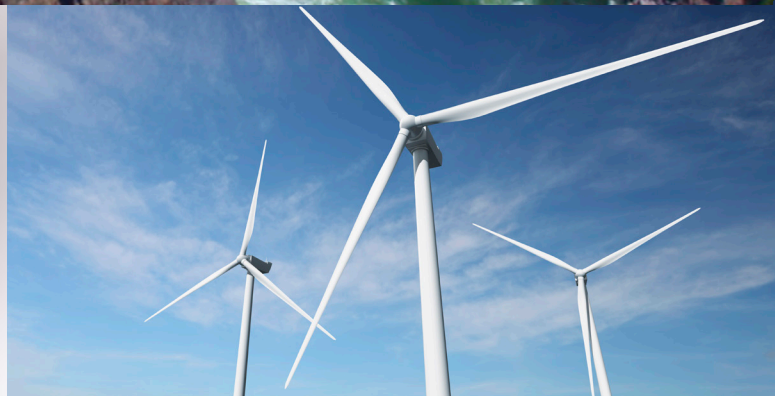
2021 Electric Integrated Resource Plan

Preferred Resource Strategy Update



4/30/2021

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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.

Introduction

Avista issued a request for proposals (RFP) to acquire up to 120 aMW of clean energy in the summer of 2020. The RFP was in response to the 2020 IRP results indicating a clean energy need. The need was driven by Washington's Clean Energy Transformation Act (CETA), but also by the potential for some resources to be cost effective with federal tax credits when compared to market alternatives. During the development of the 2021 IRP, Avista used market intelligence gained from this RFP to inform new resource assumptions; however, due to the time it took to negotiate the acquisition of the top resource identified in the RFP and filing the IRP by April 1st, the 2021 IRP did not include the RFP resource additions.

On March 24, 2021, just prior to filing the 2021 Electric IRP, Avista signed a 10-year contract with Chelan PUD for a 5 percent (slice) of its Rocky Reach and Rock Island hydro facilities. Energy deliveries will begin January 1, 2024 at a fixed price over the contract term[1]. The new Chelan PUD hydro slice adds approximately 51 aMW under average water conditions and 88 MW of nameplate capacity[2]. Avista estimates the contract will decrease its system peak planning requirements by 53 MW, serving both Idaho and Washington jurisdictions. Idaho's share of the renewable attributes may meet Washington's CETA law by transferring the renewable attributes to Washington in exchange for a financial credit to Idaho customers.

The next several sections outline resource plan changes due to the acquisition of the aforementioned Chelan slice. This document describes the impacts on resource selection, cost and emissions relative to the 2021 IRP's Preferred Resource Strategy (PRS). The RFP acquisition does not meet all of Avista's requirements for clean energy and reliability resources over the next decade. At this time, both parties have an interest in Avista acquiring an additional slice of capacity based on alternative proposals by Chelan submitted in response to the RFP and Avista anticipates releasing another all-source RFP in late 2021 to address any remaining resource shortfalls in order to comply with the Purchase of Resources requirement in Washington State.

Summary of Analysis Changes

This IRP update explores the changes to the PRS from the acquisition of Chelan's 5 percent slice. Due to its impacts on system capacity and clean energy needs, an update to the resource plan is necessary. Most of the assumptions, methodologies and results remain the same as reported in the 2021 IRP. Avista used its PRiSM model to re-optimize new resource selection after making changes to some assumptions. These changes are described in Table 1. In some cases, changes were required due to the timing of this analysis, such as moving the timing of the first wind facility from 2023 to 2024. Other

[1] Pricing and terms of the contract are confidential.
[2] Avista currently has a 5 percent slice of the same Chelan PUD hydro facilities through 2031.

changes, such as narrowing the window of the Kettle Falls modernization project, reflects an update to Avista's actual decision window. Avista chose to maintain the 2021 IRP's cost-effective energy efficiency savings forecast. The Company conducted a study re-optimizing the efficiency forecast, but it only resulted in modest reductions so for simplicity sake, it was left consistent with the original plan.

Table 1: Modeling Changes

Assumption Changes	Reasons for Changes
Include new energy, capacity and cost of the new Chelan contract.	Required to reflect system changes.
Allow only new Chelan hydro slice to be transferred from Idaho to Washington prior to 2030[3].	Aligns purpose of acquisition to use resource for compliance with CETA requirements.
The energy efficiency estimates from the original 2021 IRP are not re-optimized.	Re-optimizing energy efficiency will not materially affect the plan.
Timing of first acquirable new wind generation moved from 1/1/2023 to 1/1/2024.	Since a new wind resource was not selected in the RFP, a new facility could not be constructed in time to meet a potential resource selected in 2023.
Narrow window of the Kettle Falls Generating Station (KFGS) modernization between 2024 to 2030.	This change reflects the timing necessary for updating or replacing aging equipment.
Add up to a 5 MW market purchase allowance prior to 2025.	If Colstrip exits the portfolio prior to 2025, Avista could have a de minimis resource deficit in 2023.

The Preferred Resource Strategy

Avista's 10-year agreement to receive a 5 percent slice of Chelan PUD's Rocky Reach and Rock Island projects changes the 2021 PRS by adding both clean energy and capacity to the system. Ultimately, this RFP acquisition delays the need for new capacity compared to the 2021 IRP. The following section describes the resource plan and identifies changes from the original 2021 IRP strategy. Since the energy efficiency selection remains the same as the original plan, this update only includes changes to the supply-side and demand response resources. The revised load and resource balance are shown at the end of this document.

2022-2031 Supply-Side Resource Selections

Avista must acquire new energy and capacity resources to meet clean energy goals and fill capacity deficits. Table 2 shows the revised list of new generation selections and exiting resources for the 2022 to 2031 period by jurisdiction. The system label identifies where the resource is split using the existing allocation factor of approximately 65 percent Washington and 35 percent Idaho. Where a resource has a specific state listed, 100 percent of the resource benefits and costs are allocated to the identified customers. The

[3] All other Idaho hydro shares are "transferrable" after 2030 as with the original PRS such as Palouse Wind, Rattlesnake Flat, and Kettle Falls.

first planned resource change is an economically driven exit of Colstrip from the portfolio which reflects no change from the 2021 IRP's preferred resource plan. Refer to the 2021 IRP for more information on Colstrip. Avista's first new resource addition includes 100 MW of wind from Montana in 2025, followed by another 100 MW of Montana wind in 2028 both for Washington customers. These resources contribute to meeting Washington's clean energy goals along with providing some capacity benefit in meeting the system winter peak. Ultimately, a future RFP will determine if these Montana wind resources are the most economic alternatives for Avista's customers. Like the previous RFP, another resource may better suit customer needs when a competitive list of proposed projects is considered.

In the 2020 IRP, Avista found it cost effective to modernize the Post Falls hydro facility, including increasing its capacity by 8 MW and energy output by 4 aMW. Avista included this upgrade as an assumption in the plan, meaning its contribution to future load is an input to the PRiSM model. Avista is currently developing plans for this facility and the final energy and capacity specifications may change slightly.

Avista narrowed the decision window for modernizing Kettle Falls to between 2025 and 2030 to serve system loads. This IRP investigated the possibility of increasing plant output by up to 12 MW during the modernization. This update identified the capacity increase should occur by 2027.

With the economically assumed exit of Colstrip and expiration of the Lancaster PPA in October 2026, the resource plan update adds 168 MW of natural gas-fired CTs compared to 211 MW in the 2021 IRP. The resources are allocated to both Idaho and Washington customers equally. As described before, actual acquisition is subject to the resources available during an RFP or another competitive acquisition process.

Two new capacity resources are selected in 2031. The first is a 55 MW natural gas reciprocating internal combustion engine (ICE) for Idaho customers. This resource addition replaces lost capacity from Mid-Columbia hydro contracts and serves load growth. The other resource addition is a proposed renewal of some lost capacity from the Mid-Columbia contracts. In this case, the model found it most economic to allocate the hydro acquisition to Washington and the reciprocating ICE to Idaho.

Over the next 10 years, this updated plan adds 518 MW of new generating capability, although considering the losses of Colstrip and Lancaster, it only reflects a net increase of 39 MW. From a winter peak perspective, Avista will have 136 MW less of winter peak capability than it does today and 76 aMW less generation. Because the Company's current resource mix has excess capacity, Avista is planning for less generating capability than today.

Table 2: 2021 Preferred Resource Strategy Update (2022-2031)

Resource	Jurisdiction	Year	ISO Conditions (MW)	Equivalent Winter Peak Capacity (MW)	Energy Capability (aMW)
Colstrip 3 & 4[4]	System	TBD	-222	-222	-206
Montana wind	WA	2025	100	33	45
Post Falls modernization	System	2026	8	4	4
Lancaster PPA	System	2026	-257	-283	-209
Kettle Falls modernization	System	2027	12	12	10
Natural gas CT	WA	2027	84	93	76
Natural gas CT	ID	2027	84	96	76
Montana wind	WA	2028	100	33	45
Natural gas reciprocating ICE	ID	2031	55	54	50
Mid-Columbia Hydro Extension	WA	2031	75	44	33
Total New Resources			**518**	**369**	**339**
Net of Removed Resources			**39**	**-136**	**-76**

2032-2041 Supply-Side Resource Selections

The second decade of the PRS continues to replace existing resource capacity, meet future load growth, maintain resource adequacy and add renewable energy to meet CETA requirements. A complete list of resource additions for this decade is in Table 3. The first resource addition for this decade is 100 MW of Montana wind for Washington. This is followed by a 5 MW Rathdrum CT upgrade in 2034 to serve capacity needs in both states.

Avista's Northeast CT is expected to retire by the end of 2035, if not earlier. Constructed in 1978, Avista forecasts its retirement in 2035 due to its age and the difficulty of acquiring parts to maintain the equipment. A new natural gas-fired CT will serve the lost capacity and meet load growth for both Washington and Idaho customers. This addition is an 84 MW simple cycle CT using the existing allocation factors.

Avista's first planned solar acquisition occurs in 2038. Along with 50 MW of on-site lithium-ion batteries with four hours of storage, the 100 MW solar project will serve both states' needs. This addition corresponds with the expiration of our Adams-Neilson solar PPA. In 2040, the 25 MW Boulder Park natural gas-fired reciprocating ICE facility and Rattlesnake Flat PPA exit the portfolio. These resource losses are met with new Montana wind and natural gas-fired reciprocating ICE machines. The Montana wind is allocated to Washington customers and the natural gas resource is allocated to Idaho customers.

[4] The 2021 IRP determined Colstrip is cost effective for Avista customers to exit in 2022, although due to contractual complexities detailed in the 2021 IRP, Avista cannot at this time commit to a firm exit date.

Over the second decade of the plan, the system has a net increase in 224 MW of generating capability with 475 MW of additional resources. Net winter peak and energy capabilities increase by 121 MW and 153 aMW respectively.

Table 3: 2021 Preferred Resource Strategy Update (2032-2041)

Resource	Jurisdiction	Year	ISO Conditions (MW)	Equivalent Winter Peak Capacity (MW)	Energy Capability (aMW)
Montana wind	WA	2034	100	28	45
Rathdrum upgrade	System	2034	5	5	4
Northeast CT[5]	System	2035	-62	-43	0
Natural gas CT	System	2036	84	93	76
Adams-Neilson Solar PPA	WA	2037	-19.2	0	-5
Solar w/ storage	System	2038	100	2	26
4-hour storage (lithium-ion)	System	2038	50	7	-2
Rattlesnake Flat PPA	System	2040	-145	-7	-55
Boulder Park	System	2041	-25	-25	-14
Montana wind	WA	2041	100	26	45
Natural gas reciprocating ICE	ID	2041	36	35	33
Total New Resources			**475**	**196**	**227**
Net of Removed Resources			**224**	**121**	**153**

2042-2045 Supply Side Resource Selections

The IRP typically does not forecast resource additions beyond 20 years; however, given CETA requirements to be 100 percent clean by 2045, Avista modeled 24 years into the future for certain scenario analyses (see Chapter 12 of the 2021 IRP). The final four years of the plan, while relatively uncertain, includes replacement of renewable PPAs with both solar energy and storage technologies, including lithium-ion and liquid air energy storage (LAES). Table 4 outlines these additions. No major capacity resources are expected to leave Avista's portfolio during this time period absent expiring PPAs.

[5] Northeast CT has a 100-hour operating limit per year due to its air permit. Avista currently utilizes this resource for operating reserves and contingency planning.

Table 4: 2021 Preferred Resource Strategy Update (2042-2045)

Resource	Jurisdiction	Year	ISO Conditions (MW)	Equivalent Winter Peak Capacity (MW)	Energy Capability (aMW)
Palouse Wind PPA	System	2042	-105	-5	-36
Solar w/ storage	WA	2042	117	2	31
4-hour storage (lithium-ion)	WA	2042	58	9	-2
Solar w/ storage	WA	2043	122	2	31
4-hour storage (lithium-ion)	WA	2043	61	9	-2
Liquid Air Energy Storage	WA	2044	13	7	-1
Solar w/ storage	WA	2045	149	3	40
4-hour storage (lithium-ion)	WA	2045	75	11	-2
4-hour storage (lithium-ion)	ID	2045	16	2	-1
Total New Resources			**611**	**45**	**94**
Net of Removed Resources			**506**	**40**	**58**

Demand Response Selections

Demand Response (DR) resources are integral to Avista's strategy to meet customer peak load requirements with non-emitting resources. Avista does not currently offer any load management programs, although it has piloted DR programs[6]. To understand the potential for new DR programs, Avista contracted with Applied Energy Group (AEG) to estimate the amount of DR available in our Idaho and Washington service territories. Chapter 6 – Demand Response of the 2021 IRP provides an overview of DR programs, their expected costs and capacity potential. In total, the maximum DR potential study includes 16 programs to reduce as much as 169 MW of winter peak load and 245 MW of summer peak load when ignoring costs. Some DR programs offer reductions in both winter and summer, while others only in one season. Avista's primary needs are for winter peak reduction, and several programs were found cost effective. The 2021 PRS update incorporates the first DR program in 2025. Table 5 shows each DR program selected for the PRS. Figure 1 illustrates when DR enters the system and how the penetration of DR programs increase through 2045.

Meeting reliability targets with DR depends on the length of time each program can reduce loads. Avista's ARAM model assumes 60 percent on-peak capacity credit for DR using an 8-hour daily duration relative to a natural gas-fired CT. Actual experience and program design will ultimately determine the actual amount of reliable capacity contribution from these resources.

[6] Avista does not have any current plans to institute DR programs specifically for low-income energy assistance and has not performed an assessment of low-income DR programs. If the Company elects to perform such an assessment, it would be coordinated through the Energy Assistance Advisory Group or the Equity Advisory Group.

Table 5: Preferred Resource Strategy Update- Demand Response Programs (2022-2045)

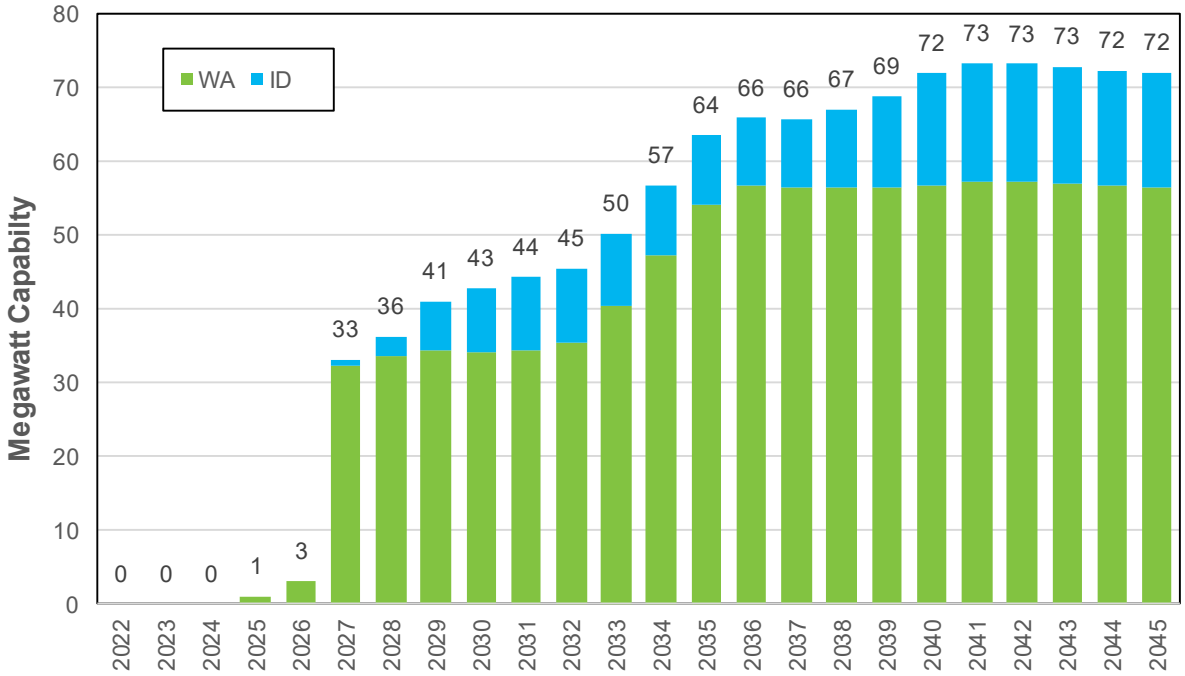
Program	Washington		Idaho	
	MW	Year	MW	Year
Variable Peak Pricing	6.9	2025	5.6	2027
Large C&I Program	25	2027	0	n/a
Time of Use Rates	2.4	2031	1.9	2028
DLC Smart Thermostats	7	2032	0	n/a
Third Party Contracts	14.3	2033	7.6	2038
Behavioral	0.9	2039	0	n/a
Total	**56.5**		**15.1**	

The same DR programs were selected as in the 2021 IRP, but the timing of the programs changed. For example, the Time-of-Use rates program shifted in Washington from 2024 to 2031 and in Idaho from 2024 to 2028 after the addition of the Chelan slice contract. Table 6 outlines these changes to DR programs. While the programs selected do not change, expected capacity savings change slightly due to the changes in program timing. Overall DR capacity savings over the 24-year period are approximately 1 MW higher in this update. Within Figure 1, the DR levels decrease in the later years of the forecast due to customer fatigue. As indicated in AEG's potential study, the DR participation rates are expected to decline after the programs reach full saturation.

Table 6: Timing Changes of Demand Response Programs (2022-2045)

Program	Washington		Idaho	
	2021 IRP	Update	2021 IRP	Update
Variable Peak Pricing	2024	2025	2024	2027
Large C&I Program	2027	2027	n/a	n/a
Time-of-Use Rates	2024	2031	2024	2028
DLC Smart Thermostats	2031	2032	n/a	n/a
Third Party Contracts	2032	2033	2024	2038
Behavioral	2041	2039	n/a	n/a

Figure 1: Annual PRS Demand Response Capability (MW)



PRS Comparison Analysis

The new Chelan slice contract creates a series of changes to the PRS. Table 7 illustrates the supply-side changes in chronological order. Energy efficiency remains the same as the 2021 IRP and DR programs are shown above. The table includes resource selections by year, jurisdiction and megawatt capability. The 2021 IRP column shows the 2021 IRP's PRS. The "Update" column includes the revised resource selection resulting from this update. In the case where a resource selection changed years, for example Kettle Falls, it shows the original year of 2026 from the 2021 IRP and the revised year of 2027 resulting from the update along with the changes in capacity in the "Change" column. In total, Washington additions are the same throughout the 24-year horizon although there are changes to resource timing. Idaho capacity selections increase by 16 MW from changes in the storage technologies pursued and from additional natural gas acquisition. Washington does not see any changes in total natural gas generation acquisition, but rather a change in the timing of those resources.

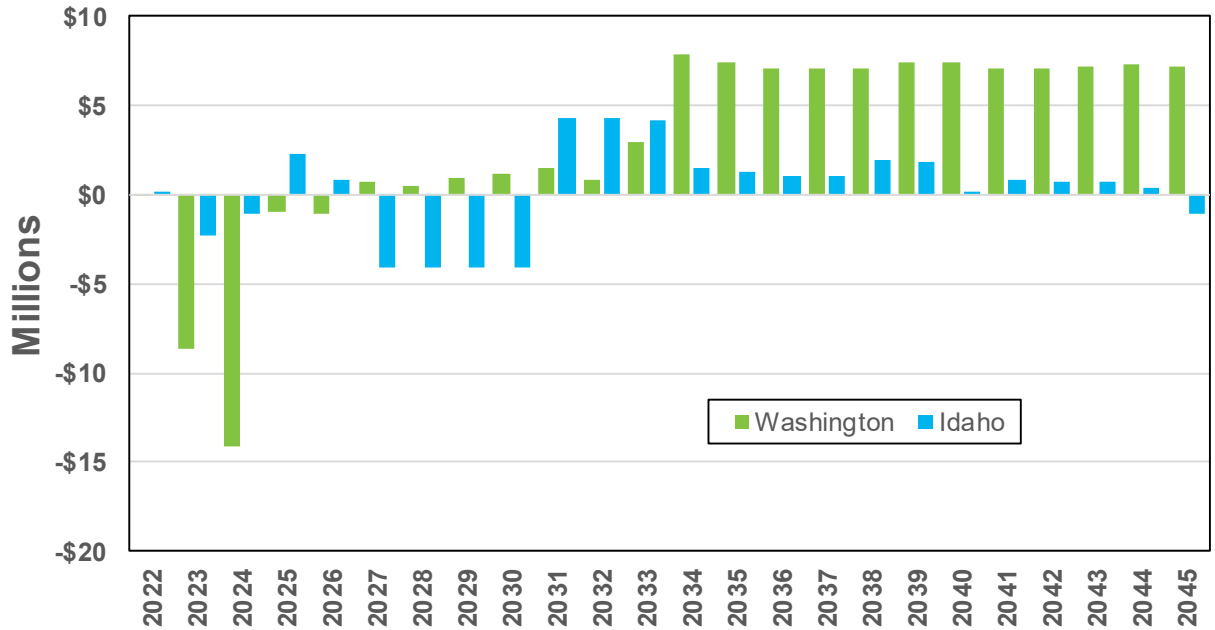
Table 7: Preferred Resource Strategy Changes (Capability in MW)

Resource Type	Year	Jurisdiction	2021 IRP	Update	Change
Montana wind	2023	WA	100	0	-100
Montana wind	2024	WA	100	0	-100
Montana wind	2025	WA	0	100	100
Kettle Falls modernization	2026	System	12	0	-12
Post Falls modernization	2026	System	8	8	0
Kettle Falls modernization	2027	System	0	12	12
Natural Gas Peaker	2027	ID	85	84	-1
Natural Gas Peaker	2027	System	126	0	-126
Natural Gas Peaker	2027	WA	0	84	84
Montana wind	2028	WA	100	100	0
NW Hydro Slice	2031	WA	75	75	0
Natural gas reciprocating ICE	2031	ID	0	55	55
Montana wind	2034	WA	0	100	100
Rathdrum CT Upgrade	2034	System	0	5	5
Rathdrum CT Upgrade	2035	System	5	0	-5
Natural Gas Peaker	2036	System	87	84	-3
Solar w/ storage (4 hours)	2038	System	100	100	0
4-hr Storage for Solar	2038	System	50	50	0
Natural Gas Peaker	2041	ID	36	36	0
Montana wind	2041	WA	100	100	0
Solar w/ storage (4 hours)	2042-2043	WA	239	239	0
4-hr Storage for Solar	2042-2043	WA	119	119	0
Liquid Air Storage	2044	WA	12	13	1
Liquid Air Storage	2045	ID	10	0	-10
4-hr Lithium-ion	2045	ID	0	16	16
Solar w/ storage (4 hours)	2045	WA	149	149	0
4-hr Storage for Solar	2045	WA	75	75	0
Washington Total			**1,324**	**1,324**	**0**
Idaho Total			**264**	**280**	**16**

Revenue Requirement Changes

The total revenue requirement, including the addition of the Chelan hydro slice contract and other portfolio changes, increases by 0.08 percent from the 2021 IRP on a net present value of revenue requirement (PVRR) basis. From a jurisdictional perspective, Idaho costs decrease slightly (-0.02 percent) and Washington costs slightly increase (0.12 percent). The annual revenue requirement changes are shown in Figure 2. Change in costs reflect the actual cost of the 5 percent Chelan slice contract along with the other changes described in this document. For example, not adding a 2023 wind resource assumes the loss of the federal production tax credit (PTC) for later wind resources and it does have a cost consequence to trade off the early savings of the Chelan contract to offset higher non-PTC wind costs in 2034.

Figure 2: Revenue Requirement Changes by State



Clean Energy Comparative Analyses

Overall greenhouse gas emissions from the updated portfolio are 0.2 percent lower than the 2021 IRP's PRS. This measurement includes only those emissions directly attributed to Avista's resources, and assumes Colstrip leaves the portfolio. Figure 3 shows the system-wide annual emissions forecast. Small emissions savings begin in the 2027 through 2030 period, but after 2030 these savings reverse due to the delayed addition of natural gas peaking resources.

As mentioned before, the total amount of clean energy resources does not change between the two plans, but rather the timing of those resources coming online. Avista continues to plan for ramping into meeting 80 percent of its Washington retail sales with clean energy beginning in 2022 to position the utility to comply with the 2030 CETA requirement. This update relies on a larger procurement of Idaho's clean energy resources. Figure 4 shows the amount of clean energy acquired from Idaho for Washington and the new resource acquisitions each year between 2022 and 2035. Avista expects Washington customers to compensate Idaho customers for use of the clean energy attributes of these resources to offset Idaho's opportunity cost of selling the clean attributes to other parties.

The orange bars in Figure 4 show Idaho's clean energy transfers to Washington, where the left side of the stacked bar chart is the updated resource strategy and the right side shows the 2021 IRP. This chart shows REC transfers in 2023 through 2024, where the 2021 IRP did not include transfers. Between 2025 and 2033 the REC transfers are also higher than the 2021 IRP reflecting the energy transferred from the Chelan hydro slice

acquisition. The blue bars in the chart represent the new clean energy additions and shows no new clean energy additions for the update until 2025. The chart ends in 2035 since the acquisition and transfers for both the updated and 2021 IRP's PRS are the same.

Figure 3: System Greenhouse Gas Emissions

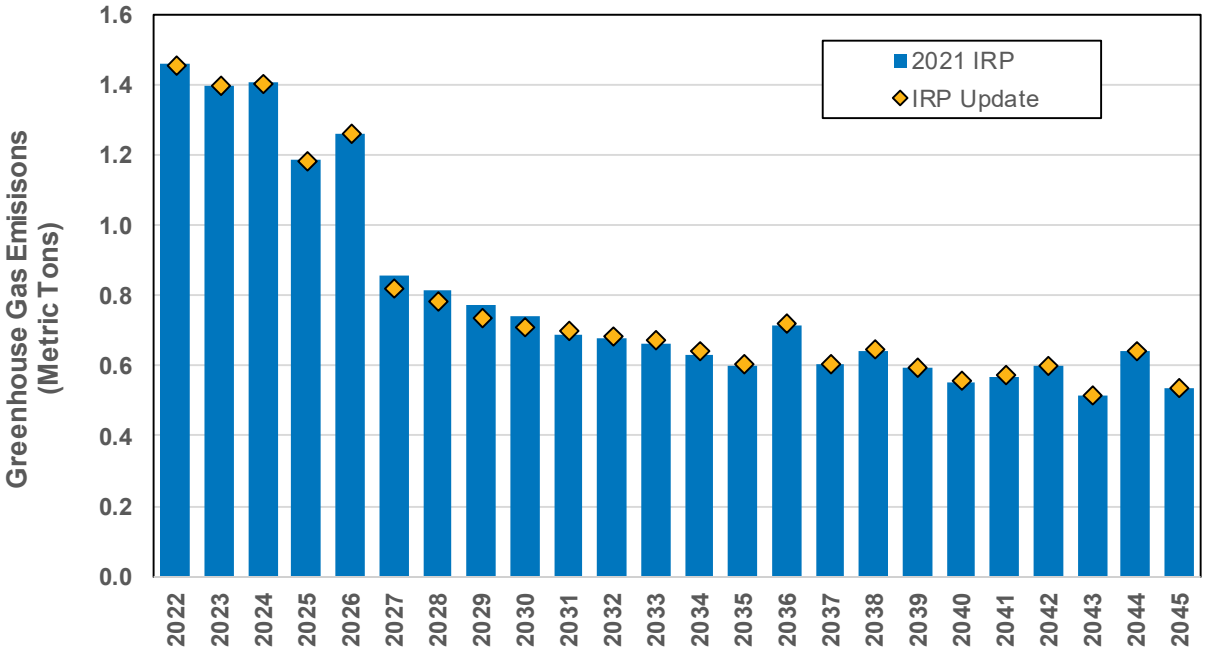
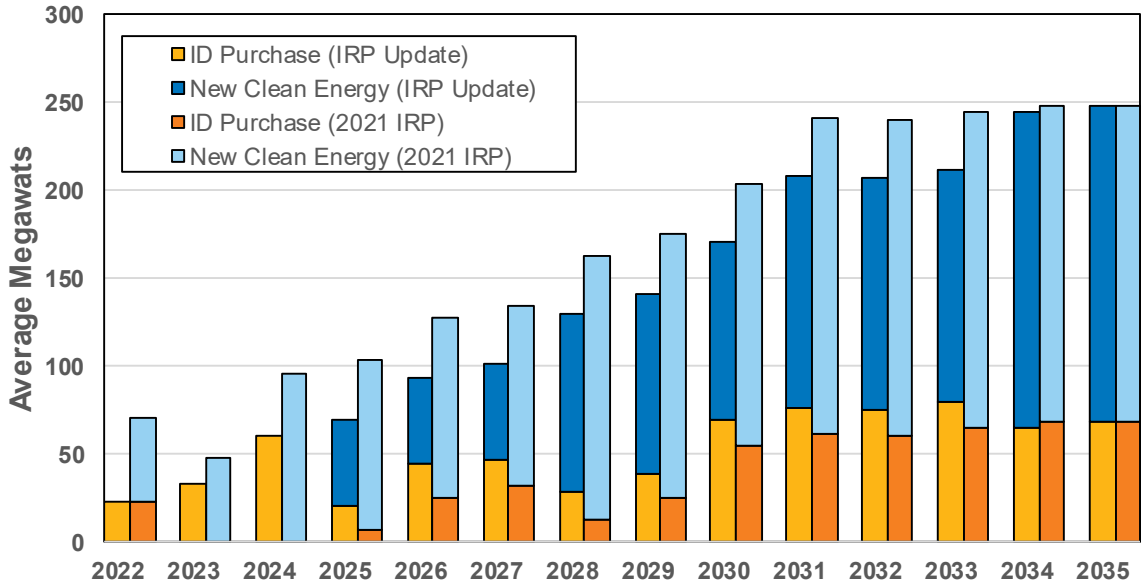


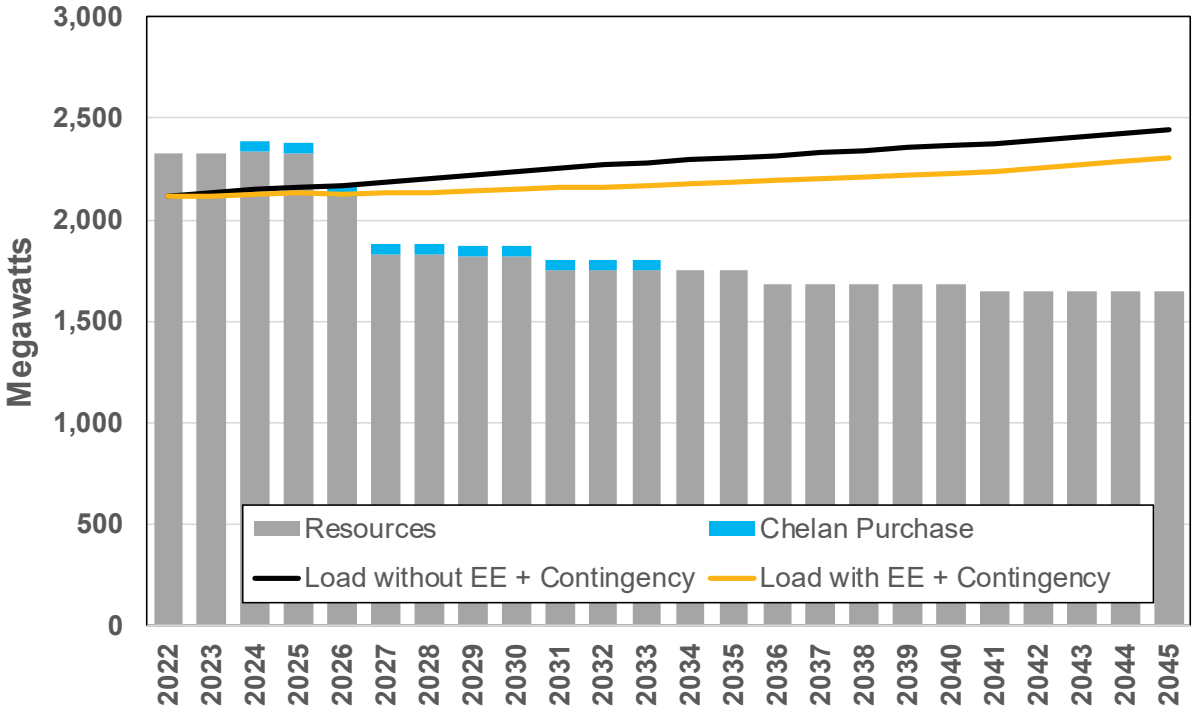
Figure 4: Washington Clean Energy Acquisition



Load and Resource Balance

The new Chelan contract improves the system load and resource balance deficit positions. Figure 5 includes the Chelan purchase in the blue bar, which increases Avista's long position through October 2026 with current resources. This addition also narrows resource deficits between 2027 and 2033.

Figure 5: Winter One-Hour Peak Capacity Load and Resource Balance



Regarding summer peaks (Figure 6) and the annual average energy position (Figure 7), the inclusion of the Chelan purchase also improves these metrics over the term of the contract. The first short position on November 1, 2026 does not change but lessens the need for new resource acquisition.

Figure 6: Summer One-Hour Peak Capacity Load and Resource Balance

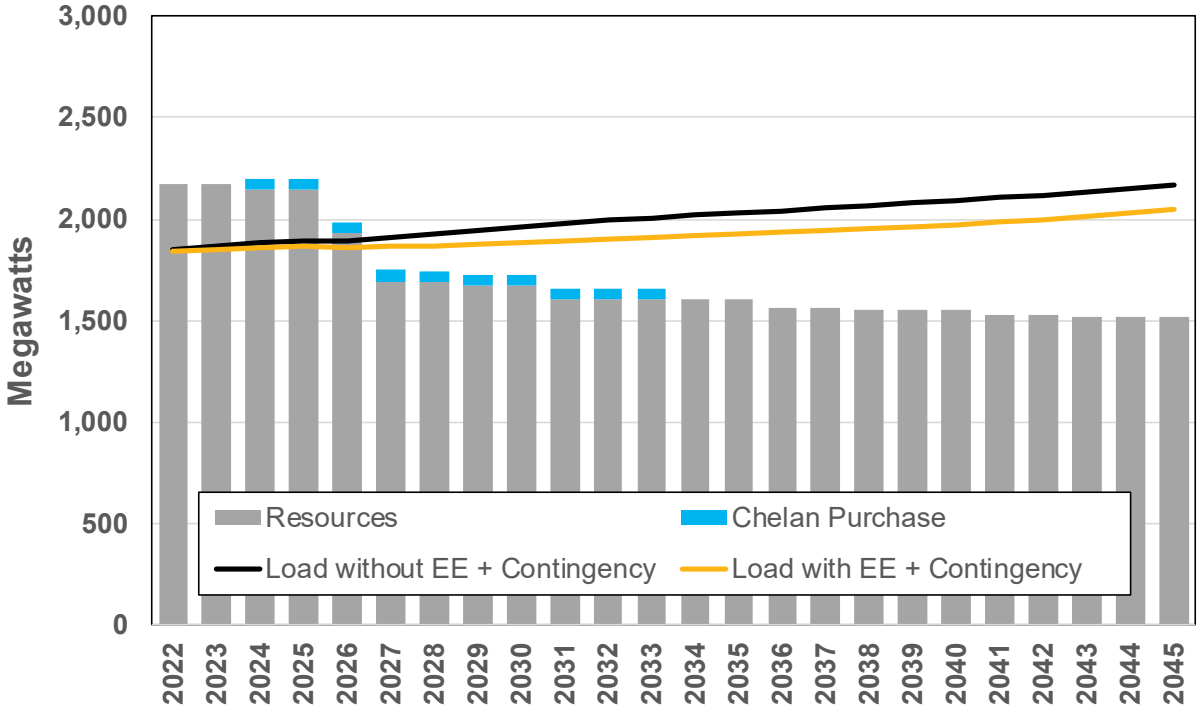
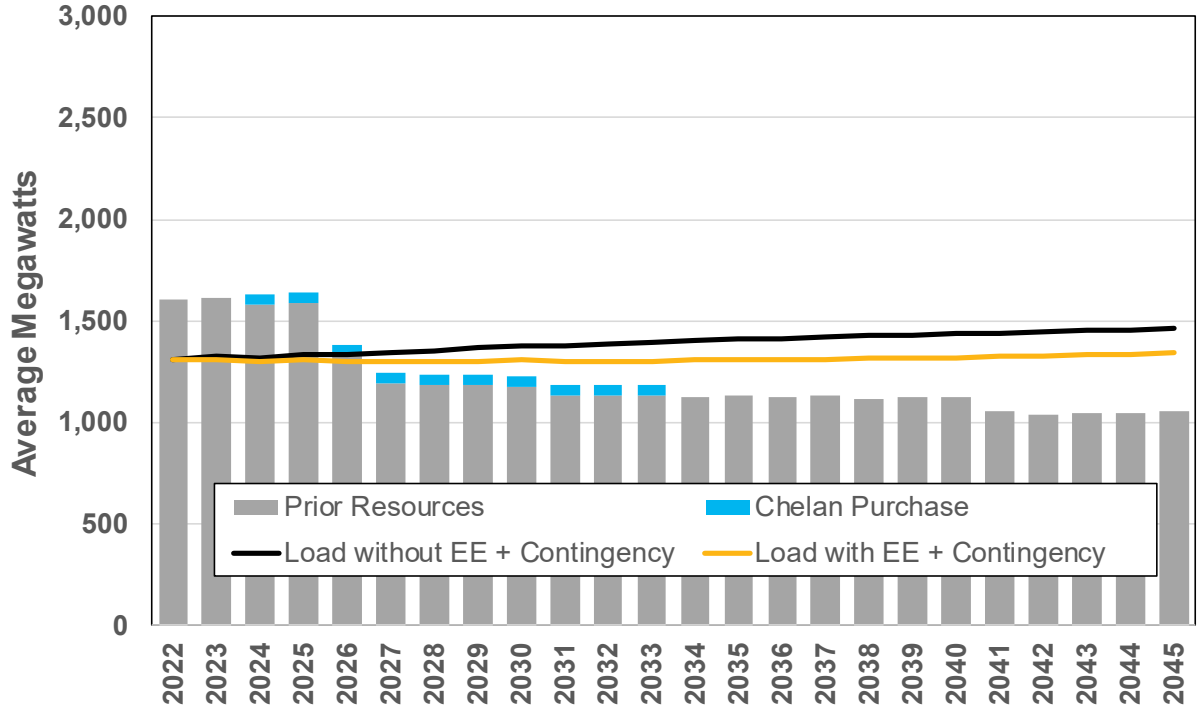


Figure 7: Annual Average Energy Load and Resource Balance



New Resource Avoided Cost

Avista estimates the avoided costs of new resources for each IRP. This is a transparent methodology to price new resources using resource cost and selection from the IRP. This methodology is discussed in Chapter 11 of the 2021 IRP. Due to changes in the updated portfolio's resource selection timing, the avoided costs change for both the clean energy premium and the capacity value. The new prices are shown in Table 8. The most significant change is the clean energy premium start date moves from 2023 to 2025 to align with next new renewable resource addition. The capacity cost slightly increases in 2027 and beyond. These costs are derived from estimating the difference in cost of portfolios with and without certain resources. For example, the clean energy premium estimates the added cost of complying with Washington's CETA requirements. The capacity value is estimated by comparing the cost of a portfolio with new capacity resources versus a portfolio relying solely on the energy market.

Table 8: New Resource Avoided Costs

Year	Energy Flat (MWh)	Energy On-Peak (MWh)	Energy Off-Peak (MWh)	Clean Premium (MWh)	Capacity ($/kW-Yr)
2022	$20.37	$21.66	$18.65	$0.00	$0.0
2023	$18.71	$19.34	$17.89	$0.00	$0.0
2024	$18.73	$19.04	$18.32	$0.00	$0.0
2025	$19.99	$20.05	$19.92	$16.90	$0.0
2026	$23.74	$23.68	$23.82	$17.24	$0.0
2027	$24.63	$24.27	$25.12	$17.58	$118.3
2028	$25.67	$24.99	$26.58	$17.93	$120.6
2029	$26.65	$25.77	$27.83	$18.29	$123.0
2030	$26.46	$25.48	$27.78	$18.66	$125.5
2031	$27.63	$26.48	$29.15	$19.03	$128.0
2032	$28.02	$26.86	$29.57	$19.41	$130.6
2033	$29.30	$27.96	$31.08	$19.80	$133.2
2034	$29.42	$27.98	$31.33	$20.20	$135.8
2035	$30.47	$28.81	$32.68	$20.60	$138.6
2036	$32.10	$30.38	$34.41	$21.01	$141.3
2037	$31.95	$30.08	$34.45	$21.43	$144.1
2038	$34.46	$32.26	$37.39	$21.86	$147.0
2039	$34.77	$32.31	$38.04	$22.30	$150.0
2040	$35.67	$33.15	$39.01	$22.74	$153.0
2041	$38.23	$35.77	$41.52	$23.20	$156.0
2042	$38.71	$36.40	$41.79	$23.66	$159.2
2043	$39.27	$36.92	$42.40	$24.14	$162.3
2044	$46.82	$44.18	$50.34	$24.62	$165.6
2045	$46.45	$44.31	$49.28	$25.11	$168.9
20 yr. Levelized	**$25.85**	**$25.20**	**$26.72**	**$14.61**	**$82.5**
24 yr. Levelized	**$27.18**	**$26.39**	**$28.22**	**$15.38**	**$88.9**