



2025 Electric Integrated Resource Plan
Technical Advisory Committee Meeting No. 6 Agenda
Tuesday, May 7, 2024
Virtual Meeting – 8:30 am to 10:00 am PTZ

Topic	Staff
Introductions	John Lyons
Conservation Potential Assessment	AEG
Demand Response Potential Assessment	AEG

Microsoft Teams meeting

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2025 IRP TAC 6 Introductions

John Lyons, Ph.D.
Technical Advisory Committee Meeting No. 6
May 7, 2024

Today's Agenda

Introductions, John Lyons

Conservation Potential Assessment, AEG

Demand Response Potential Assessment, AEG

Remaining 2025 Electric IRP TAC Schedule

- **TAC 7: May 21, 2024: 8:30 to 10:00 (PTZ)**
 - Variable Energy Resource Study
 - Portfolio/Market Scenarios
- **TAC 8: June 4, 2024: 8:30 to 10:00 (PTZ)**
 - Load & Resource Balance and Methodology
 - Loss of Load Probability Study
 - New Resources Options Costs and Assumptions
- **TAC 9: June 18, 2024: 8:30 to 10:00 (PTZ)**
 - IRP Generation Option Transmission Planning Studies
 - Distribution System Planning within the IRP & DPAG update
- **Technical Modeling Workshop: June 25, 2024: 9:00 am to 12:00pm (PTZ)**
 - PRiSM Model Tour
 - ARAM Model Tour
 - New Resource Cost Model

Remaining 2025 Electric IRP TAC Schedule

- **TAC 10: July 16, 2024: 8:30 to 10:00 (PTZ)**
 - Preferred Resource Strategy Results
 - Washington Customer Benefit Indicator Impacts
 - Resiliency Metrics
- **TAC 11: July 30, 2024: 8:30 to 10:00 (PTZ)**
 - Preferred Resource Strategy Results
 - Portfolio Scenario Analysis
 - LOLP Study Results
- **TAC 12: August 13, 2024: 8:30 to 10:00 (PTZ)**
 - Preferred Resource Strategy Results (continued)
 - Portfolio Scenario Analysis (continued)
 - LOLP Study Results (continued)
 - QF Avoided Cost
- **September 2, 2024- Draft IRP Released to TAC.**
- **Virtual Public Meeting- Natural Gas & Electric IRP (September 2024)**
 - Recorded presentation
 - Daytime comment and question session (12pm to 1pm- PST)
 - Evening comment and question session (6pm to 7pm- PST)

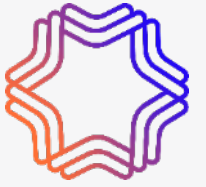


Avista Energy Electric CPA Draft Results



Prepared for Avista Energy TAC Meeting 5/7/2024

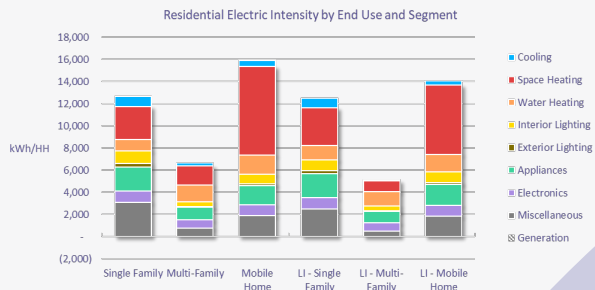
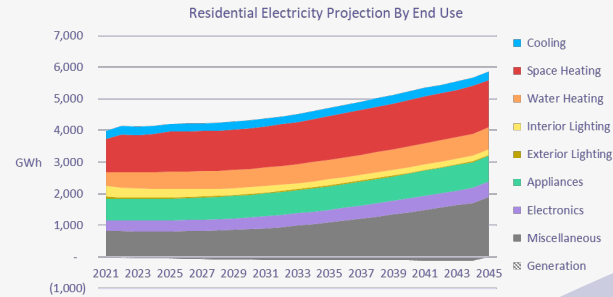
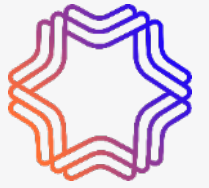
CPA Objectives



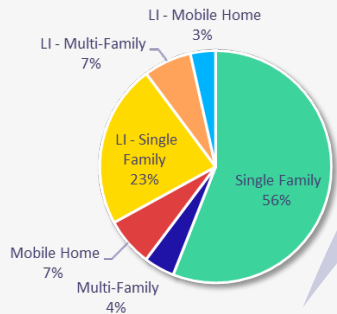
- Assess a broad set of technologies to identify long-term energy efficiency and demand response potential in Avista’s Washington and Idaho service territories to support:
 - Integrated Resource Planning
 - Portfolio target-setting
 - Program development
- Provide information on costs and seasonal impacts of conservation to compare to supply-side alternatives
- Understand differences in energy consumption and energy efficiency opportunities by income level
- Ensure transparency into methods, assumptions, and results



EE Modeling Approach



Residential Electric Use by Segment, 2021



Market Characterization

- Baseline studies
- Utility data
- Secondary data

Baseline Projection

- Utility forecasts
- Standards and building codes

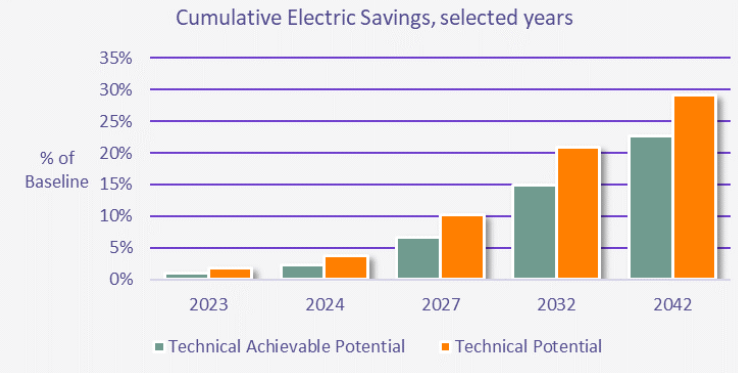


Identify Demand-Side Resources

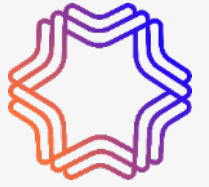
- EE equipment
- EE measures
- Emerging tech.

Potential Estimation

- Technical
- Achievable Tech.
- Economic screen in IRP



Major Modeling Inputs and Sources



Avista foundational data

Avista power sales by schedule
Current and forecasted customer counts
Retail price forecasts by class



Survey data showing presence of equipment

Avista: Residential customer survey conducted in 2013
NEEA: Residential and Commercial Building Stock Assessments (RBSA 2016 and CBSA 2019)
US Energy Information Administration: Residential, Commercial, and Manufacturing Energy Consumption Surveys (RECS 2020, CBECS 2018, and MECS 2015)



Technical data on end-use equipment costs and energy consumption

Regional Technical Forum workbooks
Northwest Power and Conservation Council's 2021 Power Plan workbooks
US Department of Energy and ENERGY STAR technical data sheets
Energy Information Administration's Annual Energy Outlook/National Energy Modeling System data files



State and Federal energy codes and standards

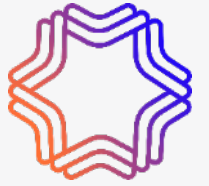
Washington State Energy Code
Idaho Energy Code
Federal energy standards by equipment class



Market trends and effects

RTF market baseline data
Annual Energy Outlook purchase trends (in base year)

Forecast Update – DOE HPWH Standard



New efficiency requirements take effect in 2029

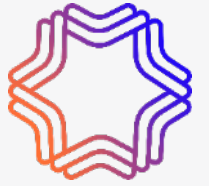
- Forecast shown at the time of the previous TAC meeting (April 23rd) did not include the new water heater standard published on April 30th
- Ordinarily, forecast assumptions would already be frozen for this cycle, however this standard has a huge impact on both baseline and a major savings measure within the CPA

Impacts

- Reduces consumption growth by ~297 GWh (33.9 aMW) by 2045
- Reduces Peak growth by ~29 MW in Summer and ~52 MW in Winter (est.)
- Delays Winter Peak overtake of Summer by about 10 years
- Moves majority of DHW savings into baseline instead of CPA

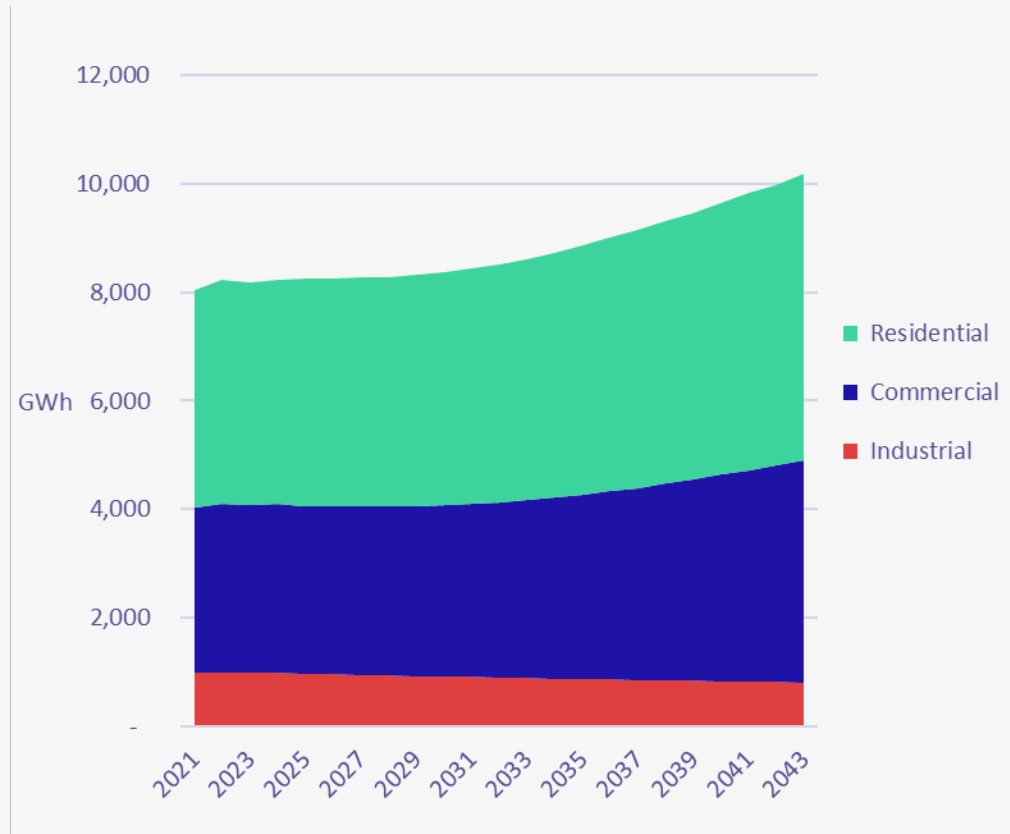
Water Heater Size	Efficiency Requirement
20 to <55 Gallons	UEF 2.3 (CCE Tier 1)
> 55 gallons	UEF 2.5 (CCE Tier 2)

Baseline Forecast - Updated

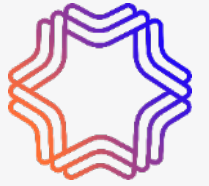


Washington + Idaho Combined

- Customer growth and electrification from natural gas systems combine for a projected 30% increase in electric loads over the forecast period, or 1.12% annually
- Growth from electrification is ~2,400 GWh
- Includes:
 - Projected cooling and heating degree days according to climate trends in Avista's territory
 - Market efficiency impacts (such as trends toward LED lighting as baseline), which are saving over 1,400 GWh in the forecast period compared to minimum codes & standards
 - Solar and EV projections from the DER study in Washington (Avista projections for Idaho)
 - DOE HPWH standard starting in 2029



Levels of Savings Estimates

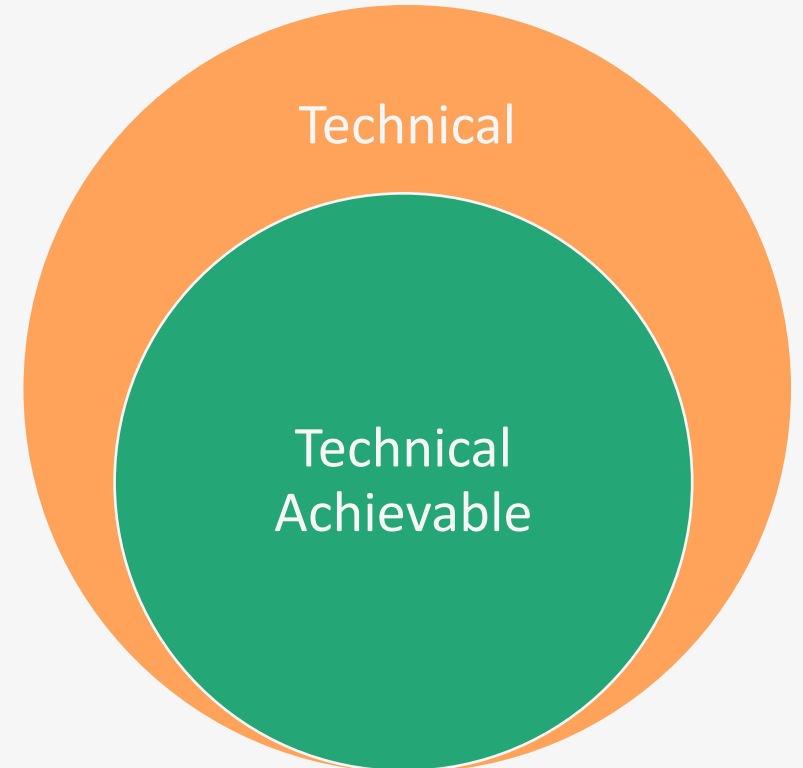


NW Power Council Methodology

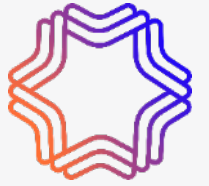
This study develops two sets of estimates:

- Technical potential (TP): upper bound on potential, assuming all of the most energy efficiency opportunities are adopted without consideration of cost or customer willingness to participate.
- This may include emerging or very expensive ultra-high efficiency technologies
- Technical Achievable Potential (TAP) is a subset of TP that accounts for customer preference and likelihood to adopt through both utility- and non-utility driven mechanisms, but does not consider cost-effectiveness

In addition to these estimates, the study produces cost data for the Total Resource Cost (TRC) and Utility Cost Test (UCT) perspectives that can be used by Avista's IRP process to select energy efficiency measures in competition with other resources (see next slide)



Potential Estimates



Achievability

All potential “ramps up” over time – all ramp rates are based on those found within the NWPCC’s 2021 Power Plan

- **Max Achievability**
 - **NWPCC 2021 Plan allows some measures max achievability to reach up to 100% of technical potential**
 - **Previous Power Plans assumed a maximum achievability of 85%**
 - **AEG has aligned assumptions with the 2021 Plan and measures such as lighting reach greater than 85%**
- **Note that Council ramp rates are agnostic to delivery to acquisition mechanism and include potential that may be realized through utility DSM programs, regional initiatives and market transformation, or enhanced codes and standards**

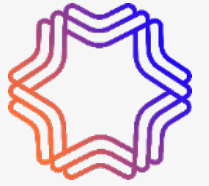
Measures examples over 85% Achievability:

- All Lighting
- Washers/Dryers
- Dishwashers
- Refrigerators/Freezers
- Circulation Pumps
- Thermostats
- C&I Fans

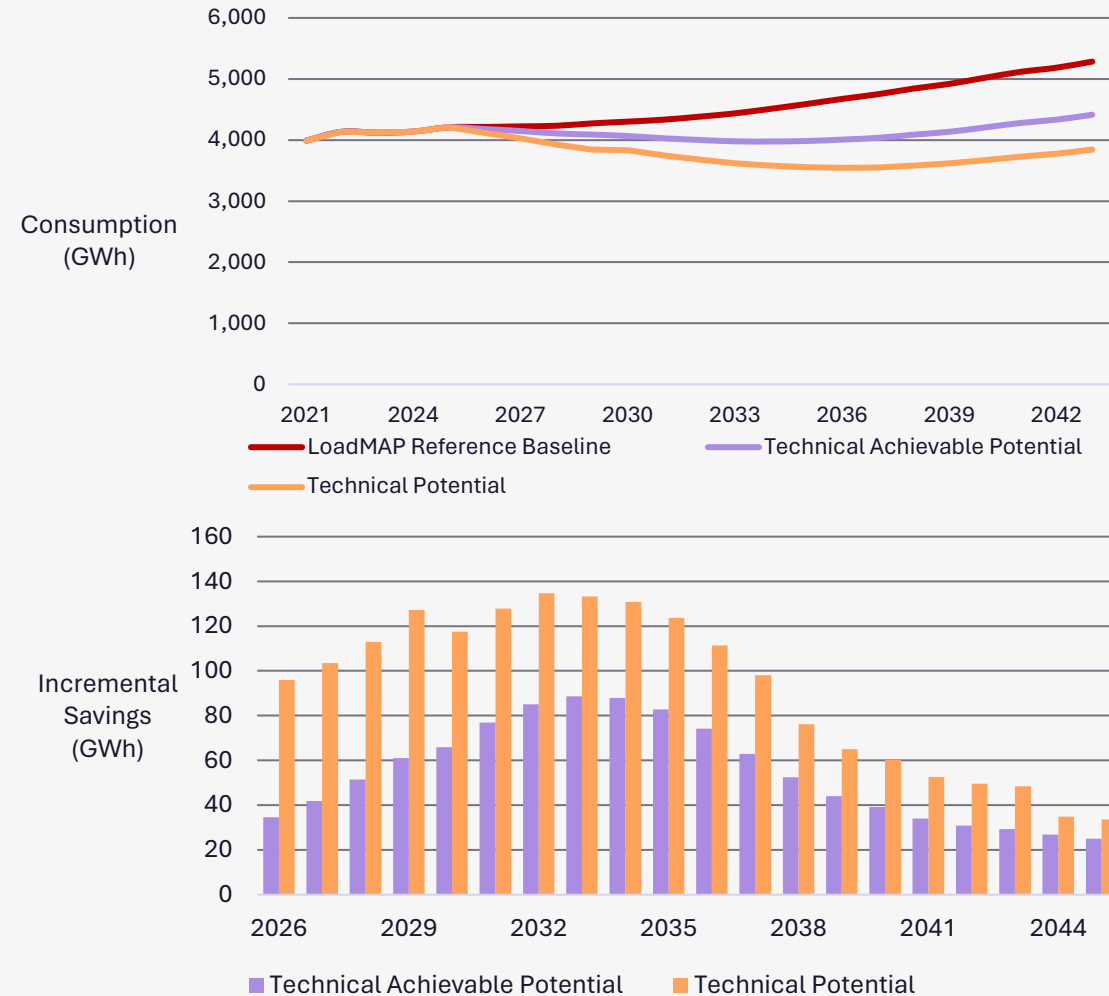


Residential Electric Draft Results

Residential EE Potential

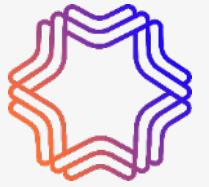


- Draft results indicate energy savings of 1.0% of baseline consumption per year are Technically Achievable.
 - 76 GWh (8.6 aMW) in next biennial period (2026-2027)
 - 604 GWh (69.0 aMW) by 2035
 - 890 GWh (101.6 aMW) by 2045
- Top measures in 2045 include:
 - Heat Pump Water Heaters
 - ENERGY STAR 7.0 Windows
 - Level 2 Electric Vehicle Chargers

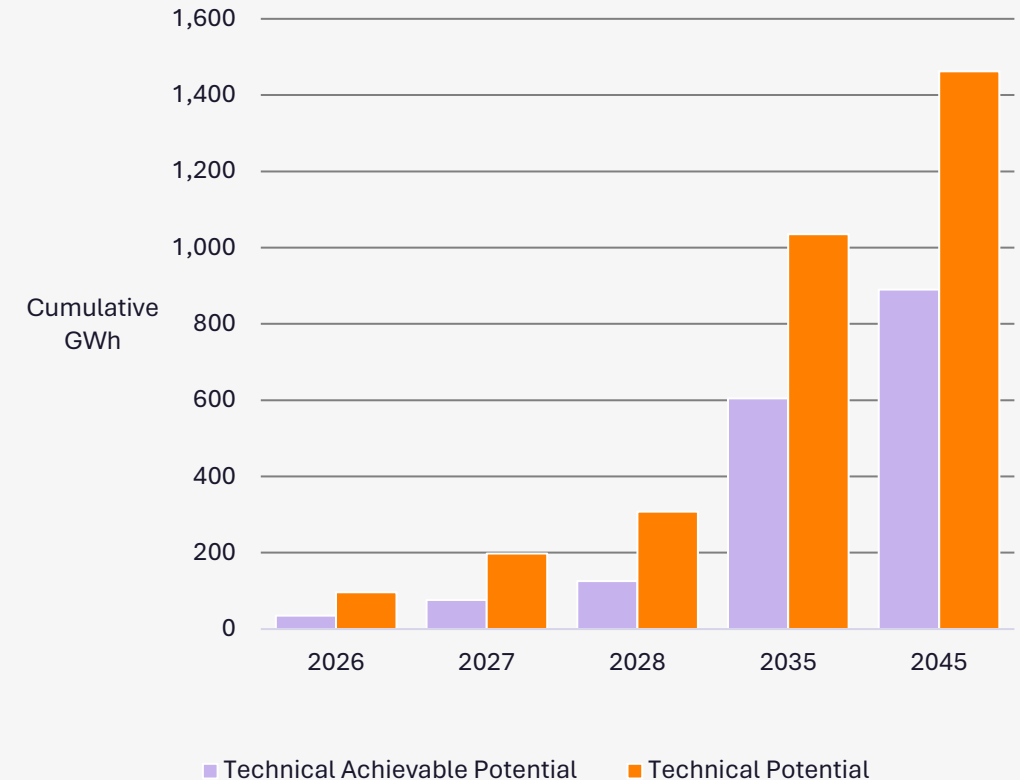


Residential EE Potential

WA and ID



Summary of Energy Savings (GWh), Selected Years	2026	2027	2028	2035	2045
Reference Baseline	4,215	4,224	4,234	4,590	5,432
<i>Washington</i>	2,798	2,804	2,810	3,063	3,670
<i>Idaho</i>	1,417	1,421	1,424	1,527	1,763
Cumulative Savings (GWh)					
Technical Achievable Potential	35	76	125	604	890
<i>Washington</i>	23	50	83	413	617
<i>Idaho</i>	12	26	42	191	274
Technical Potential	96	198	307	1,035	1,462
Energy Savings (% of Baseline)					
Technical Achievable Potential	0.8%	1.8%	3.0%	13.2%	16.4%
<i>Washington</i>	0.8%	1.8%	3.0%	13.5%	16.8%
<i>Idaho</i>	0.8%	1.8%	3.0%	12.5%	15.5%
Technical Potential	2.3%	4.7%	7.3%	22.6%	26.9%
Incremental Savings (GWh)					
Technical Achievable Potential	35	42	51	83	25
<i>Washington</i>	23	28	34	58	17
<i>Idaho</i>	12	14	17	25	8
Technical Potential	96	103	113	124	34

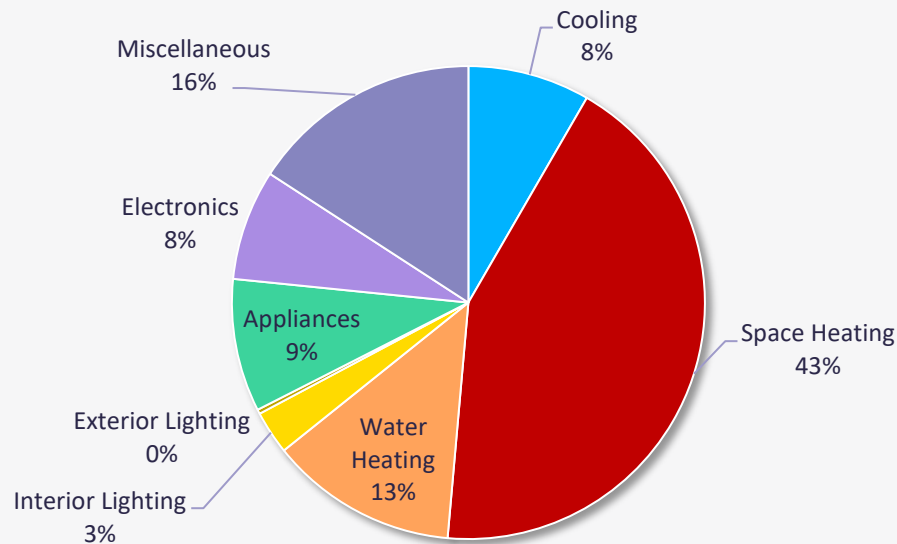


Residential EE Technical Achievable Potential



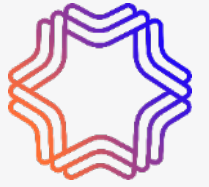
Top Measures Summary (ID & WA Combined)

2045 Technical Achievable Savings by End Use

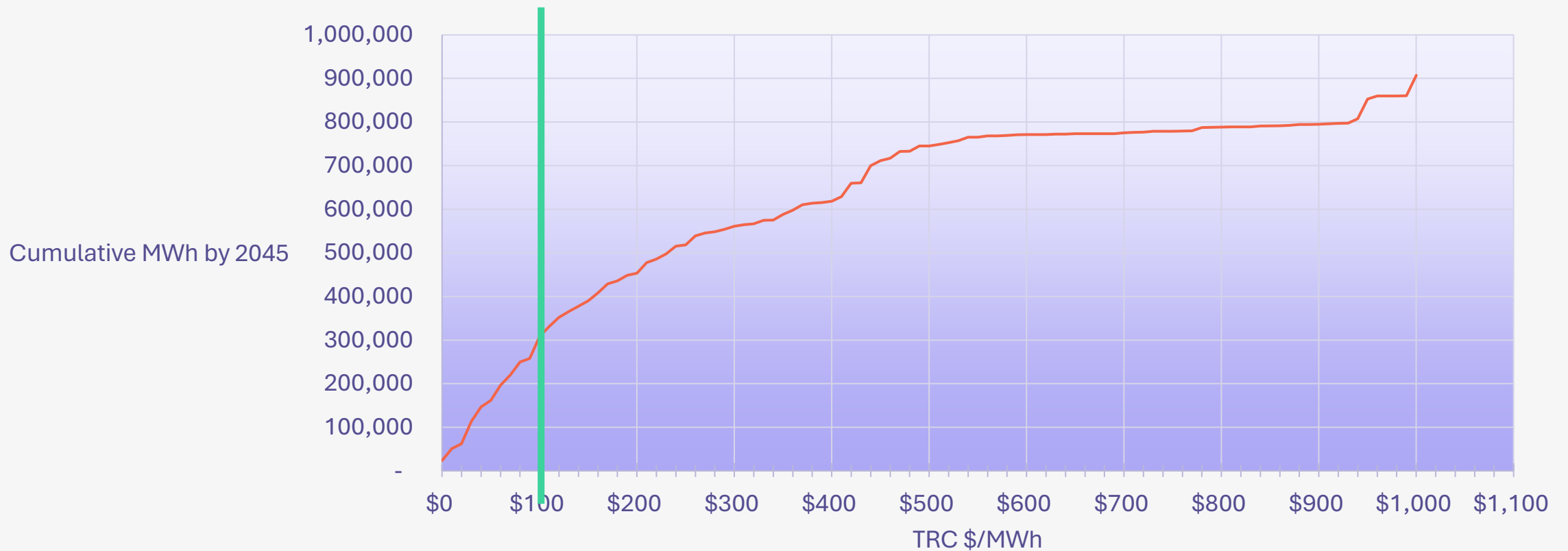


Rank	Measure / Technology	2045	% of Total	TRC LCOE (\$/kWh)
1	Windows - High Efficiency (ENERGY STAR 7.0)	88,239	9.9%	\$0.43
2	Water Heater (<= 55 Gal) - NEEA Tier 5 Heat Pump (CCE 3.5)	62,528	7.0%	\$0.07
3	Electric Vehicles - Level 2	51,493	5.8%	\$0.16
4	Windows - High Efficiency (Triple Pane) - U-0.17	35,246	4.0%	\$0.56
5	Ducting - Repair and Sealing	33,947	3.8%	\$0.14
6	Insulation - Wall Sheathing - R-19	29,879	3.4%	\$0.22
7	Advanced New Construction Designs	28,923	3.2%	\$0.15
8	Engine Block Heater Controls	27,356	3.1%	\$0.08
9	Home Energy Reports	25,919	2.9%	\$0.05
10	Insulation - Ducting - R-8 Ducts (Retrofit up to code)	25,355	2.8%	\$0.19
11	Building Shell - Air Sealing (Infiltration Control)	25,229	2.8%	\$0.59
12	TVs - ENERGY STAR (9.0)	24,637	2.8%	\$0.00
13	Clothes Dryer - UCEF 2.62/CEF 3.93 - ENERGY STAR 1.1/2028 Standard	23,742	2.7%	\$0.24
14	Air-Source Heat Pump - SEER 16.0 / HSPF 9.2 SEER2 15.2 / HSPF2 7.8 (ENERGY STAR 6.1)	21,888	2.5%	\$0.48
15	HVAC - Maintenance and Tune-Up	21,227	2.4%	\$0.50
16	Clothes Washer - CEE Tier 2	21,070	2.4%	\$0.03
17	Ducting - Repair and Sealing - Aerosol	19,136	2.1%	\$0.75
18	Home Energy Management System (HEMS)	16,881	1.9%	\$0.30
19	Linear Lighting - LED 2035 (152 lm/W system)	16,063	1.8%	-\$0.15
20	Insulation - Floor Upgrade - R-30	14,834	1.7%	\$0.49
Total of Top 20 Measures		613,591	68.9%	
Total Cumulative Savings		890,281	100.0%	

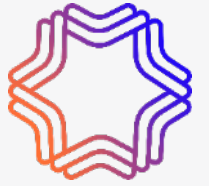
Residential Supply Curve



A large portion of Technical Achievable Potential is very costly



Residential EE Technical Achievable Potential



Major drivers and Changes from prior study



Higher tiers of Heat Pump Water Heaters have been added since the prior study, which provides some opportunity even above the new federal standard



Large growth of Electric Vehicles, particularly in Washington give more opportunity for EV Charger savings.



Efficient Windows have higher ENERGY STAR requirement. AEG also updated base assumptions using latest Residential Energy Consumption Survey data.



Connected Thermostats have lower savings than prior study due to lowered savings and lifetime assumptions in RTF workbooks.

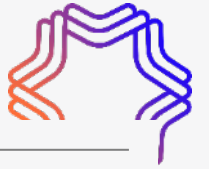


Updated the applicability of several measures to reflect new market data available (ie, RECS 2020), reduce overlapping applications, and better reflect market balance between competing non-equipment measures

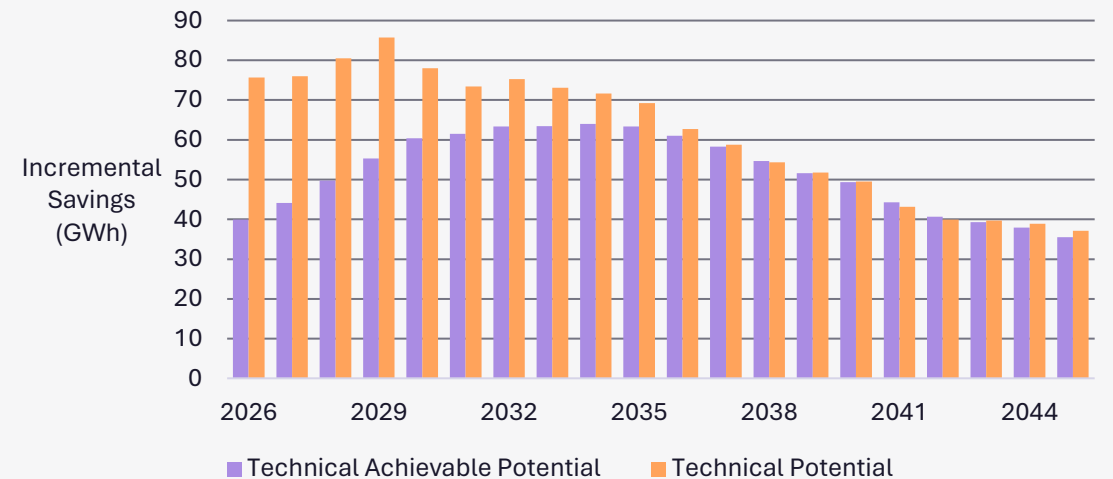
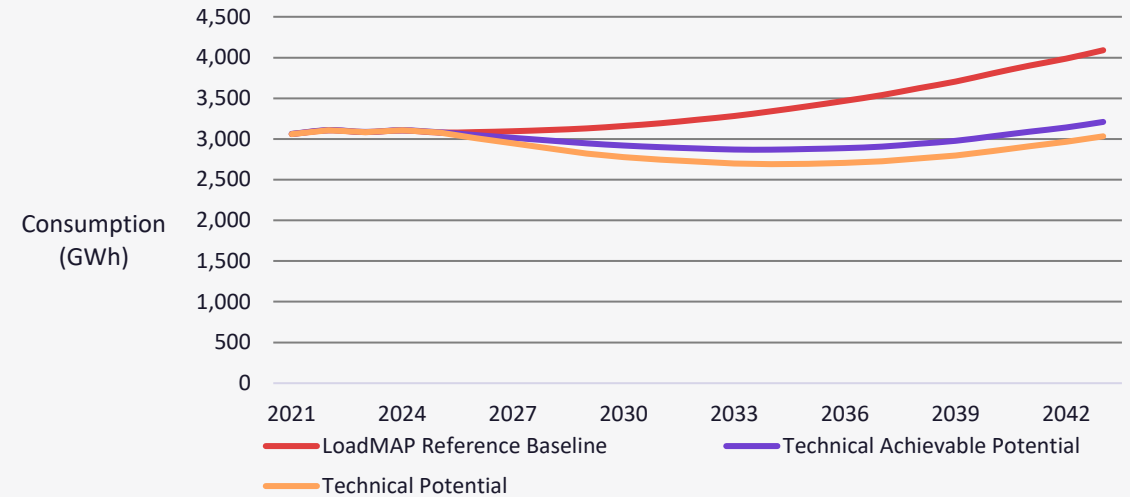


Commercial Electric Draft Results

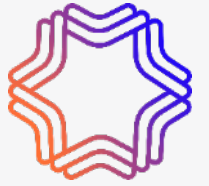
Commercial EE Potential



- Commercial Technical Achievable potential is slightly higher than Residential, roughly 1.1% of baseline per year
 - 84 GWh (9.5 aMW) in next biennial period (2026-2027)
 - 527 GWh (60.1 aMW) by 2035
 - 943 GWh (107.6 aMW) by 2045
- Top measures in 2045 include:
 - LED fixture replacements bundled with controls
 - Level 2 EV Chargers in WA
 - HVAC System upgrades

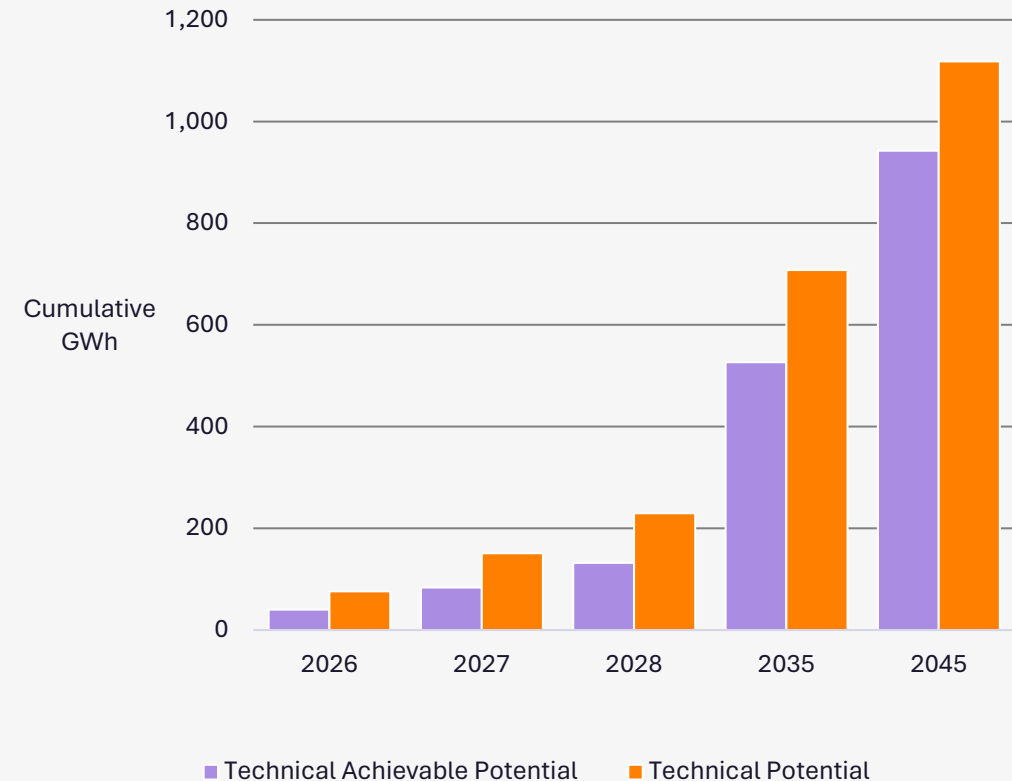


Commercial EE Potential

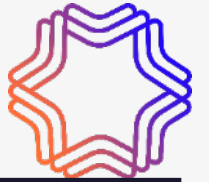


WA and ID

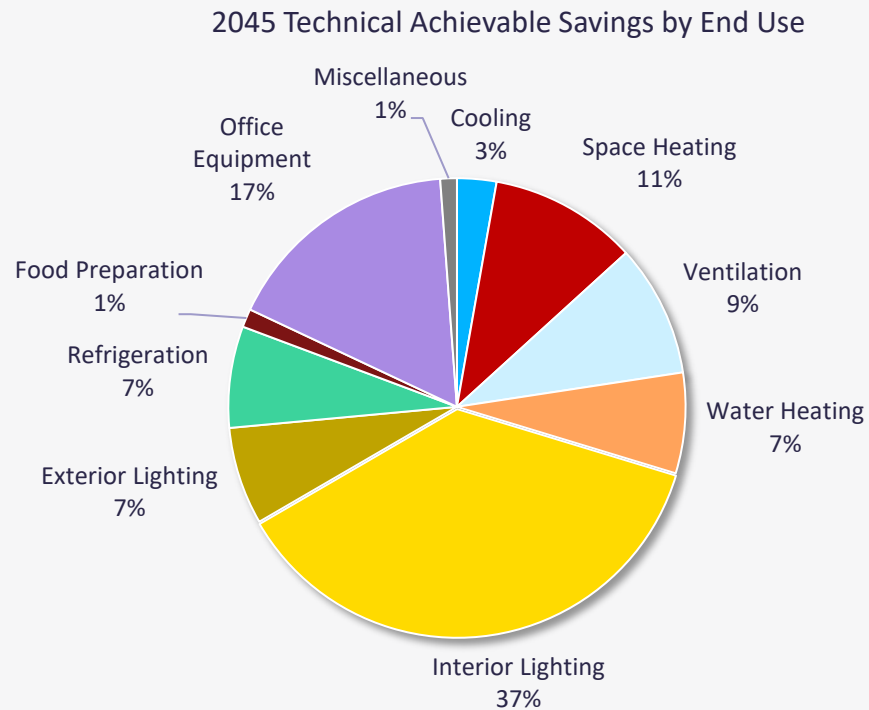
Summary of Energy Savings (GWh), Selected Years	2026	2027	2028	2035	2045
Reference Baseline	3,086	3,097	3,112	3,403	4,274
<i>Washington</i>	2,049	2,056	2,066	2,305	3,034
<i>Idaho</i>	1,037	1,041	1,046	1,099	1,240
Cumulative Savings (GWh)					
Technical Achievable Potential	40	84	132	527	943
<i>Washington</i>	28	59	94	374	687
<i>Idaho</i>	12	24	38	153	256
Technical Potential	76	151	229	708	1,118
Energy Savings (% of Baseline)					
Technical Achievable Potential	1.3%	2.7%	4.2%	15.5%	22.1%
<i>Washington</i>	1.4%	2.9%	4.5%	16.2%	22.6%
<i>Idaho</i>	1.1%	2.3%	3.7%	13.9%	20.6%
Technical Potential	2.5%	4.9%	7.4%	20.8%	26.2%
Incremental Savings (GWh)					
Technical Achievable Potential	40	44	50	63	36
<i>Washington</i>	28	31	35	45	27
<i>Idaho</i>	12	13	14	18	9
Technical Potential	76	76	80	69	37



Commercial Technical Achievable EE Potential

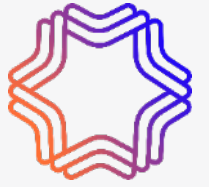


Top Measures Summary (ID & WA Combined)

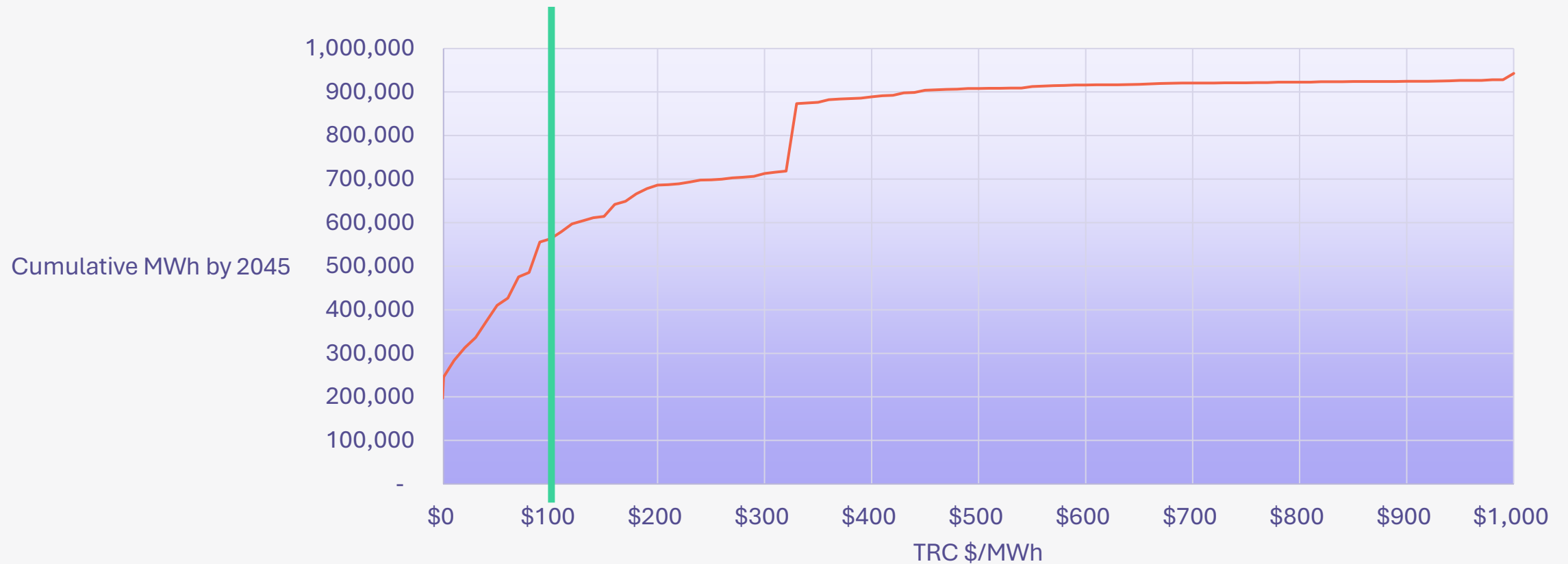


Rank	Measure / Technology	2045	% of Total	TRC LCOE (\$/kWh)
1	Linear Lighting – LED Fixture w/ Embedded Controls	176,027	18.7%	\$0.00
2	Electric Vehicle Chargers - Level 2	157,586	16.7%	\$0.31
3	Air-Source Heat Pump - IEER 20.3 / COP 3.7	42,489	4.5%	\$0.42
4	Server - ENERGY STAR (4.0)	32,087	3.4%	\$0.06
5	High-Bay Lighting - LED Fixtures w/ Embedded Controls	32,048	3.4%	\$0.00
6	HVAC - Energy Recovery Ventilator	31,766	3.4%	\$0.65
7	Ventilation - Variable Speed Control	31,620	3.4%	\$4.32
8	Office Equipment - Advanced Power Strips	31,544	3.3%	\$0.97
9	Water Heater - Pipe Insulation	31,097	3.3%	\$0.08
10	Strategic Energy Management	30,256	3.2%	\$0.18
11	HVAC - Dedicated Outdoor Air System (DOAS)	29,384	3.1%	\$7.26
12	Desktop Computer - ENERGY STAR (8.0)	27,107	2.9%	\$0.09
13	Refrigeration - Economizer Addition	26,547	2.8%	\$0.10
14	Water Heater - Solar System	19,713	2.1%	\$0.23
15	Ductless Mini Split Heat Pump	17,208	1.8%	\$0.41
16	Retrocommissioning	11,752	1.2%	\$0.19
17	Refrigeration - High Efficiency Compressor	8,700	0.9%	\$4.03
18	Lodging - Guest Room Controls	8,615	0.9%	\$0.17
19	Grocery - Display Case - LED Lighting	7,416	0.8%	\$3.98
20	Area Lighting – LED Fixtures w/ Embedded Controls	7,297	0.8%	\$0.00
Total of Top 20 Measures		760,259	80.6%	
Total Cumulative Savings		942,676	100.0%	

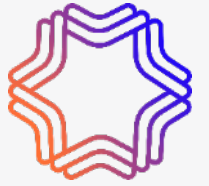
Commercial Supply Curve



A large portion of Technical Achievable Potential is very costly



Commercial Technical Achievable EE Potential



Major drivers and Changes from prior study



Updated lighting baseline to latest RTF market assumptions, actually increased available LED market



Commercial EV fleets are a new modeling aspect, assumptions from DER study have a large population and RTF workbooks give valuable savings

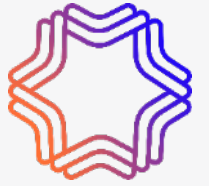


Updated applicability of shell and controls measures to latest market data and to avoid overlapping applications

Demand Response



DR Study Approach



Data Collection

Align with EE Potential Study

- Market Profiles

Secondary Sources

- Industry or regional reports
- Previous studies

Characterize the Market

Segmentation by Customer Class

- Residential
- General Service
- Large General Service
- Extra-Large General Service

Develop list of DR Options

Program Categories

- Conventional DLC
- Smart/Interactive DLC
- Curtailment
- Energy Storage
- Time-Varying Rates/Behavioral
- Ancillary Services

Characterize the Options

Develop Program Assumptions

- Impacts
- Participation
- Technology
- Costs
- Incentives

Estimate Potential

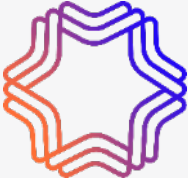
Technical Achievable Potential

- Potential for all programs regardless of cost and without consideration of dual participation

Achievable Potential

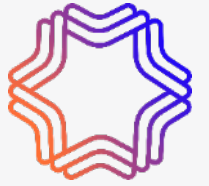
- Integrated program options without participant overlap

All Program Options



Conventional DLC	Central AC Water Heating
Smart/Interactive DLC	Grid-Interactive Water Heating Smart Thermostats (Cooling/Heating) Smart Appliances
Third Party Curtailment	Emergency Curtailment
Energy Storage	Battery Storage Thermal Storage
Time-Varying Rates/Behavioral	Behavioral Time-of-Use Electric Vehicle Time-of-Use Electric Vehicle V1G Telematics Variable Peak Pricing Peak Time Rebate

Current and Future DR Programs



Current DR Programs include:

- Electric Vehicle TOU
- Electric Vehicle V1G Telematics
- Third Party Contracts (one large industrial customer for 30 MW)



DR Pilot Programs beginning in June 2024:

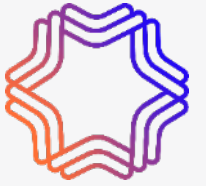
- Time-of-Use Opt-in
- Peak Time Rebate



Pilot Programs will run for two years starting in 2024

- For DR potential, AEG ramps up pilot programs to steady state participation once pilot period has commenced

Advanced Metering Infrastructure (AMI) Assumptions



Some of the options require AMI

- DLC Options- No AMI Metering Required
- Dynamic Rates- require AMI for billing

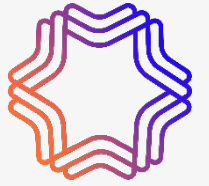
Washington

- Assume 100% throughout study for all sectors

Idaho starting AMI rollout March 2027

- 36-month deployment schedule

Assumptions and Updates



Smart Thermostat - Heating Program will piggyback off Cooling Program

Shared Admin, Development, and O&M Costs



Grid-Interactive Water Heaters

Split results across water heater type- ER and HP

- Per-customer impacts reflect AEG-estimated grid-interactive water heater peak kW



Dynamic Rates

PTR - Residential and General Service

VPP - Large and Extra-Large General Services

EV TOU - General Service and Large General Service

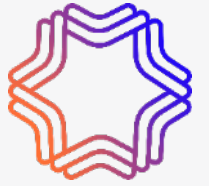
TOU - Residential and General Service



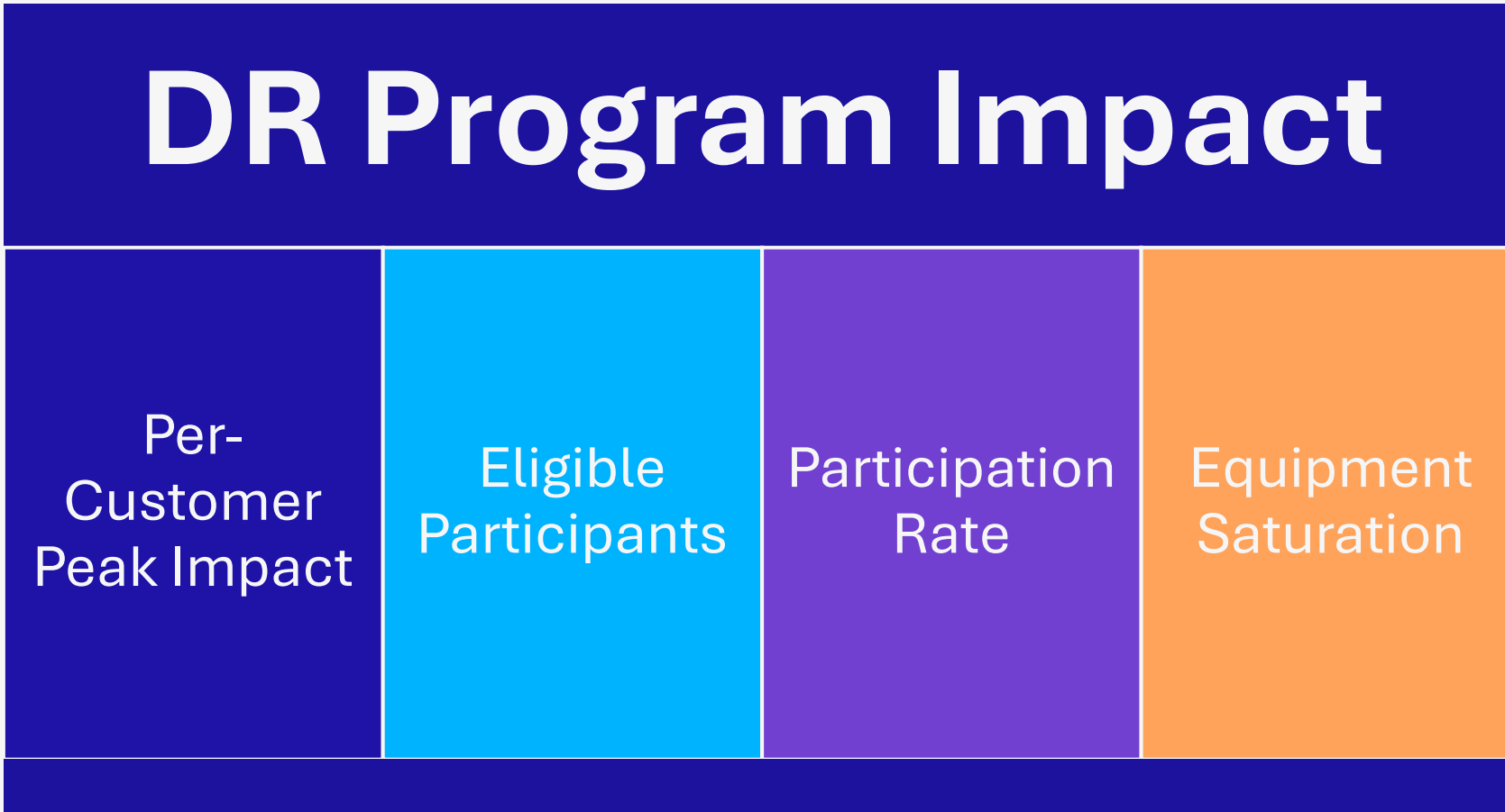
Program Impact and Cost assumptions based on NWPCC 2021 Power Plan assumptions and DR program results from surrounding utilities

Diverged from these where appropriate

- Customization for Avista's service territory
- Where NWPCC program information wasn't available



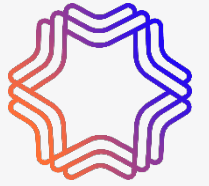
DR Program Impact



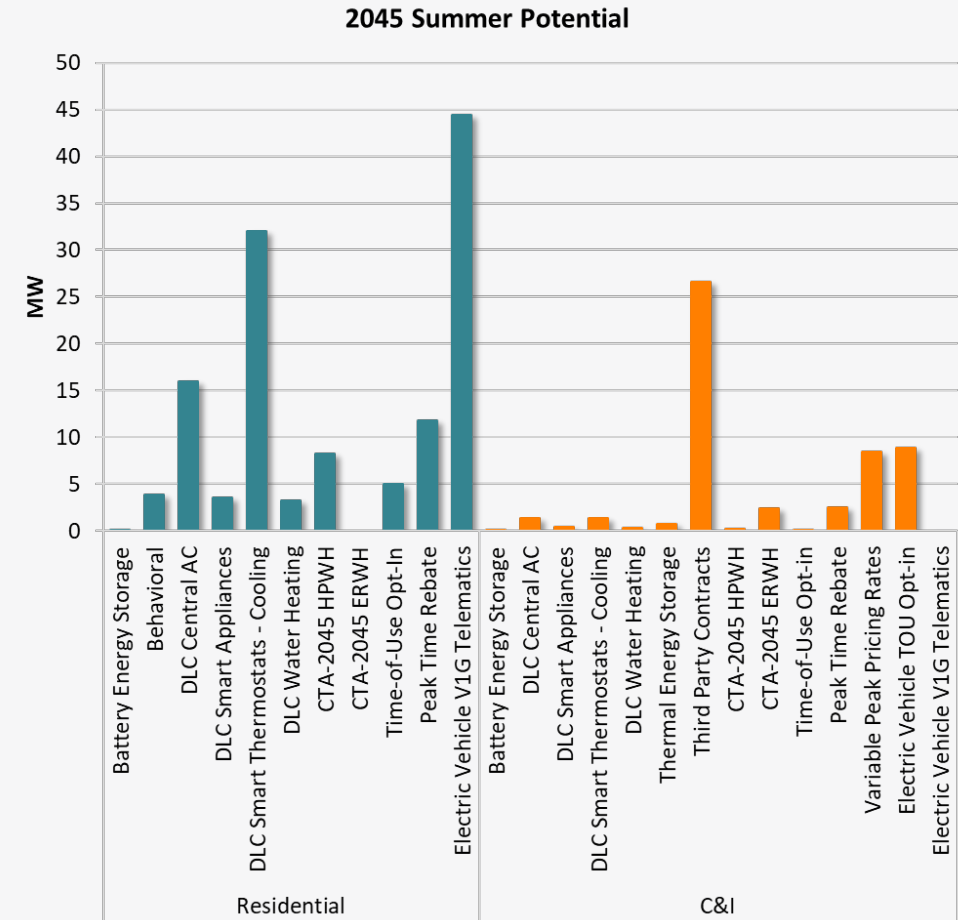


Draft DR Results

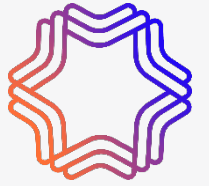
Summer DR Potential - Technical Achievable



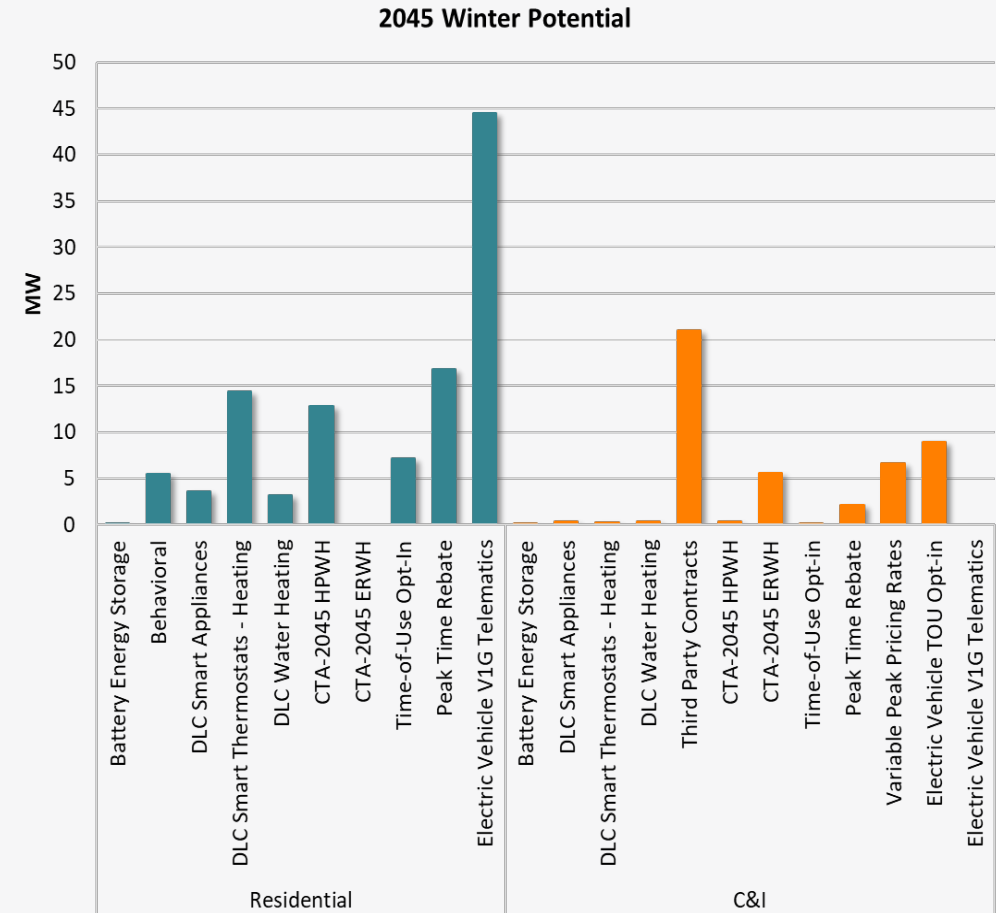
Summer TAP	2026	2027	2028	2035	2045	2045 from 2022 CPA
Baseline Forecast (Summer MW)	1,802	1,792	1,769	1,958	2,215	1,986
Battery Energy Storage	0.0	0.0	0.0	0.1	0.1	5.5
Behavioral	1.1	1.8	2.2	3.4	3.8	4.4
CTA-2045 HPWH	0.0	0.0	0.1	3.5	8.5	1.0
CTA-2045 ERWH	0.1	0.2	0.5	4.9	2.4	5.3
DLC Central AC	1.2	3.7	8.7	14.3	17.4	15.4
V1G Telematics	0.9	2.8	4.7	16.4	44.5	29.3
DLC Smart Appliances	0.3	0.9	2.2	3.5	4.0	3.7
DLC Smart Thermostats - Cooling	2.3	7.0	16.6	27.4	33.4	30.7
DLC Smart Thermostats - Heating	-	-	-	-	-	-
DLC Water Heating	0.3	0.8	1.9	3.0	3.5	2.4
Electric Vehicle TOU Opt-in	0.1	0.2	0.4	2.7	8.9	4.7
Thermal Energy Storage	0.0	0.1	0.3	0.7	0.7	0.8
Third Party Contracts	7.9	12.5	17.0	24.1	26.6	29.1
Time-of-Use Opt-in	0.2	0.5	0.9	4.5	5.1	10.3
Time-of-Use Opt-out	7.4	6.9	6.6	2.7	3.1	39.6
Variable Peak Pricing Rates	0.6	1.8	4.1	7.6	8.4	5.4
Peak Time Rebate	0.3	0.8	2.3	12.5	14.3	15.5



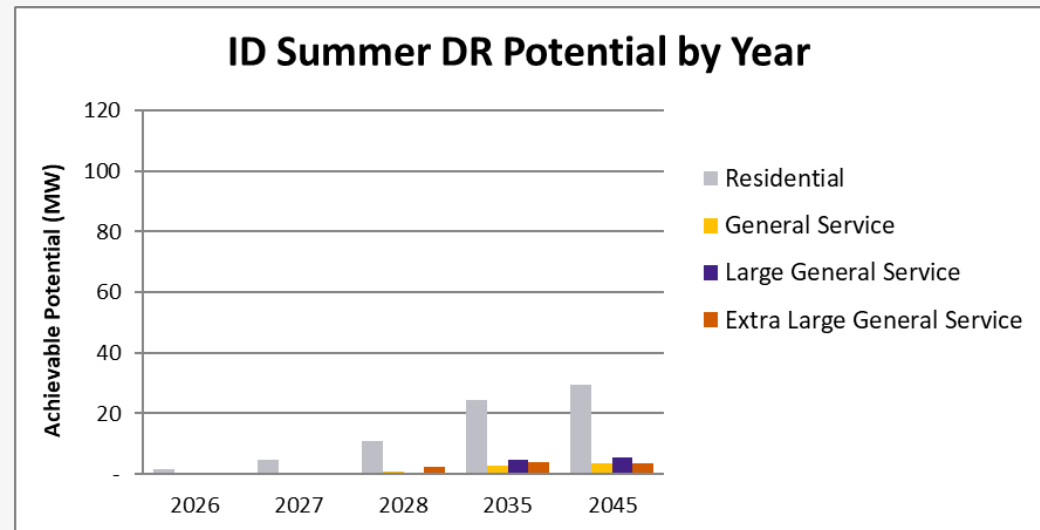
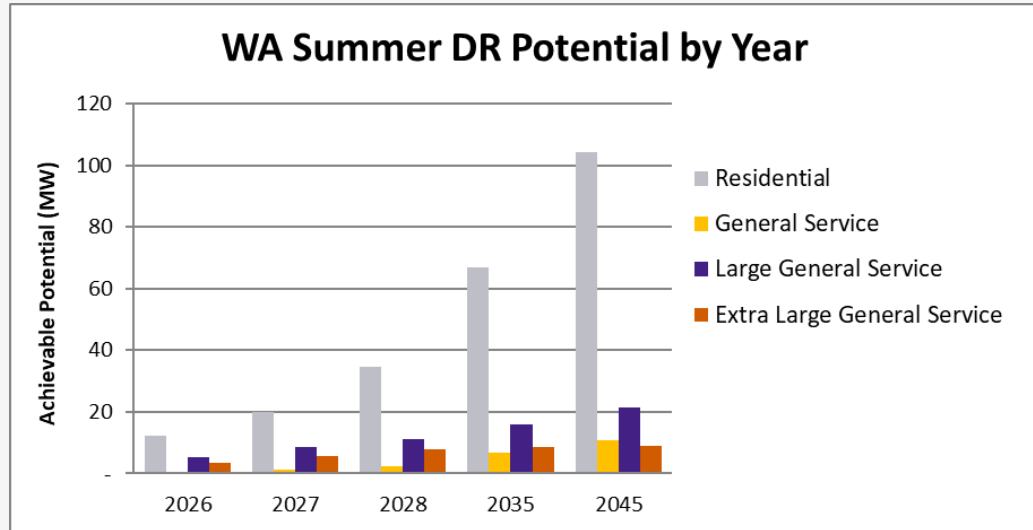
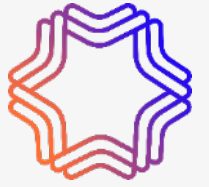
Winter DR Potential – Technical Achievable



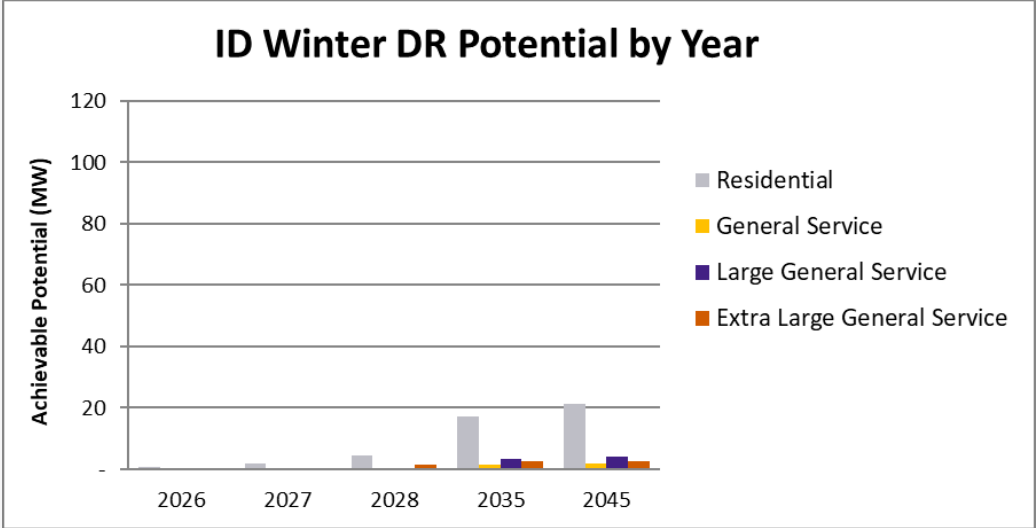
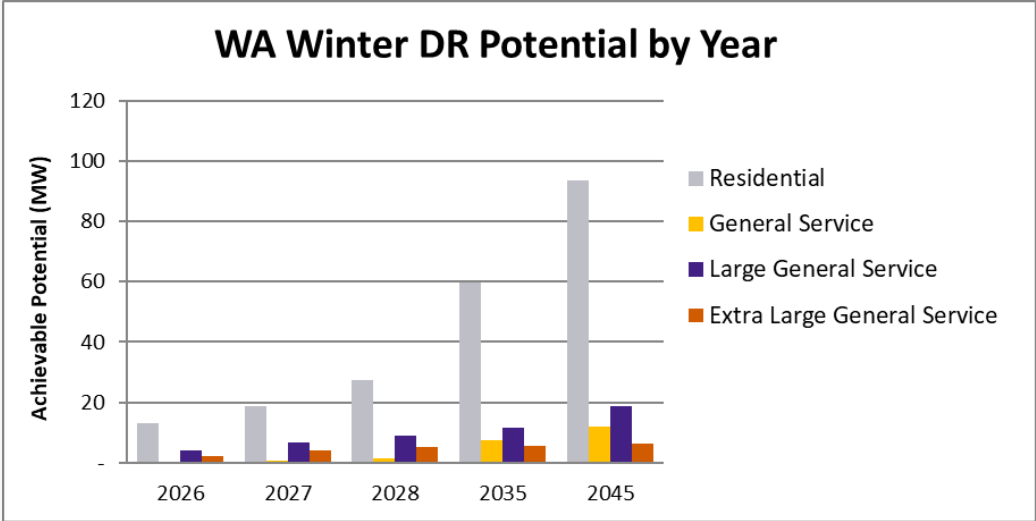
Winter TAP	2026	2027	2028	2035	2045	2045 from 2022 CPA
Baseline Forecast (Winter MW)	1,819	1,835	1,817	1,963	2,375	1,936
Battery Energy Storage	0.0	0.0	0.0	0.1	0.1	5.5
Behavioral	1.4	2.3	2.9	4.7	5.5	4.2
CTA-2045 HPWH	0.0	0.0	0.1	5.5	13.2	2.6
CTA-2045 ERWH	0.1	0.5	1.1	11.4	5.6	5.7
DLC Central AC	-	-	-	-	-	-
V1G Telematics	0.9	2.8	4.7	16.4	44.5	29.3
DLC Smart Appliances	0.3	0.9	2.2	3.5	4.0	3.7
DLC Smart Thermostats - Cooling	-	-	-	-	-	-
DLC Smart Thermostats - Heating	0.8	2.5	6.0	10.9	14.6	5.8
DLC Water Heating	0.3	0.8	1.9	3.0	3.5	2.4
Electric Vehicle TOU Opt-in	0.1	0.2	0.4	2.7	8.9	4.7
Thermal Energy Storage	-	-	-	-	-	-
Third Party Contracts	5.8	9.3	12.6	16.8	21.0	29.6
Time-of-Use Opt-in	0.2	0.6	1.2	6.2	7.2	9.9
Time-of-Use Opt-out	9.6	9.0	8.5	3.6	4.3	38.3
Variable Peak Pricing Rates	0.4	1.3	3.0	5.3	6.6	5.5
Peak Time Rebate	0.3	1.0	2.9	16.0	18.9	14.8



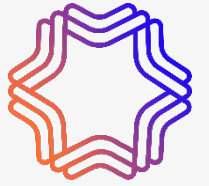
Summer DR Potential



Winter DR Potential



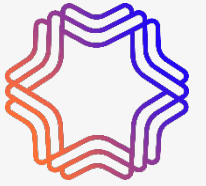
Developing Demand Response Resource Costs



- ✔ DR Programs have both upfront and ongoing costs according to the table below
- ✔ DR costs are amortized over 10 years to allow programs time to fully ramp up
- ✔ Levelized costs are presented in \$/kW-year

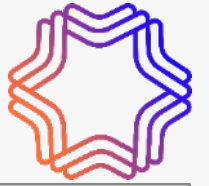
One-Time Fixed Costs	One-Time Variable Costs	Ongoing Costs
Program Development Costs (\$/program)	Equipment Costs (\$/participant)	Administrative Costs (shared costs)
	Marketing Costs (\$/participant)	O&M Costs (\$/participant)
		Incentives (\$/participant or \$/kW)

Example: Residential Grid-Interactive Electric Resistance Water Heaters

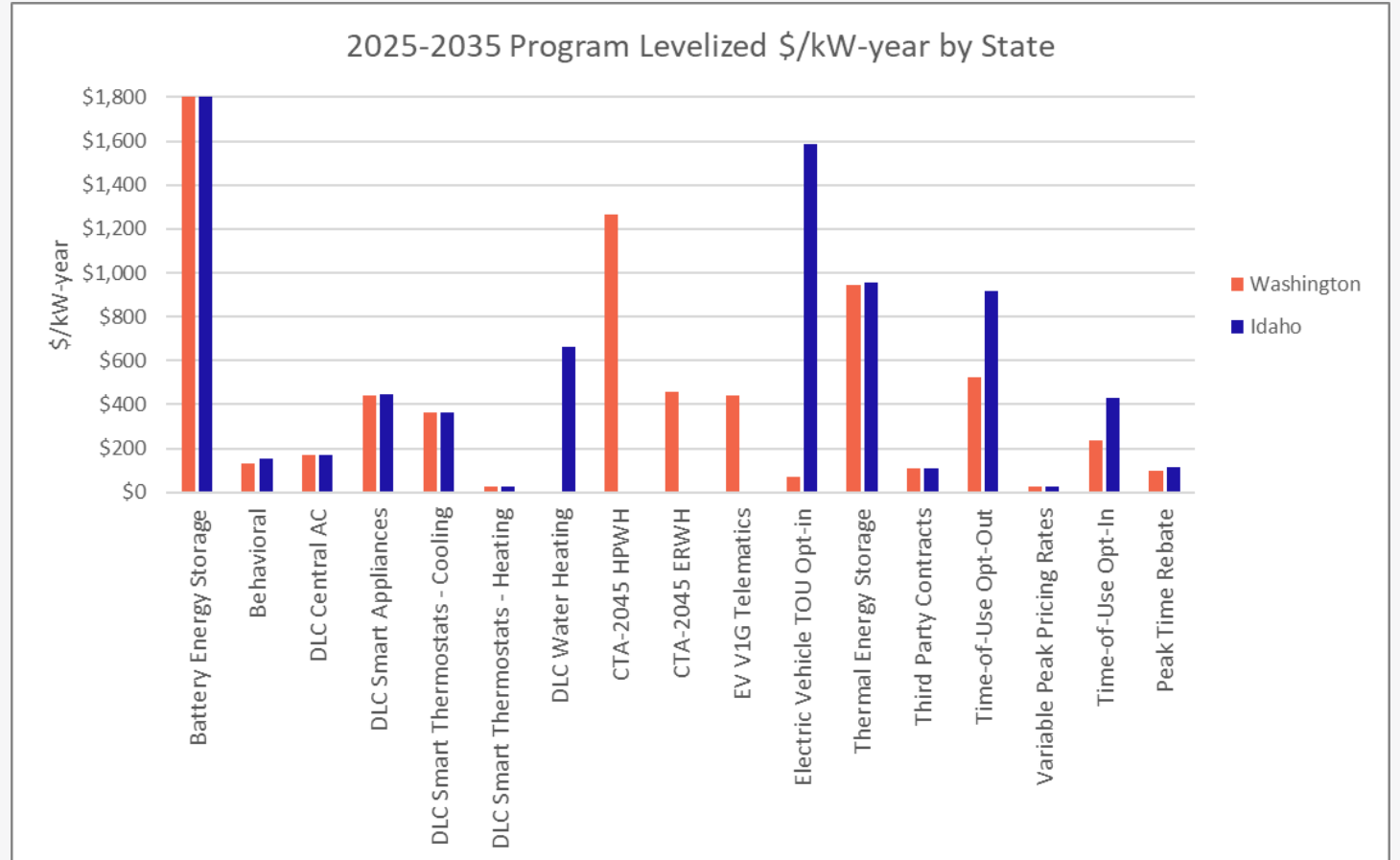


Cost Type	Unit	Cost
Development	\$/program	\$34,000
Administrative	\$/program/yr	\$40,800
O&M	\$/participant/yr	\$0
Marketing	\$/new participant	\$60
Equipment	\$/new participant	\$170
Incentive	\$/program/yr	\$24

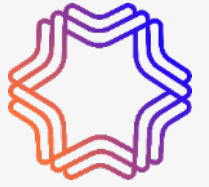
Program Levelized Costs by State



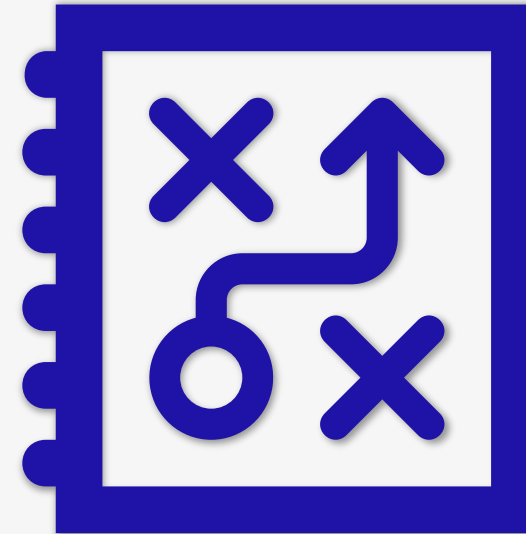
Max Levelized \$ / kW-year @ Gen 2025-2035		
	Washington	Idaho
Battery Energy Storage	\$2,446.83	\$6,046.75
Behavioral	\$128.84	\$150.75
DLC Central AC	\$169.62	\$169.82
DLC Smart Appliances	\$442.50	\$446.16
DLC Smart Thermostats - Cooling	\$364.56	\$363.45
DLC Smart Thermostats - Heating	\$26.47	\$26.57
DLC Water Heating		\$660.70
CTA-2045 HPWH	\$1,263.36	
CTA-2045 ERWH	\$455.26	
EV V1G Telematics	\$442.49	
Electric Vehicle TOU Opt-in	\$70.05	\$1,585.73
Thermal Energy Storage	\$944.90	\$954.97
Third Party Contracts	\$108.54	\$108.67
Time-of-Use Opt-Out	\$524.41	\$918.04
Variable Peak Pricing Rates	\$24.98	\$26.09
Time-of-Use Opt-In	\$235.01	\$431.20
Peak Time Rebate	\$100.15	\$114.20



Next Steps



- ✔ AEG still working on Industrial modeling, planned to wrap up by May 10th
- ✔ Working IRP Inputs for EE and DR due to Avista by May 17th



Thank You.

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