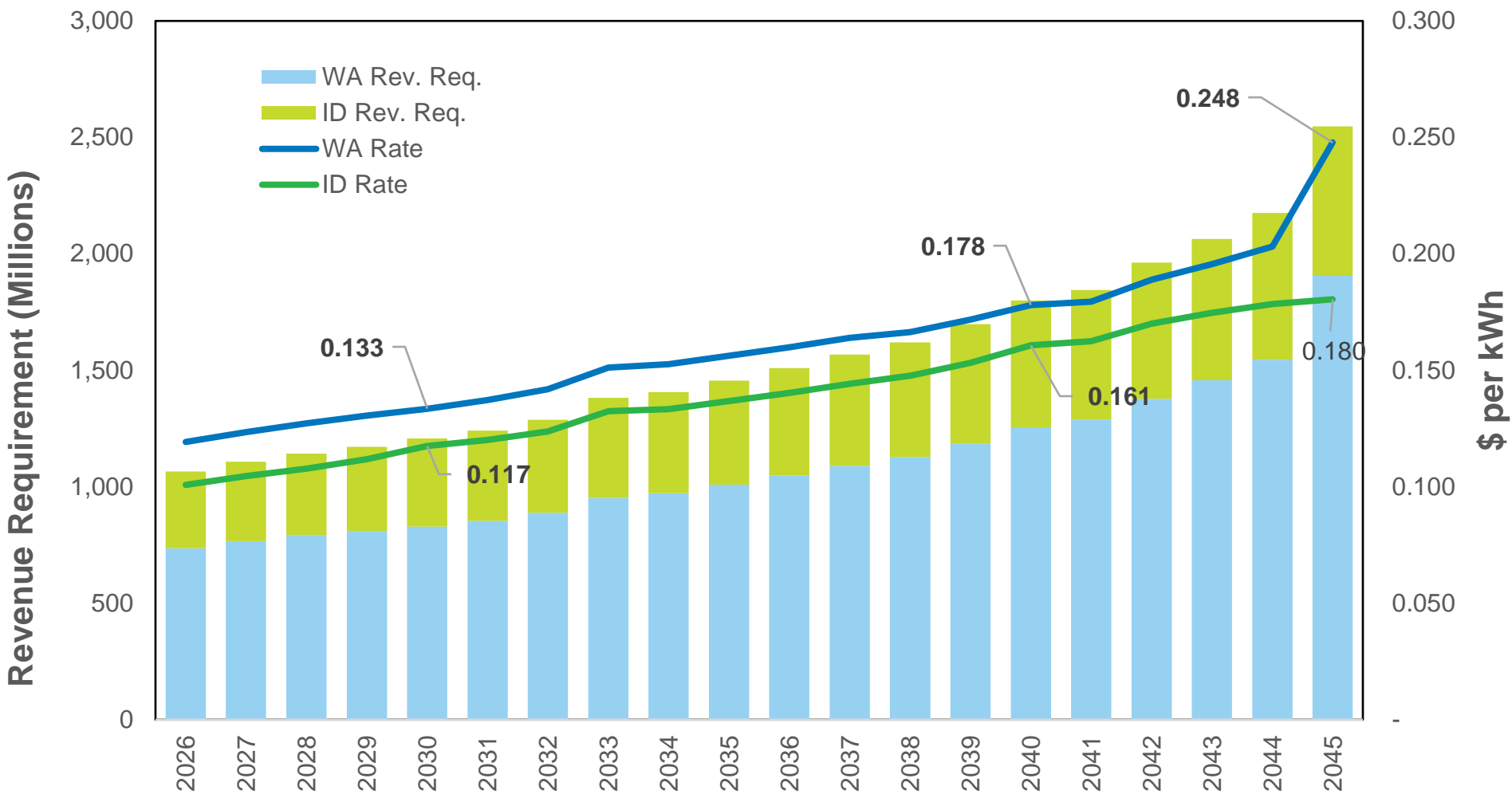
New Resource Supply Selections

2025 to 2030	2031 to 2039	2040 to 2045		
<p>Market Power</p>	<p>Transmission to Eastern Markets</p>	<p>Nuclear</p>	<p>Wind</p>	<p>Solar</p>
<p>Avista will begin a competitive process to find the best resource to meet these needs in 2025</p>	<p>300 MW</p>	<p>100 MW</p>	<p>567 MW*</p>	<p>300 MW</p>
	<p>Montana/ Off System Wind</p>	<p>Wind</p>		
	<p>257 MW</p>	<p>100 MW</p>		
	<p>Natural Gas</p>		<p>Natural Gas</p>	<p>Power to Gas</p>
	<p>90 MW</p>		<p>185 MW</p>	<p>394 MW**</p>
	<p>Community Solar</p>		<p>Batteries</p>	<p>Long-Duration Energy Storage</p>
	<p>5.6 MW</p>		<p>150 MW</p>	<p>111 MW</p>
			<p>Biomass</p>	<p>Geothermal</p>
			<p>68 MW</p>	<p>20 MW</p>
			<p>Community Solar</p>	
			<p>3.1 MW</p>	

*includes replacement of 245 MW of existing wind contracts
 ** includes converting an existing natural gas plant to hydrogen



Preferred Resource Stagey Cost Forecast



Assumes non-power cost increase at historical averages



Customer Benefit Indicators Trajectory

Customer Benefit Indicator	Next 10 Year Trajectory	
Customers with Excess Energy Burden (before energy assistance)	Generally lower due to energy efficiency and community solar	↓
Number of Customers with Excess Energy Burden (before energy assistance)	Generally lower due to energy efficiency and community solar	↓
Average Excess Burden per Household (before energy assistance)	Increase in real \$	↑
Total MWh of DER Generation in Named Communities	Increasing due to community solar and customer energy storage	↑
Total MWh of Energy Storage in Named Communities	Increasing due to community solar and customer energy storage	↑
Investments in Named Communities	Rapid increase due energy efficiency	↑
Planning Reserve Margin	Increasing above threshold	↑
Generation in Washington State and/or connected to Avista's System	Expected to retain current percentage	↔
Local Generation Air Emissions (SO₂, Hg, NO_x, VOC)	Below local requirements and declining due to less dispatch	↓
Greenhouse Gas Emissions (Allocated to Washington)	Declining due to less dispatch (and Colstrip exit)	↓

IRP Analysis – 26 Scenarios

Methodology	Specific	Resource Availability	Load
Alternative Lowest Reasonable Cost	Maximum WA Customer Benefit	Clean Portfolio by 2045	Low Growth High Growth
Baseline Least Cost Portfolio	17% PRM at 17%	500 MW Nuclear in 2040	80% WA Building Electrification by 2045
Minimal Viable CETA Target	30% PRM at 30%	No Power to Gas	80% WA Building Electrification by 2045 & High TE
Maximum Viable CETA Target	PRS w/ CCA Repealed	Regional Transmission Unavailable	80% System Building Electrification by 2045 & High TE, No New NG CTs
PRS Constrained to the 2% Cost Cap		2026 NE CTs Retire	200 MW Data Center in 2030
		On-System Wind Limited to 200 MW	RCP 8.5 Weather
		No IRA Tax Incentives	80% System Building Electrification by 2045 TE, No New NG CTs with RCP 8.5 Weather
		2035 NE CTs Retire	

Portfolio Risks

- **Future load additions**
 - State of interconnection will influence resource choice.
 - Impacts to existing customers will occur in the long-term due to constraints on resource options and transmission.
- **Wind/(Solar) PPA pricing**
 - Avista's forecast of wind ahead of need is a result of PPA prices lower than electric market forecasts.
- IRP assumes **jurisdictional allocation**; this does not actually exist and complicates resource acquisition and choice.
- **CETA's 2% cost cap** is expected to be reached when complying with the 2045 100% clean energy standard.

2025 IRP Action Items

Company

- Northeast CT's future
- Transmission expansion
- All-source Request for Proposal (RFP) for the new resources
- RFP for Demand Response (DR)
- Natural gas supply availability and resiliency

2027 IRP Planning

- Incorporate new energy policy ("Use" rules/initiatives)
- Model exploration
- End Use Load Forecast
- Improve TAC engagement
- Evaluate 3rd party load/generation capacity risks
- Incorporate 2025 Clean Energy Implementation Plan (CEIP)
- Integrated System Planning