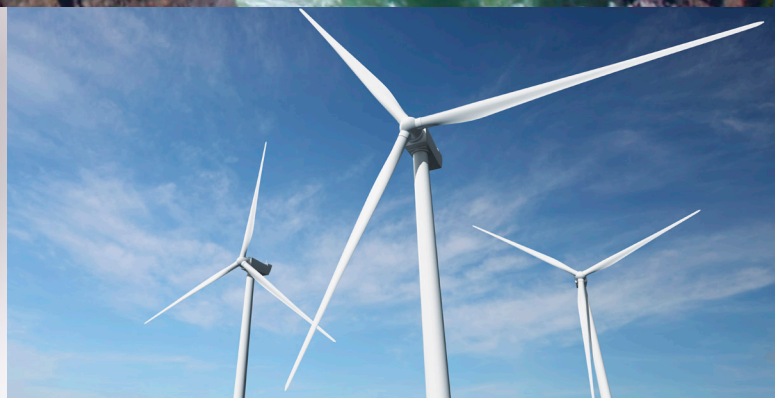
2021 Electric Integrated Resource Plan

Washington Clean Energy Action Plan Update



4/30/2021

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.

Washington Clean Energy Action Plan

On May 7, 2019, the Clean Energy Transformation Act (CETA) was signed into law committing Washington to an electricity supply free of greenhouse gas emissions by 2045. Consequently, each utility must incorporate the social cost of greenhouse gas emissions as a cost adder for all relevant inputs when developing IRPs and Clean Energy Action Plans (CEAP). RCW 19.280.030 states that for an Investor-Owned Utility, the CEAP must (a) identify and be informed by the utility's ten-year cost-effective conservation potential assessment; (b) if applicable, establish a resource adequacy requirement; (c) identify the potential cost-effective demand response and load management programs that may be acquired; (d) identify renewable resources, non-emitting electric generation and distributed energy resources that may be acquired and evaluate how each identified resource may be expected to contribute to meeting the utility's resource adequacy requirement; (e) identify any need to develop new, or expand or upgrade existing bulk transmission and distribution facilities; and (f) identify the nature and possible extent to which the utility may need to rely on alternative compliance options, if appropriate.

Avista's updated 10-year CEAP is a lowest reasonable cost plan of resource acquisition given societal costs, clean energy and reliability requirements after incorporating the successful completion of its 2020 renewable RFP. Avista developed this CEAP in conjunction with its Technical Advisory Committee to meet the capacity, energy and clean energy needs of both Idaho and Washington. The resources described in this CEAP are specific to the Washington portion of Avista's system needs for compliance with CETA. The discussion of the plan below describes the key considerations required by the WUTC. Details regarding the methodology and assumptions for this plan are included in the 2021 IRP and the 2021 IRP Update. This CEAP is the basis for the upcoming 2021 Clean Energy Implementation Plan (CEIP).

Table 1 illustrates annual capacity additions of all planned resources, including demand response and energy efficiency, for 2022 through 2031.

Energy Efficiency Savings

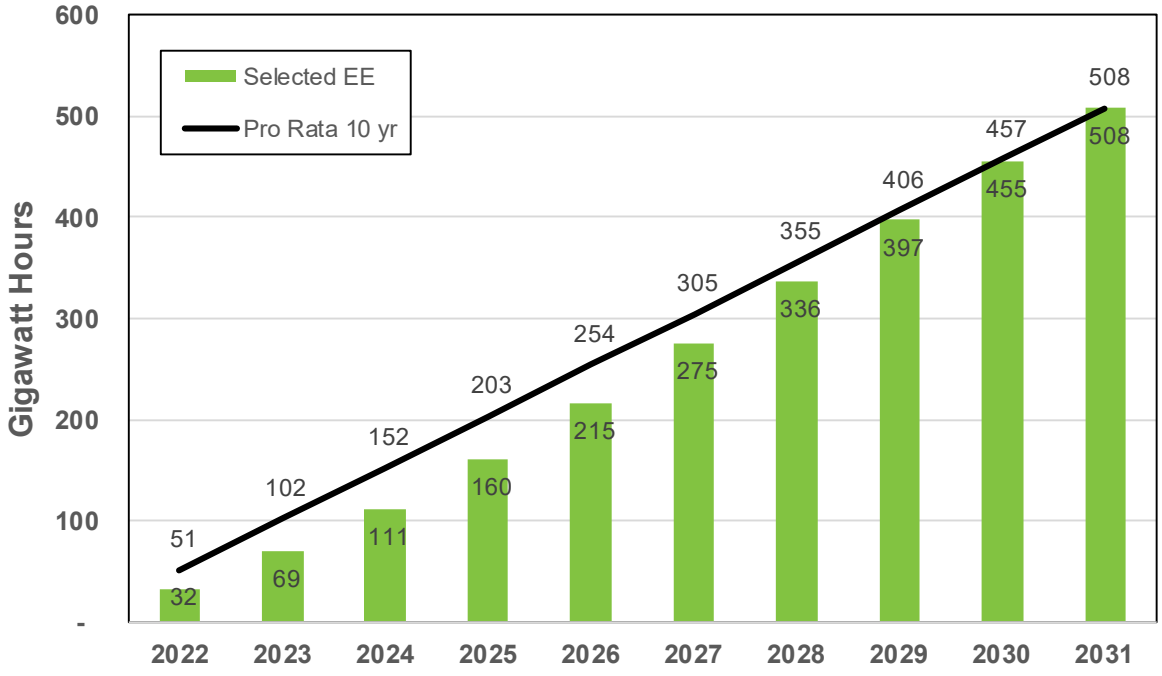
Avista plans to acquire 508 GWh of cumulative energy efficiency over the next 10 years based on this IRP analysis. This represents 61.3 aMW when accounting for transmission and distribution line loses over the 10-year period. These programs reduce winter peak loads by 64.3 MW and summer peak loads by 69.5 MW. Information on energy efficiency targets, and detailed results, are available in IRP chapters 5 and 11, Energy Efficiency and the Preferred Resource Strategy respectively. Figure 1 illustrates the energy efficiency selected for the 2021 PRS as well as the 10-year pro rata share of both annual and cumulative efficiency[1]. For more information on the biennial conservation target and the EIA penalty threshold see Table 5.2 in Chapter 5.

[1] For 2022 and 2023, Avista's Biennial Conservation target is higher reflecting Distribution and Street Light programs, decoupling adjustments and modifications for NEEA.

Table 1: Washington Annual Capacity by Resource Type

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Supply Resources (MW)										
Wind	-	-	-	100.0	-	-	100.0	-	-	-
Kettle Falls GS upgrade	-	-	-	-	7.9	-	-	-	-	-
Natural Gas CT	-	-	-	-	-	84.0	-	-	-	-
NW Hydro Slice	-	-	-	-	-	-	-	-	-	75.0
Total Resources	**-**	**-**	**-**	**100.0**	**7.9**	**84.0**	**100.0**	**-**	**-**	**75.0**
Demand Response (MW)										
Variable Peak Pricing	-	-	-	1.0	2.1	4.2	1.3	0.7	-0.1	-0.1
Time of Use Rates	-	-	-	-	-	-	-	-	-	0.3
Large C&I	-	-	-	-	-	25.0	-	-	-	-
Total Demand Response	**-**	**-**	**-**	**1.0**	**2.1**	**29.2**	**1.3**	**0.7**	**-0.1**	**0.2**
Energy Efficiency										
Energy Savings (GWh)[2]	33.5	39.6	43.9	52.1	58.3	62.9	65.5	64.0	61.2	56.1
Winter Peak Reduction	3.6	4.4	5.1	6.1	7.0	7.8	8.1	8.0	7.5	6.6
Summer Peak Reduction	4.5	5.3	5.9	7.0	7.5	8.1	8.3	8.1	8.1	6.8
Total MW[3]	**3.6**	**4.4**	**5.1**	**107.1**	**17.0**	**121.0**	**109.4**	**8.7**	**7.4**	**81.8**

Figure 1: Washington 10-year Energy Efficiency Target



[2] Includes estimated line losses.
[3] Uses winter peak savings for energy efficiency.

Resource Adequacy

Avista must ensure its resources are adequate to serve its customers. Because of the benefits of regional coordination, Avista is participating in the development of a regional resource adequacy program. The Company's participation in regional resource adequacy efforts is important because the choices of other utilities can affect the amount of resources that must be constructed. Avista currently targets a 16 percent planning margin to meet winter peaks and a 7 percent planning margin for summer peaks. This is in addition to meeting operating reserves and regulation requirements. Avista estimates participation in a regional resource adequacy program may reduce its need for new capacity by up to 70 MW in 2031 based on the current draft program design. These savings could allow the utility to require fewer new resources while maintaining the same level of reliability if the program is successfully implemented.

Avista's 2021 IRP calls for 84 MW of natural gas-fired capacity for Washington customers by November 1, 2026 to replace the Lancaster PPA and meet reliability targets for Washington customers during peak load hours. However, a total of 168 MW is needed for all Avista's customers. While a future RFP may identify a lower cost clean resource to meet this reliability shortfall, the current IRP modeling results selected a natural gas-fired resource in 2026 to ensure reliable load service.

Demand Response and Load Management Programs

Avista does not have any demand response or load management programs today, but this CEAP identifies new programs with the potential to reduce peak load by 34.4 MW by 2031. Load management programs are projected to begin in 2025 with variable peak pricing opt-in programs. Savings are estimated to be 9.1 MW by 2031. A 25 MW large commercial customer program option is selected before the Lancaster PPA ends in 2026. Time-of-use rates become cost effective in 2031, but only contribute 0.3 MW in its first year of program ramping. Future all-source RFPs may find additional opportunities from demand response aggregators or other sources.

Table 2: Demand Response and Load Management Programs

Program	2031 Savings (MW)	Year
Variable Peak Pricing	9.1	2025
Large C&I Program	25.0	2027
Time of Use Rates	0.3	2031
Total	**34.4**	

Planned Clean Energy Acquisitions

Avista developed CEAP targets to ensure 100 percent of Washington retail sales by 2030 are served with clean energy options including up to 20 percent from offsets such as renewable energy credits (RECs). Table 3 outlines the requirements and projected new resources to meet the 2030 goal along with clean energy acquisition targets beginning in 2022. The 2021 IRP identified a need for 132 aMW of clean energy by 2031[4] along with 59 aMW of clean energy purchases from Avista's Idaho customers and 17 aMW of RECs from Idaho customers under median hydro conditions in 2031. Depending on the WUTC's decision regarding compliance with the 100 percent goal, Avista may need additional clean energy and/or RECs if renewable and non-emitting energy must be delivered to customers simultaneously. Chapter 12 – Portfolio Scenarios of the 2021 IRP outlines the cost and energy acquisition impacts of this scenario.

The new resources identified to meet CETA include 200 MW (96 aMW) of Montana wind, 5 aMW from Washington's share of a 12 MW upgrade to the Kettle Falls Generating Station in 2026 and 31 aMW from renewing a 75 MW long-term hydro purchase power agreement in 2031. Avista's Washington customers may need to rely on the purchase of additional Idaho-shares of hydro in years with low hydro or wind output.

Avista does not include transformational energy projects in this CEAP due to the uncertainty regarding application to the clean energy requirements, although, Avista is actively pursuing transportation electrification. The inclusion of these projects in the CEAP will be included in future resource plans. Figure 2 summarizes the annual clean energy serving Washington customers each year and by resource type in gigawatt-hours. The 10-year cumulative summary of clean energy in gigawatt-hours is split by resource type in Figure 3.

Washington customers benefit from Avista's clean energy portfolio by optimizing or selling RECs and specified energy sales to other markets. These sales benefit Washington customers by $5 to $8 million each year. Avista is considering creating a separate goal for the CEIP to lower the targeted amount of "retired" or "not sold" clean energy to align with customer affordability and to lessen customer rate impacts between 2022 and 2029. Avista plans to discuss this target through its CEIP public participation outreach prior to finalizing specific goals for the CEIP. This proposal does not change any planned clean energy acquisitions, but rather the amount retired for compliance and/or purchased from Idaho customers in a given year through 2029.

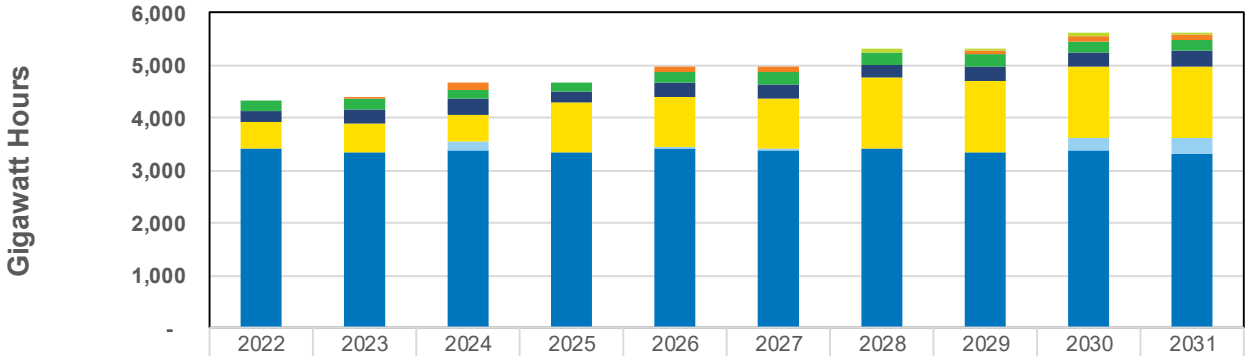
[4] The owned hydro energy forecast includes Washington customers' share of additional energy from an upgrade to the Post Falls hydro facility.

Table 3: 2022-2031 Washington Clean Energy Targets (aMW)

	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Retail Sales	647	650	651	655	657	658	658	661	662	663
PURPA	22	22	22	22	22	22	22	22	22	22
Solar Select	6	6	6	6	6	6	0	0	0	0
Net Requirement	**619**	**623**	**624**	**628**	**629**	**631**	**636**	**640**	**641**	**642**
Target Clean Acquisition %	80	80	85	85	90	90	95	95	100	100
Clean Energy Goal	**496**	**498**	**530**	**534**	**567**	**568**	**604**	**608**	**641**	**642**
Owned Hydro	292	288	288	285	292	289	292	289	291	291
Contract Hydro[5]	96	95	99	100	99	97	97	92	93	57
Kettle Falls	24	23	23	21	23	21	22	20	21	19
Palouse Wind	24	24	24	24	24	24	24	24	24	24
Rattlesnake Flat Wind	36	36	36	36	36	36	36	36	36	36
Adams Neilson Solar	0	0	0	0	0	0	6	6	6	6
Available Resources	**473**	**466**	**470**	**465**	**473**	**468**	**475**	**467**	**470**	**433**
Total Clean Energy Need	**23**	**33**	**60**	**69**	**93**	**100**	**129**	**141**	**170**	**208**
Resource Forecast										
Montana Wind	0	0	0	48	48	48	96	96	96	96
Kettle Falls Upgrade	0	0	0	0	0	6	6	6	5	5
Regional Hydro	0	0	0	0	0	0	0	0	0	31
ID AVA Clean Purchase	23	33	60	21	45	47	28	39	60	59
ID AVA Hydro Purchase	0	0	0	0	0	0	0	0	9	17
Total Energy/RECs	**23**	**33**	**60**	**69**	**93**	**100**	**129**	**141**	**170**	**208**
Net Position	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**

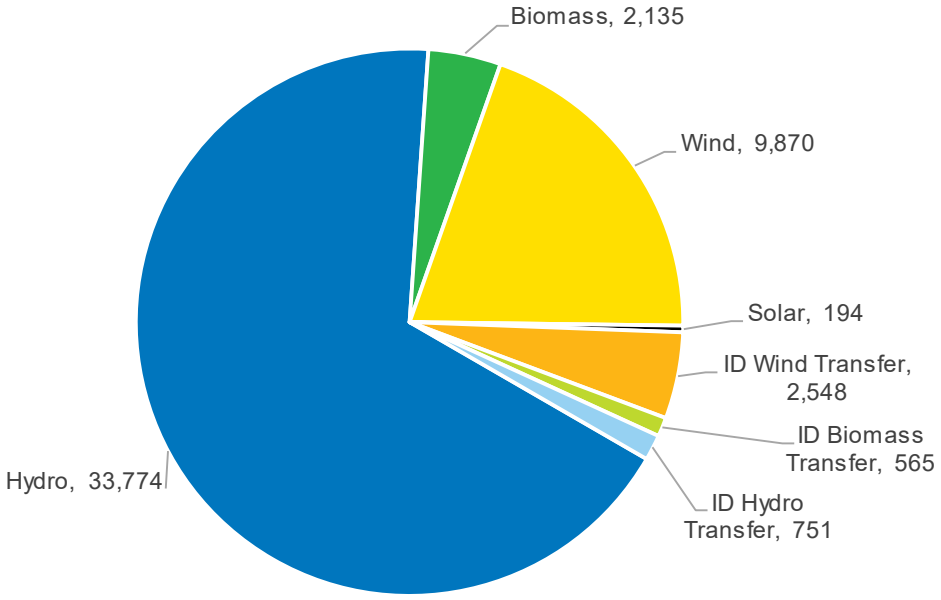
[5] Includes the new Chelan contract.

Figure 2: Washington Annual Clean Energy Acquisition (GWh)



	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
Solar	-	-	-	-	-	-	49	49	49	49
ID Biomass Transfer	-	11	105	-	103	96	-	67	95	89
Biomass	211	200	201	184	197	233	239	226	228	216
ID Wind Transfer	200	274	275	184	274	275	243	274	273	273
Wind	526	525	526	943	945	945	1,369	1,366	1,362	1,364
ID Hydro Transfer	-	-	150	-	20	38	-	-	238	304
Hydro	3,405	3,354	3,398	3,365	3,422	3,387	3,410	3,340	3,367	3,325

Figure 3: Cumulative 10-year Clean Energy Acquisitions for Washington (GWh)



Transmission & Distribution Improvements

Avista's resource acquisition plan does not include significant resource related transmission or distribution improvements as acquired resources are likely to be off system or utilize existing transmission assets with minimal new transmission investment. Avista plans future transmission and distribution investments following its 10-year plan described in Appendix G.

This IRP resulted in two interconnection requests for Avista's Transmission department to evaluate future resource opportunities. The first request is for up to 200 MW in the Rathdrum, Idaho area and the second is to integrate the additional capacity at Kettle Falls. The Kettle Falls interconnection request does not require any significant improvements at this time. Rathdrum area results will not be available until late 2021 after the publication of this IRP in April.

Avista continues to upgrade its distribution system as customer load grows. Avista conducted a review of potential resource acquisitions that could defer distribution investments, but none were selected in this IRP based on economic analysis of the available alternatives. Avista plans to develop a public process for distribution planning in 2021.

Energy Equity

Avista is currently developing a plan to ensure an equitable distribution of benefits and reduced burdens on highly impacted communities and vulnerable populations through the IRP process. Washington recently provided areas identified as Highly Impacted Communities which will be a discussion topic of Avista's Equity Advisory Group (EAG). The EAG will guide the determination of these communities as well as assist in designing the outreach and engagement that will be used to distinguish and prioritize customer benefit indicators and solutions as well as measuring results. Avista recently committed to an energy efficiency program pilot focused on vulnerable populations starting in 2021. Options on how to design and implement a program to meet this commitment while identifying barriers or missing data to ensure that these groups are receiving their fair share of energy and non-energy benefits under CETA continue to be assessed.

This IRP includes analytical enhancements to its energy efficiency cost effectiveness tests to include non-energy impacts. These enhancements should benefit vulnerable communities. Avista also includes provisions in its energy acquisition process to prioritize projects that may improve resiliency and increase energy security in these communities. The priority evaluation also includes preference to renewable projects located in vulnerable population areas to develop these economies. This plan does not include new generation facilities in Washington[6] except for an upgrade to the Kettle Falls wood-fired facility[7].

[6] A future request for proposals of renewable energy may yield Washington based resources more beneficial than those identified in this plan.

[7] Due to its location near tribal lands, the Kettle Falls plant is in a state identified Highly Impacted Community, regardless of not meeting proposed criteria to be identified as a vulnerable populated area.

Cost Analysis

The 2021 IRP includes an analysis comparing the cost of the PRS to a baseline portfolio without CETA's clean energy requirements. This analysis (Table 4 and Table 5) does not include the recent acquisition of the Chelan PUD 5 percent hydro slice in the baseline. This modeling exercise determines whether alternative compliance mechanisms such as the 2 percent cost cap will be required. For the first two of the four-year compliance periods under CETA, Avista expects to be under the cap by $89 and $62 million, respectively, absent any future equity-related program costs. The final two years of the 10-year plan are not shown as they are part of a four-year period extending beyond this CEAP timeline which are also expected to remain under the cost cap. Avista will utilize the methodology used in this CEAP to develop a more detailed cost cap analysis for the CEIP.

Table 4: 2022-2025 Washington Cost Cap Analysis (millions $)

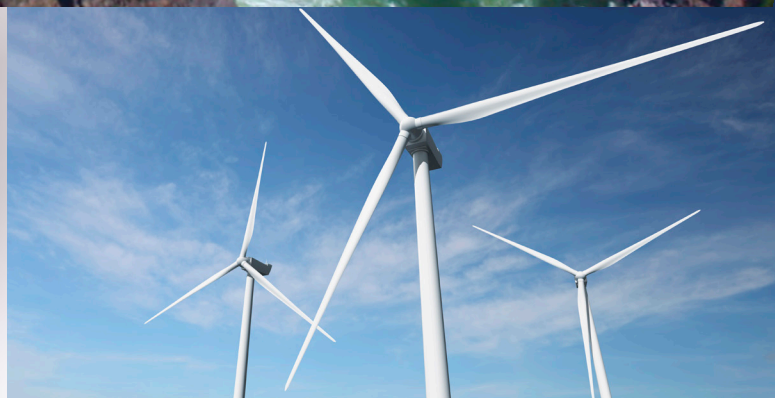
	2021	2022	2023	2024	2025	Total
Revenue Requirement w/ SCC	651	651	659	685	704	
Baseline		650	657	672	678	
Annual Delta		1	2	13	26	42
Percent Change		0.18%	0.29%	1.93%	3.83%	1.6%
Four Year Max Spending		33	33	33	33	132
Comparison vs Annualized Cost Cap		(32)	(31)	(20)	(7)	(89)

Table 5: 2026-2029 Washington Cost Cap Analysis (millions $)

	2025	2026	2027	2028	2029	Total
Revenue Requirement w/ SCC	704	712	718	744	755	
Baseline		688	709	721	731	
Annual Delta		24	9	23	24	81
Percent Change		3.51%	1.34%	3.22%	3.27%	2.8%
Four Year Max Spending		36	36	36	36	143
Comparison vs Annualized Cost Cap		(11)	(26)	(12)	(12)	(62)

2021 Electric Integrated Resource Plan

Preferred Resource Strategy Update



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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)

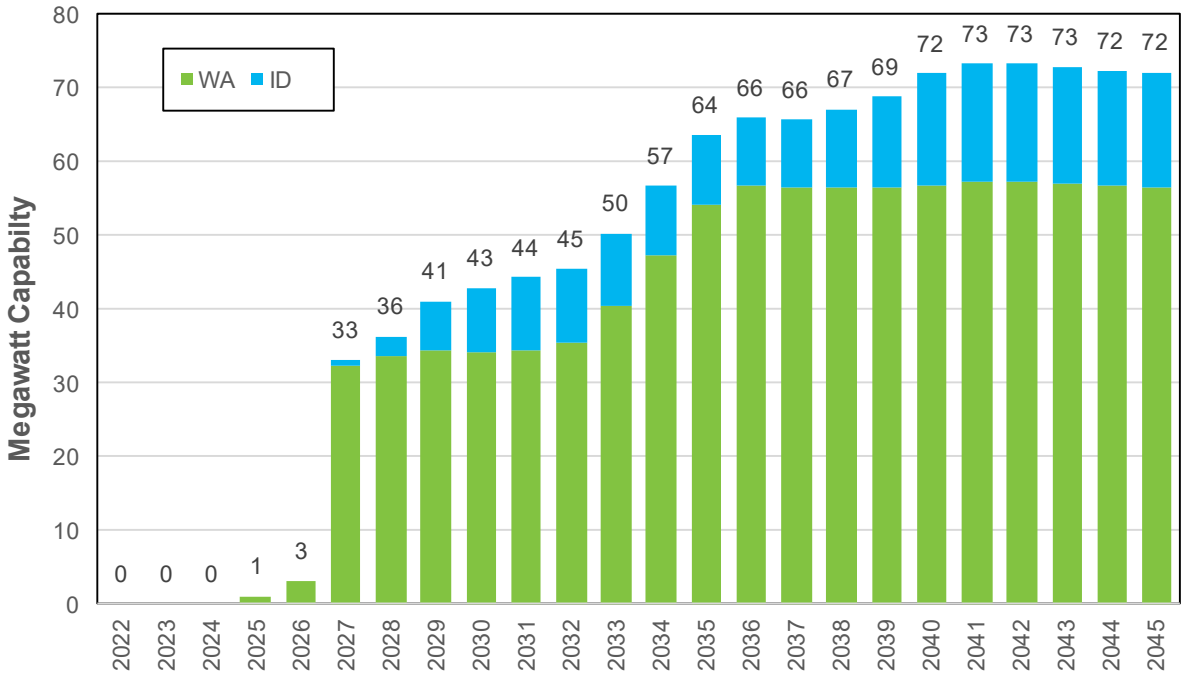
Program	Washington		Idaho	
	MW	Year	MW	Year
Variable Peak Pricing	6.9	2025	5.6	2027
Large C&I Program	25	2027	0	n/a
Time of Use Rates	2.4	2031	1.9	2028
DLC Smart Thermostats	7	2032	0	n/a
Third Party Contracts	14.3	2033	7.6	2038
Behavioral	0.9	2039	0	n/a
Total	**56.5**		**15.1**	

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.

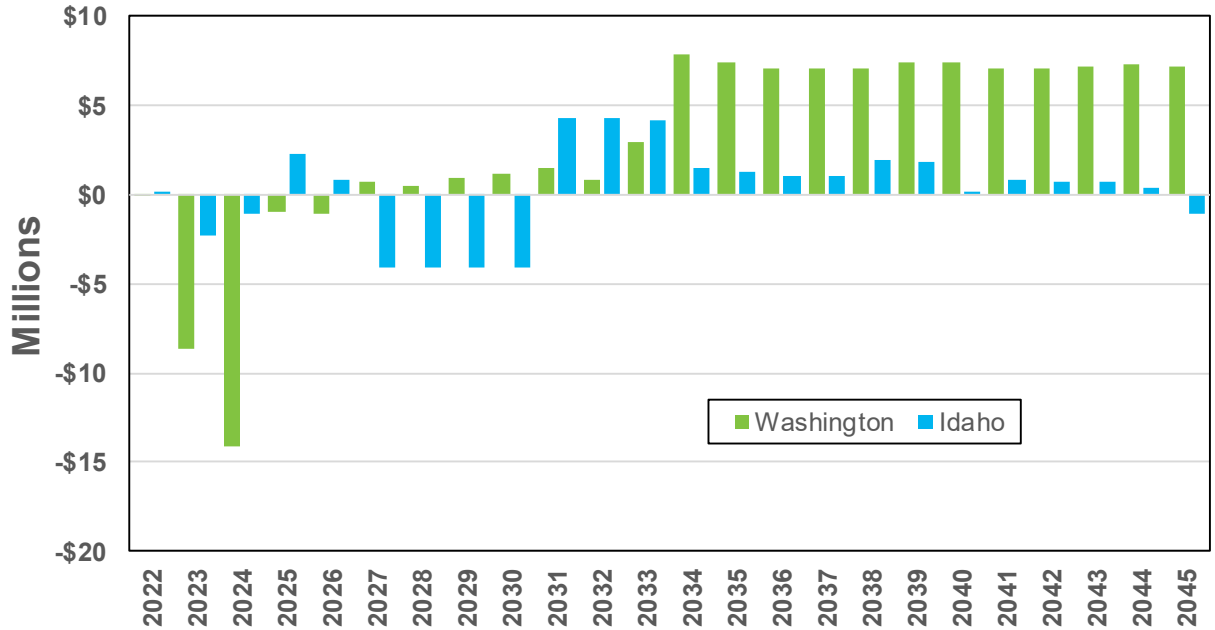
Table 7: Preferred Resource Strategy Changes (Capability in MW)

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

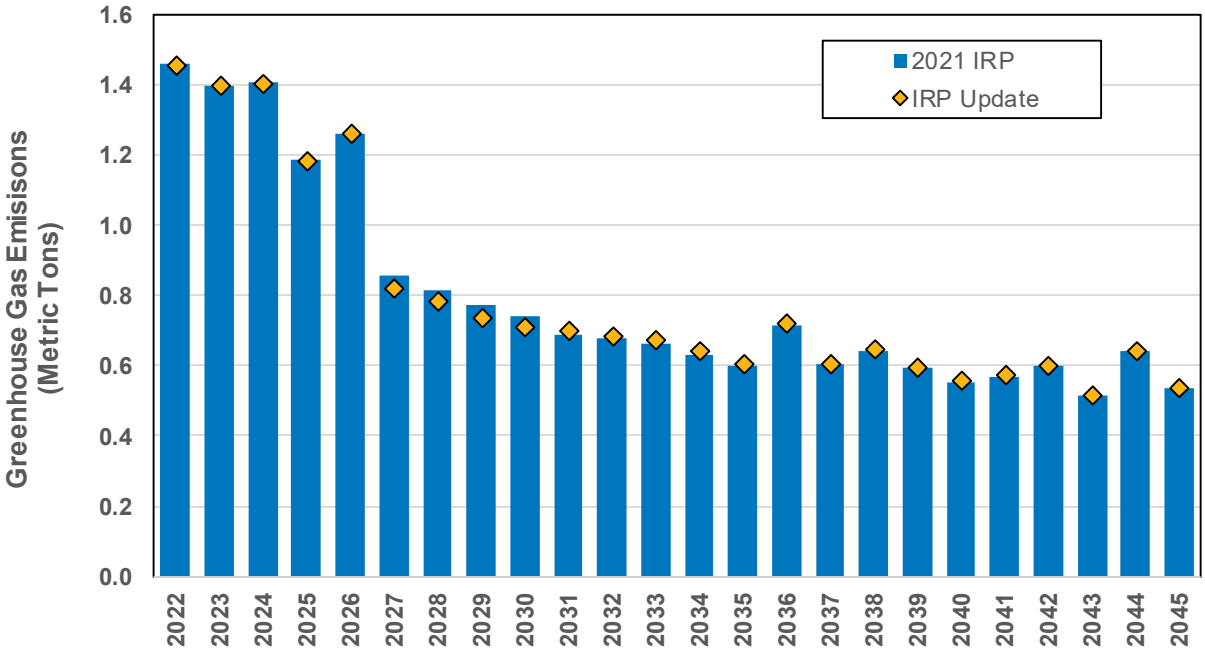
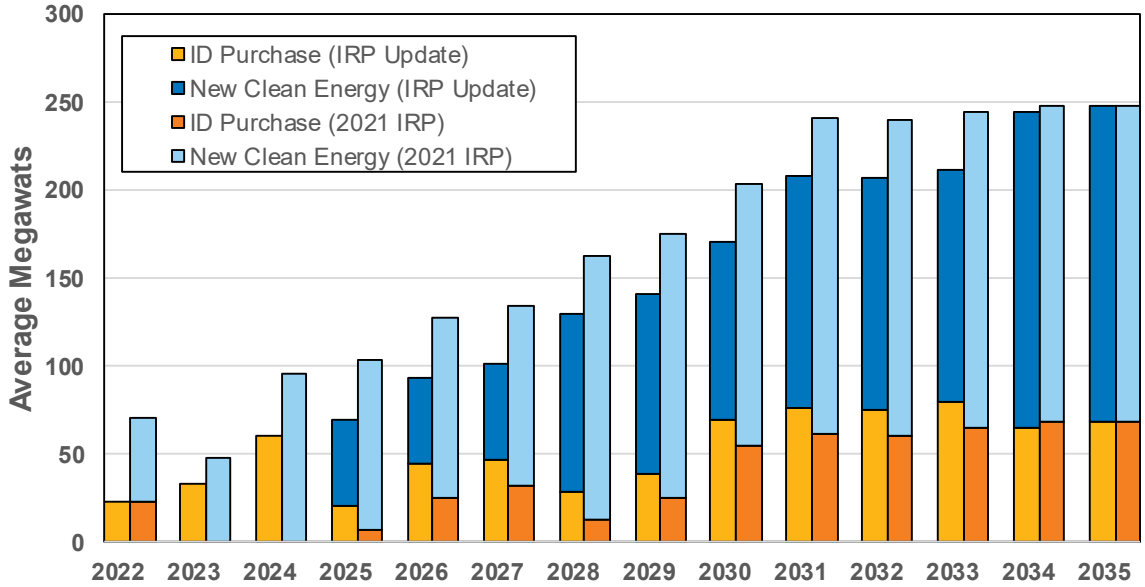


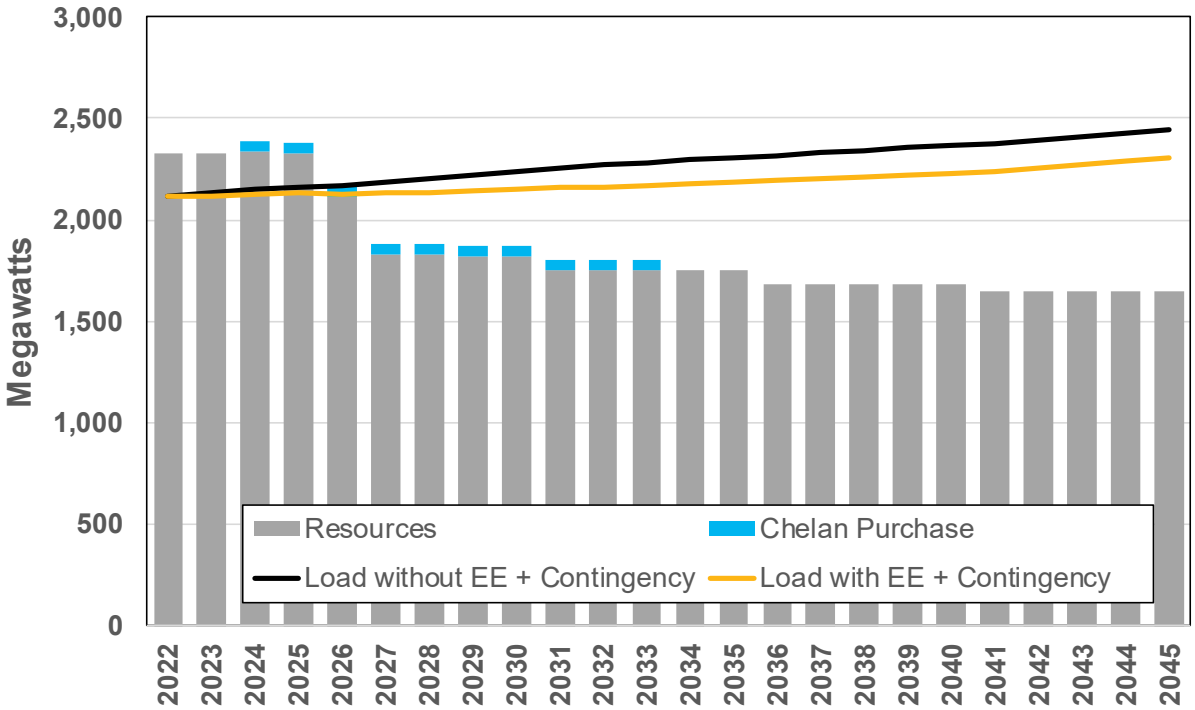
Figure 4: Washington Clean Energy Acquisition



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

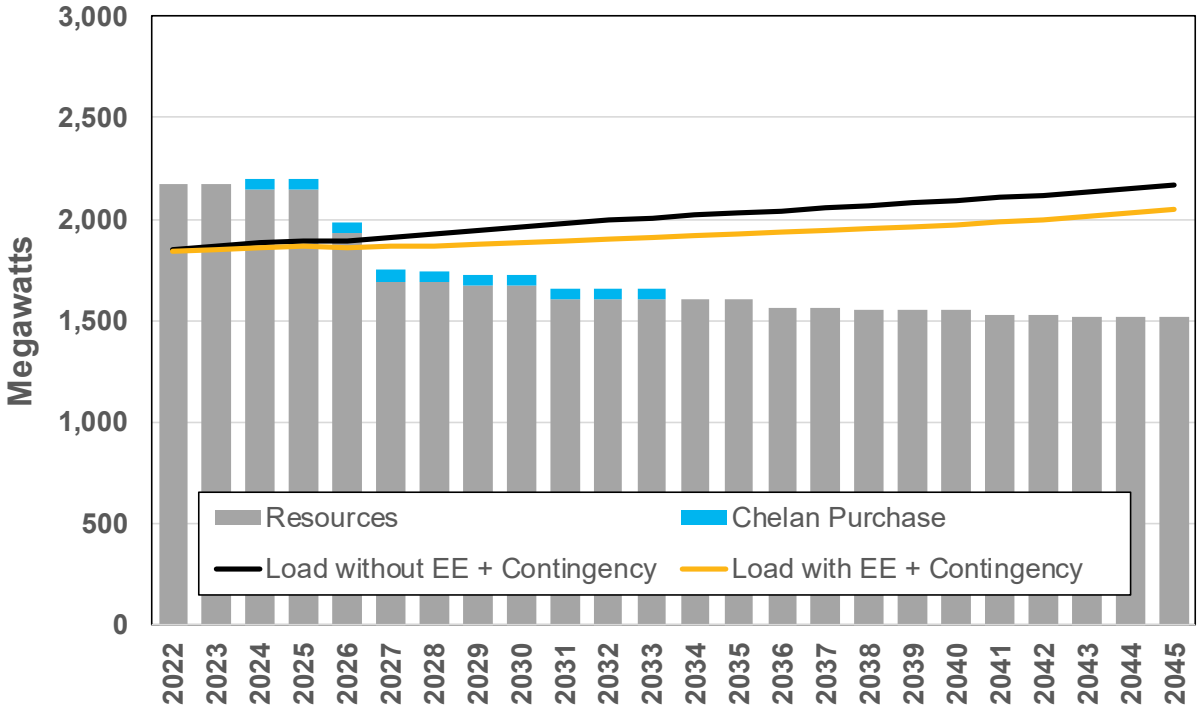
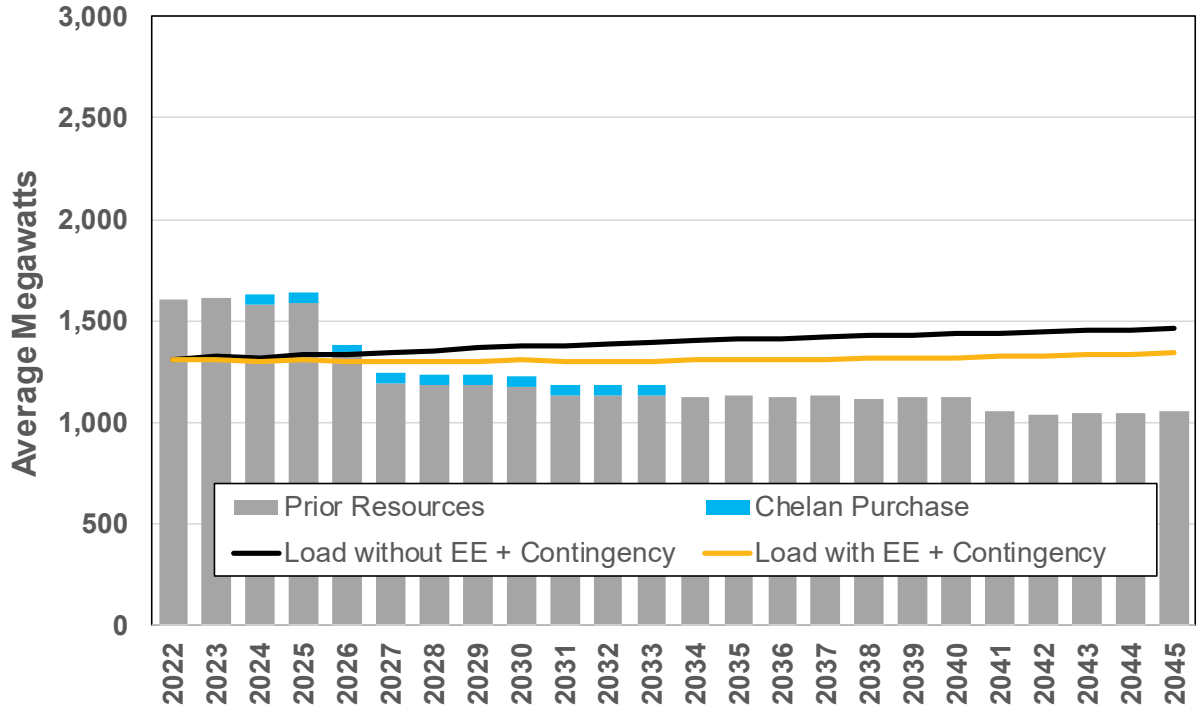


Figure 7: Annual Average Energy Load and Resource Balance



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**

2021 Electric Integrated Resource Plan

Appendix F – Avoided Cost Calculations

Estimated Avoided Costs

Energy Only Value Assuming Flat Delivery All Hours in a Year -- Example Rates For Large QF Resources, Not Applicable to Small QF
Hourly Values ($/MWh)

HLH	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
Jan	24.43	25.73	22.61	21.92	23.26	27.38	31.85	32.82	35.03	35.93	36.79	37.33	38.90	40.33	42.17	43.74	45.51	47.52	49.40	50.47	53.79	56.36	59.95	65.16	66.09
Feb	20.20	20.90	18.70	17.12	20.23	22.29	25.99	26.54	28.35	28.52	29.10	30.06	32.68	33.34	34.53	35.22	38.44	37.46	38.16	39.52	43.07	40.47	42.79	47.74	52.28
Mar	17.29	18.05	16.87	17.88	17.25	17.73	21.75	21.95	25.35	25.62	33.38	37.05	38.44	47.12	48.31	54.59	47.35	42.79	39.77	34.87	27.99	26.65	26.00	23.65	24.37
Apr	11.27	11.54	12.50	15.27	17.03	18.98	17.25	13.17	13.44	14.76	16.03	20.64	18.57	17.23	21.42	16.94	13.66	12.87	6.94	1.38	1.28	(4.59)	(4.64)	(4.49)	(5.35)
May	4.19	4.27	5.38	3.73	1.90	1.88	(3.04)	(5.79)	(4.92)	(6.97)	(8.35)	(6.48)	(8.48)	(8.98)	(7.66)	(8.96)	(9.83)	(9.12)	(10.93)	(11.68)	(11.79)	(8.60)	(11.15)	(6.29)	(13.24)
Jun	12.90	13.08	13.26	15.20	11.82	11.44	10.37	4.05	3.50	(1.19)	(5.18)	(4.32)	(4.59)	(4.34)	(4.61)	(6.23)	(7.00)	(7.06)	(7.14)	(7.79)	(8.86)	(10.65)	(11.41)	(11.76)	4.07
Jul	17.63	18.71	19.54	20.21	21.31	22.63	27.02	25.00	26.30	27.62	24.41	27.22	24.31	20.34	16.87	15.73	15.22	16.06	13.36	12.00	3.21	1.74	3.27	2.51	7.21
Aug	23.01	24.46	24.94	25.02	28.64	28.72	33.69	31.21	32.73	34.26	34.16	34.97	34.84	35.77	36.12	41.79	39.30	39.63	37.60	40.65	33.33	32.47	33.60	34.88	45.16
Sep	21.49	22.18	24.48	22.95	25.95	27.71	31.76	29.25	30.17	30.38	30.56	32.42	33.92	33.38	33.39	35.20	35.83	38.12	43.03	43.18	39.70	37.69	42.43	42.73	48.04
Oct	19.43	20.01	21.18	20.37	23.53	23.91	27.88	24.91	27.07	28.52	27.00	29.20	31.42	32.22	33.31	34.78	37.47	38.73	48.08	44.96	55.39	62.05	56.09	46.98	47.34
Nov	18.66	19.83	18.54	19.75	21.37	25.40	27.33	27.27	30.10	29.68	31.47	31.25	34.24	37.06	41.58	39.99	44.82	48.13	49.28	51.38	59.59	53.91	55.49	57.91	75.39
Dec	24.42	25.90	24.50	26.20	27.78	35.07	36.07	35.69	38.04	38.24	40.61	41.41	44.23	47.14	50.76	50.06	52.85	58.36	64.13	69.24	69.52	70.34	71.29	80.69	96.11
LLH	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**
Jan	20.71	22.12	19.32	19.54	20.37	24.06	30.78	31.48	34.35	35.39	34.92	36.37	37.02	39.20	42.45	43.55	44.74	46.55	47.59	49.67	52.97	53.45	57.44	61.27	62.63
Feb	17.13	18.01	15.91	15.42	18.11	21.01	26.28	26.39	28.74	28.15	29.42	29.70	34.09	33.72	34.94	35.81	41.06	42.65	42.86	44.59	49.98	48.97	52.49	59.16	63.65
Mar	12.67	12.91	12.55	13.82	14.80	16.71	22.94	22.88	27.96	32.58	43.05	51.43	49.90	62.49	66.45	74.05	73.54	71.61	70.17	66.35	57.80	54.95	47.83	40.07	39.18
Apr	9.85	10.07	11.64	15.53	20.54	22.57	25.15	23.33	26.87	29.06	28.74	36.57	29.27	28.86	36.05	32.80	27.00	33.24	21.58	12.60	9.07	(2.76)	(5.65)	(6.86)	(8.01)
May	(5.62)	(3.69)	(1.54)	(8.96)	(5.44)	(5.74)	(8.23)	(11.58)	(12.17)	(15.65)	(19.62)	(13.55)	(19.16)	(21.27)	(20.42)	(22.38)	(24.60)	(17.58)	(23.33)	(23.33)	(24.65)	(24.78)	(24.23)	(17.14)	(22.34)
Jun	6.82	7.69	7.54	3.33	8.07	4.94	0.85	(5.18)	(7.39)	(11.25)	(16.13)	(14.54)	(14.67)	(16.46)	(18.29)	(19.83)	(18.59)	(17.50)	(16.39)	(15.79)	(18.19)	(21.23)	(19.89)	(17.49)	(9.89)
Jul	14.09	14.22	13.93	13.50	15.78	19.31	19.61	19.28	20.22	20.06	20.91	22.60	23.45	21.23	20.64	17.99	17.42	18.88	18.60	16.12	8.89	4.78	1.97	4.14	10.21
Aug	14.77	15.40	15.23	15.77	18.76	19.88	25.27	23.89	25.04	29.35	31.29	33.61	33.71	36.75	34.58	39.95	44.99	46.68	46.84	49.87	57.08	55.50	57.56	56.60	74.95
Sep	13.46	13.34	16.32	15.56	19.26	19.52	25.43	22.02	28.78	27.19	31.75	31.20	35.18	34.35	38.87	40.77	46.15	45.09	53.14	50.54	60.20	56.14	61.97	63.19	75.66
Oct	12.67	12.69	14.82	14.14	16.60	17.29	21.17	20.76	22.52	23.99	26.54	27.84	31.46	33.27	36.09	37.82	41.42	40.58	48.61	55.99	64.20	71.36	65.67	62.60	72.29
Nov	13.67	14.97	13.15	13.95	15.95	22.33	23.72	23.39	26.07	26.08	29.10	30.37	32.29	34.38	37.45	35.01	38.20	41.50	41.83	43.02	42.54	36.33	51.38	53.61	78.64
Dec	19.21	20.74	18.35	20.77	22.71	28.81	29.97	31.29	33.81	34.24	37.28	39.68	40.73	43.03	44.71	43.78	49.43	53.46	51.82	59.87	58.38	50.97	60.53	63.97	66.23

Capacity Only Value Assuming Flat Delivery All Hours in a Year -- Example Rates For Large QF Resources, Not Applicable to Small QF
Hourly Values ($/MWh)

2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
-	-	-	-	-	-	13.10	13.37	13.64	13.91	14.18	14.47	14.77	15.05	15.36	15.66	15.97	16.29	16.62	16.95	17.29	17.63	17.99	18.35	18.72

1. HLH (heavy load-hours) are defined as 6:00 am until 10:00 pm all days. LLH (light load-hours) are defined as all other hours.
2. Rate does not include adjustments for variable energy resource integration charges.
3. Capacity value is applied to all delivered energy during a calendar year.

Estimated Avoided Costs

Combined Energy and Capacity Value Assuming Flat Delivery All Hours in a Year -- Example Rates For Large QF Resources, Not Applicable to Small QF

Hourly Values ($/MWh)

HLH	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
Jan	24.43	25.73	22.61	21.92	23.26	27.38	44.95	46.18	48.67	49.84	50.98	51.80	53.67	55.38	57.53	59.40	61.48	63.82	66.02	67.43	71.08	73.99	77.94	83.51	84.81
Feb	20.20	20.90	18.70	17.12	20.23	22.29	39.10	39.91	41.99	42.43	43.28	44.53	47.45	48.39	49.89	50.89	54.42	53.75	54.78	56.47	60.36	58.11	60.78	66.09	71.00
Mar	17.29	18.05	16.87	17.88	17.25	17.73	34.85	35.31	38.99	39.53	47.57	51.52	53.21	62.17	63.67	70.26	63.32	59.08	56.40	51.82	45.28	44.28	43.98	42.00	43.09
Apr	11.27	11.54	12.50	15.27	17.03	18.98	30.35	26.53	27.08	28.67	30.21	35.11	33.33	32.28	36.78	32.60	29.63	29.16	23.56	18.33	18.57	13.04	13.34	13.87	13.37
May	4.19	4.27	5.38	3.73	1.90	1.88	10.06	7.58	8.72	6.94	5.84	7.99	6.29	6.07	7.70	6.71	6.14	7.17	5.69	5.27	5.50	9.03	6.84	12.06	5.48
Jun	12.90	13.08	13.26	15.20	11.82	11.44	23.47	17.42	17.14	12.72	9.01	10.15	10.18	10.71	10.75	9.43	8.98	9.23	9.48	9.16	8.43	6.98	6.58	6.59	22.79
Jul	17.63	18.71	19.54	20.21	21.31	22.63	40.12	38.36	39.93	41.53	38.59	41.69	39.07	35.39	32.23	31.39	31.19	32.35	29.98	28.95	20.50	19.37	21.25	20.86	25.93
Aug	23.01	24.46	24.94	25.02	28.64	28.72	46.80	44.57	46.37	48.17	48.35	49.44	49.61	50.82	51.48	57.46	55.27	55.92	54.23	57.60	50.62	50.11	51.59	53.23	63.88
Sep	21.49	22.18	24.48	22.95	25.95	27.71	44.86	42.61	43.81	44.29	44.74	46.89	48.69	48.43	48.75	50.87	51.81	54.41	59.65	60.13	56.99	55.32	60.42	61.09	66.75
Oct	19.43	20.01	21.18	20.37	23.53	23.91	40.98	38.27	40.71	42.43	41.19	43.67	46.18	47.27	48.67	50.44	53.45	55.02	64.70	61.92	72.68	79.68	74.08	65.33	66.06
Nov	18.66	19.83	18.54	19.75	21.37	25.40	40.43	40.63	43.74	43.59	45.66	45.72	49.00	52.11	56.94	55.65	60.80	64.42	65.90	68.33	76.88	71.54	73.48	76.26	94.10
Dec	24.42	25.90	24.50	26.20	27.78	35.07	49.18	49.06	51.68	52.15	54.79	55.88	58.99	62.19	66.11	65.73	68.83	74.65	80.75	86.20	86.82	87.97	89.27	99.04	114.82
LLH	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**
Jan	20.71	22.12	19.32	19.54	20.37	24.06	43.88	44.85	47.99	49.30	49.11	50.84	51.79	54.25	57.81	59.21	60.71	62.85	64.21	66.62	70.27	71.09	75.43	79.62	81.34
Feb	17.13	18.01	15.91	15.42	18.11	21.01	39.38	39.76	42.37	42.06	43.61	44.17	48.86	48.77	50.30	51.48	57.03	58.94	59.48	61.54	67.27	66.61	70.48	77.51	82.37
Mar	12.67	12.91	12.55	13.82	14.80	16.71	36.05	36.25	41.59	46.50	57.24	65.90	64.66	77.54	81.80	89.72	89.51	87.90	86.79	83.30	75.09	72.59	65.82	58.42	57.89
Apr	9.85	10.07	11.64	15.53	20.54	22.57	38.25	36.69	40.51	42.97	42.92	51.04	44.03	43.91	51.41	48.47	42.97	49.53	38.20	29.55	26.36	14.87	12.34	11.49	10.70
May	(5.62)	(3.69)	(1.54)	(8.96)	(5.44)	(5.74)	4.87	1.79	1.47	(1.74)	(5.43)	0.92	(4.40)	(6.22)	(5.06)	(6.72)	(8.63)	(1.28)	(6.71)	(6.38)	(7.36)	(7.14)	(6.24)	1.21	(3.62)
Jun	6.82	7.69	7.54	3.33	8.07	4.94	13.95	8.18	6.25	2.67	(1.95)	(0.07)	0.10	(1.41)	(2.93)	(4.17)	(2.62)	(1.21)	0.23	1.16	(0.89)	(3.60)	(1.90)	0.86	8.82
Jul	14.09	14.22	13.93	13.50	15.78	19.31	32.72	32.65	33.86	33.97	35.10	37.07	38.22	36.28	36.00	33.65	33.39	35.17	35.22	33.07	26.19	22.41	19.96	22.49	28.93
Aug	14.77	15.40	15.23	15.77	18.76	19.88	38.38	37.25	38.68	43.26	45.48	48.08	48.47	51.80	49.94	55.62	60.96	62.97	63.46	66.82	74.37	73.14	75.54	74.95	93.67
Sep	13.46	13.34	16.32	15.56	19.26	19.52	38.53	35.38	42.42	41.10	45.94	45.67	49.95	49.40	54.22	56.43	62.13	61.38	69.76	67.50	77.50	73.77	79.96	81.54	94.37
Oct	12.67	12.69	14.82	14.14	16.60	17.29	34.27	34.12	36.16	37.90	40.73	42.31	46.22	48.32	51.45	53.48	57.39	56.87	65.23	72.94	81.49	89.00	83.66	80.95	91.00
Nov	13.67	14.97	13.15	13.95	15.95	22.33	36.83	36.76	39.71	39.99	43.29	44.84	47.05	49.43	52.80	50.67	54.17	57.79	58.45	59.97	59.84	53.96	69.36	71.96	97.36
Dec	19.21	20.74	18.35	20.77	22.71	28.81	43.08	44.65	47.44	48.15	51.46	54.15	55.50	58.08	60.07	59.44	65.40	69.75	68.44	76.82	75.67	68.60	78.52	82.32	84.95

1. HLH (heavy load-hours) are defined as 6:00 am until 10:00 pm all days. LLH (light load-hours) are defined as all other hours.
2. After 15 years rates are escalated using growth rate between year 14 and year 15.
3. Rate does not include adjustments for variable energy resource integration charges.

Schedule 62 QF Avoided Costs

Specified-Term Standard Power & Short-Term Time of Delivery Capacity Rates

Hourly Values ($/MWh)

RCW 80.80.40 Compliant Resources - Contracts Ending after 15 Years									
First Delivery Year	Hourly Capacity Value <3 Year History								3+ Year History $/kW-mo
	On-System Wind	Montana Wind	Solar	Solar + 4Hr Batt	Hydro	Wood Biomass	Geothermal (off sys)	Other	
2022	1.43	5.52	0.75	5.87	14.65	11.55	9.71	8.93	6.52
2023	1.60	6.21	0.84	6.61	16.47	12.99	10.92	10.04	7.33
2024	1.79	6.93	0.94	7.37	18.38	14.49	12.18	11.20	8.18
2025	2.10	8.13	1.10	8.64	21.56	17.00	14.29	13.14	9.59

RCW 80.80.40 Compliant Resources - Renewal Contracts Ending after 10 Years									
First Delivery Year	Hourly Capacity Value <3 Year History								3+ Year History $/kW-mo
	On-System Wind	Montana Wind	Solar	Solar + 4Hr Batt	Hydro	Wood Biomass	Geothermal (off sys)	Other	
2022	1.02	3.95	0.54	4.20	10.49	8.27	6.95	6.39	4.67
2023	1.25	4.85	0.66	5.16	12.87	10.15	8.53	7.84	5.73
2024	1.50	5.79	0.78	6.16	15.35	12.11	10.17	9.36	6.83
2025	1.92	7.43	1.01	7.90	19.70	15.54	13.05	12.01	8.77

RCW 80.80.40 Non-Compliant Resources - Renewal Contracts Ending after 5 Years									
First Delivery Year	Hourly Capacity Value <3 Year History								3+ Year History $/kW-mo
	On-System Wind	Montana Wind	Solar	Solar + 4Hr Batt	Hydro	Wood Biomass	Geothermal (off sys)	Other	
2022	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2023	0.40	1.54	0.21	1.64	4.09	3.23	2.71	2.49	1.82
2024	0.81	3.15	0.43	3.35	8.36	6.60	5.54	5.10	3.72
2025	1.54	5.97	0.81	6.35	15.84	12.49	10.50	9.66	7.05

1. Capacity payments are based on an annual capacity value multiplied by the standardized on-peak capacity contribution divided by a standardized capacity factor. Once QF output exceeds that of the assumed capacity factor level, capacity payments will cease until the next contract year.
2. Existing resources with 3 years of operating history will receive a $/MWh payment derived using the $/kW-mo rate. To convert the $/kW-mo rate to a per-MWh rate, multiply the $/kW-mo rate by 12 months and multiply it again by the capacity contribution factor defined in tariff and then divide that figure by the average capacity factor over the same number of years used to define the capacity contribution factor.
3. On-Peak Capacity Contribution Assumptions <3 Years Operating History:
   On-System Wind: 5% Montana Wind: 30% Solar: 2% Solar + 4Hr Battery: 15%
   Hydro: 61% Other: 100%
4. Standardized Capacity Factor Assumptions <3 Years Operating History:
   On-System Wind: 31% Montana Wind: 49% Solar: 24% Solar + 4Hr Battery: 23%
   Hydro: 37% Wood Biomass: 77% Geothermal (off-sys): 92%
5. Fixed rate is for contracts ending in 2035. Shorter terms will receive capacity payment based on value provided over the term of the contract.
6. Capacity contribution payment with batteries is based on the size of the resource itself, not the summation of the battery and resource. Battery size is assumed to be equal to a multiple of the underlying resource capacity (e.g., 2 MW solar + 4 hr battery = 8 MWh battery).

Schedule 62 QF Avoided Costs

Specified Term–Standard Power Energy Rates

Hourly Values ($/MWh)

HLH	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045
Jan	24.43	25.73	22.61	21.92	23.26	27.38	31.85	32.82	35.03	35.93	36.79	37.33	38.90	40.33	42.17	43.74	45.51	47.52	49.40	50.47	53.79	56.36	59.95	65.16	66.09
Feb	20.20	20.90	18.70	17.12	20.23	22.29	25.99	26.54	28.35	28.52	29.10	30.06	32.68	33.34	34.53	35.22	38.44	37.46	38.16	39.52	43.07	40.47	42.79	47.74	52.28
Mar	17.29	18.05	16.87	17.88	17.25	17.73	21.75	21.95	25.35	25.62	33.38	37.05	38.44	47.12	48.31	54.59	47.35	42.79	39.77	34.87	27.99	26.65	26.00	23.65	24.37
Apr	11.27	11.54	12.50	15.27	17.03	18.98	17.25	13.17	13.44	14.76	16.03	20.64	18.57	17.23	21.42	16.94	13.66	12.87	6.94	1.38	1.28	(4.59)	(4.64)	(4.49)	(5.35)
May	4.19	4.27	5.38	3.73	1.90	1.88	(3.04)	(5.79)	(4.92)	(6.97)	(8.35)	(6.48)	(8.48)	(8.98)	(7.66)	(8.96)	(9.83)	(9.12)	(10.93)	(11.68)	(11.79)	(8.60)	(11.15)	(6.29)	(13.24)
Jun	12.90	13.08	13.26	15.20	11.82	11.44	10.37	4.05	3.50	(1.19)	(5.18)	(4.32)	(4.59)	(4.34)	(4.61)	(6.23)	(7.00)	(7.06)	(7.14)	(7.79)	(8.86)	(10.65)	(11.41)	(11.76)	4.07
Jul	17.63	18.71	19.54	20.21	21.31	22.63	27.02	25.00	26.30	27.62	24.41	27.22	24.31	20.34	16.87	15.73	15.22	16.06	13.36	12.00	3.21	1.74	3.27	2.51	7.21
Aug	23.01	24.46	24.94	25.02	28.64	28.72	33.69	31.21	32.73	34.26	34.16	34.97	34.84	35.77	36.12	41.79	39.30	39.63	37.60	40.65	33.33	32.47	33.60	34.88	45.16
Sep	21.49	22.18	24.48	22.95	25.95	27.71	31.76	29.25	30.17	30.38	30.56	32.42	33.92	33.38	33.39	35.20	35.83	38.12	43.03	43.18	39.70	37.69	42.43	42.73	48.04
Oct	19.43	20.01	21.18	20.37	23.53	23.91	27.88	24.91	27.07	28.52	27.00	29.20	31.42	32.22	33.31	34.78	37.47	38.73	48.08	44.96	55.39	62.05	56.09	46.98	47.34
Nov	18.66	19.83	18.54	19.75	21.37	25.40	27.33	27.27	30.10	29.68	31.47	31.25	34.24	37.06	41.58	39.99	44.82	48.13	49.28	51.38	59.59	53.91	55.49	57.91	75.39
Dec	24.42	25.90	24.50	26.20	27.78	35.07	36.07	35.69	38.04	38.24	40.61	41.41	44.23	47.14	50.76	50.06	52.85	58.36	64.13	69.24	69.52	70.34	71.29	80.69	96.11
LLH	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**	**2031**	**2032**	**2033**	**2034**	**2035**	**2036**	**2037**	**2038**	**2039**	**2040**	**2041**	**2042**	**2043**	**2044**	**2045**
Jan	20.71	22.12	19.32	19.54	20.37	24.06	30.78	31.48	34.35	35.39	34.92	36.37	37.02	39.20	42.45	43.55	44.74	46.55	47.59	49.67	52.97	53.45	57.44	61.27	62.63
Feb	17.13	18.01	15.91	15.42	18.11	21.01	26.28	26.39	28.74	28.15	29.42	29.70	34.09	33.72	34.94	35.81	41.06	42.65	42.86	44.59	49.98	48.97	52.49	59.16	63.65
Mar	12.67	12.91	12.55	13.82	14.80	16.71	22.94	22.88	27.96	32.58	43.05	51.43	49.90	62.49	66.45	74.05	73.54	71.61	70.17	66.35	57.80	54.95	47.83	40.07	39.18
Apr	9.85	10.07	11.64	15.53	20.54	22.57	25.15	23.33	26.87	29.06	28.74	36.57	29.27	28.86	36.05	32.80	27.00	33.24	21.58	12.60	9.07	(2.76)	(5.65)	(6.86)	(8.01)
May	(5.62)	(3.69)	(1.54)	(8.96)	(5.44)	(5.74)	(8.23)	(11.58)	(12.17)	(15.65)	(19.62)	(13.55)	(19.16)	(21.27)	(20.42)	(22.38)	(24.60)	(17.58)	(23.33)	(23.33)	(24.65)	(24.78)	(24.23)	(17.14)	(22.34)
Jun	6.82	7.69	7.54	3.33	8.07	4.94	0.85	(5.18)	(7.39)	(11.25)	(16.13)	(14.54)	(14.67)	(16.46)	(18.29)	(19.83)	(18.59)	(17.50)	(16.39)	(15.79)	(18.19)	(21.23)	(19.89)	(17.49)	(9.89)
Jul	14.09	14.22	13.93	13.50	15.78	19.31	19.61	19.28	20.22	20.06	20.91	22.60	23.45	21.23	20.64	17.99	17.42	18.88	18.60	16.12	8.89	4.78	1.97	4.14	10.21
Aug	14.77	15.40	15.23	15.77	18.76	19.88	25.27	23.89	25.04	29.35	31.29	33.61	33.71	36.75	34.58	39.95	44.99	46.68	46.84	49.87	57.08	55.50	57.56	56.60	74.95
Sep	13.46	13.34	16.32	15.56	19.26	19.52	25.43	22.02	28.78	27.19	31.75	31.20	35.18	34.35	38.87	40.77	46.15	45.09	53.14	50.54	60.20	56.14	61.97	63.19	75.66
Oct	12.67	12.69	14.82	14.14	16.60	17.29	21.17	20.76	22.52	23.99	26.54	27.84	31.46	33.27	36.09	37.82	41.42	40.58	48.61	55.99	64.20	71.36	65.67	62.60	72.29
Nov	13.67	14.97	13.15	13.95	15.95	22.33	23.72	23.39	26.07	26.08	29.10	30.37	32.29	34.38	37.45	35.01	38.20	41.50	41.83	43.02	42.54	36.33	51.38	53.61	78.64
Dec	19.21	20.74	18.35	20.77	22.71	28.81	29.97	31.29	33.81	34.24	37.28	39.68	40.73	43.03	44.71	43.78	49.43	53.46	51.82	59.87	58.38	50.97	60.53	63.97	66.23

1. New resources must sign contracts through the end of 2035. Existing resources must execute 10-year contracts. Resources not RCW 80.80.40 compliant must execute 5-year contracts. All new resource contracts must begin delivery within 3 years of execution; renewal QF contract terms must begin at time of existing contract expiration.
2. HLH (heavy load-hours) are defined as 6:00 am until 10:00 pm all days. LLH (light load-hours) are defined as all other hours.
3. QF may cease deliveries during periods where prices are negative.