

2021 Electric Integrated Resource Plan
Technical Advisory Committee Meeting No. 4 Agenda
 Tuesday, November 17, 2020
 Virtual Meeting

Topic	Time	Staff
Introductions	9:00	Lyons
Final Resource Needs Assessment	9:15	Lyons
2020 Renewable RFP Update	9:45	Drake
Break	10:20	
Portfolio Modeling Overview	10:30	Gall
Lunch	11:30	
Draft PRS and Scenarios	12:30	Gall
Adjourn	2:00	

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2021 Electric IRP TAC Introductions and IRP Process Updates

John Lyons, Ph.D.
Fourth Technical Advisory Committee Meeting
November 17, 2020

Updated TAC Meeting Guidelines

- IRP team working remotely through the rest of this IRP, but still available by email and phone for questions and comments
- Some processes are taking longer remotely
- Virtual IRP meetings until able to hold large group meetings again
- Joint Avista IRP page for gas and electric:
<https://www.myavista.com/about-us/integrated-resource-planning>
 - TAC presentations
 - Documentation for IRP work
 - Past IRPs

Virtual TAC Meeting Reminders

- Please mute mics unless speaking or asking a question
- Use the Skype chat box to write questions or comments or let us know you would like to say something
- Respect the pause
- Please try not to speak over the presenter or a speaker who is voicing a question or thought
- Remember to state your name before speaking for the note taker
- This is a public advisory meeting – presentations and comments will be recorded and documented

Integrated Resource Planning

- Required by Idaho and Washington* every other year
- Guides resource strategy over the next twenty + years
- Current and projected load & resource position
- Resource strategies under different future policies
 - Resource choices
 - Conservation measures and programs
 - Transmission and distribution integration for electric
 - Gas distribution planning
 - Gas and electric market price forecasts
- Scenarios for uncertain future events and issues
- Key dates for modeling and IRP development are available in the Work Plans

Technical Advisory Committee

- The public process piece of the IRP – input on what to study, how to study, and review of assumptions and results
- Wide range of participants involved in all or parts of the process
 - Ask questions
 - Help with soliciting new members
- Open forum while balancing need to get through all of the topics
- Welcome requests for studies or different assumptions.
 - Time or resources may limit the number or type of studies
 - Earlier study requests allow us to be more accommodating
 - **August 1, 2020** was the electric study request deadline
- Planning teams are available by email or phone for questions or comments between the TAC meetings

2021 Electric IRP TAC Schedule

- TAC 1: Thursday, June 18, 2020
- TAC 2: Thursday, August 6, 2020 (Joint with Natural Gas TAC)
- TAC 2.5: Tuesday, August 18, 2020 Economic and Load Forecast
- TAC 3: Tuesday, September 29, 2020
- **TAC 4: Tuesday, November 17, 2020**
- TAC 4.5: December 2020 – 2 Hours on Scenarios
- TAC 5: Thursday, January 21, 2021
- Public Outreach Meeting: February 2021
- TAC agendas, presentations, meeting minutes and IRP files available at:

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

Process Updates

Available IRP Data:

- Avista Resource Emissions Summary
- Load Forecast
- CPA Measures
- Avista 2020 Electric CPA – Summary and IRP Inputs
- Home Electrification Conversions
- Named Populations
- Natural Gas Prices
- Social Cost of Carbon

Files Added Since TAC 3:

- High and Low Natural Gas Prices
- Market Modeling Results
- Climate Shift Scenario Inputs
- 2021 IRP New Resource Options

Today's TAC Agenda

- 9:00 Introductions, Lyons
- 9:15 Final Resource Need Assessment, Lyons
- 9:45 2020 Renewable RFP Update, Drake
- 10:20 Break
- 10:30 Portfolio Modeling Overview, Gall
- 11:30 Lunch
- 12:30 Draft PRS and Scenarios, Gall
- 2:00 Adjourn



2020 Electric IRP Resource Need Assessment

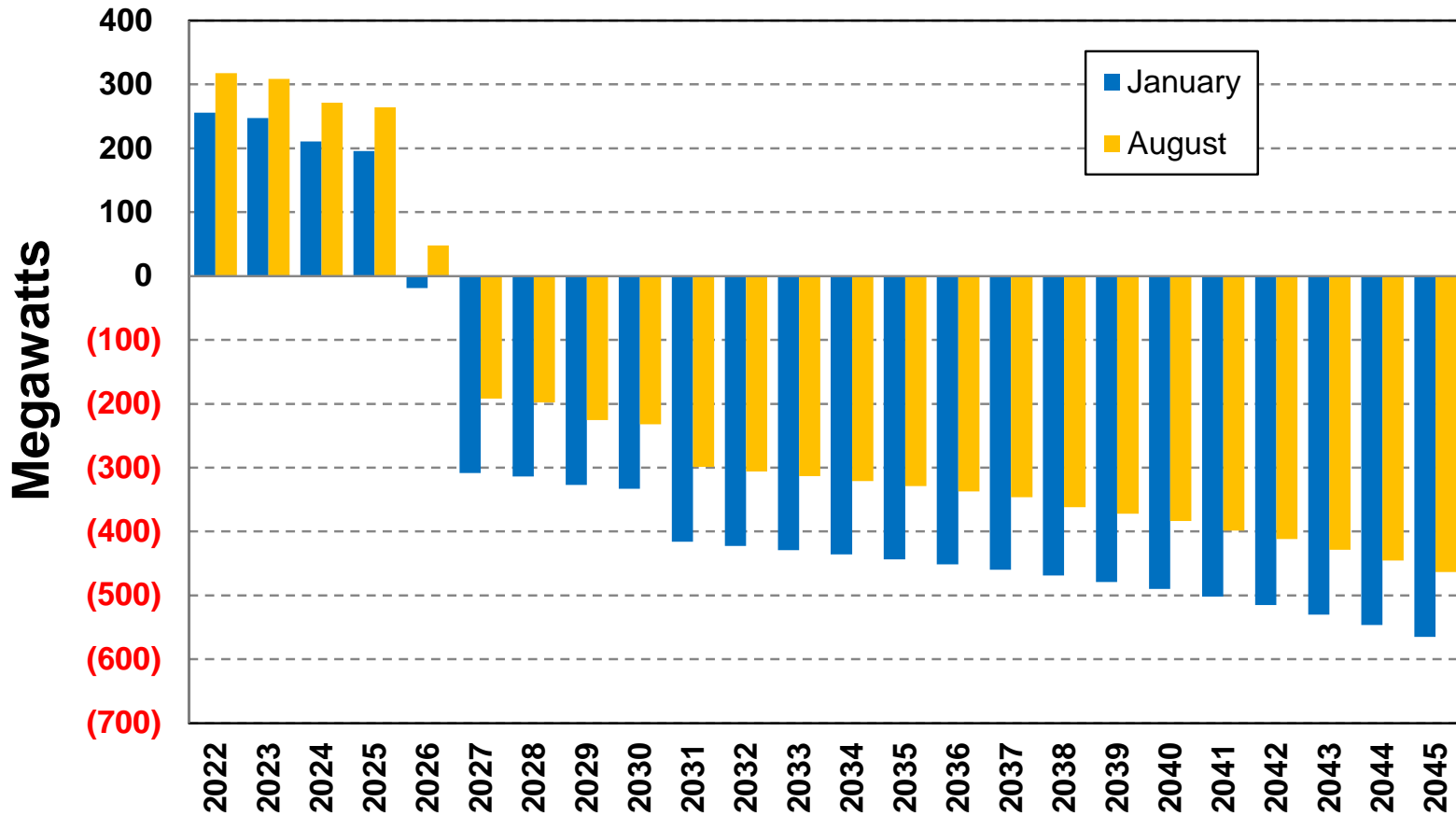
John Lyons, Ph.D.
Fourth Technical Advisory Committee Meeting
November 17, 2020

Load & Resource Methodology Review

- Sum resource capabilities against loads
- Resource plans are subject to 5% LOLP analysis – determines planning margins
- Colstrip is included through 2025 per 2020 IRP
- Capacity
 - Planning Margin (16% Winter, 7% Summer)
 - Using 2020 IRP result; pending future analysis
 - Operating Reserves and Regulation (~8%)
 - Reduced by planned outages for maintenance
 - Plan to largest deficit months between 1- and 18-hour analyses
- Energy
 - Reduced by planned and forced outages
 - Maximum *potential* thermal generation over the year
 - 80-year hydro average, adjusted down to 10th percentile

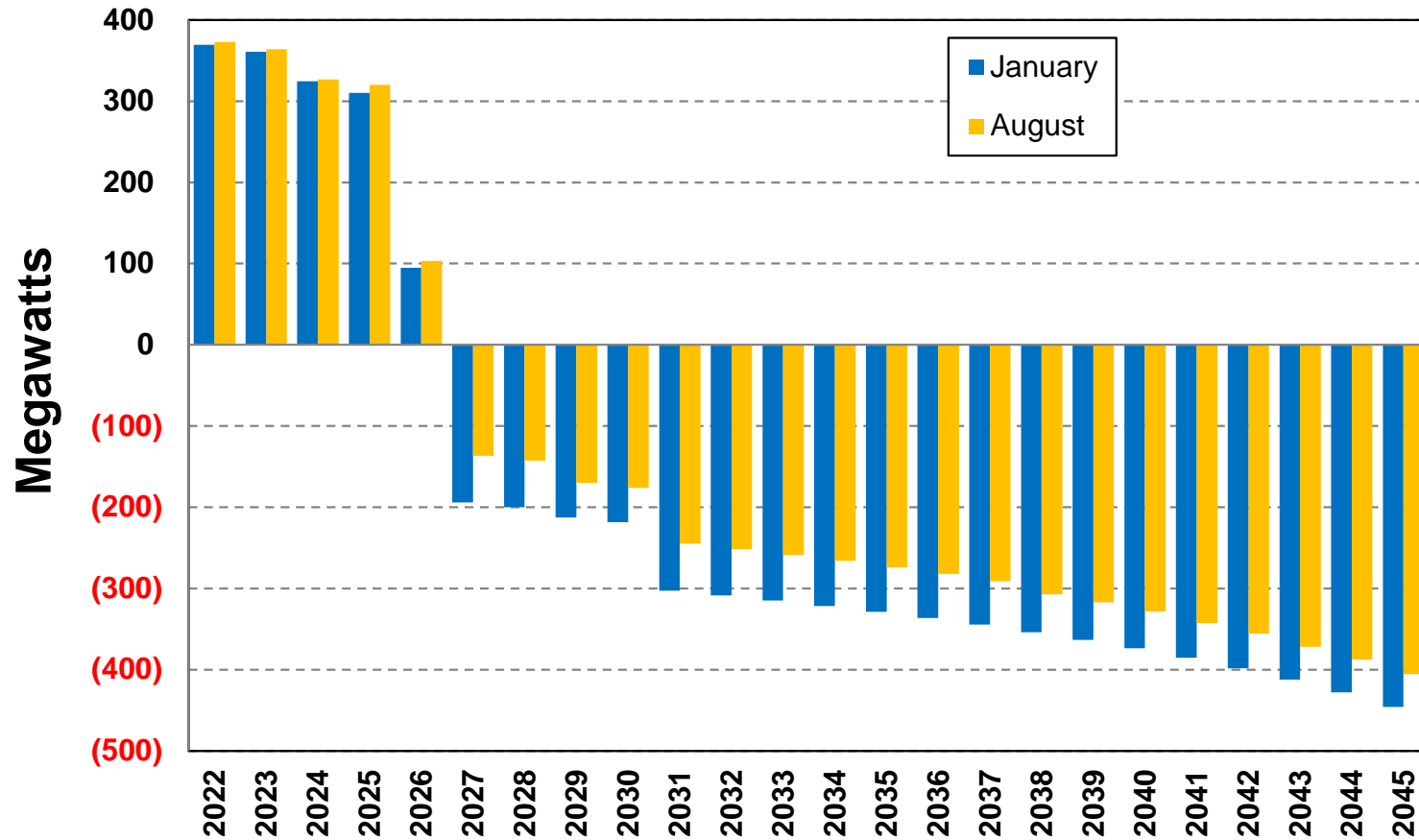
One Hour Peak Load & Resource Position

1 Hour Peak Load & Resource Position



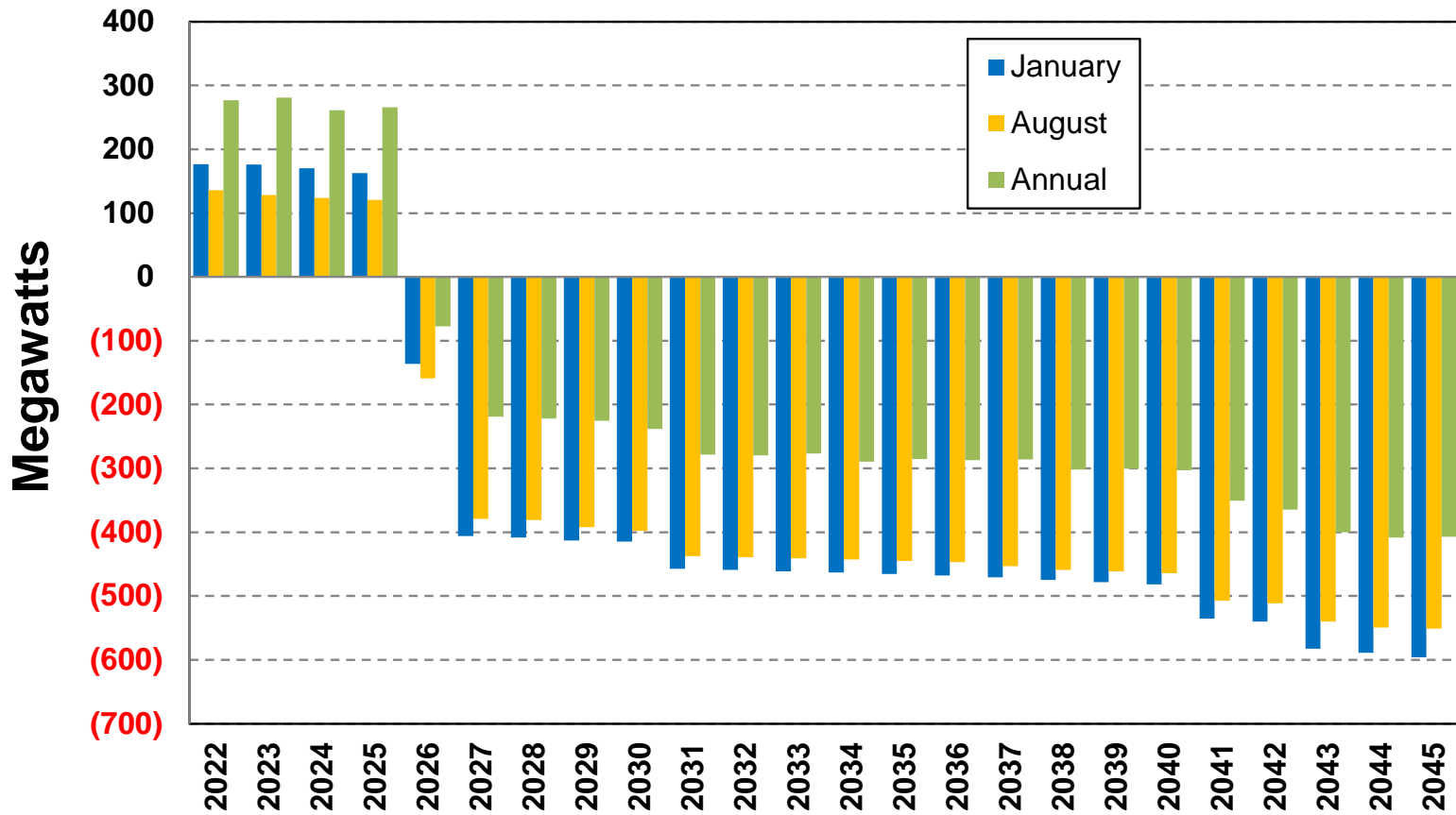
18-Hour Peak Load & Resource Position

18 Hour Peak Load & Resource Position



Energy Load & Resource Position

Energy Load & Resource Position



Avista's Clean Energy Goal

Goals

- 2027 – 100% carbon-neutral
- 2045 – 100% clean electricity

How we will get there

- It's not just about generation – various solutions are necessary
- Maintain focus on reliability and affordability
- Natural gas plays an important part of a clean energy future
- Cost effective technologies need to emerge and mature



Washington State Clean Energy Goals

- Energy Independence Act or Initiative 937
 - 15% of Washington retail load after 2020
 - Not modeling for this IRP since CETA takes us beyond 15%
 - Last IRP anticipated the inclusion of qualifying BPA and Wanapum generation, neither of which materialized
 - Avista decision to offset costs in lieu of BPA RECs
 - Inability to use Wanapum because of difference in hydro methodology
- Clean Energy Transformation Act
 - By 2025 – eliminate coal-fired resources from serving WA customers
 - By 2030 – electric supply must be greenhouse gas neutral,
 - By 2045 – electric supply must be 100% renewable or be generated from zero-carbon resources



2020 Renewable RFP Update

Chris Drake, Wholesale Marketing Manager
Fourth Technical Advisory Committee Meeting
November 17, 2020

Justification

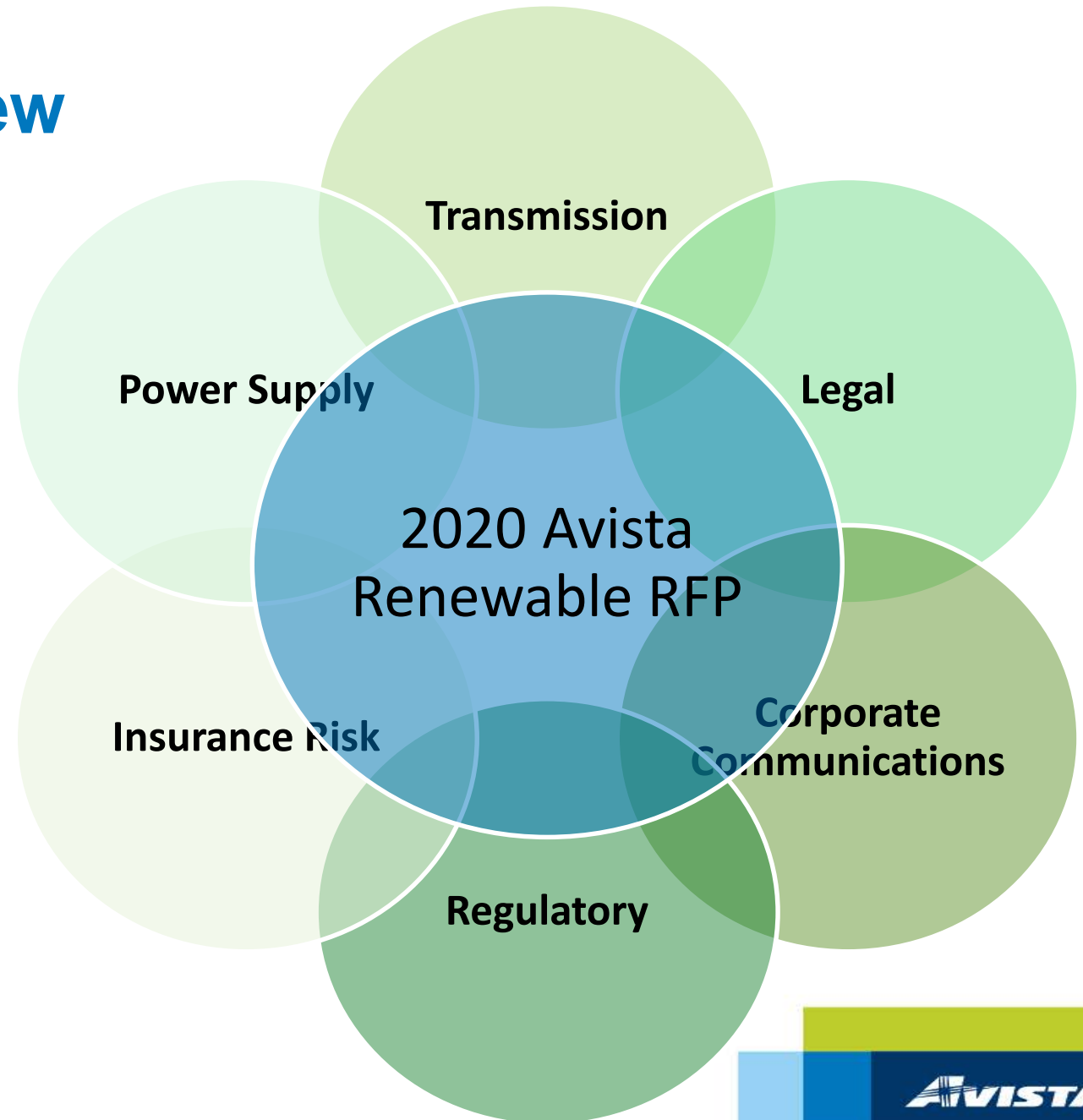
- Integrated Resource Plan (IRP) - Preferred Resource Strategy (PRS)
- Market indicators suggested competitive pricing for renewables
- Competition for preferred sites
- Corporate renewable goals – systemwide
 - Carbon neutral by 2027
 - 100% clean electricity by 2045
- If bids are not compelling, no obligation to contract
- Capacity Request For Information (or similar investigation) may be considered at a later date

2020 IRP Preferred Resource Strategy

Resource Type	Year	Capability (MW)
Montana wind	2022	100
NW wind	2022-2023	200
Kettle Falls upgrade	2026	12
Colstrip 3 & 4 exits portfolio	2026	-222
Rathdrum CT 1 & 2 upgrades	2026	24
Long-duration pumped hydro	2026	175
Lancaster PPA expires	2026	-257
Post Falls upgrade	2027	8
Montana wind	2027	200
Mid-Columbia hydro	2031	75
Northeast CTs retires	2035	-55
Long Lake 2 nd powerhouse	2035	68
Liquid-air storage (16 hours)	2036-2041	100
Wind (including PPA renewals)	2041-2043	300
Lithium-ion storage (4 hour)	2042-2045	300
Solar w/ storage (4 hours)	2044	55
4-hr Storage for Solar	2044	50
Supply-side resource net total (MW)		1,133
Supply-side additions through 2045 (MW)		1,667
Demand Response through 2045 (MW)		112
Energy Efficiency through 2045 (aMW)		187

Cross-Departmental Review

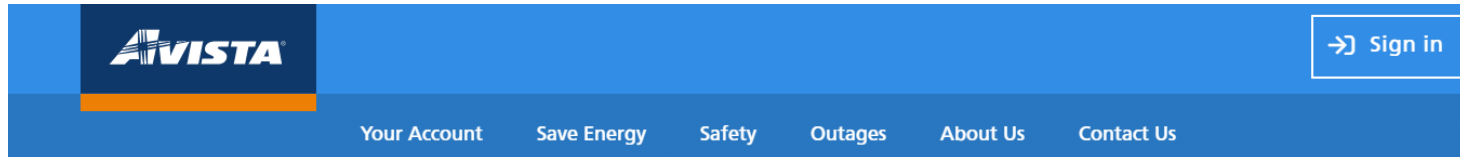
- Power Supply
 - Wholesale marketing, resource planning, real-time, traders, credit and resource optimization
- Transmission
- Regulatory
- Insurance/Risk
- Corporate Communications
- Legal



New Elements of 2020 RFP

- New and existing projects were eligible to bid
 - New renewable resources
 - Nonemitting electric generation (existing)
- Updated evaluation methodology criteria
 - Risk Management, Net Price, Price Risk, Electric Factors, Environmental
 - Added Community Impact
 - Avista service territory economic impact
 - Equity provisions
 - Vulnerable and highly impacted communities
 - Energy security
- Published evaluation methodology

RFP Communications



Renewables RFP

Avista released a request for proposals on June 26, 2020 seeking pricing from renewable energy project developers capable of constructing, owning and operating up to 120 average MW's for delivery to Avista's electric utility service territory. Please respond to the RFP by completing the following forms and submitting them to 2020renewablerfp@avistacorp.com by July 22, 2020.

- [Request for proposals](#)
- [Exhibit A](#)
- [Exhibit B](#)
- [Exhibit C](#)
- [Exhibit D](#)

2020 RFP Target Schedule (subject to change)

- June 26, 2020 – Release RFP
- July 22, 2020 – Preliminary Information due
- July 31, 2020 – Short list identified
- August 21, 2020 – Detailed Proposals due from short-listed bidders
- August 21, 2020 through September 9, 2020 - Negotiations with short-listed bidders
- October 16, 2020 – Final bidder(s) selected
- December 15, 2020 – Final contracting complete with successful bidder(s)

Please note: The RFP does not constitute a legal offer or otherwise create a binding agreement or obligation to consummate any contemplated transaction. Any such obligation or agreement will be created only by the execution of definitive agreements, the provisions of which, if so executed, will supersede the RFP. Avista reserves the right to cancel the RFP at any time in its sole discretion.

[Savings Tools](#)

[Energy Saving Advice](#)

[Tools For Your Business](#)

[Energy and Savings Profile](#)

[Green Options](#)

- [My Clean Energy](#)
- [Onsite Generation](#)
- [Community Renewable Options](#)
- [Electric Transportation](#)
- [Compressed Natural Gas](#)

[Avista Marketplace](#)

[Rebate Overview](#)

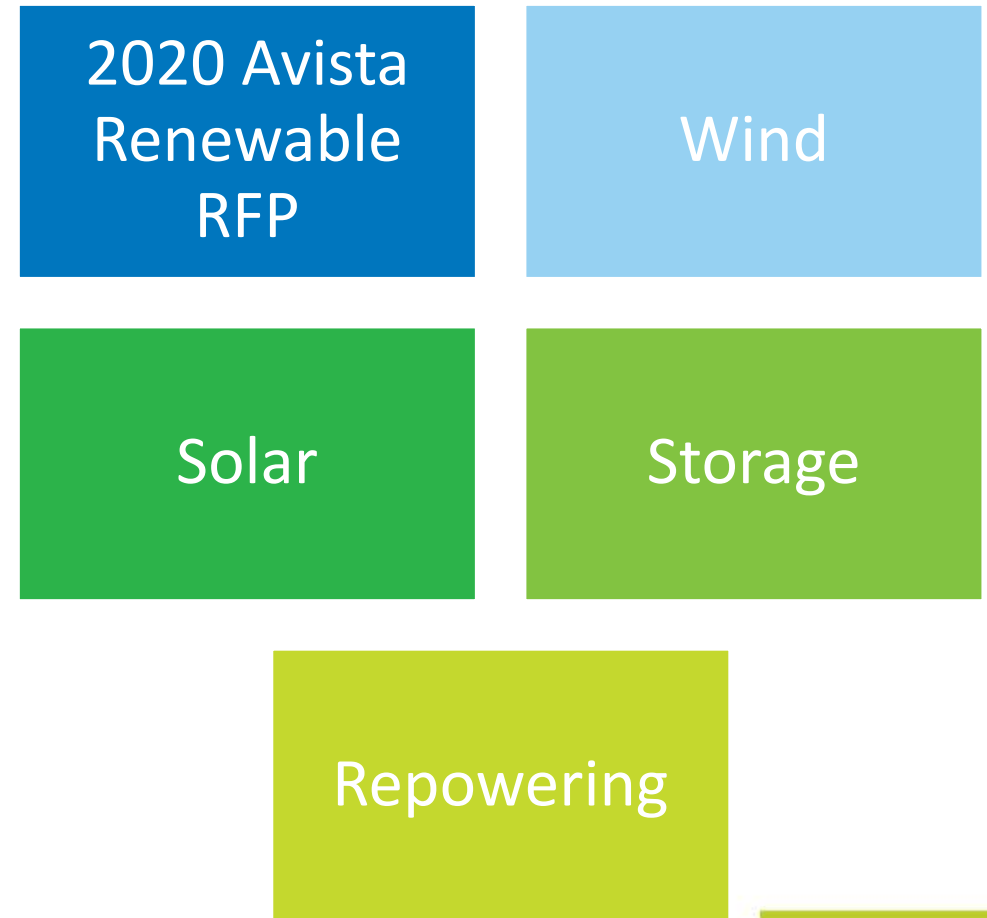
[Rebates: Washington](#)

[Rebates: Idaho](#)

- Published on www.myavista.com
- Press Release
 - Local media contacts
 - GlobeNewswire distribution to over 600 national outlets

Renewable Generation Need

- RFP for up to 300 MW renewables
- 2020 IRP's PRS model
 - 2022 Montana wind – 100 MW
 - 2022-2023 NW wind – 200 MW
- Anticipated proposals – mix of wind/solar/storage

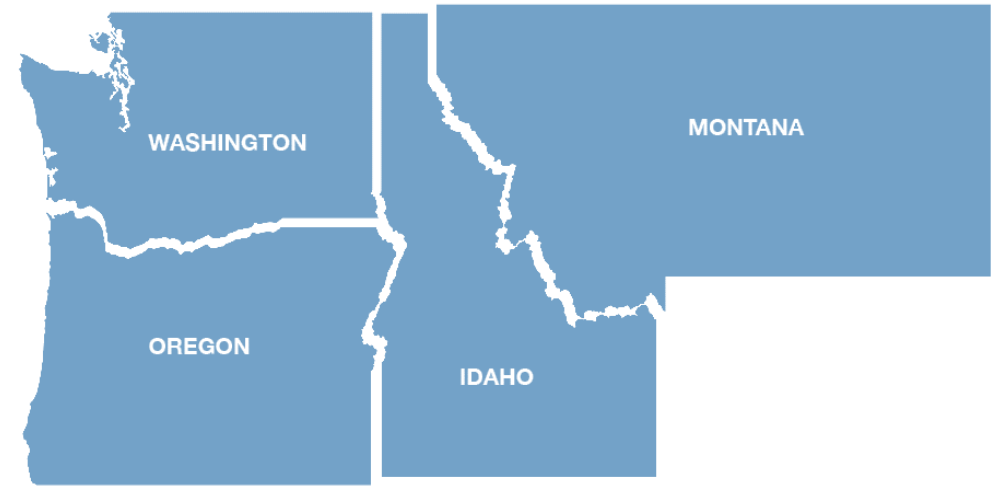


Bids Received July 22, 2020

- 42 projects
- 25 developers
- 27 solar (many with battery options)
- 13 wind (some with battery option)
- 1 hydro
- 1 biomass

RFP Initial Reactions

- Good selection of shovel ready and existing projects
- Good geographic distribution
 - Projects throughout Northwest with majority in Washington, then Montana, Idaho and Oregon
- Prices were higher than 2018 RFP
 - Sunsetting PTC
 - Increased construction costs
- Multiple capacity projects submitted
 - Hydro
 - Biomass



2020 Avista Renewable RFP Evaluation Methodology

General Qualifications

- Compatibility with resource need
- Site control
- Financial plan to bring project to completion
- Credit requirements
- Procurement plan
- Project completion no later than December 31, 2023

Evaluation Criteria

- Risk Management - Credit and Developer Experience
- Net Price - Nominal levelized cost / MWh
- Price Risk - Fixed price, construction, fuel supply
- Electric Factors - Interconnection, transmission, technology
- Environmental - Permitting
- Community Impact - Community involvement, Avista service territory, vulnerable populations

2020 Target Schedule (and Milestones Completed)

- ✓ June 26, 2020 – RFP Released
- ✓ July 22, 2020 – Preliminary Information Due
- ✓ July 31, 2020 – Short-list identified and notified (along with other bidders)
- ✓ August 21, 2020 – Detailed proposals received from short-list
- ✓ October 16, 2020 – Final bidder(s) selected for continued review
- December 31, 2020 – Contract negotiation(s)

2020 RFP Next Steps

- Continue to address specific attributes within proposal(s)
- Contract negotiations with successful project(s)
- Continue internal review to make a final determination



PRiSM Model Overview

James Gall, Electric IRP Manager
Fourth Technical Advisory Committee Meeting
November 17, 2020

What is PRISM?

- Preferred Resource Strategy Model
- Mixed Integer Program (MIP) used to select new resources to meet resource needs of our customers



Excel

The user interface



The solver interface



The solver

New PRiSM Features for 2021 IRP

- Significant changes were made to this IRP's model due to individual state policies.
 - Model purpose: Same as before with additional constraints and options.
 - New Constraints: Must meet individual state L&R balance requirements and clean energy goals.
 - New Options: Resources can be added for a specific state or the system.
 - New Outputs: State level cost and rate estimates along with resource strategies.
 - Model will be fully available and published on IRP website.
 - Model is continually being vetted.

Objective Function

Intro to linear programming: <https://www.youtube.com/watch?v=Uo6aRV-mbeg>

Minimize: (WA “Societal” NPV₂₀₂₂₋₄₅) + (ID NPV₂₀₂₂₋₄₅)

Where:

WA NPV₂₀₂₂₋₄₅ = Market Value of Load + Existing & Future Resource Cost/Operating Margin + Social Cost of Carbon + EE TRC

ID NPV₂₀₂₂₋₄₅ = Market Value of Load + Existing & Future Resource Cost/Operating Margin + EE UTC

Subject to:

Generation Availability & Timing

Energy Efficiency Potential

Demand Response Potential

Winter Peak Requirements

Summer Peak Requirements

Annual Energy Requirements

Clean Energy Goals

T&D Constraints

Optimization Tolerance: 0.0001 or 1,500 seconds (Note: certain studies longer solution times allowed)

Optimized Cost vs. Actual Costs

- Objective function includes social costs that are not part of utility revenue requirement.
- This is used for resource optimization only.
- Social costs may include:
 - Energy Efficiency
 - TRC
 - Non-energy benefits
 - Power Act 10% adder
 - T&D Savings
 - Social Cost of Carbon
- Actual costs illustrate expected cost ratepayers will pay.
- Estimate annual revenue requirements.
- Estimate average rates.

Aurora Integration

- Aurora's price forecast and resource dispatch are inputs into PRiSM.
- Each **supply resource's** operations is included by iteration.
 - Includes MWh, GHG, Revenue, Fuel Cost, VOM costs.
- **Avista load and existing contracts** are also entered in totals.
- **Energy efficiency** load shapes are marked to market and used for the energy value of these programs.
- **Demand response** options are not modeled in Aurora, but use hourly price results for a market value.

Thermal Resources

- Model may retain or exclude specific resources in any year.
 - Retirements are for both states (except Colstrip).
 - No re-allocation of existing resources between states.
- Includes major future capital spend for continued operation along with O&M costs.
- Resource costs and benefits are allocated using PT ratio (65% WA, 35% ID).
- Lancaster PPA expires in October 2026.
- Northeast assumes retirement in 2035 & Boulder Park in 2040.
- Kettle Falls CT is excluded from retirement option, but is excluded from winter peak due to pending pipeline review.
- Colstrip must be removed in Washington by 2025.
 - Model can remove earlier or retain for Idaho.
 - Washington's share of cost after 2025 are not included in model.

Hydro Resources

- Available for full length of study.
- Post Falls assumes rebuild in 2025 (found cost effective in 2021 IRP).
- Energy, capacity, and clean energy attributes split between states using PT ratio (65% WA/35% ID).

Other Existing “Resources”

- PURPA
 - CETA has provision for in-state PURPA generation reducing clean energy obligation.
 - For modelling purposes, generation is allocated to each state it qualifies under PURPA.
- Other Wholesale Contracts
 - Current PPAs are allocated to each state using PT ratio.
 - Except for Adam’s Neilson Solar- fully allocated to Washington.
 - PURPA related resales are fully allocated to state it qualifies for under PURPA
- Renewable Energy Credits (RECs)
 - Each state receives “RECs” from its “PT ratio” share of resources.
 - Model allows for sale of RECs between states subject to limits.

Energy Efficiency

Washington

- AEG provides EE potential by year and program
 - Winter peak savings
 - Summer peak savings
 - Annual average savings
- Electrical savings are grossed up for T&D losses
- Benefit of T&D Capital Avoidance (\$25.35 per kW-yr)
- Total Resource Cost (TRC) test
- Add value for non-energy benefits (\$23 per MWh)
- Power Act 10% adder for energy and capacity value
- Social Cost of Carbon using regional incremental emission rates per MWh
- Included in L&R constraints to avoid new supply resource options

Idaho

- AEG provides EE potential by year and program
 - Winter peak savings
 - Summer peak savings
 - Annual average savings
- Electrical savings are grossed up for T&D losses
- Benefit of T&D Capital Avoidance (\$25.35 per kW-yr)
- Utility Cost Test (UCT) for cost effectiveness
- Included in L&R constraints to avoid new supply resource options

Demand Response

- Programs available in each state determined by AEG.
- AEG estimated capital amortized over 5 years and a levelized cost is created by combining the O&M costs.
- Projects must ramp in over time (except large industrial).
 - 25 MW of industrial DR for Washington
- Water heating is different between states:
 - WA includes CTA-2045
 - DLC water heating in ID
- Energy arbitrage and savings is included based on 50% of potential use.
 - 10% preference adder included for Washington.
- Peak Credit is using 2020 IRP estimate of 60%.
 - Additional studies may be available to validate.
 - Based on prior IRP- this estimate could be too high.

Supply-Side Options

- Uses levelized fixed and variable costs for potentially owned resources (i.e. natural gas, storage).
- Uses PPA \$/MWh or \$/kW-yr costs for resources.
- All generation costs are available on the IRP website.
- Washington PPA options includes rate of return for clean resources.
- Resources must be added in increments of probable size of actual acquisition- not any value- this assumption can increase cost or change resource strategy.

Clean Energy Goals

- **Washington**

- 100% clean energy (carbon neutral) by 2030
- 100% clean energy by 2045

- **MAJOR ASSUMPTIONS:**

- By 2030, Washington's clean energy must equal 100% of net retail sales; 20% of this total may come from RECs.
 - Only REC purchases assumed are from Idaho customers at \$7.50/MWh escalating
- 2045, 100% goal of all 100% of electrons clean is not modeled at this time (likely 2024 IRP).
- Between 2030 and 2045 REC transfers decline to zero.
- Prior to 2030 REC transfers are limited to non-hydro resources to encourage early acquisition.

- **Idaho**

- No clean energy requirement.
- Idaho is allowed to sell REC's to Washington LSE.
- Other REC sales to other parties are not modeled.
- Scenarios will show cost of additional renewable energy acquisition.

Greenhouse Gas Emissions

- The model estimates the GHG emissions for thermal resource dispatch.
 - Market purchase/sale effects are estimated using the regional average emission rate.
 - Storage resources include a market based GHG adder.
- Societal emissions saved from Energy Efficiency using an incremental emissions approach are estimated.
- Includes upstream emissions for natural gas resources.
- Construction and operation emissions are included.

Social Cost of Carbon or Social Cost of Greenhouse Gas

Washington

- Costs are included for resource dispatch of new thermal & storage options.
- Cost are also included for existing natural gas-fired resources.
- Energy Efficiency receives a social credit for emission savings.
- No cost are included for market transactions, except for storage resources.
 - This would give extra incentive to renewables by valuing the social cost of carbon on non-Avista resources. [Potential scenario]
 - Model time step doesn't allow for SCC on purchases only.

Idaho

- No direct cost of GHG is included.
- Objective function is 65% Washington Cost- therefore existing resources are influenced by this cost and could have effects on Idaho.
- A scenario using the Washington methodology will be studied.

Transmission

- Resources have either a capital investment or a wheeling charge.
 - Capital investments are based on the transmission cost estimates from the September 2020 TAC 3 meeting.
- Resource options in the Rathdrum, Idaho area are a challenge.
 - Approximately 100 MW can be added without significant investment.
 - Over 100 MW may either require additional infrastructure or Remedial Action Scheme (RAS).
 - RAS has not been studied
 - Avista has resource options in the area without new transmission (i.e. Lancaster), but if Lancaster operates and Avista builds new resources would require an investment or RAS.
 - **For this analysis no additional Rathdrum transmission is assumed until either Lancaster is ruled out from an RFP or RAS is determined to not be an option.**
 - By including the additional transmission cost could either create a portfolio where Idaho must pursue a more costly option- an RFP needs to decide this rather than an IRP without cost of a Lancaster extension.

Resource Adequacy Check

- To the furthest extent possible, portfolios will be studied for resource adequacy for 2025, 2030, and 2040.
 - Each study takes 3 days to complete; Avista has only 2 machines capable of this work.
- If a portfolio fails the adequacy test- additional capacity will be required or noted.
- Avista does not expect to complete all studies for the draft IRP release.
 - Although studies will be conducted through February for the final draft portfolios requiring this work.
 - All other studies will need to rely on the planning margin for its resource adequacy test.
- Reliability data input files are still in process and results are not available at this time.

Equity Provisions

- Avista previously identified potential areas within its system qualifying for VP/HIC status, although final determination is still ongoing.
- A baseline analysis for cost and reliability/resilience has been completed.
- Avista is developing an Equity Advisory Group (EAG).
 - EAG will determine final VP/HIC determinants.
 - Develop outreach plan for each community to understand energy needs and preferences.
 - Study solutions and develop programs to meet needs of the communities.
- Process to develop a solid plan for these VP/HIC communities will not be available for this IRP.



Least “Reasonable” Cost Strategy & Baseline Analysis

“Not Preferred Resource Strategy Yet”

James Gall, Electric IRP Manager
Fourth Technical Advisory Committee Meeting
November 17, 2020

Safe Harbor Statement

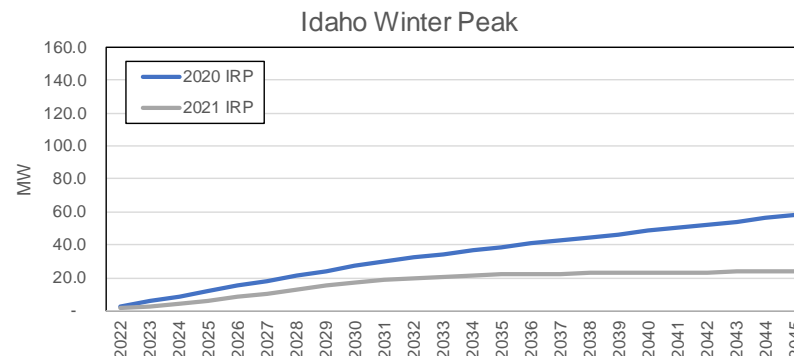
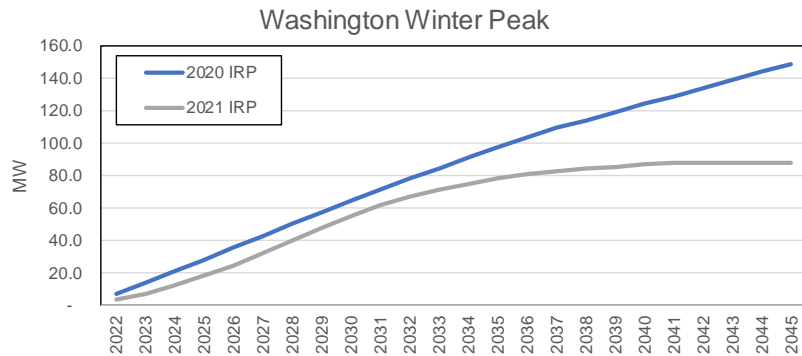
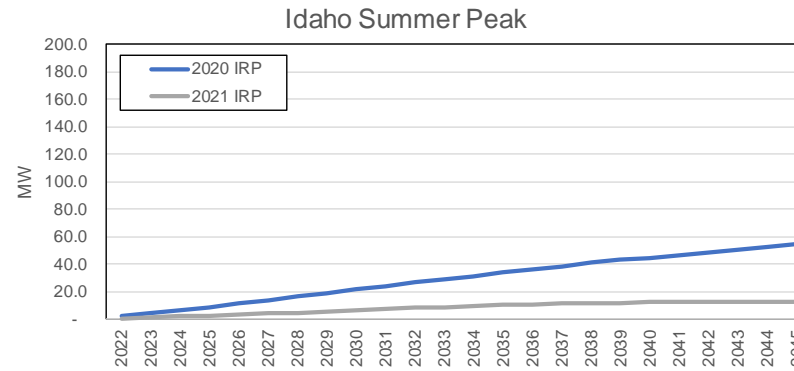
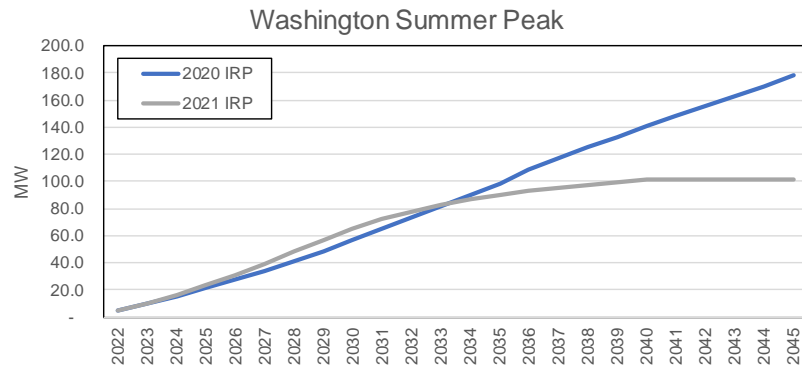
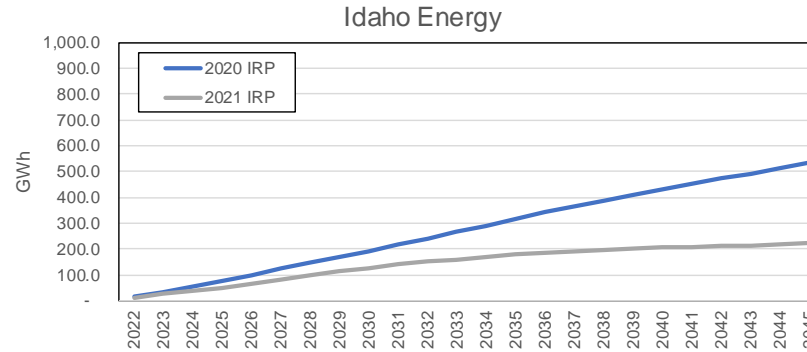
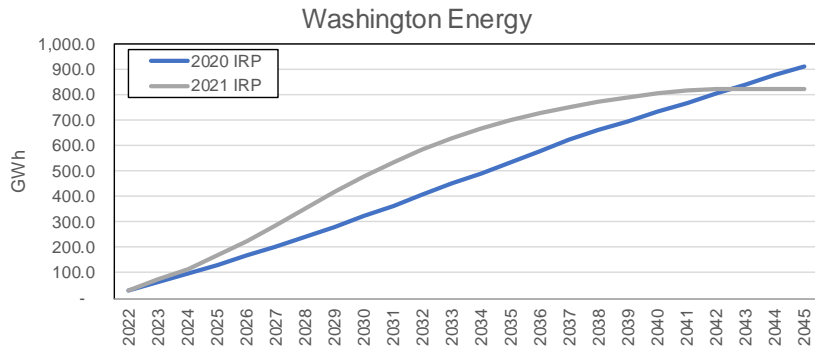
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For a further discussion of these factors and other important factors, please refer to the Company's reports filed with the Securities and Exchange Commission. The forward-looking statements contained in this document speak only as of the date hereof. The Company undertakes no obligation to update any forward-looking statement or statements to reflect events or circumstances that occur after the date on which such statement is made or to reflect the occurrence of unanticipated events. New risks, uncertainties and other factors emerge from time to time, and it is not possible for management to predict all of such factors, nor can it assess the impact of each such factor on the Company's business or the extent to which any such factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statement.

Other Caveats

- Clean Energy Transformation Act (CETA) rules and requirements are not complete.
 - This is Avista’s best estimate of known requirements.
- Avista is negotiating with the renewable Request for Proposals (RFP) shortlist bidders
 - This may change the results of the resource plan due to a potential contract.
- IRP resource options are primarily “new” resource options- RFP will determine whether or not existing resources can be acquired at similar or lower cost than “new” options.
- Avista may not be able to physically retire or exit certain resources as the IRP PRiSM model determines.
- No future state specific resource cost allocation agreement has been made.
- Forward looking rates include non-modeled power supply cost escalating at 2% per year-
 - **DO NOT TAKE THIS AS A RATE FORECAST**
 - This is for informational purposes only

Energy Efficiency Results



NOTE:
Energy Efficiency results do not materially impact supply resource strategy.

Supply resource strategy is based on the load forecast for both energy and peak.

EE is first estimated, then added to the load forecast; the model then picks economic EE to have net load equal to the load forecast

Cumulative Energy Efficiency End Use Results (GWh)

	2023		2031		2045	
	WA	ID	WA	ID	WA	ID
Appliances	0.7	0.1	6.6	0.8	15.6	2.7
Cooling	6.4	0.5	41.7	2.8	61.2	7.0
Electronics	1.1	0.2	15.2	4.8	27.1	9.3
Exterior Lighting	4.3	1.4	24.8	7.8	37.2	14.3
Food Preparation	0.1	0.0	2.2	0.4	5.9	0.9
Interior Lighting	21.1	13.0	103.6	49.3	176.3	89.6
Miscellaneous	1.5	0.3	16.0	2.8	36.0	5.5
Motors	4.9	3.4	35.3	24.0	41.3	27.0
Office Equipment	0.6	0.0	3.6	0.0	6.2	0.0
Process	0.7	0.1	4.1	1.1	4.5	1.4
Refrigeration	8.3	0.3	60.9	2.3	70.0	2.6
Space Heating	13.1	3.5	122.9	30.3	175.4	39.9
Ventilation	5.3	0.7	31.0	5.2	46.1	12.5
Water Heating	4.6	1.4	65.9	8.3	120.6	9.7
Total	72.7	25.1	533.7	140.0	823.4	222.3

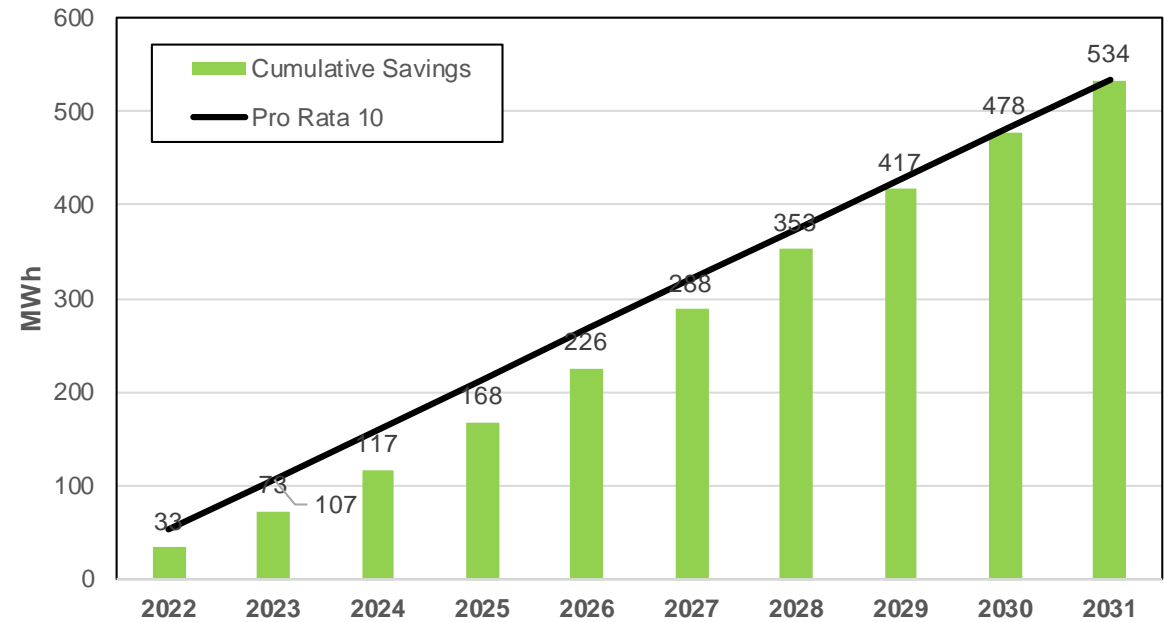
Cumulative Energy Efficiency Segment Results (GWh)

	2023		2031		2045	
	WA	ID	WA	ID	WA	ID
College	2.7	0.7	13.8	4.2	19.5	7.5
Grocery	6.8	0.2	47.6	1.4	56.6	1.7
Health	2.7	0.9	14.5	4.7	23.0	8.1
Industrial	12.0	7.9	62.5	41.1	91.4	61.1
Large Office	6.6	1.3	43.6	8.8	67.5	16.5
Lodging	1.4	0.6	8.9	2.9	13.2	4.9
Low Income	3.4	1.7	40.4	10.7	60.8	13.2
Miscellaneous	6.1	1.9	41.5	10.7	61.3	19.1
Mobile Home	0.7	0.2	7.2	1.4	14.2	2.1
Multi-Family	0.5	0.2	7.6	1.2	16.6	1.9
Restaurant	2.1	0.2	15.1	1.6	20.2	2.3
Retail	5.6	2.0	35.8	10.3	52.8	17.9
School	3.1	0.1	18.5	0.4	28.7	0.8
Single Family	14.4	5.1	147.6	28.6	250.3	42.8
Small Office	2.4	1.1	16.9	7.4	26.5	13.5
Warehouse	2.4	0.9	12.4	4.7	20.8	8.9
Total	72.7	25.1	533.7	140.0	823.4	222.3

Higher Washington Energy Efficiency Goals

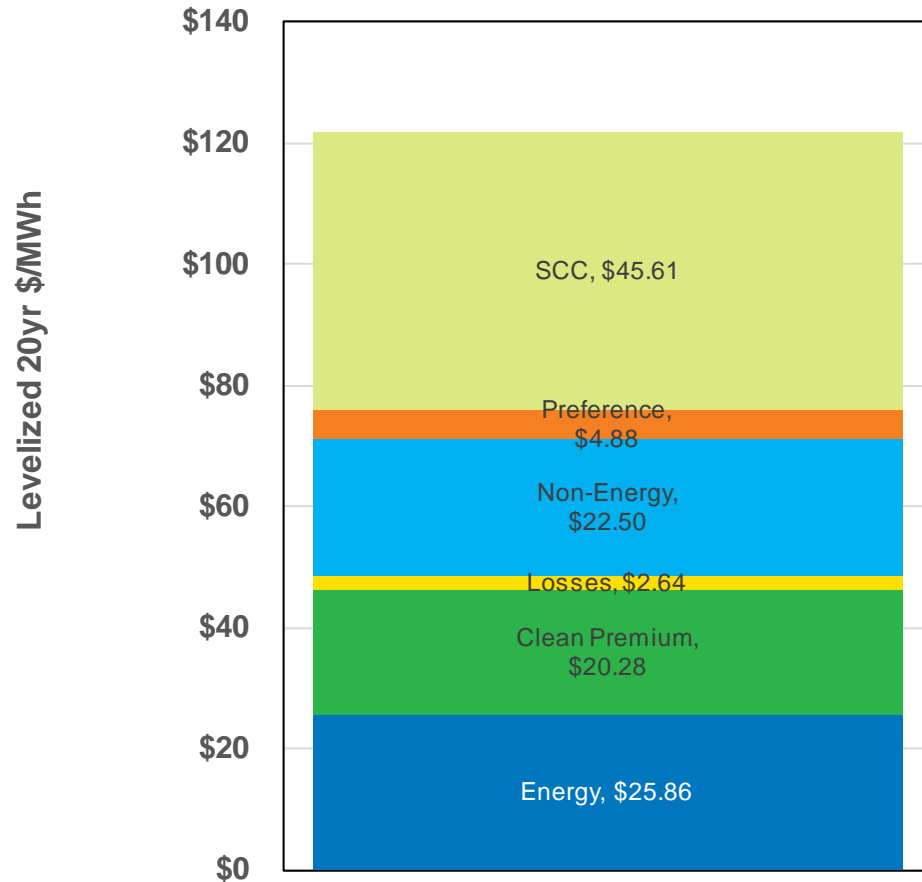
More Aggressive Ramp Rates & Higher Avoided Costs

Biennial Conservation Target (MWh)	Based on 2021 IRP	Based on 2020 IRP
CPA Pro-Rata Share	106,740	72,338
Distribution and Street Light Efficiency	219	504
EIA Target	106,959	72,842
Decoupling Threshold	5,348	3,642
Total Utility Conservation Goal	112,307	76,484
Excluded Programs (NEEA)	-14,016	-14,016
Utility Specific Conservation Goal	98,291	62,468
Decoupling Threshold	-5,348	-3,642
EIA Penalty Threshold	92,943	58,826

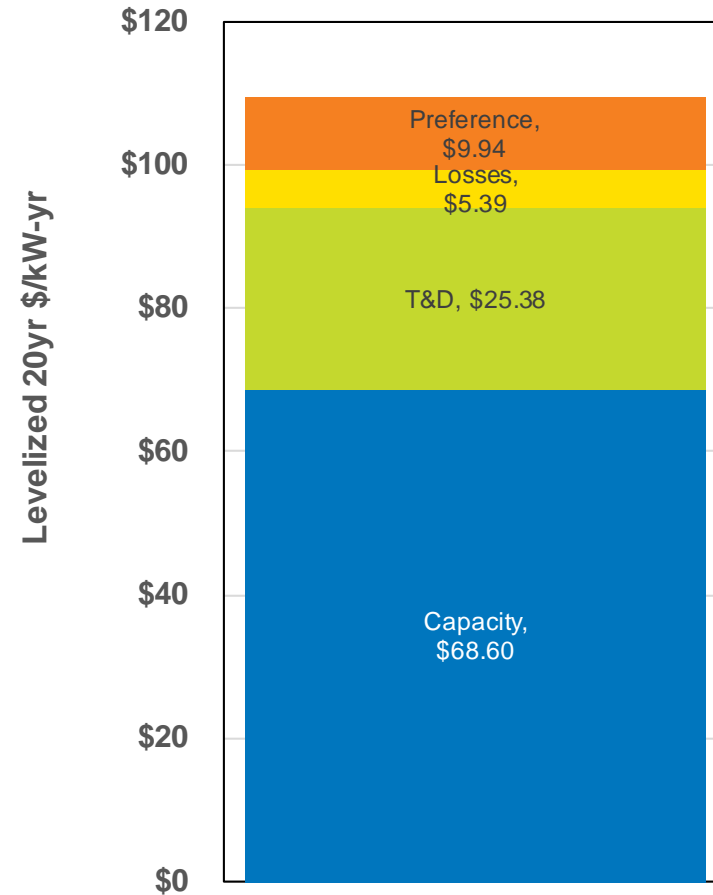


Stacked 20-Year Levelized Energy Efficiency Avoided Cost (WA)

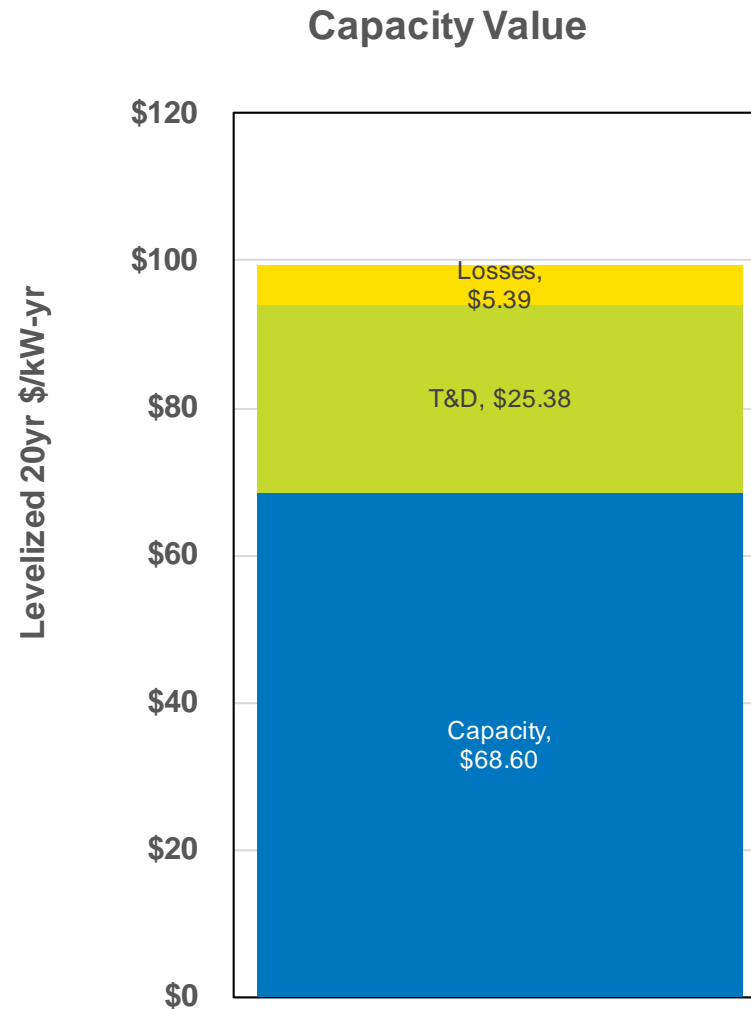
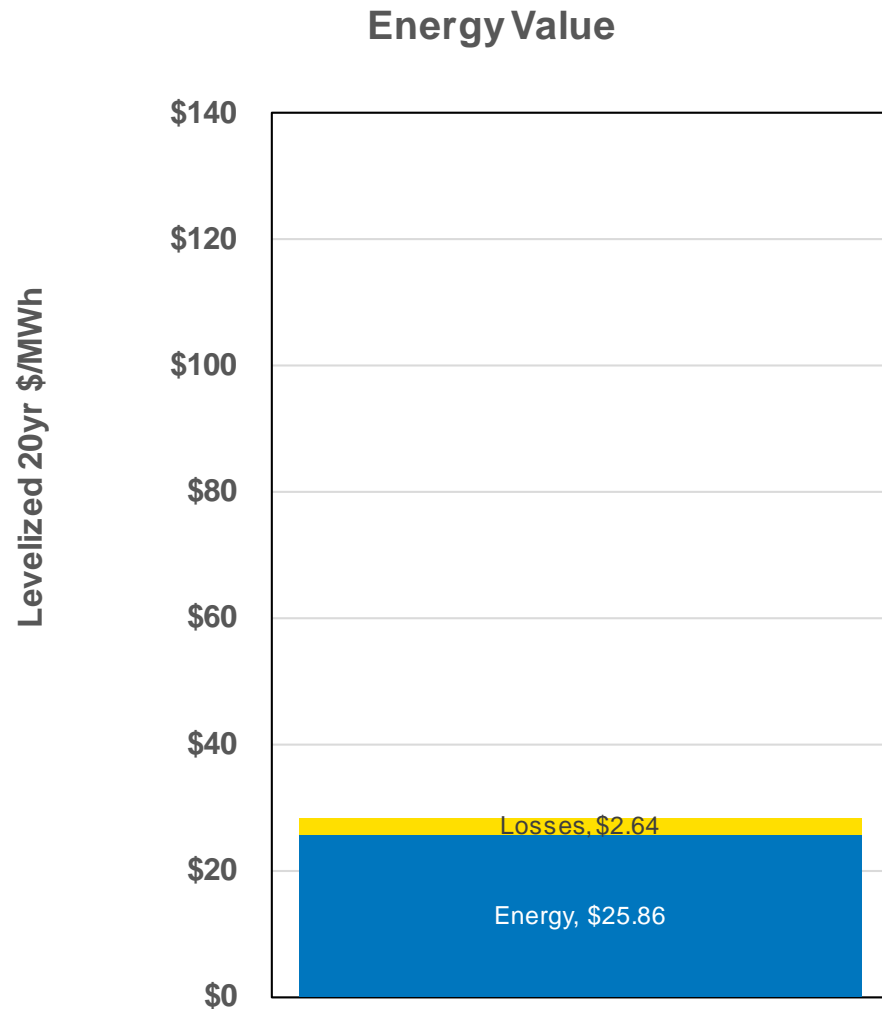
Energy Value



Capacity Value



Stacked 20-Year Levelized Energy Efficiency Avoided Cost (ID)



Demand Response

Program	Washington	Idaho
Time of Use Rates	2 MW (2024)	2 MW (2030)
Variable Peak Pricing	7 MW (2024)	6 MW (2030)
Large C&I Program	25 MW (2027)	n/a
DLC Smart Thermostats	7 MW (2030)	n/a
Third Party Contracts	15 MW (2031)	n/a
Behavioral Programs	1 MW (2039)	n/a
Total	56 MW	8 MW

Note: DR programs in another state for the benefit of the other state is not modeled

2022-2025 Supply Side Resource Changes

2022: Economic to exit out of Colstrip 3 & 4 (Both)

2023: 100 MW of Montana Wind (WA)

2024: 50 MW of Montana Wind (WA)

2025: No Action

NOTE: Renewable RFP may change this strategy

2026-2029 Supply Side Resource Changes

2026: 50 MW Montana Wind (WA)

48 MW NG SCCT (Both)

Lancaster CCCT contract ends (Both)

2026/27: 84 MW NG SCCT (ID)

84 MW NG SCCT (Both)

12 MW Upgrade Kettle Falls (Both)

2028: 50 MW Montana Wind (WA)

2029: 50 MW Solar + 50 MW 4-Hour Storage (Both)

NOTE: Renewable RFP may change this strategy

2030-2033 Supply Side Resource Changes

2030: No Action

2031: 75 MW Hydro Contract Renewal (WA)

2032: No Action

2033: No Action

NOTE: Renewable RFP may change this strategy

2034-2037 Supply Side Resource Changes

2034: 5 MW Rathdrum CT Upgrade (Both)

2035: 50 MW Solar + 50 MW 4-Hour Storage (Both)

Northeast Retires (Both)

2036: 50 MW Hydrogen SCCT (WA)

55 MW NG SCCT (ID)

2037: No Action

2038-2045 Supply Side Resource Changes

- 2038:** 50 MW Montana Wind (WA)
- 2039:** No Action
- 2040:** 50 MW Solar + 50 MW 4-Hour Storage (Both)
- 2041:** 50 MW Solar + 50 MW 4-Hour Storage (WA)
50 MW Montana Wind (WA)
Boulder Park Retires (Both)
- 2042:** 50 MW Montana Wind (WA)
50 MW Solar + 50 MW 4-Hour Storage (Both)
- 2043:** 50 MW Solar (WA)
100 MW Solar + 100 MW 4-Hour Storage (Both)
- 2044:** 50 MW Solar + 50 MW 4-Hour Storage (ID)
- 2045:** 150 MW Solar (WA)
30 MW Storage (ID)

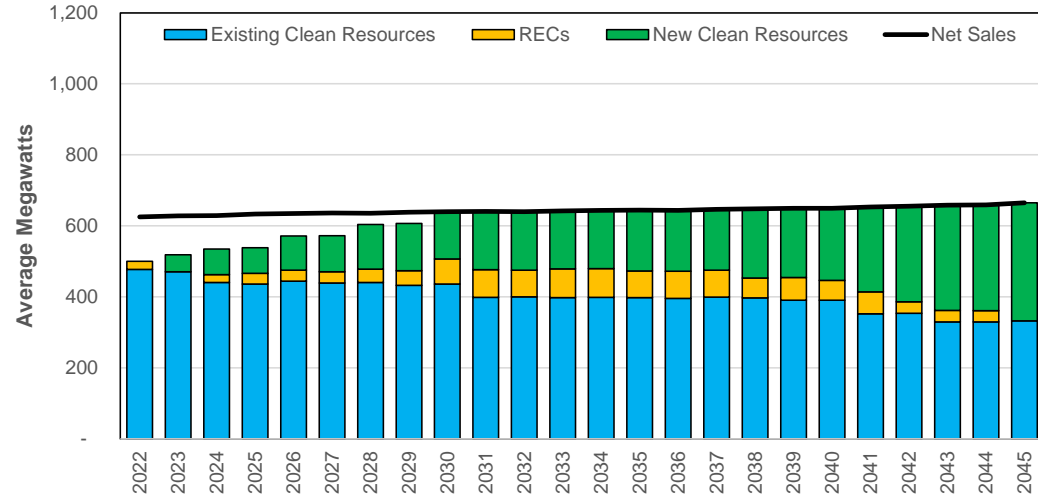
Least Reasonable Cost Resource Selection (MW)

Nameplate MW	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
Shared System Resource																								
NG CT	0	0	0	0	48	84	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Solar	0	0	0	0	0	0	0	50	0	0	0	0	0	50	0	0	0	0	50	0	50	100	0	0
Storage Added to Solar	0	0	0	0	0	0	0	50	0	0	0	0	0	50	0	0	0	0	50	0	50	100	0	0
Wind	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Storage	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrogen	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other- (Clean Capacity)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thermal Upgrade	0	0	0	0	0	12	0	0	0	0	0	0	5	0	0	0	0	0	0	0	0	0	0	0
Hydro	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Washington																								
NG CT	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Solar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	50	0	150
Storage Added to Solar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	0	0	0
Wind	0	100	50	0	50	0	50	0	0	0	0	0	0	0	0	0	50	0	0	50	50	0	0	0
Storage	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydrogen	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0	0	0	0	0	0	0	0	0	0
Other- (Clean Capacity)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thermal Upgrade	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydro	0	0	0	0	0	0	0	0	0	75	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DR Capability	0	0	1	4	9	37	37	37	38	42	47	54	56	56	56	56	56	56	56	57	57	56	56	56
EE- Winter Capacity	3	4	5	6	7	7	8	8	7	6	5	4	4	3	2	2	2	1	1	1	1	0	0	0
EE- Summer Capacity	5	5	6	7	8	8	9	8	8	7	6	5	4	3	3	2	2	2	2	0	0	0	0	0
Idaho																								
NG CT	0	0	0	0	0	84	0	0	0	0	0	0	0	0	55	0	0	0	0	0	0	0	0	0
Solar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0
Storage Added to Solar	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	50	0
Wind	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Storage	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	30
Hydrogen	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Other- (Clean Capacity)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Thermal Upgrade	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Hydro	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
DR Capability	0	0	0	0	0	0	0	0	1	3	7	9	10	10	10	10	9	9	9	9	9	9	9	8
EE- Winter Capacity	1	1	2	2	2	2	2	2	2	2	1	1	1	0	0	0	0	0	0	0	0	0	0	0
EE- Summer Capacity	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	0	0	0	0	0	0	0	0	0

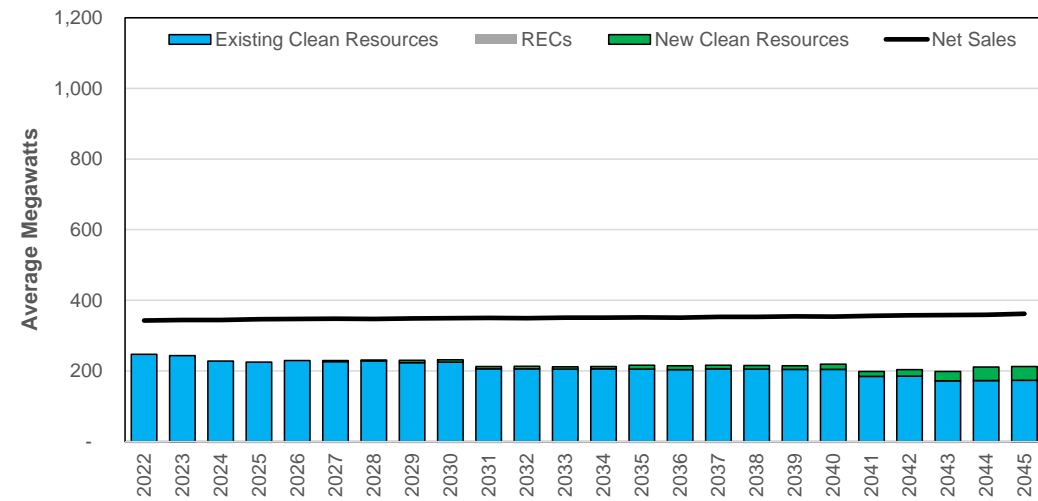
Note: DR is cumulative due to the small changes year to year

Clean Energy Share (aMW)

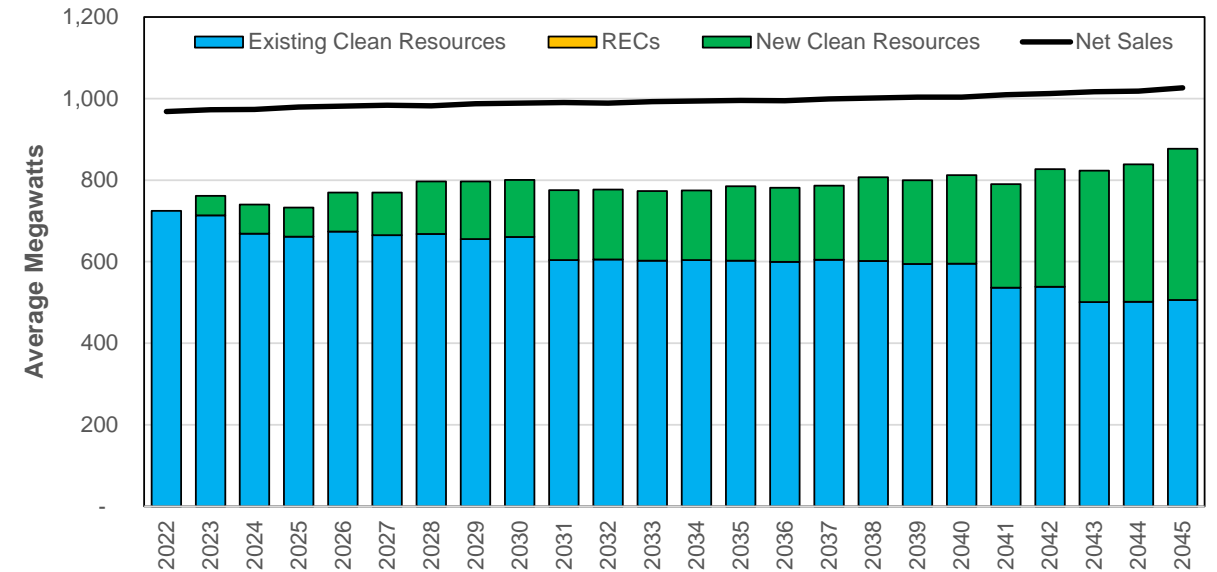
Washington



Idaho



System



System Clean Resource Percentage

2022: 74.8%

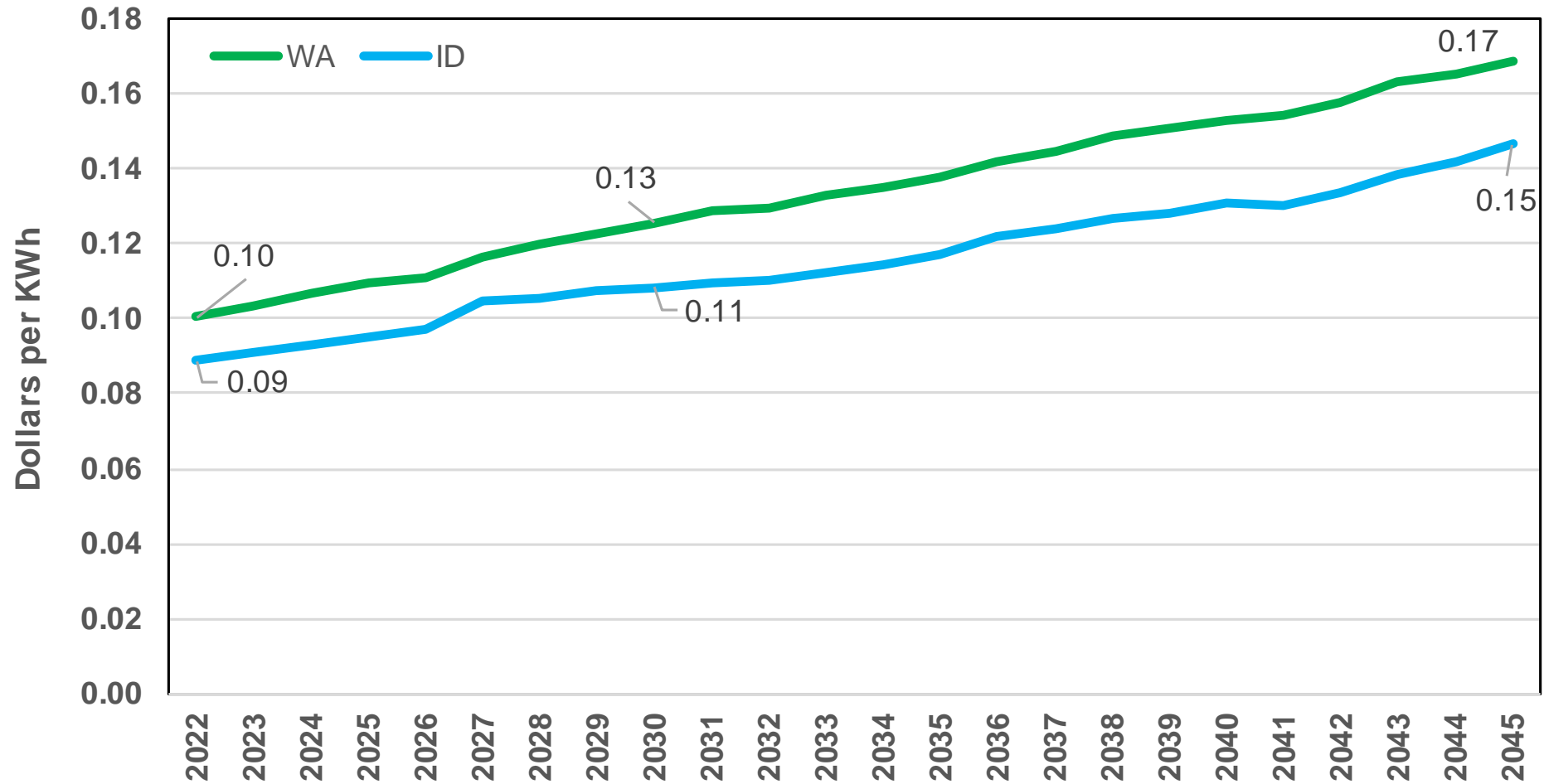
2027: 78.3%

2045: 85.5%

Excludes Clean Market Purchases

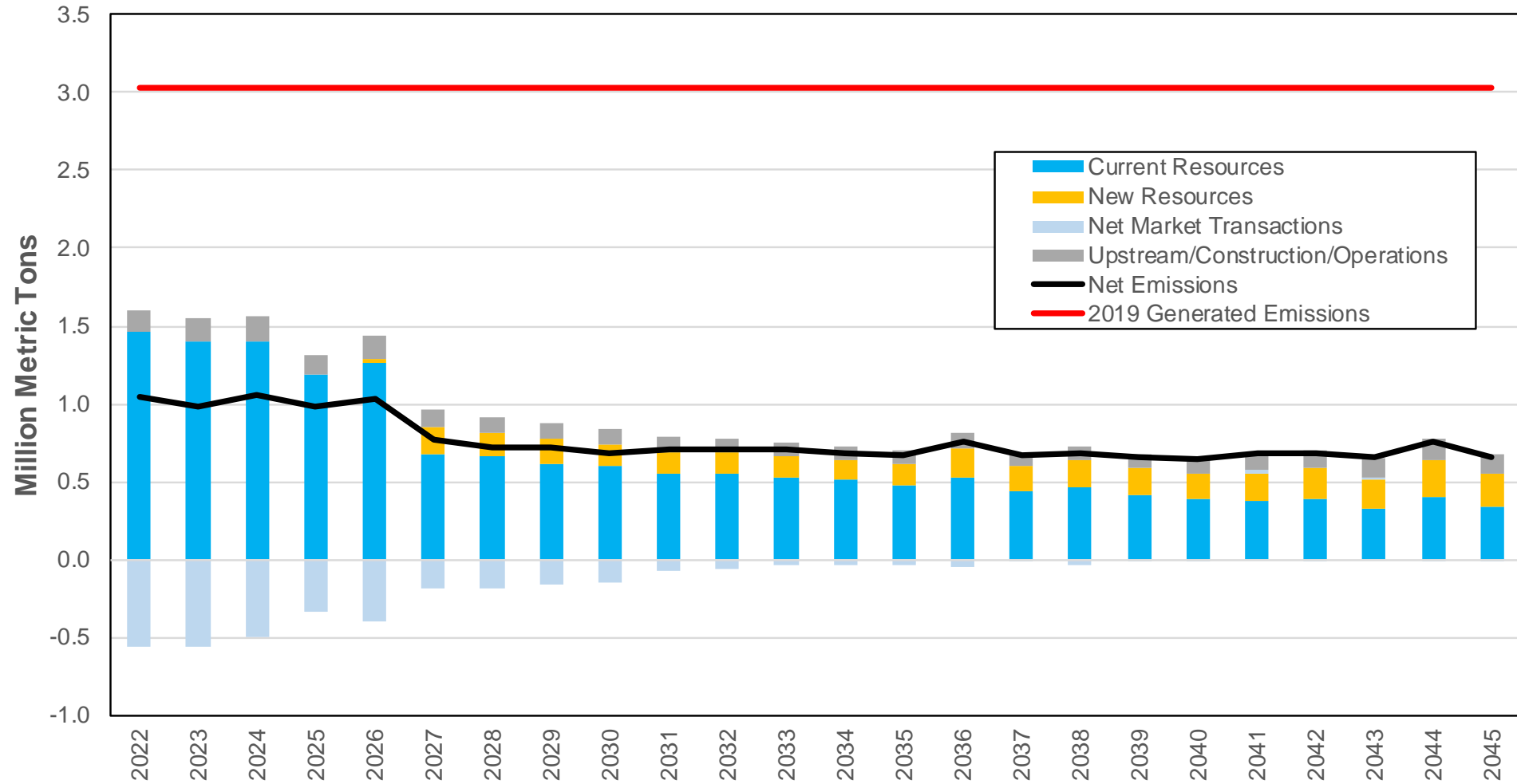


Annual Average Least Reasonable Cost Rate Forecast



NOTE: Estimated rates only using 2% annual rate increase for non-modeled costs

Greenhouse Gas Forecast



Note: Assumes Colstrip exits the portfolio

Baseline Analysis

- 1. Least Reasonable Cost Strategy:** Includes all requirements
- 2. Baseline Portfolio 1:** Excludes CETA's 2030 and 2045 goals
 - Used for incremental cost calculation
- 3. Baseline Portfolio 2:** Baseline Portfolio 1 + removal of SCC
 - Energy Efficiency held constant from LCS
 - Used to estimate cost of capacity by comparing to Baseline 3
- 4. Baseline Portfolio 3:** Baseline Portfolio 2 + removal of capacity constraints
 - Estimates cost to serve load without new resources

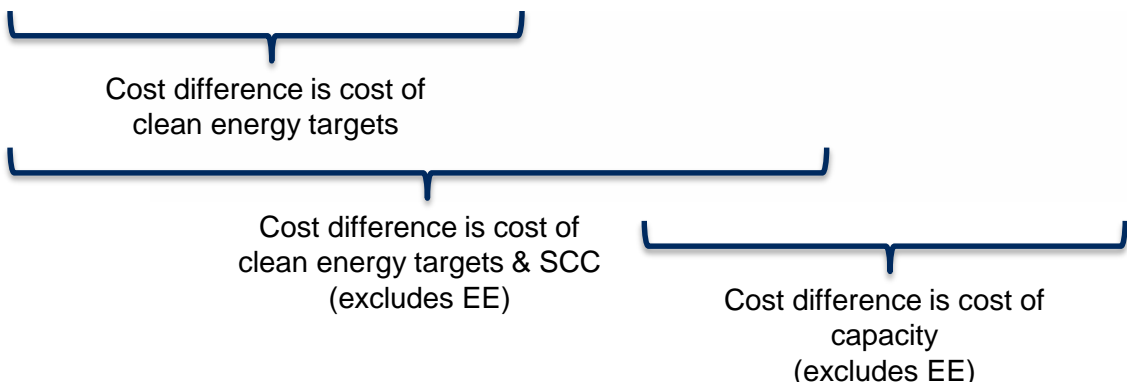
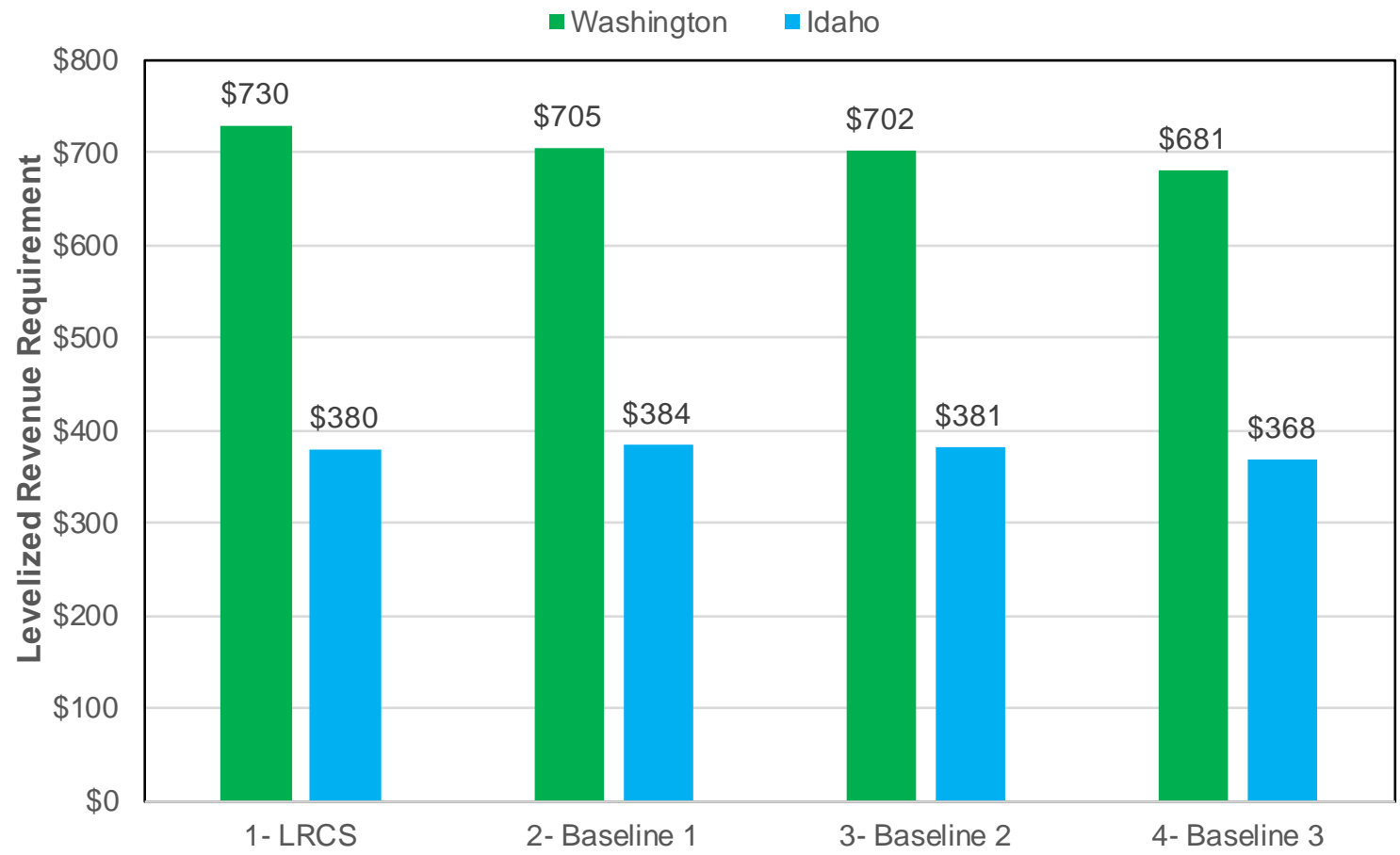
Resource Mix Summary

DRAFT

	1. LRCS	2. Baseline 1	3. Baseline 2	4. Baseline 3
Shared System Resource				
NG CT	132	132	479	0
Solar	300	150	150	0
Storage Added to Solar	300	150	150	0
Wind	0	0	0	0
Storage	0	33	0	0
Hydrogen	0	0	0	0
Other- (Clean Capacity)	0	0	0	0
Thermal Upgrade	17	17	17	0
Hydro	0	0	75	0
Washington				
NG CT	0	84	0	0
Solar	250	0	0	0
Storage Added to Solar	50	0	0	0
Wind	400	0	0	0
Storage	0	30	0	0
Hydrogen	50	100	0	0
Other- (Clean Capacity)	0	0	0	0
Thermal Upgrade	0	0	0	0
Hydro	75	75	0	0
DR Capability	56	55	35	3
EE- Winter Capacity	88	86	88	88
EE- Summer Capacity	101	94	101	101
Idaho				
NG CT	139	139	0	0
Solar	50	0	50	0
Storage Added to Solar	50	0	50	0
Wind	0	0	0	0
Storage	30	90	80	0
Hydrogen	0	0	0	0
Other- (Clean Capacity)	0	0	0	0
Thermal Upgrade	0	0	0	0
Hydro	0	0	0	0
DR Capability	8	19	19	2
EE- Winter Capacity	24	23	24	24
EE- Summer Capacity	13	13	13	13

Cost Comparison of Baseline Scenarios

DRAFT



Washington CETA Cost Cap Analysis (assumes current methodology)

Washington Incremental Cost Calculation	2022	2023	2024	2025
Revenue Requirement w/ SCC	651	669	693	698
Baseline (Total Revenue Requirement Plus SCC)	649	657	670	675
Annual Delta	2	12	23	23
Percent Change	0%	2%	3%	3%
Four Year Max Spending				118.4
Annual Max Spending	29.6	29.6	29.6	29.6
Forecasted Spend				59

Forecasted to be under cap (59)

Incremental cost

Annual spending to use cap

Washington Incremental Cost Calculation	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
Revenue Requirement w/ SCC	718	715	735	749	763	775	782	797	810	825	855	861	889	900	914	925	951	984	1,013	1,030
Baseline (Total Revenue Requirement Plus SCC)	685	702	713	725	735	754	759	775	786	798	829	834	868	877	887	888	912	936	986	996
Annual Delta	33	13	22	23	28	22	23	22	24	28	25	27	21	23	27	37	39	48	27	34
Percent Change	5%	2%	3%	3%	4%	3%	3%	3%	3%	3%	3%	3%	2%	3%	3%	4%	4%	5%	3%	3%
Four Year Max Spending				127.9				136.8				146.0				158.5			113.2	
Annual Max Spending	32.0	32.0	32.0	32.0	34.2	34.2	34.2	34.2	36.5	36.5	36.5	36.5	39.6	39.6	39.6	39.6	37.7	37.7	37.7	
Forecasted Spend				91				94				104				108			113	
				(37)				(43)				(42)				(50)			0	

Increases exceed 2% each year over baseline, but rate cap is exponential.

Avista should hit 2042-44 rate cap.

New Supply-Side Resource Avoided Costs

Year	Flat (\$/MWh)	On-Peak (\$/MWh)	Off-Peak (\$/MWh)	Clean Energy Premium (\$/MWh)	Capacity Premium (\$/kW-Yr)
2022	\$20.37	\$21.67	\$18.63	\$0.00	\$0.00
2023	\$18.70	\$19.22	\$18.01	\$17.32	\$0.00
2024	\$18.73	\$19.04	\$18.32	\$17.66	\$0.00
2025	\$20.00	\$20.05	\$19.92	\$18.02	\$0.00
2026	\$23.74	\$23.68	\$23.83	\$18.38	\$0.00
2027	\$24.65	\$24.27	\$25.16	\$18.75	\$82.67
2028	\$25.69	\$24.87	\$26.79	\$19.12	\$84.32
2029	\$26.66	\$25.77	\$27.85	\$19.50	\$86.01
2030	\$26.46	\$25.48	\$27.80	\$19.89	\$87.73
2031	\$27.63	\$26.48	\$29.19	\$20.29	\$89.49
2032	\$28.02	\$26.86	\$29.58	\$20.70	\$91.28
2033	\$29.30	\$27.94	\$31.16	\$21.11	\$93.10
2034	\$29.46	\$27.85	\$31.65	\$21.53	\$94.96
2035	\$30.48	\$28.82	\$32.71	\$21.96	\$96.86
2036	\$32.10	\$30.38	\$34.43	\$22.40	\$98.80
2037	\$31.95	\$30.08	\$34.48	\$22.85	\$100.78
2038	\$34.46	\$32.26	\$37.45	\$23.31	\$102.79
2039	\$34.77	\$32.28	\$38.13	\$23.77	\$104.85
2040	\$35.70	\$32.94	\$39.40	\$24.25	\$106.94
2041	\$38.23	\$35.77	\$41.56	\$24.74	\$109.08
2042	\$38.72	\$36.41	\$41.84	\$25.23	\$111.26
2043	\$39.27	\$36.92	\$42.44	\$25.73	\$113.49
2044	\$46.82	\$44.10	\$50.49	\$26.25	\$115.76
2045	\$46.48	\$44.00	\$49.80	\$26.77	\$118.07
20 yr Levelized	\$25.86	\$25.18	\$26.78	\$25.27	\$57.64
24 yr Levelized	\$27.18	\$26.36	\$28.30	\$25.33	\$62.15



Least “Reasonable” Cost Strategy & Baseline Analysis

“Not Preferred Resource Strategy Yet”

James Gall, Electric IRP Manager
Fourth Technical Advisory Committee Meeting
November 17, 2020

Safe Harbor Statement

This document contains forward-looking statements. Such statements are subject to a variety of risks, uncertainties and other factors, most of which are beyond the Company's control, and many of which could have a significant impact on the Company's operations, results of operations and financial condition, and could cause actual results to differ materially from those anticipated.

For a further discussion of these factors and other important factors, please refer to the Company's reports filed with the Securities and Exchange Commission. The forward-looking statements contained in this document speak only as of the date hereof. The Company undertakes no obligation to update any forward-looking statement or statements to reflect events or circumstances that occur after the date on which such statement is made or to reflect the occurrence of unanticipated events. New risks, uncertainties and other factors emerge from time to time, and it is not possible for management to predict all of such factors, nor can it assess the impact of each such factor on the Company's business or the extent to which any such factor, or combination of factors, may cause actual results to differ materially from those contained in any forward-looking statement.

Portfolio Scenarios- 2021 IRP

1. Preferred Resource Strategy
2. Baseline Portfolio 1 (No CETA renewable targets)
3. Baseline Portfolio 2 (No CETA renewable targets/SCC)
4. Baseline Portfolio 3 (No additions)
5. Clean Resource Plan (100% Portfolio net clean by 2027)
6. Clean Resource Plan (100% Portfolio clean by 2045)
7. Social Cost of Carbon applied to Idaho
8. Least Cost Plan- w/ low load growth
9. Least Cost Plan- w/ high load growth
10. Least Cost Plan- w/ Northwest Resource Adequacy Market Peak Credits
11. Heating Electrification Scenario 1
12. Heating Electrification Scenario 2
13. Heating Electrification Scenario 3
14. Least Cost Plan- w/ climate shift
15. Least Cost Plan- w/ 2x SCC prices
16. Colstrip serves Idaho customers through 2025
17. Colstrip serves Idaho customers through 2035
18. Colstrip serves Idaho customers through 2045
19. If necessary: CETA deliver to customers each hour
20. Social Cost of Carbon "Tax" Least Cost Strategy
21. If necessary: other resource specific scenarios depending on outcome of PRS results

Only black font scenarios are shown in this presentation

Scenario Descriptions

1. **Least Reasonable Cost Strategy:** Includes all requirements
2. **Baseline Portfolio 1:** Excludes CETA's 2030 and 2045 goals
 - Used for incremental cost calculation
3. **Baseline Portfolio 2:** Baseline Portfolio 1 + removal of SCC
 - Energy Efficiency held constant from LCS
4. **Baseline Portfolio 3:** Baseline Portfolio 2 + removal of capacity constraints
 - Energy Efficiency held constant from LCS
5. **Clean Resource Plan (2027)**
 - Add constraint to meet or exceed 100% of all retail sales with clean energy
6. **Clean Resource Plan (2045)**
 - Add constraint to meet or exceed 100% of all retail sales with clean energy
 - All thermal resources must exit by 2044
 - No new thermal resources
7. **Social Cost of Carbon applied to Idaho**
 - Includes SCC as cost adder to generation and savings for EE using same method as Washington State

Scenario Descriptions Continued

- 15. Least Cost Plan- with 2 time SCC prices**
 - Double of Social Cost of Carbon charge for Washington Only
- 16. Colstrip serves Idaho customers through 2025**
 - Colstrip obligated to run through 2025 in both states
- 17. Colstrip serves Idaho customers through 2035**
 - Colstrip obligated to run through 2035 for Idaho
- 18. Colstrip serves Idaho customers through 2045**
 - Colstrip obligated to run through 2045 for Idaho

Portfolio Sensitivities

- Portfolio scenarios will be tested with alternative price forecasts
 - High Natural Gas Prices
 - Low Natural Gas Prices
 - Social Cost of Carbon “Tax”
 - Climate Shift
- Likely available for draft document, but not TAC presentations

Scenario Cumulative Resource Selection

	1. LRCS	2. Baseline 1	3. Baseline 2	4. Baseline 3	5. CRS (2027)	6. CRS (2045)	7. SCC ID	15- LRCS 2x SCC	16- Colstrip 2025	17- Colstrip 2035	18- Colstrip 2045
Shared System Resource											
NG CT	132	132	479	0	0	0	48	0	132	132	132
Solar	300	150	150	0	650	670	200	100	300	300	300
Storage Added to Solar	300	150	150	0	650	625	200	100	300	300	300
Wind	0	0	0	0	250	550	0	0	0	0	0
Storage	0	33	0	0	0	0	0	0	0	0	0
Hydrogen	0	0	0	0	0	0	0	0	0	0	0
Other- (Clean Capacity)	0	0	0	0	0	20	0	0	0	0	0
Thermal Upgrade	17	17	17	0	17	12	17	17	17	17	17
Hydro	0	0	75	0	0	0	75	0	0	0	0
Washington											
NG CT	0	84	0	0	48	0	84	144	0	0	0
Solar	250	0	0	0	100	0	350	0	250	250	250
Storage Added to Solar	50	0	0	0	0	0	50	0	75	0	0
Wind	400	0	0	0	200	450	400	600	400	400	400
Storage	0	30	0	0	0	250	0	140	0	10	10
Hydrogen	50	100	0	0	50	100	50	100	50	50	50
Other- (Clean Capacity)	0	0	0	0	0	50	0	0	0	0	0
Thermal Upgrade	0	0	0	0	0	0	0	0	0	0	0
Hydro	75	75	0	0	75	75	0	75	75	75	75
DR Capability	56	55	35	3	56	104	56	55	55	57	57
EE- Winter Capacity	88	86	88	88	89	91	90	98	88	91	92
EE- Summer Capacity	101	94	101	101	99	115	116	142	113	100	100
Idaho											
NG CT	139	139	0	0	120	0	84	223	139	139	55
Solar	50	0	50	0	300	585	0	0	0	0	50
Storage Added to Solar	50	0	50	0	125	200	0	0	0	0	50
Wind	0	0	0	0	150	50	0	0	0	0	0
Storage	30	90	80	0	0	0	40	50	90	70	130
Hydrogen	0	0	0	0	0	250	50	50	0	0	0
Other- (Clean Capacity)	0	0	0	0	0	0	0	0	0	0	0
Thermal Upgrade	0	0	0	0	0	0	0	0	0	0	0
Hydro	0	0	0	0	0	0	0	0	0	0	0
DR Capability	8	19	19	2	19	19	21	7	8	17	20
EE- Winter Capacity	24	23	24	24	25	33	39	23	22	21	23
EE- Summer Capacity	13	13	13	13	18	22	36	12	15	11	15

Existing Resource “Exits”

	1- LRCS	2- Baseline 1	3- Baseline 2	4- Baseline 3 w/ EE	5- Clean Resource Plan (2027)	6- Clean Resource Strategy (2045)	7- SCC Idaho	15- 2x SCC	16- Colstrip 2025	17- Colstrip 2035	18- Colstrip 2045
Coyote Springs 2	-	-	-	-	-	2044	-	2022	-	-	-
Lancaster	2026	2026	2026	2026	2026	2026	2026	2026	2026	2026	2026
Colstrip (3)	2021	2021	2021	2021	2021	2035	2021	-	2025	2035	2045
Colstrip (4)	2021	2021	2021	2021	2021	2021	2021	2025	2025	2035	2045
Kettle Falls	-	-	-	-	-	-	-	-	-	-	-
Kettle Falls CT	-	-	-	-	-	2044	-	-	-	-	-
Boulder Park 1-6	2040	2037	2026	2040	2040	2040	2040	2030	2040	2040	2040
Rathdrum 1	-	-	-	-	-	2044	-	-	-	-	-
Rathdrum 2	-	-	-	-	-	2044	-	-	-	-	-
Northeast A&B	2035	2035	2026	2035	2035	2035	2035	2035	2035	2035	2035

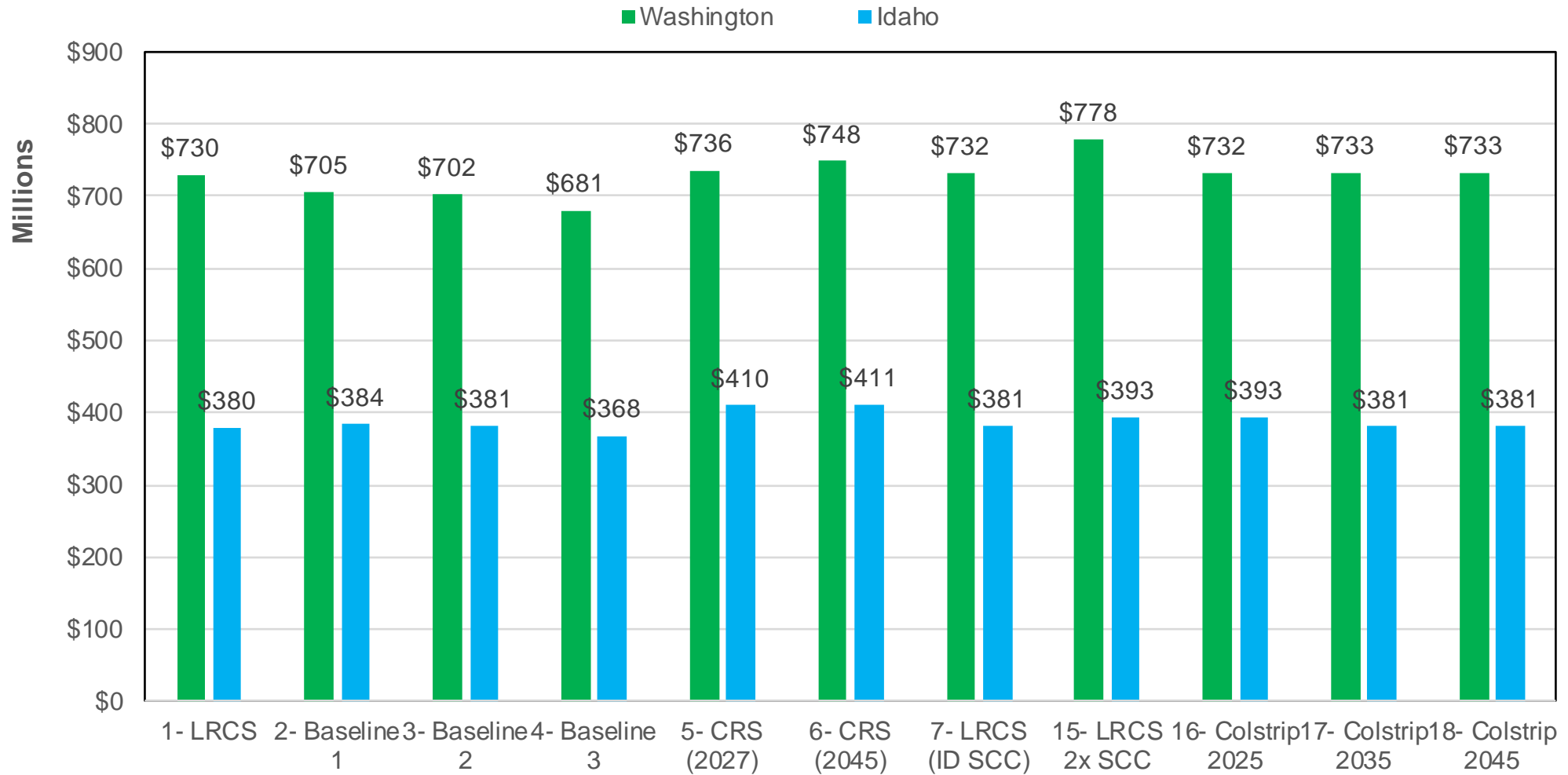
Note:

Assumes each plant is available through December 31st of the final year;

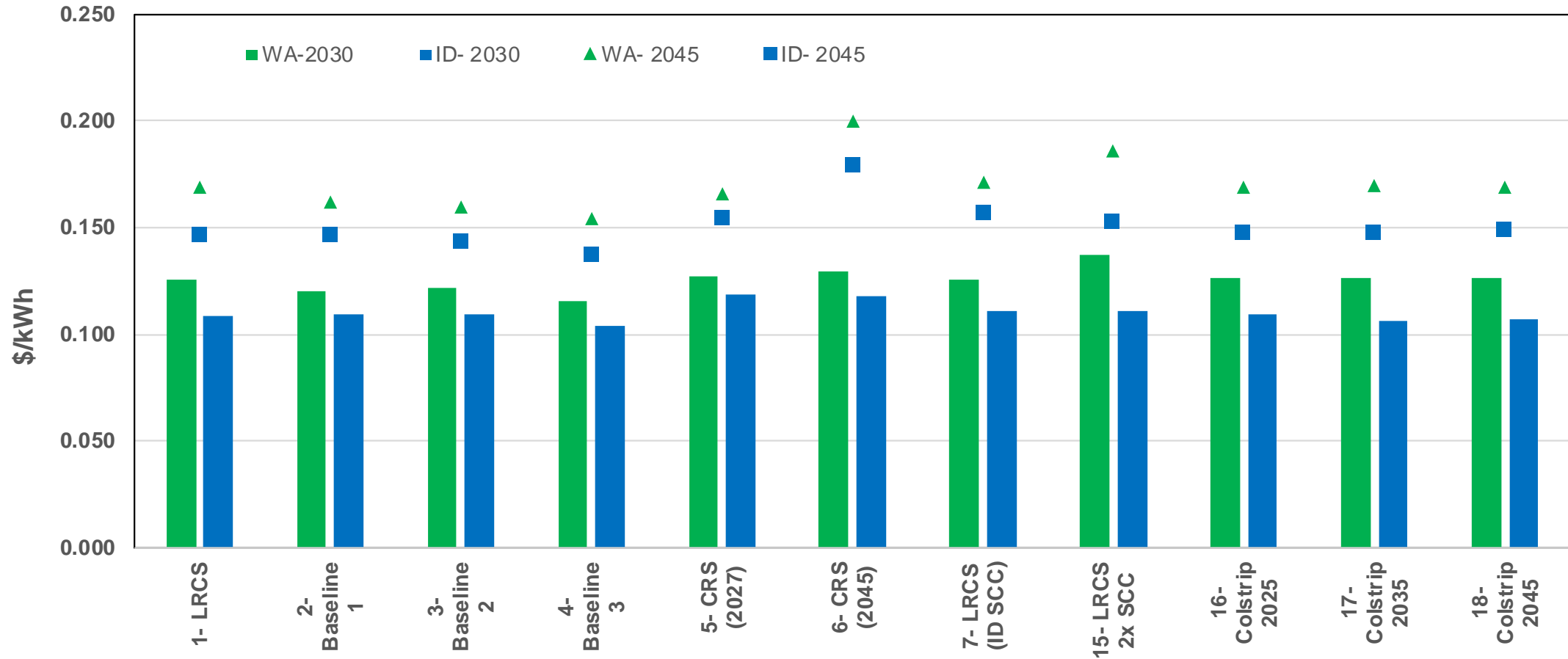
Exception: Lancaster PPA expires Oct 2026.

Dash indicates no plant exit in the study

2022-45 Levelized Revenue Requirement

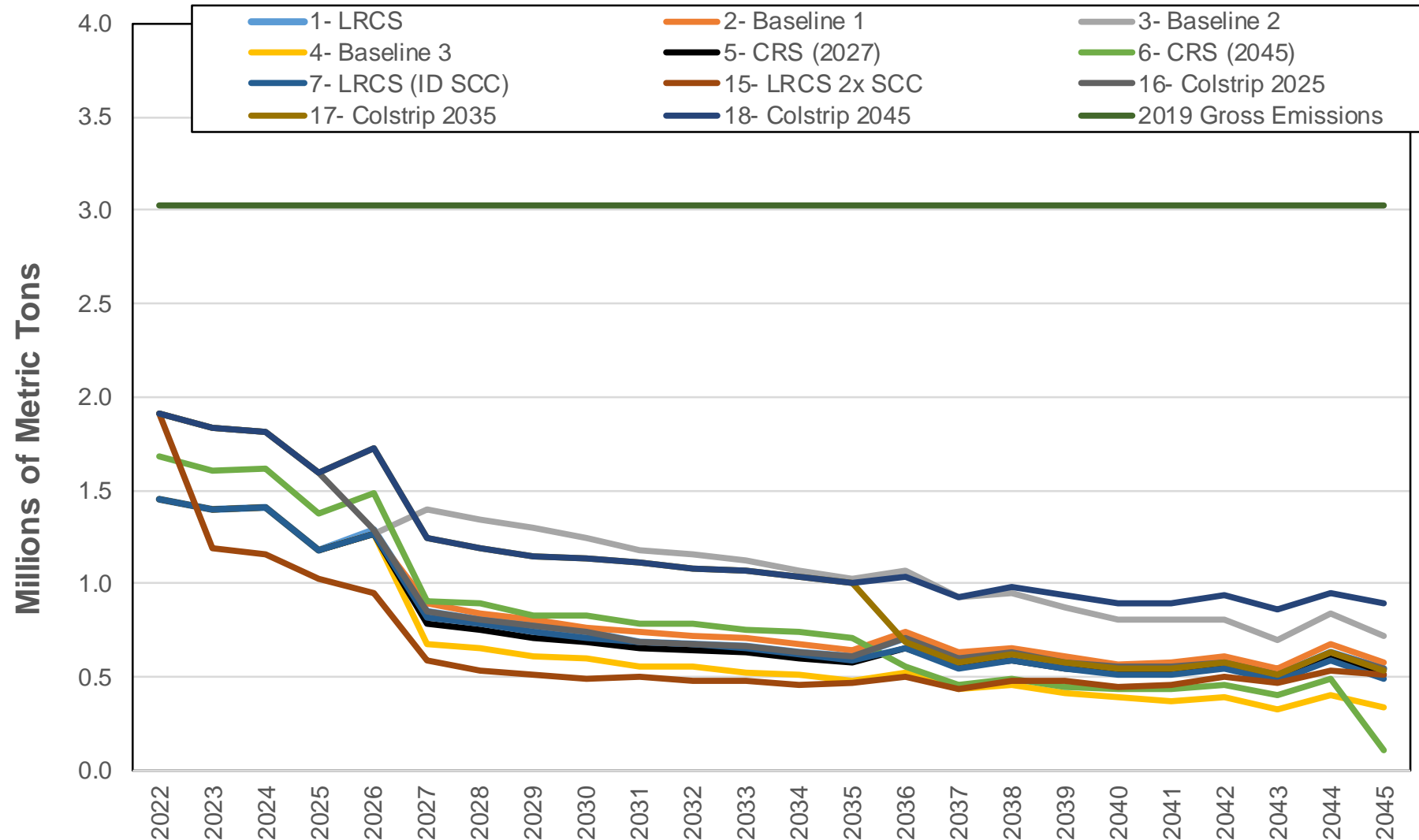


Rate Estimates (Average Annual)



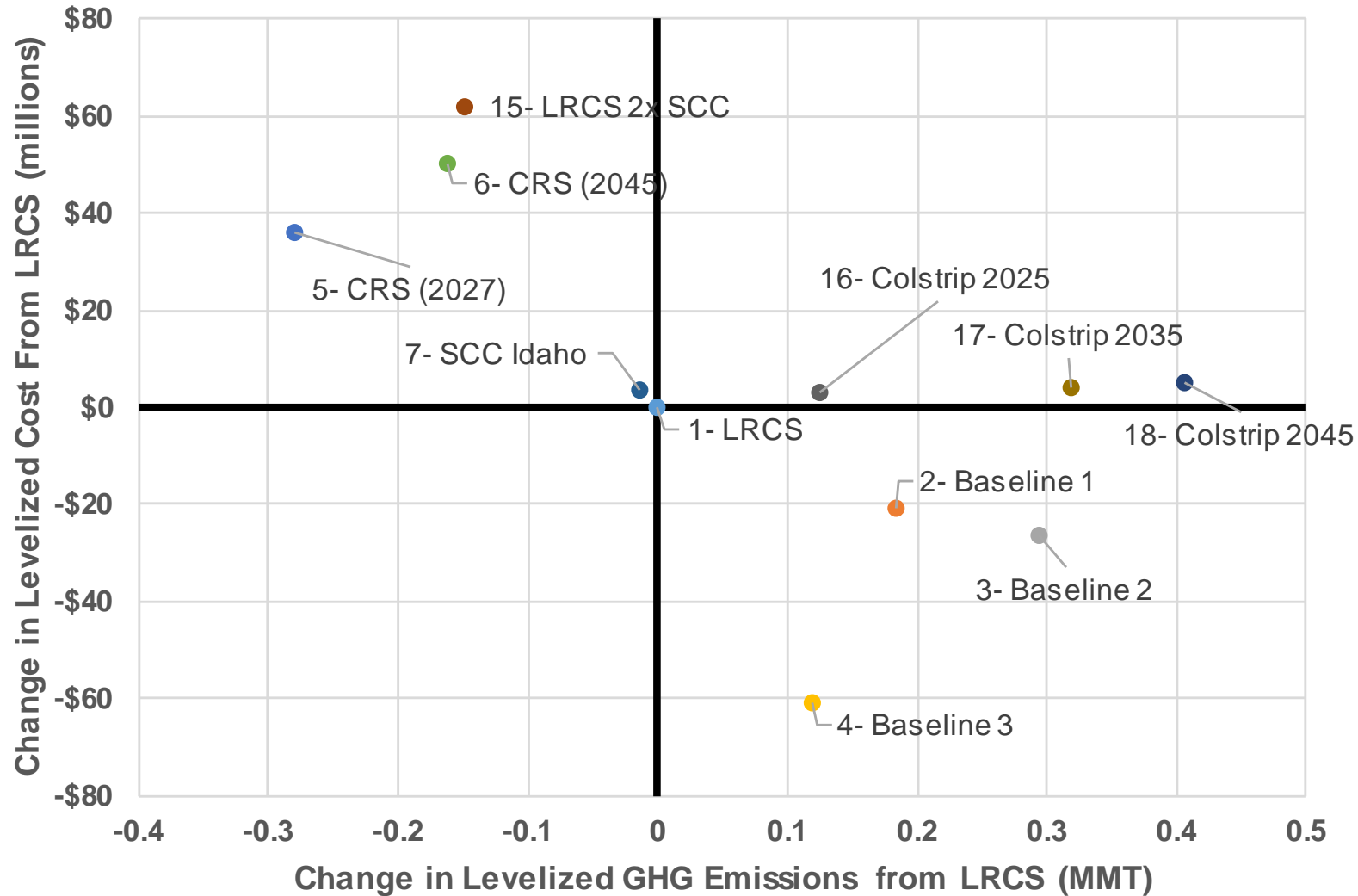
Annual Greenhouse Gas Emission

Avista Dispatch & Storage Purchases



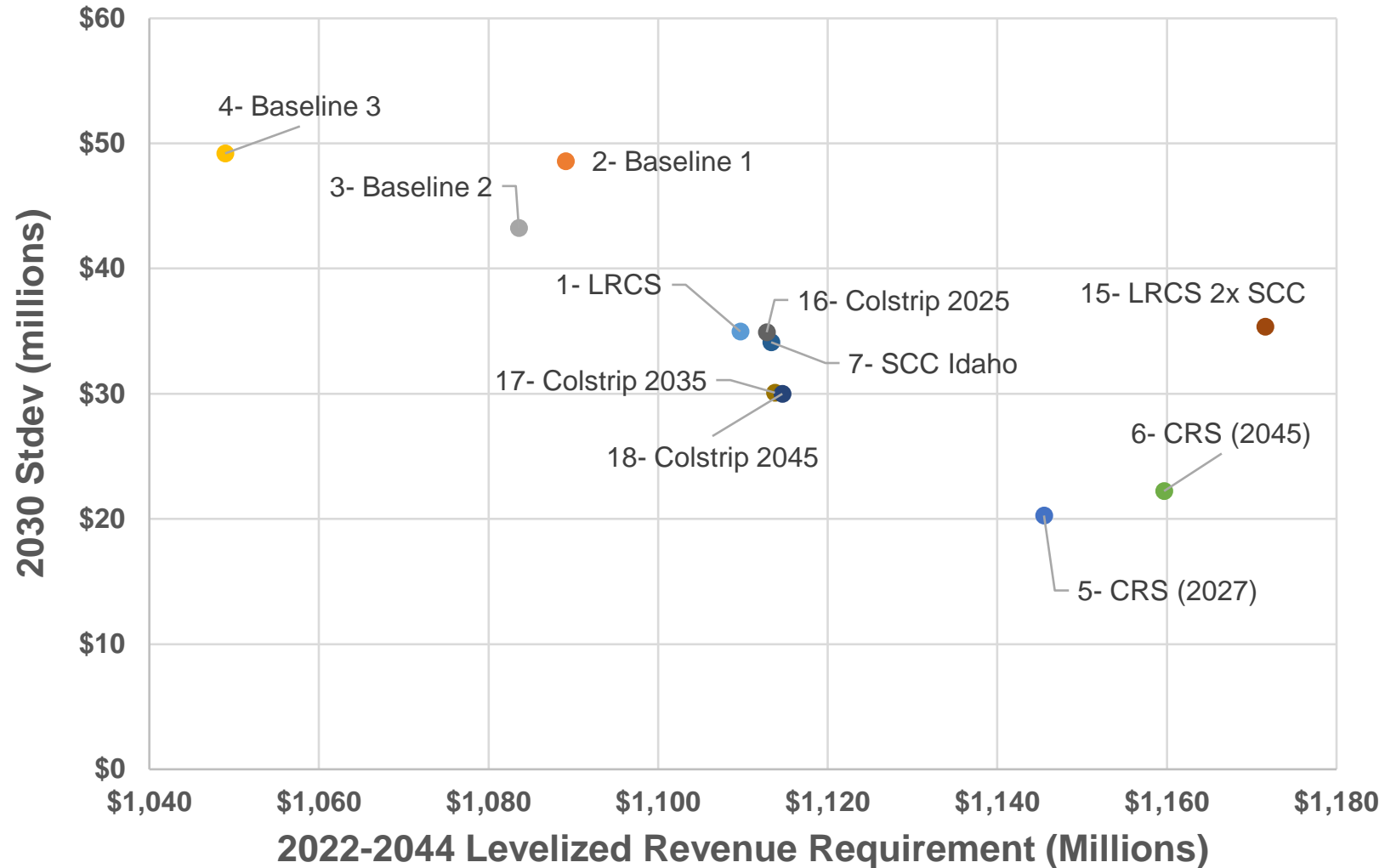
Cost vs. GHG Tradeoffs

Change in Levelized Cost vs. Change in Levelized Net Emissions



2030 Risk Analysis

Measures 2030 standard deviation of “modeled” power cost compared to levelized cost

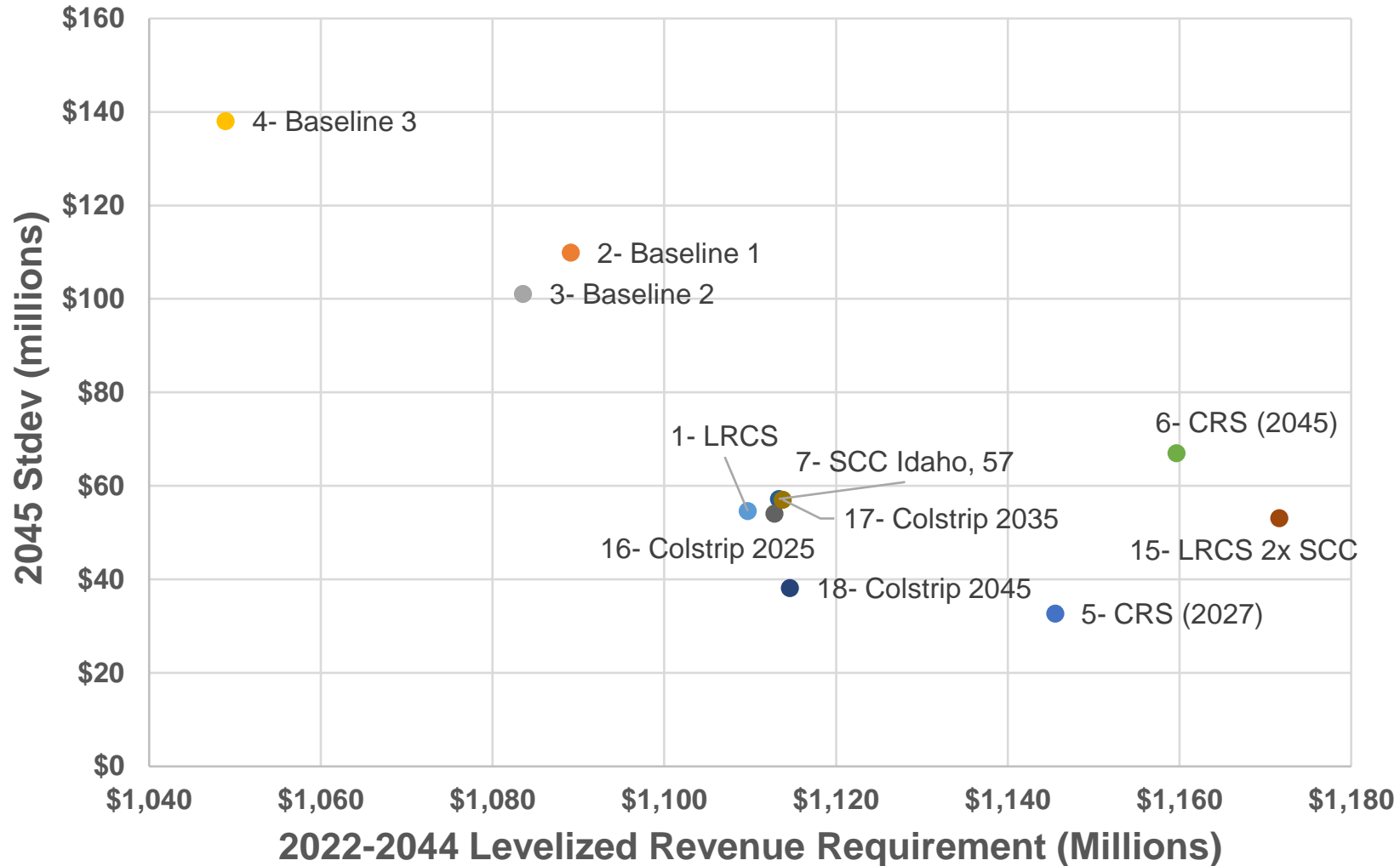


Note: PPA cost are considered “fixed” for this analysis- meaning the cost do not change with changes in delivered energy



2045 Risk Analysis

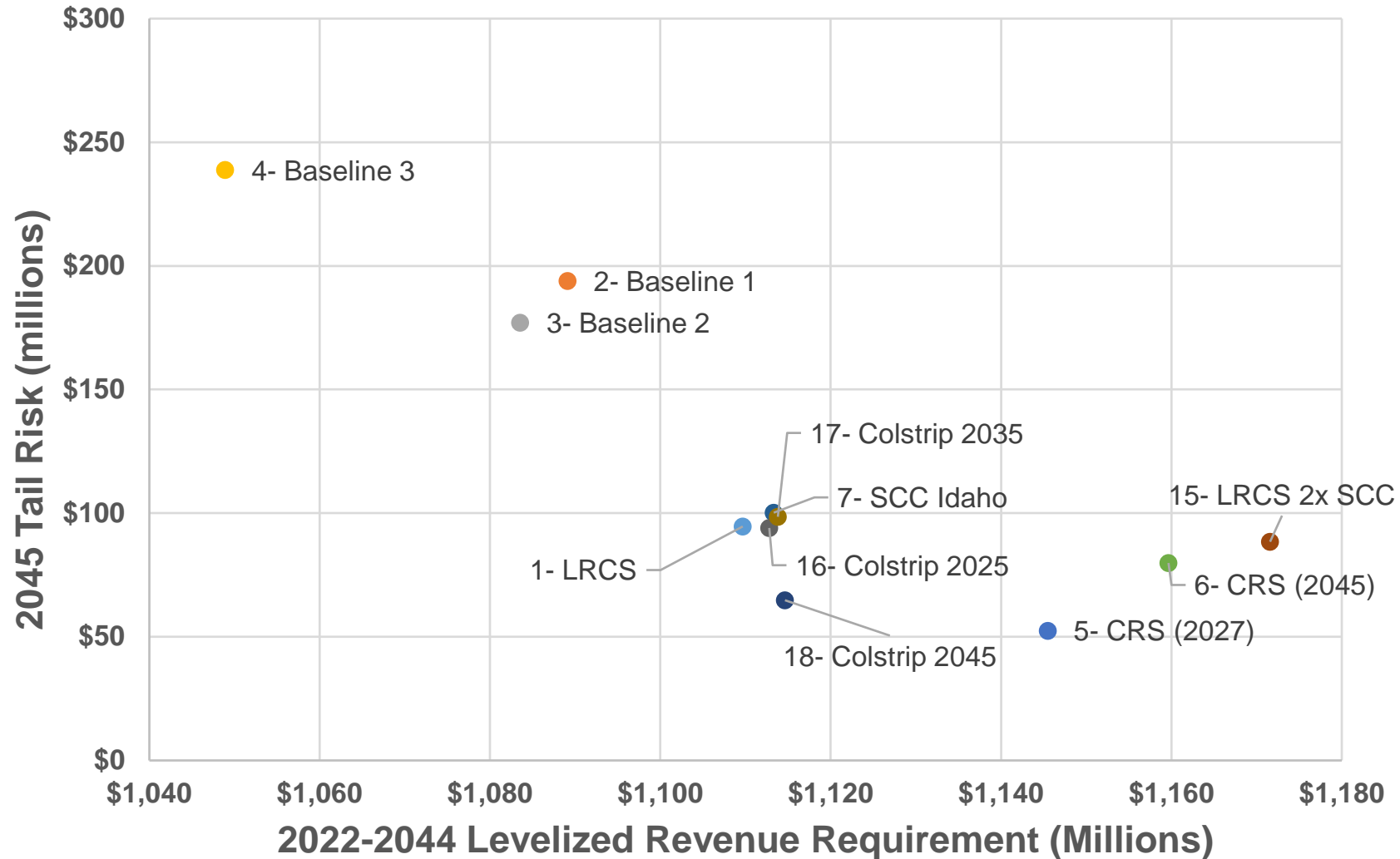
Measures 2045 standard deviation of “modeled” power cost compared to levelized cost



Note: PPA cost are considered “fixed” for this analysis- meaning the cost do not change with changes in delivered energy

2045 Upper Tail Risk Analysis

95th percentile power cost minus mean power cost compared to levelized cost



Note: PPA cost are considered “fixed” for this analysis- meaning the cost do not change with changes in delivered energy

Next Steps

- Post PRiSM model to website
- Complete other scenarios and sensitivities
- Begin reliability studies
- Update PRiSM model for any modifications
- Select Preferred Resource Strategy
- Re-run scenarios and sensitivities
- Continue reliability studies if necessary