

Pacific Northwest Coordination Agreement
2023 – 2024 Contract Year

Computation of Payments
for Coordinated Storage Releases
from Upstream Reservoirs



PACIFIC NORTHWEST COORDINATION AGREEMENT
2023-24 Contract Year

Computation of Payments for Coordinated
Storage Releases From Upstream Reservoirs

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**PACIFIC NORTHWEST COORDINATION AGREEMENT
2023-24 CONTRACT YEAR**

**COMPUTATION OF PAYMENTS FOR COORDINATED
STORAGE RELEASES FROM UPSTREAM RESERVOIRS**

SUMMARY

Beginning with the 2003-04 contract year, the computation of payments is done according to the provisions of the 1997 Pacific Northwest Coordination Agreement. The methods used under the 1997 Agreement are the same as those used under the 1964 Agreement, with two exceptions:

The multiplier used in the calculation of the average annual usable energy values, A_s and A_h , is no longer variable but is fixed at 2.

The calculation for the value of benefits received from storage, used as a limit to payments, was increased by \$1000 beginning in 2008-09, but is now fixed at \$10,000.

This booklet contains a revision to Exhibit J of this Agreement. Also included are computations made to determine the payments to be made during 2023-24 to Reservoir Parties having upstream reservoirs in the United States. No special conditions are attached to any of these costs for 2023-24.

As of February 28, 2011, Avista Corporation is no longer responsible for the operation and maintenance of the Priest Lake facility. Therefore, downstream parties are no longer required to make payments to Avista related to this project.

On November 18, 2014, Northwestern Energy assumed the operation of the Kerr and Thompson projects. The Operation of Kerr [now renamed Seliš Ksanka Qlispè] was then taken over by Energy Keepers, Inc on September 5, 2015 on behalf of the Confederated Salish and Kootenai Tribes. Northwestern retains ownership of Thompson Falls.

Generation data are from regulation studies as required by provisions of the Coordination Agreement. The Final Regulation, as prescribed in Section 6 of the Agreement, is used to determine the Critical Period energy values P_s and P_h , and the multi-year regulation (80-year study) specified in Section 7 produces the average annual usable energy values, A_s and A_h .

Because of the bulk of the Final Regulation and the 80-year regulation, only the summary tabulations are included in this book. Complete copies of both regulations and period-by-period determinations of P_s , P_h , A_s , and A_h are kept in the Study Group office and are posted on the NWPP website. They are available for inspection by any party to the Agreement.

Included in this booklet are the "Usability Coefficient" values. The following quote is from paragraph 13(a)(3) of the PNCA: "The Coordinating Group shall reduce the Coordinated System's total increment of energy gained or lost due to storage to the amount usable in the Coordinated System's estimated load after use of energy from unregulated flow. The Coordinating Group shall prorate such gain or loss to each Project in each Period in proportion to that Project's increment of energy due to storage." The above quote is implemented in the program via the "Usability Coefficient" which is calculated as follows: the ratio of usable energy to power from storage, where usable energy is the total load less the smaller of power from natural flow or total generation. This value is limited to a range of 0.0 to 1.0.

An estimated potential market for secondary energy is computed each year to provide a limit of usefulness of secondary generation in the 80-year study. The average secondary market is 16,328 MW. This figure includes 5,966 MW of average annual replaceable thermal which includes 1,848 MW of non-coordinated system thermal resources

in the region. The method for determining the 2023-24 secondary energy market is the same as the method used last year.

In a multiple-year Critical Period, there are a number of Periods in which there is significant storage refill, or negative draft. The Coordinating Group has confirmed that only positive drafts are to be considered in determining the storage benefit attributable to a reservoir, except when negative draft is made voluntarily during the drawdown period. The exception is intended to remove the possibility of a Reservoir Party manipulating the Critical Rule Curve for a reservoir to increase its payment. The computer program which calculates the allocation of Critical Period storage benefits contains the following logic:

1. All positive storage releases are credited, in any Period, to the extent that they are within project turbine capacity, even if they are within such capacity only because of negative releases from other upstream reservoirs.
2. No negative release is charged in a Period when the Coordinated System has a net negative storage generation.
3. No negative release is charged in any other Period, if the Final Regulation indicates by the "Mode of Operation" flag that the reservoir is filling involuntarily.

The computations were made by representatives of Avista Corporation, Chelan Public Utility District, Bonneville Power Administration and the Study Group. All data were distributed to and approved by all Systems.

Study Group

Pacific Northwest Coordination Agreement
Computation of Payment Under Subsection 13 (A)

Summary of Payments and Receipts

2023-24 Contract Year	Energy						Portland General	Total
	United States	Keepers	Avista Corp.	Pend Oreille	Chelan			
United States	\$0	\$1,903,000	\$375,000	\$67,000	\$450,000	\$6,000		\$2,801,000
Avista Corporation	\$348,565	\$744,000	\$0	\$0	\$0	\$0		\$1,092,565
Northwestern	\$94,207	\$206,000	\$0	\$0	\$0	\$0		\$300,207
PUD #1 of Pend Oreille	\$188,674	\$155,000	\$8,000	\$0	\$0	\$0		\$351,674
Seattle City Light	\$1,056,734	\$859,000	\$45,000	\$28,000	\$0	\$0		\$1,988,734
PUD #1 of Douglas County	\$1,005,543	\$178,000	\$26,000	\$6,000	\$0	\$0		\$1,215,543
PUD #1 of Chelan County	\$2,328,321	\$446,000	\$72,000	\$14,000	\$0	\$0		\$2,860,321
PUD #2 of Grant County	\$2,335,937	\$427,000	\$69,000	\$15,000	\$273,000	\$0		\$3,119,937
Portland General Electric Company	\$29,000	\$0	\$0	\$0	\$0	\$0		\$29,000
Eugene Water and Electric Board	\$3,000	\$0	\$0	\$0	\$0	\$0		\$3,000
Energy Keepers	\$289,349	\$0	\$0	\$0	\$0	\$0		\$289,349
Total	\$7,679,330	\$4,918,000	\$595,000	\$130,000	\$723,000	\$6,000		\$14,051,330

Pacific Northwest Coordination Agreement
Computation of Payment Under Subsection 13 (A)
Capital and Annual Costs - Storage Reservoirs - Joint use Facilities Allocated to Power

2023-24 Contract Year

		HUNGRY HORSE	ALBENI FALLS	LIBBY	GRAND COULEE
<u>Capital Costs</u>					
Joint use Facilities Allocated to Power					
Land		\$3,958,814	\$33,571,207	\$348,048,164	\$17,178,614
Land Excluded		\$63,233,369	\$0	\$0	\$181,733,635
Total Joint Use Facilities		\$67,192,183	\$33,571,207	\$348,048,164	\$198,912,249
Other		\$0	\$0	\$0	\$34,259,637
Total		\$67,192,183	\$33,571,207	\$348,048,164	\$233,171,886
<u>Annual Costs</u>					
Operations (Incl. Rent Overflow)		\$626,281	\$3,844,346	\$4,295,727	\$41,568,375
Maintenance		\$417,508	\$2,662,762	\$1,285,825	\$15,127,929
Administration General		\$373,414	\$1,952,132	\$1,674,466	\$17,568,700
Taxes		\$0	\$0	\$0	\$0
Interest		\$2,015,765	\$839,280	\$10,876,505	\$5,967,367
Depreciation or Amortization		\$595,659	\$344,375	\$2,973,360	\$1,763,357
Insurance		\$67,192	\$33,571	\$348,048	\$233,172
Interim Replacements		\$47,035	\$53,714	\$142,700	\$163,220
Depreciation - Irrigation		\$0	\$0	\$0	\$685,193
Total Annual Cost		\$4,142,854	\$9,730,181	\$21,596,631	\$83,077,313
<u>Basic Factors used in Determining Annual Costs</u>					
Taxes	-%	0.0000	0.0000	0.0000	0.0000
Interest - Power Allocation	-%	3.0000	2.5000	3.1250	3.0000
Assumed Life of Facilities or Amortization Period	-Years	50	50	50	50
Depreciation or Amortization Factor					
- Power	-%	0.8865	1.0258	0.8543	0.8865
- Irrigation	-%	2.0000	0.0000	0.0000	2.0000
Insurance	-%	0.1000	0.1000	0.1000	0.1000
Interim Replacements	-%	0.0700	0.1600	0.0410	0.0700

Pacific Northwest Coordination Agreement
Computation of Payment Under Subsection 13 (A)
Capital and Annual Costs - Storage Reservoirs - Joint use Facilities Allocated to Power

2023-24 Contract Year

		NOXON RAPIDS	PRIEST LAKE	COUER D'ALENE	LONG LAKE
<u>Capital Costs</u>					
Joint use Facilities Allocated to Power					
Land		\$37,198,948	\$0	\$4,161,522	\$2,421,233
Land Excluded		\$44,017,276	\$0	\$27,510,055	\$60,404,053
Total Joint Use Facilities		\$81,216,224	\$0	\$31,671,577	\$62,825,286
Other		\$0	\$0	\$0	\$0
Total		\$81,216,224	\$0	\$31,671,577	\$62,825,286
<u>Annual Costs</u>					
Operations (Incl. Rent Overflow)		\$14,213,308	\$0	\$959,034	\$1,160,356
Maintenance		\$454,795	\$0	\$20,411	\$72,446
Administration General		\$4,400,431	\$0	\$293,914	\$369,840
Taxes		\$1,819,243	\$0	\$709,443	\$1,407,286
Interest		\$4,872,973	\$0	\$1,900,295	\$3,769,517
Depreciation or Amortization		\$33,849	\$0	\$21,155	\$46,451
Insurance		\$81,216	\$0	\$31,672	\$62,825
Interim Replacements		\$0	\$0	\$0	\$0
Depreciation - Irrigation		\$0	\$0	\$0	\$0
Total Annual Cost		\$25,875,816	\$0	\$3,935,924	\$6,888,721
<u>Basic Factors used in Determining Annual Costs</u>					
Taxes	-%	2.2400	0.0000	2.2400	2.2400
Interest - Power Allocation	-%	6.0000	6.0000	6.0000	6.0000
Assumed Life of Facilities or Amortization Period	-Years	75	50	75	75
Depreciation or Amortization Factor					
- Power	-%	0.0769	0.3440	0.0769	0.0769
- Irrigation	-%	0.0000	0.0000	0.0000	0.0000
Insurance	-%	0.1000	0.1000	0.1000	0.1000
Interim Replacements	-%	0.0000	0.0000	0.0000	0.0000

Pacific Northwest Coordination Agreement
Computation of Payment Under Subsection 13 (A)
Capital and Annual Costs - Storage Reservoirs - Joint use Facilities Allocated to Power

2023-24 Contract Year

		KERR	SULLIVAN LAKE	CHELAN	ROUND BUTTE
<u>Capital Costs</u>					
Joint use Facilities Allocated to Power					
Land		\$1,301,968	\$55,094	\$3,423,601	\$1,891,263
Land Excluded		\$1,923,169	\$6,681,879	\$32,159,892	\$118,324,028
Total Joint Use Facilities		\$3,225,137	\$6,736,973	\$35,583,492	\$120,215,291
Other		\$0	\$0	\$0	\$0
Total		\$3,225,137	\$6,736,973	\$35,583,492	\$120,215,291
<u>Annual Costs</u>					
Operations (Incl. Rent Overflow)		\$16,560,000	\$64,928	\$501,615	\$2,609,444
Maintenance		\$2,600,219	\$59,173	\$1,677,910	\$565,929
Administration General		\$780,066	\$27,693	\$653,857	\$508,060
Taxes		\$0	\$31,664	\$167,242	\$2,692,823
Interest		\$193,508	\$295,888	\$1,156,464	\$7,212,917
Depreciation or Amortization		\$1,479	\$64,594	\$104,423	\$90,991
Insurance		\$3,225	\$6,737	\$35,583	\$120,215
Interim Replacements		\$0	\$0	\$0	\$0
Depreciation - Irrigation		\$0	\$0	\$0	\$0
Total Annual Cost		\$20,138,497	\$550,677	\$4,297,094	\$13,800,379
<u>Basic Factors used in Determining Annual Costs</u>					
Taxes	-%	0.0000	0.4700	0.4700	2.2400
Interest - Power Allocation	-%	6.0000	4.3920	3.2500	6.0000
Assumed Life of Facilities or Amortization Period	-Years	75	40	75	75
Depreciation or Amortization Factor					
- Power	-%	0.0769	0.9588	0.3247	0.0769
- Irrigation	-%	0.0000	0.0000	0.0000	0.0000
Insurance	-%	0.1000	0.1000	0.1000	0.1000
Interim Replacements	-%	0.0000	0.0000	0.0000	0.0000

Pacific Northwest Coordination Agreement
Computation of Payment Under Subsection 13 (A)
Capital and Annual Costs - Storage Reservoirs - Joint use Facilities Allocated to Power

2023-24 Contract Year

	WILL-AMETTES	BLUE RIVER	HILLS CREEK	LOOKOUT POINT	COUGAR GR PETER /FOSTER	DETROIT	TIMOTHY	
<u>Capital Costs</u>								
Joint use Facilities Allocated to Power								
Land	\$0	\$0	\$12,393,944	\$37,577,296	\$30,129,056	\$41,297,712	\$18,208,954	\$4,729
Land Excluded	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$41,680,246
Total Joint Use Facilities	\$0	\$0	\$12,393,944	\$37,577,296	\$30,129,056	\$41,297,712	\$18,208,954	\$41,684,975
Other	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total	\$0	\$0	\$12,393,944	\$37,577,296	\$30,129,056	\$41,297,712	\$18,208,954	\$41,684,975
<u>Annual Costs</u>								
Operations (Incl. Rent Overflow)	\$0	\$0	\$482,140	\$3,121,876	\$619,521	\$1,886,487	\$2,249,971	\$1,571,980
Maintenance	\$0	\$0	\$141,544	\$308,746	\$57,308	\$175,753	\$179,699	\$482,078
Administration General	\$0	\$0	\$187,105	\$1,029,187	\$203,049	\$618,672	\$728,901	\$328,649
Taxes	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$933,743
Interest	\$0	\$0	\$309,849	\$939,432	\$753,226	\$1,032,443	\$455,224	\$2,501,099
Depreciation or Amortization	\$0	\$0	\$127,138	\$385,470	\$309,066	\$423,634	\$186,788	\$32,052
Insurance	\$0	\$0	\$12,394	\$37,577	\$30,129	\$41,298	\$18,209	\$41,685
Interim Replacements	\$0	\$0	\$868	\$5,261	\$3,615	\$11,150	\$4,734	\$0
Depreciation - Irrigation	\$0	\$0	\$0	\$0	\$0	\$0	\$0	\$0
Total Annual Cost	\$0	\$0	\$1,261,038	\$5,827,549	\$1,975,914	\$4,189,437	\$3,823,526	\$5,891,286
<u>Basic Factors used in Determining Annual Costs</u>								
Taxes	-%	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	2.2400
Interest - Power Allocation	-%	0.0000	0.0000	2.5000	2.5000	2.5000	2.5000	6.0000
Assumed Life of Facilities or Amortization Period	-Years	0	0	50	50	50	50	75
<u>Depreciation or Amortization Factor</u>								
- Power	-%	0.0000	0.0000	1.0258	1.0258	1.0258	1.0258	0.0769
- Irrigation	-%	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000	0.0000
Insurance	-%	0.0000	0.0000	0.1000	0.1000	0.1000	0.1000	0.1000
Interim Replacements	-%	0.0000	0.0000	0.0070	0.0140	0.0120	0.0270	0.0000

Pacific Northwest Coordination Agreement
Computation of Payment Under Subsection 13 (A)
Allocation of Annual Costs - Storage Reservoirs - Joint use Facilities Allocated to Power

2023-24 Contract Year

United States

Headwater Improvement Project:

Dam and Reservoir Cost

	Hungry Horse	Albeni Falls	Libby	Grand Coulee	Total
Annual Cost to be Apportioned	\$4,142,854	\$9,730,181	\$21,596,631	\$83,077,313	\$118,546,979
Critical Period & Annual Energy at Site, MW	274.9	74.0	585.2	6132.0	7066.1
Critical Period & Annual Energy From Storage, MW	648.6	326.7	671.0	524.4	2170.7
Portion of Annual Cost Allocated to Storage	0.7023	0.8153	0.5342	0.0788	
Amount of Annual Cost Allocated to Storage	\$2,909,643	\$7,933,242	\$11,535,854	\$6,544,941	\$28,923,680
Limit \$10000* (Storage Energy)	\$6,486,000	\$3,267,000	\$6,710,000	\$5,244,000	

Energy Gains and Apportionment of Cost by Project

	Gains		Gains		Gains		Gains		Gains	
	MW	Costs Dollars	MW	Costs Dollars	MW	Costs Dollars	MW	Costs Dollars	MW	Costs Dollars
Federal										
Hungry Horse	83.6	\$375,033	0.0	\$0	0.0	\$0	0.0	\$0	83.6	\$375,033
Albeni Falls	6.6	\$29,608	5.7	\$57,000	0.0	\$0	0.0	\$0	12.3	\$86,608
Grand Coulee	69.1	\$309,985	63.5	\$635,000	117.7	\$1,177,000	96.0	\$960,000	346.3	\$3,081,985
Chief Joseph	50.3	\$225,648	39.3	\$393,000	100.5	\$1,005,000	103.7	\$1,037,000	293.8	\$2,660,648
McNary	14.3	\$64,150	13.1	\$131,000	24.5	\$245,000	21.9	\$219,000	73.8	\$659,150
John Day	20.0	\$89,721	17.7	\$177,000	34.7	\$347,000	31.2	\$312,000	103.6	\$925,721
The Dalles	15.3	\$68,636	14.0	\$140,000	25.8	\$258,000	20.0	\$200,000	75.1	\$666,636
Bonneville	15.5	\$69,534	13.2	\$132,000	28.7	\$287,000	28.8	\$288,000	86.2	\$776,534
Libby	0.0	\$0	0.0	\$0	125.1	\$1,251,000	0.0	\$0	125.1	\$1,251,000
Total Federal	274.7	\$1,232,315	166.5	\$1,665,000	457	\$4,570,000	301.6	\$3,016,000	1199.8	\$10,483,315
Non-Federal										
Kerr	64.5	\$289,349	0.0	\$0	0.0	\$0	0.0	\$0	64.5	\$289,349
Thompson Falls	21.0	\$94,207	0.0	\$0	0.0	\$0	0.0	\$0	21.0	\$94,207
Noxon Rapids	44.2	\$198,283	0.0	\$0	0.0	\$0	0.0	\$0	44.2	\$198,283
Cabinet Gorge	33.5	\$150,282	0.0	\$0	0.0	\$0	0.0	\$0	33.5	\$150,282
Box Canyon	16.2	\$72,674	11.6	\$116,000	0.0	\$0	0.0	\$0	27.8	\$188,674
Boundary	87.1	\$390,734	66.6	\$666,000	0.0	\$0	0.0	\$0	153.7	\$1,056,734
Spokane River	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0
Wells	18.4	\$82,543	13.7	\$137,000	37.5	\$375,000	41.1	\$411,000	110.7	\$1,005,543
Chelan	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0
Rocky Reach	30.9	\$138,619	23.3	\$233,000	60.3	\$603,000	62.5	\$625,000	177.0	\$1,599,619
Rock Island	14.2	\$63,702	11.3	\$113,000	27.3	\$273,000	27.9	\$279,000	80.7	\$728,702
Wanapum	21.8	\$97,796	16.5	\$165,000	44.7	\$447,000	47.5	\$475,000	130.5	\$1,184,796
Priest Rapids	22.1	\$99,141	17.2	\$172,000	44.2	\$442,000	43.8	\$438,000	127.3	\$1,151,141
R Butte/Pelton	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0
Total Non-Federal	373.9	\$1,677,330	160.2	\$1,602,000	214.0	\$2,140,000	222.8	\$2,228,000	970.9	\$7,647,330
Grand total - Federal and Non-Federal	648.6	\$2,909,645	326.7	\$3,267,000	671.0	\$6,710,000	524.4	\$5,244,000	2170.7	\$18,130,645

Energy Gains and Apportionment of Costs by Ownership

United States	274.7	\$1,232,315	166.5	\$1,665,000	457.0	\$4,570,000	301.6	\$3,016,000	1199.8	\$10,483,315
Avista Corporation	77.7	\$348,565	0.0	\$0	0.0	\$0	0.0	\$0	77.7	\$348,565
Northwestern	21	\$94,207	0.0	\$0	0.0	\$0	0.0	\$0	21.0	\$94,207
PUD #1 of Pend Oreille	16.2	\$72,674	11.6	\$116,000	0.0	\$0	0.0	\$0	27.8	\$188,674
Seattle City Light	87.1	\$390,734	66.6	\$666,000	0.0	\$0	0.0	\$0	153.7	\$1,056,734
PUD #1 of Douglas County	18.4	\$82,543	13.7	\$137,000	37.5	\$375,000	41.1	\$411,000	110.7	\$1,005,543
PUD #1 of Chelan County	45.1	\$202,321	34.6	\$346,000	87.6	\$876,000	90.4	\$904,000	257.7	\$2,328,321
PUD #2 of Grant County	43.9	\$196,937	33.7	\$337,000	88.9	\$889,000	91.3	\$913,000	257.8	\$2,335,937
Portland General Electric Company	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0
Eugene Water and Electric Board	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0
Energy Keepers	64.5	\$289,349	0.0	\$0	0.0	\$0	0.0	\$0	64.5	\$289,349
Total	648.6	\$2,909,645	326.7	\$3,267,000	671.0	\$6,710,000	524.4	\$5,244,000	2170.7	\$18,130,645

Pacific Northwest Coordination Agreement
Computation of Payment Under Subsection 13 (A)
Allocation of Annual Costs - Storage Reservoirs - Joint use Facilities Allocated to Power

2023-24 Contract Year

	<u>Avista Corp.</u>				
	Noxon Rapids	Priest Lake	Couer D'Alene	Long Lake	Total
Headwater Improvement Project:					
<u>Dam and Reservoir Cost</u>					
Annual Cost to be Apportioned	\$25,875,816	\$0	\$3,935,924	\$6,888,721	\$36,700,461
Critical Period & Annual Energy at Site, MW	495.3	0.0	25.9	160.1	681.3
Critical Period & Annual Energy From Storage, MW	25.6	15.2	68.3	1.1	110.2
Portion of Annual Cost Allocated to Storage	0.0491	1.0000	0.7251	0.0068	
Amount of Annual Cost Allocated to Storage	\$1,271,685	\$0	\$2,853,754	\$47,007	\$4,172,446
Limit \$10000* (Storage Energy)	\$256,000	\$0	\$683,000	\$11,000	

Energy Gains and Apportionment of Cost by Project

	Gains MW	Costs Dollars	Gains MW	Costs Dollars	Gains MW	Costs Dollars	Gains MW	Costs Dollars	Gains MW	Costs Dollars
Federal										
Hungry Horse	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0
Albeni Falls	0.3	\$3,000	0.3	\$0	0.0	\$0	0.0	\$0	0.6	\$3,000
Grand Coulee	4.3	\$43,000	3.3	\$0	11.1	\$111,000	0.0	\$0	18.7	\$154,000
Chief Joseph	2.6	\$26,000	1.6	\$0	5.2	\$52,000	0.0	\$0	9.4	\$78,000
McNary	0.9	\$9,000	0.5	\$0	2.2	\$22,000	0.0	\$0	3.6	\$31,000
John Day	1.3	\$13,000	0.7	\$0	3.1	\$31,000	0.0	\$0	5.1	\$44,000
The Dalles	1.0	\$10,000	0.6	\$0	2.5	\$25,000	0.0	\$0	4.1	\$35,000
Bonneville	0.9	\$9,000	0.5	\$0	2.1	\$21,000	0.0	\$0	3.5	\$30,000
Libby	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0
Total Federal	11.3	\$113,000	7.5	\$0	26.2	\$262,000	0	\$0	45	\$375,000
Non-Federal										
Kerr	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0
Thompson Falls	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0
Noxon Rapids	2.2	\$22,000	0.0	\$0	0.0	\$0	0.0	\$0	2.2	\$22,000
Cabinet Gorge	1.6	\$16,000	0.0	\$0	0.0	\$0	0.0	\$0	1.6	\$16,000
Box Canyon	0.8	\$8,000	0.6	\$0	0.0	\$0	0.0	\$0	1.4	\$8,000
Boundary	4.5	\$45,000	3.4	\$0	0.0	\$0	0.0	\$0	7.9	\$45,000
Spokane River	0.0	\$0	0.0	\$0	30.6	\$306,000	1.1	\$11,000	31.7	\$317,000
Wells	0.8	\$8,000	0.6	\$0	1.8	\$18,000	0.0	\$0	3.2	\$26,000
Chelan	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0
Rocky Reach	1.7	\$17,000	1.2	\$0	3.2	\$32,000	0.0	\$0	6.1	\$49,000
Rock Island	0.7	\$7,000	0.5	\$0	1.6	\$16,000	0.0	\$0	2.8	\$23,000
Wanapum	1.0	\$10,000	0.7	\$0	2.4	\$24,000	0.0	\$0	4.1	\$34,000
Priest Rapids	1.0	\$10,000	0.7	\$0	2.5	\$25,000	0.0	\$0	4.2	\$35,000
R Butte/Pelton	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0
Total Non-Federal	14.3	\$143,000	7.7	\$0	42.1	\$421,000	1.1	\$11,000	65.2	\$575,000
Grand total - Federal and Non-Federal	25.6	\$256,000	15.2	\$0	68.3	\$683,000	1.1	\$11,000	110.2	\$950,000

Energy Gains and Apportionment of Costs by Ownership

United States	11.3	\$113,000	7.5	\$0	26.2	\$262,000	0.0	\$0	45.0	\$375,000
Avista Corporation	3.8	\$38,000	0.0	\$0	30.6	\$306,000	1.1	\$11,000	35.5	\$355,000
Northwestern	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0
PUD #1 of Pend Oreille	0.8	\$8,000	0.6	\$0	0.0	\$0	0.0	\$0	1.4	\$8,000
Seattle City Light	4.5	\$45,000	3.4	\$0	0.0	\$0	0.0	\$0	7.9	\$45,000
PUD #1 of Douglas County	0.8	\$8,000	0.6	\$0	1.8	\$18,000	0.0	\$0	3.2	\$26,000
PUD #1 of Chelan County	2.4	\$24,000	1.7	\$0	4.8	\$48,000	0.0	\$0	8.9	\$72,000
PUD #2 of Grant County	2.0	\$20,000	1.4	\$0	4.9	\$49,000	0.0	\$0	8.3	\$69,000
Portland General Electric Company	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0
Eugene Water and Electric Board	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0
Energy Keepers	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0
Total	25.6	\$256,000	15.2	\$0	68.3	\$683,000	1.1	\$11,000	110.2	\$950,000

Pacific Northwest Coordination Agreement
Computation of Payment Under Subsection 13 (A)
Allocation of Annual Costs - Storage Reservoirs - Joint use Facilities Allocated to Power

2023-24 Contract Year

	<u>Energy Keepers</u>	<u>Pend Oreille</u>	<u>Chelan PUD</u>	<u>PGE</u>
Headwater Improvement Project:	Kerr	Sullivan Lake	Chelan	Round Butte
<u>Dam and Reservoir Cost</u>				
Annual Cost to be Apportioned	\$20,138,497	\$550,677	\$4,297,094	\$13,800,379
Critical Period & Annual Energy at Site, MW	329.1	0.0	138.8	290.4
Critical Period & Annual Energy From Storage, MW	554.7	13.0	171.8	1.1
Portion of Annual Cost Allocated to Storage	0.6276	1.0000	0.5531	0.0038
Amount of Annual Cost Allocated to Storage	\$12,639,539	\$550,677	\$2,376,821	\$52,077
Limit \$10000* (Storage Energy)	\$5,547,000	\$130,000	\$1,718,000	\$11,000

Energy Gains and Apportionment of Cost by Project

	Gains		Gains		Gains		Gains	
	MW	Costs Dollars	MW	Costs Dollars	MW	Costs Dollars	MW	Costs Dollars
Federal								
Hungry Horse	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0
Albeni Falls	6.3	\$63,000	0.0	\$0	0.0	\$0	0.0	\$0
Grand Coulee	69.8	\$698,000	2.6	\$26,000	0.0	\$0	0.0	\$0
Chief Joseph	48.7	\$487,000	1.7	\$17,000	0.0	\$0	0.0	\$0
McNary	14.1	\$141,000	0.6	\$6,000	9.9	\$99,000	0.0	\$0
John Day	20.4	\$204,000	0.7	\$7,000	14.2	\$142,000	0.0	\$0
The Dalles	15.7	\$157,000	0.6	\$6,000	10.7	\$107,000	0.3	\$3,000
Bonneville	15.3	\$153,000	0.5	\$5,000	10.2	\$102,000	0.3	\$3,000
Libby	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0
Total Federal	190.3	\$1,903,000	6.7	\$67,000	45	\$450,000	0.6	\$6,000
Non-Federal								
Kerr	62.9	\$629,000	0.0	\$0	0.0	\$0	0.0	\$0
Thompson Falls	20.6	\$206,000	0.0	\$0	0.0	\$0	0.0	\$0
Noxon Rapids	41.4	\$414,000	0.0	\$0	0.0	\$0	0.0	\$0
Cabinet Gorge	33.0	\$330,000	0.0	\$0	0.0	\$0	0.0	\$0
Box Canyon	15.5	\$155,000	0.0	\$0	0.0	\$0	0.0	\$0
Boundary	85.9	\$859,000	2.8	\$28,000	0.0	\$0	0.0	\$0
Spokane River	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0
Wells	17.8	\$178,000	0.6	\$6,000	0.0	\$0	0.0	\$0
Chelan	0.0	\$0	0.0	\$0	71.7	\$717,000	0.0	\$0
Rocky Reach	30.4	\$304,000	1.0	\$10,000	18.8	\$188,000	0.0	\$0
Rock Island	14.2	\$142,000	0.4	\$4,000	9.0	\$90,000	0.0	\$0
Wanapum	21.2	\$212,000	0.7	\$7,000	13.6	\$136,000	0.0	\$0
Priest Rapids	21.5	\$215,000	0.8	\$8,000	13.7	\$137,000	0.0	\$0
R Butte/Pelton	0.0	\$0	0.0	\$0	0.0	\$0	0.5	\$5,000
Total Non-Federal	364.4	\$3,644,000	6.3	\$63,000	126.8	\$1,268,000	0.5	\$5,000
Grand total - Federal and Non-Federal	554.7	\$5,547,000	13.0	\$130,000	171.8	\$1,718,000	1.1	\$11,000

Energy Gains and Apportionment of Costs by Ownership

United States	190.3	\$1,903,000	6.7	\$67,000	45.0	\$450,000	0.6	\$6,000
Avista Corporation	74.4	\$744,000	0.0	\$0	0.0	\$0	0.0	\$0
Northwestern	20.6	\$206,000	0.0	\$0	0.0	\$0	0.0	\$0
PUD #1 of Pend Oreille	15.5	\$155,000	0.0	\$0	0.0	\$0	0.0	\$0
Seattle City Light	85.9	\$859,000	2.8	\$28,000	0.0	\$0	0.0	\$0
PUD #1 of Douglas County	17.8	\$178,000	0.6	\$6,000	0.0	\$0	0.0	\$0
PUD #1 of Chelan County	44.6	\$446,000	1.4	\$14,000	99.5	\$995,000	0.0	\$0
PUD #2 of Grant County	42.7	\$427,000	1.5	\$15,000	27.3	\$273,000	0.0	\$0
Portland General Electric Company	0.0	\$0	0.0	\$0	0.0	\$0	0.5	\$5,000
Eugene Water and Electric Board	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0
Energy Keepers	62.9	\$629,000	0.0	\$0	0.0	\$0	0.0	\$0
Total	554.7	\$5,547,000	13.0	\$130,000	171.8	\$1,718,000	1.1	\$11,000

Pacific Northwest Coordination Agreement
Computation of Payment Under Subsection 13 (A)
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All Non-Federal

Headwater Improvement Project:

Total

Dam and Reservoir Cost

Annual Cost to be Apportioned	\$75,487,108
Critical Period & Annual Energy at Site, MW	1439.6
Critical Period & Annual Energy From Storage, MW	850.8
Portion of Annual Cost Allocated to Storage	
Amount of Annual Cost Allocated to Storage	\$19,791,560
Limit \$10000* (Storage Energy)	

Energy Gains and Apportionment of Cost by Project

	Gains MW	Costs Dollars
Federal		
Hungry Horse	0.0	\$0
Albeni Falls	6.9	\$66,000
Grand Coulee	91.1	\$878,000
Chief Joseph	59.8	\$582,000
McNary	28.2	\$277,000
John Day	40.4	\$397,000
The Dalles	31.4	\$308,000
Bonneville	29.8	\$293,000
Libby	0.0	\$0
Total Federal	287.6	\$2,801,000
Non-Federal		
Kerr	62.9	\$629,000
Thompson Falls	20.6	\$206,000
Noxon Rapids	43.6	\$436,000
Cabinet Gorge	34.6	\$346,000
Box Canyon	16.9	\$163,000
Boundary	96.6	\$932,000
Spokane River	31.7	\$317,000
Wells	21.6	\$210,000
Chelan	71.7	\$717,000
Rocky Reach	56.3	\$551,000
Rock Island	26.4	\$259,000
Wanapum	39.6	\$389,000
Priest Rapids	40.2	\$395,000
R Butte/Pelton	0.5	\$5,000
Total Non-Federal	563.2	\$5,555,000
Grand total - Federal and Non-Federal	850.8	\$8,356,000

Energy Gains and Apportionment of Costs by Ownership

United States	287.6	\$2,801,000
Avista Corporation	109.9	\$1,099,000
Northwestern	20.6	\$206,000
PUD #1 of Pend Oreille	16.9	\$163,000
Seattle City Light	96.6	\$932,000
PUD #1 of Douglas County	21.6	\$210,000
PUD #1 of Chelan County	154.4	\$1,527,000
PUD #2 of Grant County	79.8	\$784,000
Portland General Electric Company	0.5	\$5,000
Eugene Water and Electric Board	0.0	\$0
Energy Keepers	62.9	\$629,000
Total	850.8	\$8,356,000

Pacific Northwest Coordination Agreement
Computation of Payment Under Subsection 13 (A)
Allocation of Annual Costs - Storage Reservoirs - Joint use Facilities Allocated to Power

2023-24 Contract Year

All Ownership

Headwater Improvement Project:

Dam and Reservoir Cost

	Total
Annual Cost to be Apportioned	\$194,034,087
Critical Period & Annual Energy at Site, MW	8505.7
Critical Period & Annual Energy From Storage, MW	3021.5
Portion of Annual Cost Allocated to Storage	
Amount of Annual Cost Allocated to Storage	\$48,715,240
Limit \$10000* (Storage Energy)	

Energy Gains and Apportionment of Cost by Project

	Gains MW	Costs Dollars
Federal		
Hungry Horse	83.6	\$375,033
Albeni Falls	19.2	\$152,608
Grand Coulee	437.4	\$3,959,985
Chief Joseph	353.6	\$3,242,648
McNary	102.0	\$936,150
John Day	144.0	\$1,322,721
The Dalles	106.5	\$974,636
Bonneville	116.0	\$1,069,534
Libby	125.1	\$1,251,000
Total Federal	1487.4	\$13,284,315
Non-Federal		
Kerr	127.4	\$918,349
Thompson Falls	41.6	\$300,207
Noxon Rapids	87.8	\$634,283
Cabinet Gorge	68.1	\$496,282
Box Canyon	44.7	\$351,674
Boundary	250.3	\$1,988,734
Spokane River	31.7	\$317,000
Wells	132.3	\$1,215,543
Chelan	71.7	\$717,000
Rocky Reach	233.3	\$2,150,619
Rock Island	107.1	\$987,702
Wanapum	170.1	\$1,573,796
Priest Rapids	167.5	\$1,546,141
R Butte/Pelton	0.5	\$5,000
Total Non-Federal	1534.1	\$13,202,330
Grand total - Federal and Non-Federal	3021.5	\$26,486,645

Energy Gains and Apportionment of Costs by Ownership

United States	1487.4	\$13,284,315
Avista Corporation	187.6	\$1,447,565
Northwestern	41.6	\$300,207
PUD #1 of Pend Oreille	44.7	\$351,674
Seattle City Light	250.3	\$1,988,734
PUD #1 of Douglas County	132.3	\$1,215,543
PUD #1 of Chelan County	412.1	\$3,855,321
PUD #2 of Grant County	337.6	\$3,119,937
Portland General Electric Company	0.5	\$5,000
Eugene Water and Electric Board	0.0	\$0
Energy Keepers	127.4	\$918,349
Total	3021.5	\$26,486,645

Pacific Northwest Coordination Agreement
Computation of Payment Under Subsection 13 (A)
Allocation of Annual Costs - Storage Reservoirs - Joint use Facilities Allocated to Power

2023-24 Contract Year

United States

Headwater Improvement Project:

Dam and Reservoir Cost

	<u>Will-amettes</u>	<u>Blue River</u>	<u>Hills Creek</u>	<u>Lookout Point</u>	<u>Total</u>
Annual Cost to be Apportioned	\$0	\$0	\$1,261,038	\$5,827,549	\$7,088,587
Critical Period & Annual Energy at Site, MW	0.0	0.0	49.4	92.4	141.8
Critical Period & Annual Energy From Storage, MW	1.4	1.1	2.6	0.4	5.5
Portion of Annual Cost Allocated to Storage	1.0000	1.0000	0.0500	0.0043	
Amount of Annual Cost Allocated to Storage	\$0	\$0	\$63,052	\$25,119	\$88,171
Limit \$10000* (Storage Energy)	\$14,000	\$11,000	\$26,000	\$4,000	

Energy Gains and Apportionment of Cost by Project

	Gains MW	Costs Dollars	Gains MW	Costs Dollars	Gains MW	Costs Dollars	Gains MW	Costs Dollars	Gains MW	Costs Dollars
Federal										
Hungry Horse	0.0	\$0	0.0	\$0	1.7	\$17,000	0.0	\$0	1.7	\$17,000
Albeni Falls	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0
Grand Coulee	0.0	\$0	0.0	\$0	0.6	\$6,000	0.0	\$0	0.6	\$6,000
Chief Joseph	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0
McNary	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0
John Day	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0
The Dalles	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0
Bonneville	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0
Libby	0	\$0	0	\$0	2.3	\$23,000	0	\$0	2.3	\$23,000
Total Federal										
Non-Federal	0.0	\$0	0.8	\$0	0.0	\$0	0.0	\$0	0.8	\$0
Kerr	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0
Thompson Falls	1.4	\$14,000	0.3	\$0	0.3	\$3,000	0.4	\$4,000	2.4	\$21,000
Noxon Rapids	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0
Cabinet Gorge	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0
Box Canyon	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0
Boundary	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0
Spokane River	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0
Wells	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0
Chelan	1.4	\$14,000	1.1	\$0	0.3	\$3,000	0.4	\$4,000	3.2	\$21,000
Rocky Reach										
Rock Island	1.4	\$14,000	1.1	\$0	2.6	\$26,000	0.4	\$4,000	5.5	\$44,000
Wanapum										
Priest Rapids										
R Butte/Pelton	0.0	\$0	0.0	\$0	2.3	\$23,000	0.0	\$0	2.3	\$23,000
Total Non-Federal	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0
	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0
Grand total - Federal and Non-Federal	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0
<u>Energy Gains and Apportionment of Costs by Ownership</u>	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0
United States	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0
Avista Corporation	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0
Northwestern	1.4	\$14,000	0.3	\$0	0.3	\$3,000	0.4	\$4,000	2.4	\$21,000
PUD #1 of Pend Oreille	0.0	\$0	0.8	\$0	0.0	\$0	0.0	\$0	0.8	\$0
Seattle City Light	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0	0.0	\$0
PUD #1 of Douglas County	1.4	\$14,000	1.1	\$0	2.6	\$26,000	0.4	\$4,000	5.5	\$44,000

Pacific Northwest Coordination Agreement
Computation of Payment Under Subsection 13 (A)
Allocation of Annual Costs - Storage Reservoirs - Joint use Facilities Allocated to Power

2023-24 Contract Year

United States

Headwater Improvement Project:

Dam and Reservoir Cost

	Cougar	Gr Peter /Foster	Detroit	Total
Annual Cost to be Apportioned	\$1,975,914	\$4,189,437	\$3,823,526	\$17,077,464
Critical Period & Annual Energy at Site, MW	40.8	119.7	130.8	433.1
Critical Period & Annual Energy From Storage, MW	0.3	9.2	0.4	15.4
Portion of Annual Cost Allocated to Storage	0.0073	0.0714	0.0030	
Amount of Annual Cost Allocated to Storage	\$14,423	\$299,013	\$11,657	\$413,264
Limit \$10000* (Storage Energy)	\$3,000	\$92,000	\$4,000	

Energy Gains and Apportionment of Cost by Project

	Costs Dollars	Gains MW	Costs Dollars	Gains MW	Costs Dollars	Gains MW	Costs Dollars
Federal							
Hungry Horse	\$0	0.0	\$0	0.0	\$0	1.7	\$17,000
Albeni Falls	\$0	0.0	\$0	0.0	\$0	0.0	\$0
Grand Coulee	\$0	0.0	\$0	0.0	\$0	0.6	\$6,000
Chief Joseph	\$0	0.0	\$0	0.0	\$0	0.0	\$0
McNary	\$0	5.2	\$52,000	0.0	\$0	5.2	\$52,000
John Day	\$0	3.5	\$35,000	0.0	\$0	3.5	\$35,000
The Dalles	\$0	0.0	\$0	0.1	\$1,000	0.1	\$1,000
Bonneville	\$0	0.0	\$0	0.0	\$0	0.0	\$0
Libby	\$0	8.7	\$87,000	0.1	\$1,000	11.1	\$111,000
Total Federal							
Non-Federal	\$3,000	0.0	\$0	0.0	\$0	1.1	\$3,000
Kerr	\$0	0.0	\$0	0.0	\$0	0.0	\$0
Thompson Falls	\$0	0.5	\$5,000	0.3	\$3,000	3.2	\$29,000
Noxon Rapids	\$0	0.0	\$0	0.0	\$0	0.0	\$0
Cabinet Gorge	\$0	0.0	\$0	0.0	\$0	0.0	\$0
Box Canyon	\$0	0.0	\$0	0.0	\$0	0.0	\$0
Boundary	\$0	0.0	\$0	0.0	\$0	0.0	\$0
Spokane River	\$0	0.0	\$0	0.0	\$0	0.0	\$0
Wells	\$0	0.0	\$0	0.0	\$0	0.0	\$0
Chelan	\$3,000	0.5	\$5,000	0.3	\$3,000	4.3	\$32,000
Rocky Reach							
Rock Island	\$3,000	9.2	\$92,000	0.4	\$4,000	15.4	\$143,000
Wanapum							
Priest Rapids							
R Butte/Pelton	\$0	8.7	\$87,000	0.1	\$1,000	11.1	\$111,000
Total Non-Federal	\$0	0.0	\$0	0.0	\$0	0.0	\$0
	\$0	0.0	\$0	0.0	\$0	0.0	\$0
Grand total - Federal and Non-Federal	\$0	0.0	\$0	0.0	\$0	0.0	\$0
	\$0	0.0	\$0	0.0	\$0	0.0	\$0
<u>Energy Gains and Apportionment of Costs by Ownership</u>	\$0	0.0	\$0	0.0	\$0	0.0	\$0
United States	\$0	0.0	\$0	0.0	\$0	0.0	\$0
Avista Corporation	\$0	0.0	\$0	0.0	\$0	0.0	\$0
Northwestern	\$0	0.5	\$5,000	0.3	\$3,000	3.2	\$29,000
PUD #1 of Pend Oreille	\$3,000	0.0	\$0	0.0	\$0	1.1	\$3,000
Seattle City Light	\$0	0.0	\$0	0.0	\$0	0.0	\$0
PUD #1 of Douglas County	\$3,000	9.2	\$92,000	0.4	\$4,000	15.4	\$143,000

Pacific Northwest Coordination Agreement
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Allocation of Annual Costs - Storage Reservoirs - Joint use Facilities Allocated to Power

2023-24 Contract Year

PGE

Headwater Improvement Project:	Timothy	Total
<u>Dam and Reservoir Cost</u>		
Annual Cost to be Apportioned	\$5,891,286	\$5,891,286
Critical Period & Annual Energy at Site, MW	0.0	0.0
Critical Period & Annual Energy From Storage, MW	1.5	1.5
Portion of Annual Cost Allocated to Storage	1.0000	
Amount of Annual Cost Allocated to Storage	\$5,891,286	\$5,891,286
Limit \$10000* (Storage Energy)	\$15,000	

Energy Gains and Apportionment of Cost by Project

	Gains MW	Costs Dollars	Gains MW	Costs Dollars
Federal				
Hungry Horse	0.0	\$0	0.0	\$0
Albeni Falls	0.0	\$0	0.0	\$0
Grand Coulee	0.0	\$0	0.0	\$0
Chief Joseph	0.0	\$0	0.0	\$0
McNary	0.0	\$0	0.0	\$0
John Day	0.0	\$0	0.0	\$0
The Dalles	0.0	\$0	0.0	\$0
Bonneville	0.0	\$0	0.0	\$0
Libby	0	\$0	0.0	\$0
Total Federal				
Non-Federal	0.0	\$0	0.0	\$0
Kerr	0.0	\$0	0.0	\$0
Thompson Falls	0.0	\$0	0.0	\$0
Noxon Rapids	0.0	\$0	0.0	\$0
Cabinet Gorge	0.0	\$0	0.0	\$0
Box Canyon	1.0	\$10,000	1.0	\$10,000
Boundary	0.2	\$2,000	0.2	\$2,000
Spokane River	0.2	\$2,000	0.2	\$2,000
Wells	0.1	\$1,000	0.1	\$1,000
Chelan	1.5	\$15,000	1.5	\$15,000
Rocky Reach				
Rock Island	1.5	\$15,000	1.5	\$15,000
Wanapum				
Priest Rapids				
R Butte/Pelton	0.0	\$0	0.0	\$0
Total Non-Federal	0.0	\$0	0.0	\$0
	0.0	\$0	0.0	\$0
Grand total - Federal and Non-Federal	0.0	\$0	0.0	\$0
	0.0	\$0	0.0	\$0
<u>Energy Gains and Apportionment of Costs by Ownership</u>	0.0	\$0	0.0	\$0
United States	0.0	\$0	0.0	\$0
Avista Corporation	0.0	\$0	0.0	\$0
Northwestern	1.5	\$15,000	1.5	\$15,000
PUD #1 of Pend Oreille	0.0	\$0	0.0	\$0
Seattle City Light	0.0	\$0	0.0	\$0
PUD #1 of Douglas County	1.5	\$15,000	1.5	\$15,000

Pacific Northwest Coordination Agreement
Computation of Payment Under Subsection 13 (A)
Allocation of Annual Costs - Storage Reservoirs - Joint use Facilities Allocated to Power

2023-24 Contract Year

All Ownership

Headwater Improvement Project:

Dam and Reservoir Cost

Total

Annual Cost to be Apportioned	\$22,968,750
Critical Period & Annual Energy at Site, MW	433.1
Critical Period & Annual Energy From Storage, MW	16.9
Portion of Annual Cost Allocated to Storage	
Amount of Annual Cost Allocated to Storage	\$6,304,550
Limit \$10000* (Storage Energy)	

Energy Gains and Apportionment of Cost by Project

	Gains MW	Costs Dollars
Federal		
Hungry Horse	1.7	\$17,000
Albeni Falls	0.0	\$0
Grand Coulee	0.6	\$6,000
Chief Joseph	0.0	\$0
McNary	5.2	\$52,000
John Day	3.5	\$35,000
The Dalles	0.1	\$1,000
Bonneville	0.0	\$0
Libby	11.1	\$111,000
Total Federal		
Non-Federal	1.1	\$3,000
Kerr	0.0	\$0
Thompson Falls	3.2	\$29,000
Noxon Rapids	0.0	\$0
Cabinet Gorge	0.0	\$0
Box Canyon	1.0	\$10,000
Boundary	0.2	\$2,000
Spokane River	0.2	\$2,000
Wells	0.1	\$1,000
Chelan	5.8	\$47,000
Rocky Reach		
Rock Island	16.9	\$158,000
Wanapum		
Priest Rapids		
R Butte/Pelton	11.1	\$111,000
Total Non-Federal	0.0	\$0
	0.0	\$0
Grand total - Federal and Non-Federal	0.0	\$0
	0.0	\$0
<u>Energy Gains and Apportionment of Costs by Ownership</u>	0.0	\$0
United States	0.0	\$0
Avista Corporation	0.0	\$0
Northwestern	4.7	\$44,000
PUD #1 of Pend Oreille	1.1	\$3,000
Seattle City Light	0.0	\$0
PUD #1 of Douglas County	16.9	\$158,000

Pacific Northwest Coordination Agreement
Computation of Payment Under Subsection 13 (A)

Apportionment of Dam and Reservoir cost to storage Function

Columbia River Reservoirs

2023-24 Contract Year

		HUNGRY HORSE	KERR	NOXON RAPIDS	PRIEST LAKE	ALBENI FALLS	SULLIVAN LAKE	COUER D'ALENE	LONG LAKE	LIBBY	GRAND COULEE	CHELAN	ROUND BUTTE
Critical Period Energy (PS)	-Avg. MW	406.4	388.3	21.6	17.5	137.8	7.2	59.6	0.5	341.3	190.8	104.4	1.0
Critical Period Energy (PH)	-Avg. MW	80.2	89.5	90.5	0.0	18.3	0.0	6.0	39.2	122.7	1698.8	45.7	89.7
Avg. Annual Useable Energy (AS)	-Avg. MW	242.2	166.4	4.0	-2.3	188.9	5.8	8.7	0.6	329.7	333.6	67.4	0.1
Avg. Annual Useable Energy (AH)	-Avg. MW	194.7	239.6	404.8	0.0	55.7	0.0	19.9	120.9	462.5	4433.2	93.1	200.7
PS + AS	-Avg. MW	648.6	554.7	25.6	15.2	326.7	13.0	68.3	1.1	671.0	524.4	171.8	1.1
PH + AH	-Avg. MW	274.9	329.1	495.3	0.0	74.0	0.0	25.9	160.1	585.2	6132.0	138.8	290.4
PS + AS + PH + AH	-Avg. MW	923.5	883.8	520.9	15.2	400.7	13.0	94.2	161.2	1256.2	6656.4	310.6	291.5
(PS + AS)/(PS + AS + PH + AH)		0.7023	0.6276	0.0491	1.0000	0.8153	1.0000	0.7251	0.0068	0.5342	0.0788	0.5531	0.0038
CP =		\$4,142,854	\$20,138,497	\$25,875,816	\$0	\$9,730,181	\$550,677	\$3,935,924	\$6,888,721	\$21,596,631	\$83,077,313	\$4,297,094	\$13,800,379
CS =		\$2,909,643	\$12,639,539	\$1,271,685	\$0	\$7,933,242	\$550,677	\$2,853,754	\$47,007	\$11,535,854	\$6,544,941	\$2,376,821	\$52,077
LIMIT (\$10000) (PS + AS)		\$6,486,000	\$5,547,000	\$256,000	\$0	\$3,267,000	\$130,000	\$683,000	\$11,000	\$6,710,000	\$5,244,000	\$1,718,000	\$11,000
Cost to be allocated		\$2,909,643	\$5,547,000	\$256,000	\$0	\$3,267,000	\$130,000	\$683,000	\$11,000	\$6,710,000	\$5,244,000	\$1,718,000	\$11,000

Pacific Northwest Coordination Agreement
Computation of Payment Under Subsection 13 (A)

Apportionment of Dam and Reservoir cost to storage Function

Columbia River Reservoirs

2023-24 Contract Year

		WILL- AMETTES	BLUE RIVER	HILLS CREEK	LOOKOUT POINT	COUGAR	GR PETER /FOSTER	DETROIT	TIMOTHY
Critical Period Energy (PS)	-Avg. MW	1.0	0.2	2.7	0.1	0.0	6.4	0.6	1.4
Critical Period Energy (PH)	-Avg. MW	0.0	0.0	10.8	24.8	11.0	34.9	32.3	0.0
Avg. Annual Useable Energy (AS)	-Avg. MW	0.4	0.9	-0.1	0.3	0.3	2.8	-0.2	0.1
Avg. Annual Useable Energy (AH)	-Avg. MW	0.0	0.0	38.6	67.6	29.8	84.8	98.5	0.0
PS + AS	-Avg. MW	1.4	1.1	2.6	0.4	0.3	9.2	0.4	1.5
PH + AH	-Avg. MW	0.0	0.0	49.4	92.4	40.8	119.7	130.8	0.0
PS + AS + PH + AH	-Avg. MW	1.4	1.1	52.0	92.8	41.1	128.9	131.2	1.5
(PS + AS)/(PS + AS + PH + AH)		1.0000	1.0000	0.0500	0.0043	0.0073	0.0714	0.0030	1.0000
CP =		\$0	\$0	\$1,261,038	\$5,827,549	\$1,975,914	\$4,189,437	\$3,823,526	\$5,891,286
CS =		\$0	\$0	\$63,052	\$25,119	\$14,423	\$299,013	\$11,657	\$5,891,286
LIMIT (\$10000) (PS + AS)		\$14,000	\$11,000	\$26,000	\$4,000	\$3,000	\$92,000	\$4,000	\$15,000
Cost to be allocated		\$14,000	\$11,000	\$26,000	\$4,000	\$3,000	\$92,000	\$4,000	\$15,000

Pacific Northwest Coordination Agreement
Computation of Payment Under Subsection 13 (A)

Allocation of Storage Energy Generation
From Average Annual Useable Energy and
Critical Period Storage (PS + AS)
Figures in Average MW

2023-24 Contract Year

J =2

	HUNGRY HORSE	KERR	NOXON RAPIDS	PRIEST LAKE	ALBENI FALLS	SULLIVAN LAKE	COUER D'ALENE	LONG LAKE	LIBBY	GRAND COULEE	CHELAN	ROUND BUTTE	Total
HUNGRY HORSE	83.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	83.6
KERR	64.5	62.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	127.4
THOMPSON FALLS	21.0	20.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	41.6
NOXON RAPIDS	44.2	41.4	2.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	87.8
CABINET GORGE	33.5	33.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	68.1
ALBENI FALLS	6.6	6.3	0.3	0.3	5.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	19.2
BOX CANYON	16.2	15.5	0.8	0.6	11.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	44.7
BOUNDARY	87.1	85.9	4.5	3.4	66.6	2.8	0.0	0.0	0.0	0.0	0.0	0.0	250.3
POST FALLS	0.0	0.0	0.0	0.0	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	3.0
UPPER FALLS	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	0.0	0.0	0.0	0.0	3.4
MONROE	0.0	0.0	0.0	0.0	0.0	0.0	4.6	0.0	0.0	0.0	0.0	0.0	4.6
NINE MILE	0.0	0.0	0.0	0.0	0.0	0.0	3.8	0.0	0.0	0.0	0.0	0.0	3.8
LONG LAKE	0.0	0.0	0.0	0.0	0.0	0.0	11.3	0.8	0.0	0.0	0.0	0.0	12.1
LITTLE FALLS	0.0	0.0	0.0	0.0	0.0	0.0	4.5	0.3	0.0	0.0	0.0	0.0	4.8
SPOKANE RIVER	0.0	0.0	0.0	0.0	0.0	0.0	30.6	1.1	0.0	0.0	0.0	0.0	31.7
GRAND COULEE	69.1	69.8	4.3	3.3	63.5	2.6	11.1	0.0	117.7	96.0	0.0	0.0	437.4
CHIEF JOSEPH	50.3	48.7	2.6	1.6	39.3	1.7	5.2	0.0	100.5	103.7	0.0	0.0	353.6
WELLS	18.4	17.8	0.8	0.6	13.7	0.6	1.8	0.0	37.5	41.1	0.0	0.0	132.3
CHELAN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	71.7	0.0	71.7
ROCKY REACH	30.9	30.4	1.7	1.2	23.3	1.0	3.2	0.0	60.3	62.5	18.8	0.0	233.3
ROCK ISLAND	14.2	14.2	0.7	0.5	11.3	0.4	1.6	0.0	27.3	27.9	9.0	0.0	107.1
WANAPUM	21.8	21.2	1.0	0.7	16.5	0.7	2.4	0.0	44.7	47.5	13.6	0.0	170.1
PRIEST RAPIDS	22.1	21.5	1.0	0.7	17.2	0.8	2.5	0.0	44.2	43.8	13.7	0.0	167.5
MCNARY	14.3	14.1	0.9	0.5	13.1	0.6	2.2	0.0	24.5	21.9	9.9	0.0	102.0
JOHN DAY	20.0	20.4	1.3	0.7	17.7	0.7	3.1	0.0	34.7	31.2	14.2	0.0	144.0
ROUND BUTTE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
PELTON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5
R BUTTE/PELTON	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5
THE DALLES	15.3	15.7	1.0	0.6	14.0	0.6	2.5	0.0	25.8	20.0	10.7	0.3	106.5
BONNEVILLE	15.5	15.3	0.9	0.5	13.2	0.5	2.1	0.0	28.7	28.8	10.2	0.3	116.0
LIBBY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	125.1	0.0	0.0	0.0	125.1
Total	648.6	554.7	25.6	15.2	326.7	13.0	68.3	1.1	671.0	524.4	171.8	1.1	3021.5

Pacific Northwest Coordination Agreement
Computation of Payment Under Subsection 13 (A)

Allocation of Storage Energy Generation
From Average Annual Useable Energy and
Critical Period Storage (PS + AS)
Figures in Average MW

2023-24 Contract Year

J = 2

	WILL- AMETTES	BLUE RIVER	HILLS CREEK	LOOKOUT POINT	COUGAR	GR PETER /FOSTER	DETROIT	TIMOTHY	Total
HILLS CREEK	0.0	0.0	1.7	0.0	0.0	0.0	0.0	0.0	1.7
LOOKOUT POINT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
DEXTER	0.0	0.0	0.6	0.0	0.0	0.0	0.0	0.0	0.6
COUGAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
GREEN PETER	0.0	0.0	0.0	0.0	0.0	5.2	0.0	0.0	5.2
FOSTER	0.0	0.0	0.0	0.0	0.0	3.5	0.0	0.0	3.5
DETROIT	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1
BIG CLIFF	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
LEABURG	0.0	0.8	0.0	0.0	0.3	0.0	0.0	0.0	1.1
WALTERVILLE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SULLIVAN	1.4	0.3	0.3	0.4	0.0	0.5	0.3	0.0	3.2
TIMOTHY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
STONE CREEK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
OAK GROVE	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0
NORTH FORK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2
FARADAY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2
RIVER MILL	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
Total	1.4	1.1	2.6	0.4	0.3	9.2	0.4	1.5	16.9

PACIFIC NORTHWEST COORDINATION AGREEMENT

2023-24

SUMMARY OF ASUBS

J IS 2

	HORS	SKQ	NOXN	PRST	ALBF	SULL	PSTF	LNGL	LIBY	DUNC	KTNY	MICA	AROW	GNDC	CHLN	USNK	BLEE	DWOR	JDAY	RNDB	TOTL
HORS	15.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	15.4
SKQ	33.9	27.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	61.6
TOMF	11.1	9.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	20.4
NOXN	18.2	11.5	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	30.0
CABN	17.4	14.5	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	32.3
ALBF	3.3	2.5	0.1	0.1	3.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.8
BOXC	8.7	6.9	0.3	0.1	7.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	23.6
BNDY	40.9	32.9	1.2	0.2	41.7	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	118.2
PSTF	0.0	0.0	0.0	0.0	0.0	0.0	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.4
UFLS	0.0	0.0	0.0	0.0	0.0	0.0	1.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.5
MNRO	0.0	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.1
NMLE	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8
LNGL	0.0	0.0	0.0	0.0	0.0	0.0	5.1	0.7	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	5.8
LITF	0.0	0.0	0.0	0.0	0.0	0.0	2.2	0.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.6
GNDC	13.8	6.3	0.3	-0.5	33.7	1.0	-0.9	-0.2	42.5	-3.4	5.4	43.7	-56.5	42.8	0.0	0.0	0.0	0.0	0.0	0.0	128.1
CHJO	18.5	12.2	0.3	-0.6	22.1	0.8	-1.7	-0.2	57.2	10.8	3.2	96.7	20.3	73.1	0.0	0.0	0.0	0.0	0.0	0.0	312.6
WELS	8.3	6.2	0.1	-0.1	8.2	0.3	-0.4	-0.1	23.7	5.9	1.9	44.4	18.1	31.4	0.0	0.0	0.0	0.0	0.0	0.0	148.1
CHLN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	33.8	0.0	0.0	0.0	0.0	0.0	33.8
RCKR	14.6	11.6	0.5	0.1	14.5	0.5	-0.3	-0.1	38.1	9.6	6.1	70.4	32.9	46.8	8.1	0.0	0.0	0.0	0.0	0.0	253.3
RCKI	6.0	4.8	0.1	-0.1	6.9	0.2	-0.2	-0.0	16.2	3.5	2.0	28.9	9.3	20.1	3.6	0.0	0.0	0.0	0.0	0.0	101.3
WANA	10.3	8.0	0.2	-0.1	10.3	0.4	-0.1	-0.1	29.1	8.0	2.3	58.0	24.5	36.5	6.1	0.0	0.0	0.0	0.0	0.0	193.4
PRPD	10.2	7.8	0.1	-0.1	10.8	0.4	-0.1	-0.0	28.0	7.1	1.4	53.6	18.1	32.4	5.9	0.0	0.0	0.0	0.0	0.0	175.6
DWOR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	56.6	0.0	0.0	56.6
LTLG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	-1.8	0.0	0.0	-1.5
LOMN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.3	-3.1	0.0	0.0	-2.8
ICEH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.4	-4.9	0.0	0.0	-5.3
NARY	2.4	0.5	0.0	-0.3	6.7	0.2	-0.4	-0.1	8.4	-1.1	-0.6	9.5	-17.0	10.5	2.1	0.0	2.2	6.4	0.0	0.0	29.5
JDAY	2.4	0.2	0.0	-0.5	8.2	0.2	-0.7	-0.1	10.8	-1.9	-1.0	11.7	-25.0	14.3	2.7	0.0	3.1	7.1	-1.2	0.0	30.3
RNDB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.3	-0.3
PELT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.0	-0.0
DALS	1.7	0.1	-0.0	-0.3	6.7	0.2	-0.4	-0.1	7.3	-1.7	-0.8	6.6	-20.7	6.9	1.8	0.0	2.4	5.8	-1.0	0.0	14.6
BONV	5.1	3.3	0.1	-0.2	7.6	0.2	-0.2	-0.0	14.5	2.0	1.0	23.1	-0.2	18.8	3.3	0.0	3.3	8.8	-1.0	0.1	89.4
GRAN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.8	0.0	0.0	1.6
LIBY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	53.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	53.9
TOTL	242.2	166.4	4.0	-2.3	188.9	5.8	8.7	0.0	329.7	38.8	20.9	446.6	3.8	333.6	67.4	0.0	12.0	75.7	-3.2	-0.2	
ASUBH	194.7	239.6	404.8	0.0	55.7	0.0	19.9	120.9	462.5	0.0	0.0	1685.5	200.8	4433.2	93.1	1.6	561.3	427.0	1963.8	200.7	

NWPP COORDINATING GROUP
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PACIFIC NORTHWEST COORDINATION AGREEMENT

2023-24

SUMMARY OF A-SUB-S

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	COTG	DORE	FERN	FALL	BLUE	HCRK	LOOK	CGAR	GRNP	FSTR	DETR	TIM	TOTL
HCRK	0.0	0.0	0.0	0.0	0.0	-0.4	0.0	0.0	0.0	0.0	0.0	0.0	-0.4
LOOK	0.0	0.0	0.0	0.0	0.0	-2.0	-6.3	0.0	0.0	0.0	0.0	0.0	-8.3
DXTR	0.0	0.0	0.0	0.0	0.0	0.2	-0.5	0.0	0.0	0.0	0.0	0.0	-0.3
CGAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-4.0	0.0	0.0	0.0	0.0	-4.0
GRNP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.1	0.0	0.0	0.0	1.1
FSTR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.6	0.0	0.0	1.5
DETR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.5	0.0	-0.5
BIGC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.3	0.0	-0.3
LEAB	0.0	0.0	0.0	0.0	0.8	0.0	0.0	0.3	0.0	0.0	0.0	0.0	1.1
WLTR	0.0	0.0	0.0	0.0	0.6	0.0	0.0	0.2	0.0	0.0	0.0	0.0	0.8
TSUL	0.0	0.1	0.1	0.2	0.1	0.1	0.3	0.0	0.1	0.1	0.3	0.0	1.4
TIM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCRK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
OAKG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
NFRK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FRDY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1
RIVM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
TOTL	0.0	0.1	0.1	0.2	1.5	-2.1	-6.5	-3.5	2.1	0.7	-0.5	0.2	
ASUBH	0.0	0.0	0.0	0.0	0.0	38.6	67.6	29.8	57.3	27.5	98.5	0.0	

NWPP-Coordinating Group

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PACIFIC NORTHWEST COORDINATION AGREEMENT

1923-24

CRITICAL PER SUMMARY

	HORS	SKQ	NOXN	PRST	ALBF	SULL	PSTF	LNGL	LIBY	DUNC	KTNY	MICA	AROW	GNDC	CHLN	USNK	BLEE	DWOR	JDAY	RNDB	TOTL
QS AV	519.6	596.5	37.6	31.6	280.1	15.4	0.0	1.6	706.4	689.1	215.6	3913.1	3148.5	500.0	340.9	22.5	-119.5	173.3	-25.4	12.2	
QSMAY	519.6	596.5	37.6	35.5	280.1	15.4	112.5	1.6	706.4	689.1	215.6	3913.1	3148.5	500.0	341.5	22.5	-119.5	173.3	-25.4	12.2	
HORS	68.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	68.2
SKQ	30.6	35.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	65.7
TOMF	9.9	11.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.2
NOXN	26.0	29.9	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	57.8
CABN	16.1	18.5	1.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	35.7
ALBF	3.3	3.8	0.2	0.2	1.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	9.5
BOXC	7.5	8.6	0.5	0.5	4.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	21.1
BNDY	46.2	53.0	3.3	3.2	24.9	1.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	132.0
PSTF	0.0	0.0	0.0	0.0	0.0	0.0	1.6	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.6
UFLS	0.0	0.0	0.0	0.0	0.0	0.0	1.9	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.9
MNRO	0.0	0.0	0.0	0.0	0.0	0.0	2.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.5
NMLE	0.0	0.0	0.0	0.0	0.0	0.0	2.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.0
LNGL	0.0	0.0	0.0	0.0	0.0	0.0	6.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6.3
LITF	0.0	0.0	0.0	0.0	0.0	0.0	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2.4
GNDC	55.3	63.5	4.0	3.8	29.8	1.6	12.0	0.2	75.2	73.4	23.0	416.6	335.2	53.2	0.0	0.0	0.0	0.0	0.0	0.0	1146.8
CHJO	31.8	36.5	2.3	2.2	17.2	0.9	6.9	0.1	43.3	42.2	13.2	239.7	192.9	30.6	0.0	0.0	0.0	0.0	0.0	0.0	659.9
WELS	10.1	11.6	0.7	0.7	5.5	0.3	2.2	0.0	13.8	13.4	4.2	76.2	61.3	9.7	0.0	0.0	0.0	0.0	0.0	0.0	209.8
CHLN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	37.9	0.0	0.0	0.0	0.0	0.0	37.9
RCKR	16.3	18.8	1.2	1.1	8.8	0.5	3.5	0.1	22.2	21.7	6.8	123.1	99.0	15.7	10.7	0.0	0.0	0.0	0.0	0.0	349.5
RCKI	8.2	9.4	0.6	0.6	4.4	0.2	1.8	0.0	11.1	10.8	3.4	61.4	49.4	7.8	5.4	0.0	0.0	0.0	0.0	0.0	174.4
WANA	11.5	13.2	0.8	0.8	6.2	0.3	2.5	0.0	15.6	15.2	4.8	86.4	69.5	11.0	7.5	0.0	0.0	0.0	0.0	0.0	245.4
PRPD	11.9	13.7	0.9	0.8	6.4	0.4	2.6	0.0	16.2	15.8	4.9	89.6	72.1	11.4	7.8	0.0	0.0	0.0	0.0	0.0	254.3
DWOR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	31.8	0.0	0.0	31.8
GRAN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.4	4.9	0.0	0.0	1.5
LTLG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.5	5.0	0.0	0.0	1.6
LOMN	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.6	5.2	0.0	0.0	1.6
ICEH	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-3.5	5.1	0.0	0.0	1.6
NARY	11.9	13.6	0.9	0.8	6.4	0.4	2.6	0.0	16.1	15.7	4.9	89.4	72.0	11.4	7.8	0.0	-2.7	4.0	0.0	0.0	255.2
JDAY	17.6	20.2	1.3	1.2	9.5	0.5	3.8	0.1	23.9	23.3	7.3	132.2	106.4	16.9	11.5	0.0	-4.0	5.9	-0.9	0.0	376.5
RNDB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-9.9	-9.9
PELT	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.5	0.5
DALS	13.6	15.6	1.0	0.9	7.3	0.4	2.9	0.0	18.5	18.0	5.6	102.4	82.4	13.1	8.9	0.0	-3.1	4.5	-0.7	0.3	292.0
BONV	10.4	12.0	0.8	0.7	5.6	0.3	2.3	0.0	14.2	13.8	4.3	78.6	63.2	10.0	6.9	0.0	-2.4	3.5	-0.5	0.2	223.9
LIBY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	71.2	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	71.2
TOTL	406.4	388.3	21.6	17.5	137.8	7.2	59.6	0.6	341.3	263.3	82.4	1495.6	1203.4	190.8	104.4	0.0	-26.2	69.9	-2.1	-8.9	
PSUBH	80.2	89.5	90.5	0.0	18.3	0.0	6.0	39.2	122.7	0.0	0.0	1028.2	97.8	1698.8	45.7	4.6	194.7	81.3	754.9	89.7	

PACIFIC NORTHWEST COORDINATION AGREEMENT

1923-24

CRITICAL PER SUMMARY

	COTG	DORE	FERN	FALL	BLUE	HCRK	LOOK	CGAR	GRNP	FSTR	DETR	TIM	TOTL	POWR
QS AV	0.9	2.0	2.9	3.3	-6.1	-19.7	12.8	7.0	-10.2	-0.0	5.8	6.6		
QSMVA	13.8	30.3	44.0	50.3	25.6	22.7	12.8	7.0	47.1	5.0	5.8	6.6		
HCRK	0.0	0.0	0.0	0.0	0.0	2.1	0.0	0.0	0.0	0.0	0.0	0.0	2.1	2.1
LOOK	0.0	0.0	0.0	0.0	0.0	1.6	0.9	0.0	0.0	0.0	0.0	0.0	2.4	2.4
DXTR	0.0	0.0	0.0	0.0	0.0	0.4	0.2	0.0	0.0	0.0	0.0	0.0	0.7	0.7
CGAR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.9	0.0	0.0	0.0	0.0	0.9	0.9
GRNP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4.1	0.0	0.0	0.0	4.1	4.1
FSTR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.8	0.2	0.0	0.0	2.0	2.0
DETR	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.6	0.0	0.6	0.6
BIGC	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1
LEAB	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
WLIR	0.0	0.0	0.0	0.0	-1.4	0.0	0.0	-0.4	0.0	0.0	0.0	0.0	-1.8	-0.4
TSUL	0.1	0.2	0.3	0.4	0.2	0.2	0.1	0.0	0.3	0.0	0.0	0.0	1.8	0.7
TIM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
SCRK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.9	-0.9	-0.9
OAKG	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	1.0	1.0	1.0
NFRK	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.2	0.2	0.2
FRDY	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
RIVM	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1
TOTL	0.1	0.2	0.3	0.4	-1.2	4.3	1.2	0.5	6.2	0.2	0.7	0.5		
PSUBH	0.0	0.0	0.0	0.0	0.0	10.8	24.8	11.0	22.8	12.1	32.3	0.0		

NWPP COORDINATING GROUP
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2023-24															
PACIFIC NORTHWEST COORDINATION AGREEMENT															
POTENTIAL SECONDARY MARKET															
WHEN THE COORDINATED SYSTEM IS AT UPPER RULE CURVE															
ENERGY - Avg. MW	ANNUAL AVG.	2023 AUG1	AUG2	SEP	OCT	NOV	DEC	2024 JAN	FEB	MAR	APR1	APR2	MAY	JUN	JUL
SECONDARY MARKET	14234	15420	15301	15077	13074	14234	15070	15331	14721	14325	13254	13201	12368	13337	14682
FELCC	16414	19203	17572	14830	15019	16585	18710	17544	15672	15777	14260	13260	13219	18755	18740
FIRM ENERGY LOAD	18508	18093	18143	16717	16773	19041	20982	20823	19848	18514	17502	17938	17240	17847	18478
SURPLUS ABOVE FIRM LOAD	-2094	1110	-571	-1887	-1754	-2456	-2272	-3279	-4176	-2737	-3242	-4678	-4021	908	262
ADJUSTED SECONDARY MARKET	16328	14310	15872	16964	14828	16690	17342	18610	18897	17062	16496	17879	16389	12429	14421

2023-24
PACIFIC NORTHWEST COORDINATION AGREEMENT
POTENTIAL SECONDARY MARKET
WHEN THE COORDINATED SYSTEM IS AT UPPER RULE CURVE

ENERGY - Avg. MW

	ANNUAL AVG.	2023 AUG1	AUG2	SEP	OCT	NOV	DEC	2024 JAN	FEB	MAR	APR1	APR2	MAY	JUN	JUL
SOUTHWEST MARKET															
AC Capacity		3928	3928	4070	4096	3835	4006	4083	3917	3871	4239	4239	3959	3959	3959
DC Capacity		<u>2549</u>	<u>2549</u>	<u>2339</u>	<u>1134</u>	<u>2272</u>	<u>2544</u>	<u>2530</u>	<u>2520</u>	<u>2439</u>	<u>2685</u>	<u>2685</u>	<u>2486</u>	<u>2486</u>	<u>2486</u>
Total Line Limit	6366	6477	6477	6409	5230	6107	6550	6613	6437	6310	6924	6924	6445	6445	6445
Less Loop Flow	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Less Maintenance (f1)	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		----	----	----	----	----	----	----	----	----	----	----	----	----	----
Net Line Limit		----	----	----	----	----	----	----	----	----	----	----	----	----	----
Capacity Factor		----	----	----	----	----	----	----	----	----	----	----	----	----	----
Total Southwest Market	6366	6477	6477	6409	5230	6107	6550	6613	6437	6310	6924	6924	6445	6445	6445
Less Firm Energy (f2)															
BPA	464	514	596	454	454	454	454	454	454	454	454	454	454	454	472
PAC	0	-	-	-	-	-	-	-	-	-	-	-	-	-	-
PGE	32	36	36	31	26	25	25	18	28	28	41	41	37	43	45
PUGET	838	589	589	597	845	1062	1115	941	937	849	843	843	826	767	680
GCPD	50	52	52	53	52	49	47	48	48	50	52	52	52	52	51
DOPD	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
		----	----	----	----	----	----	----	----	----	----	----	----	----	----
Total Firm Energy	1384	1190	1272	1135	1377	1591	1641	1462	1467	1381	1390	1390	1370	1317	1249
NET SOUTHWEST MARKET	4982	5287	5205	5274	3853	4516	4909	5151	4970	4929	5534	5534	5075	5128	5196

(f1) - DC Line S.I.R. (Scheduled Inspection and Repair).

(f2) - From data submitted in accordance with Subsection 6(c) of the
Coordination Agreement.

2023-24
PACIFIC NORTHWEST COORDINATION AGREEMENT
POTENTIAL SECONDARY MARKET
WHEN THE COORDINATED SYSTEM IS AT UPPER RULE CURVE

ENERGY - Avg. MW

	ANNUAL AVG.	2023 AUG1	AUG2	SEP	OCT	NOV	DEC	2024 JAN	FEB	MAR	APR1	APR2	MAY	JUN	JUL
EASTERN MARKET															
Total Line Limit to Idaho															
Idaho (f1)		1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200	1200
Capacity Factor		<u>0.85</u>	<u>0.85</u>	<u>0.85</u>	<u>0.85</u>	<u>0.90</u>	<u>0.95</u>	<u>0.95</u>	<u>0.95</u>	<u>0.95</u>	<u>0.95</u>	<u>0.95</u>	<u>0.95</u>	<u>0.95</u>	<u>0.90</u>
Net Line Limit to Idaho	1100	1020	1020	1020	1020	1080	1140	1140	1140	1140	1140	1140	1140	1140	1080
Utah (f2)		337	337	337	337	337	337	337	337	337	337	337	337	337	337
Capacity Factor		<u>0.95</u>	<u>0.95</u>	<u>0.95</u>	<u>0.95</u>	<u>0.95</u>	<u>0.95</u>	<u>0.95</u>	<u>0.95</u>	<u>0.95</u>	<u>0.95</u>	<u>0.95</u>	<u>0.95</u>	<u>0.95</u>	<u>0.95</u>
Net Line Limit to Utah	320	320	320	320	320	320	320	320	320	320	320	320	320	320	320
Total Eastern Market	1420	1340	1340	1340	1340	1400	1460	1460	1460	1460	1460	1460	1460	1460	1400
NON CORDINATED SYSTEM -															
BPA	528	609	614	503	548	548	547	508	508	508	508	508	508	508	529
PacifiCorp	73	73	73	66	67	70	74	82	72	79	65	65	89	72	71
Portland General Electric	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Puget Sound Energy	490	231	231	235	494	579	681	696	611	520	506	506	500	463	361
Tacoma Power	587	460	460	519	509	608	698	699	720	602	510	510	604	600	510
Other sources	171	<u>217</u>	<u>174</u>	<u>123</u>	<u>154</u>	<u>203</u>	<u>203</u>	<u>185</u>	<u>136</u>	<u>133</u>	<u>137</u>	<u>84</u>	<u>122</u>	<u>280</u>	<u>201</u>
TOTAL	1848	1591	1553	1446	1772	2006	2203	2170	2047	1842	1726	1673	1822	1922	1672
TOTAL EXPORT MARKET	8250	8218	8099	8060	6965	7923	8572	8782	8477	8231	8721	8668	8358	8510	8269

(f1) - Estimated transfer (Westside) from Northwest to Idaho. Assumes the Jim Bridger plant is reduced.

(f2) - Net transfer limit over the Amps and Jefferson lines.

2023-24															
PACIFIC NORTHWEST COORDINATION AGREEMENT															
POTENTIAL SECONDARY MARKET															
ENERGY - Avg. MW															
WHEN THE COORDINATED SYSTEM IS AT UPPER RULE CURVE															
	ANNUAL	2023						2024							
	AVG.	AUG1	AUG2	SEP	OCT	NOV	DEC	JAN	FEB	MAR	APR1	APR2	MAY	JUN	JUL
TOTAL EXPORT MARKET	8250	8218	8099	8060	6965	7923	8572	8782	8477	8231	8721	8668	8358	8510	8269
POTENTIAL DSI LOAD (f1)	18	87	87	12	12	12	12	12	12	12	12	12	12	12	12
DISPLACEABLE THERMAL (f2)															
Columbia Gen. Station	1116	1116	1116	1116	1116	1116	1116	1116	1116	1116	1116	1116	1116	1116	1116
Misc. Thermal	4146	4763	4763	4797	4448	4532	4748	4840	4545	4315	3080	3080	2360	3031	4299
	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Total Displaceable Thermal	5262	5879	5879	5912	5563	5648	5864	5955	5661	5431	4195	4195	3475	4147	5414
REPLACEABLE IMPORTS (f2)															
PAC - Wyoming	704	1,236	1,236	1,093	533	652	623	582	572	651	326	326	523	668	988
	----	----	----	----	----	----	----	----	----	----	----	----	----	----	----
Total Replaceable Imports	704	1236	1236	1093	533	652	623	582	572	651	326	326	523	668	988
TOTAL REPLACEABLE THERMAL	5966	7115	7115	7005	6096	6299	6487	6537	6232	6082	4521	4521	3998	4815	6402
TOTAL SECONDARY MARKET	14234	15420	15301	15077	13074	14234	15070	15331	14721	14325	13254	13201	12368	13337	14682

(f1) - DSI total plant capacity less DSI firm load.
(f2) - Data based on the 2023-24 data submittals.