Southeastern Power Administration
Proposed Appropriation Language

For expenses necessary for operation and maintenance of power transmission facilities and for marketing electric power and energy, including transmission wheeling and ancillary services, pursuant to section 5 of the Flood Control Act of 1944 (16 U.S.C. 825s), as applied to the southeastern power area, $8,449,000, including official reception and representation expenses in an amount not to exceed $1,500, to remain available until expended: Provided, That notwithstanding 31 U.S.C. 3302 and section 5 of the Flood Control Act of 1944, up to $8,449,000, collected by the Southeastern Power Administration from the sale of power and related services shall be credited to this account as discretionary offsetting collections, to remain available until expended for the sole purpose of funding the annual expenses of the Southeastern Power Administration: Provided further, That the sum herein appropriated for annual expenses shall be reduced as collections are received during the fiscal year so as to result in a final fiscal year 2024 appropriation estimated at not more than $0: Provided further, That, notwithstanding 31 U.S.C. 3302, up to $71,850,000 collected by the Southeastern Power Administration pursuant to the Flood Control Act of 1944 to recover purchase power and wheeling expenses shall be credited to this account as offsetting collections, to remain available until expended for the sole purpose of making purchase power and wheeling expenditures: Provided further, That for purposes of this appropriation, annual expenses means expenditures that are generally recovered in the same year that they are incurred (excluding purchase power and wheeling expenses).

Explanation of Changes

No changes.

Public Law Authorizations:
Public Law 78-534, Flood Control Act of 1944
Public Law 95-91, DOE Organization Act of 1977, Section 302
Public Law 102-486, Energy Policy Act of 1992

Southeastern Power Administration

Funding ($K)

	FY 2022 Enacted	FY 2023 Enacted	FY 2024 Request
Gross	73,637	100,960	94,468
Offsets	-73,637	-100,960	-94,468
Net BA	0	0	0

Outyear Funding ($K)

	FY 2025 Request	FY 2026 Request	FY 2027 Request	FY 2028 Request
Gross	96,640	98,863	101,137	103,463
Offsets	-96,640	-98,863	-101,137	-103,463
Net BA	0	0	0	0

Overview

Southeastern Power Administration (Southeastern or SEPA) exists to carry out the functions assigned by the Flood Control Act of 1944: to market the electric power and energy generated by the Federal reservoir projects to public bodies and cooperatives in the southeastern United States in a professional, innovative, customer-oriented manner, while continuing to meet the challenges of an ever-changing electric utility environment through continuous improvement. Southeastern provides 472 public power customers with 3,392 megawatts of hydroelectric capacity from 22 Federal multipurpose projects, operated by the U.S. Army Corps of Engineers (Corps) at cost-based rates.

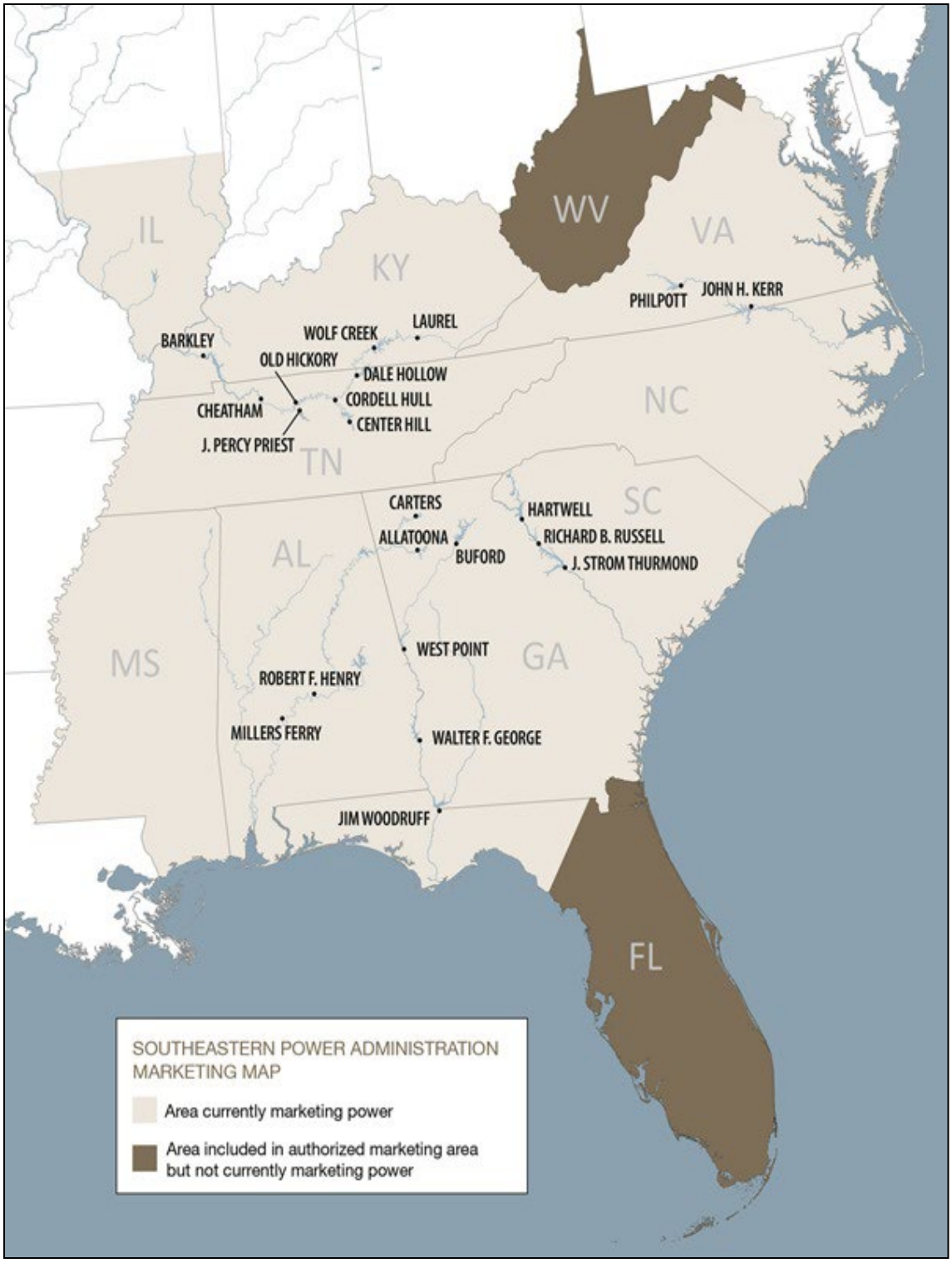
Annually, Southeastern produces an average of 7,717 gigawatt-hours of clean renewable hydroelectric energy. Southeastern maintains and upgrades its energy infrastructure to ensure reliable and efficient delivery of Federal power. Southeastern promotes energy efficiency, renewable energy, and sound management of the dispatch and distribution of Federal hydroelectric power resources in the southeastern United States while also meeting national utility performance standards and balancing the diverse interests of other water resource stakeholders. This Budget submission enables Southeastern to promote the effective management of hydroelectric resources.

Program Direction supports day-to-day agency operation and Purchase Power and Wheeling supports acquisition of replacement and pumping power along with contractually required transmission services. Consistent with the authority provided in the FY 2010 Energy and Water Appropriations, the FY 2024 Budget provides funding for annual expenses (Program Direction) through discretionary offsetting collections derived from power receipts collected to recover those expenses.

Highlights and Major Changes in the FY 2024 Budget Request

Compared to FY23 Enacted levels, Southeastern's Request for FY 2024 decreases Purchase Power and Wheeling (-$6.668 million), reflecting changes in transmission rates and rainfall estimates, and increases Program Direction (+$.176 million) based on more accurate cost estimates.

Service Area Map



Southeastern Power Administration
Funding by Congressional Control ($K)

	FY 2022 Enacted	FY 2023 Enacted	FY 2024 Request	FY 2024 Request vs FY 2023 Enacted ($)	FY 2024 Request vs FY 2023 Enacted (%)
Southeastern Power Administration					
Purchase Power and Wheeling (PPW)	66,353	92,687	86,019	-6,668	-7%
Program Direction (PD)	7,284	8,273	8,449	176	2%
Subtotal, Southeastern Power Administration	**73,637**	**100,960**	**94,468**	-6,492	-6%
Offsetting Collections, PPW	-53,000	-78,696	-71,850	6,846	-9%
Alternative Financing, PPW	-13,353	-13,991	-14,169	-178	1%
Offsetting Collections, Annual Expenses, PD	-7,184	-8,173	-8,449	-276	3%
Alternative Financing, PD	-100	-100	0	100	-100%
Total, Southeastern Power Administration	**0**	**0**	**0**	**0**	0%
Federal FTEs	**44**	**44**	**44**	0	0%

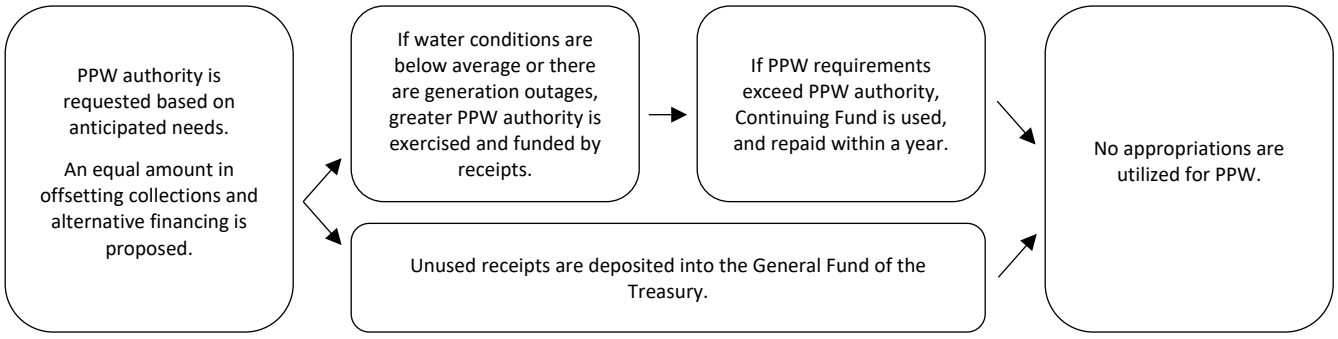
Purchase Power and Wheeling

Overview

The mission of Purchase Power and Wheeling (PPW) is to provide funding for acquisition of transmission services, ancillary services for the system, pumping energy for the Richard B. Russell and Carters Pumped Storage units, and support of the Jim Woodruff Project. Southeastern must purchase power on the open market when its Federal generating assets cannot provide enough power to fulfill its contracts with its customers.

Additionally, because Southeastern does not own or operate any transmission infrastructure, transmission expenses are based on contracts with area transmission providers to deliver specified amounts of Federal power from the hydropower projects to Federal power customers. Southeastern has access to a continuing fund for emergency expenses necessary to ensure continuity of service. Southeastern has implemented a plan to repay any Purchase Power and Wheeling expenditures made through the Continuing Fund within one year.

The FY 2024 Request uses customer receipts and net billing to pay for purchase power and wheeling expenses at no cost to the Federal Treasury. Some customers, acting independently or in partnerships, acquire replacement power and transmission services directly from suppliers. Southeastern will continue to assist its customers by arranging funding for these activities through alternative financing instruments, as needed.



Highlights of the FY 2024 Budget Request

The PPW subprogram supports Southeastern's mission to market and deliver reliable, cost-based hydroelectric power and related services. PPW enables Southeastern to wheel Federal power to preference customers, purchase replacement power, and acquire pumping energy to maximize the efficiency and benefits of Southeastern's hydropower resources. Power and services are marketed at rates designed to provide recovery of expenses and Federal investment, as established by law.

Purchase Power & Wheeling
Funding ($K)

	FY 2022 Enacted	FY 2023 Enacted	FY 2024 Request	FY 2024 Request vs FY 2023 Enacted ($)	FY 2024 Request vs FY 2023 Enacted (%)
Purchase Power					
Replacement Power	3,797	7,447	115	-7,332	-98%
Russell Project pumping power	6,900	12,017	12,405	388	3%
Carters Project pumping power	5,766	13,244	11,303	-1,941	-15%
Jim Woodruff Project support	2,600	2,000	2,000	0	0%
Total, Purchase Power	19,063	34,708	25,823	-8,885	-26%
Wheeling					
Wheeling service charges	42,580	53,239	55,456	2,217	4%
Ancillary Services	4,710	4,740	4,740	0	0%
Total, Wheeling	47,290	57,979	60,196	2,217	4%
Total, Purchase Power and Wheeling	66,353	92,687	86,019	-6,668	-7%
Alternative Financing					
Net Billing	-13,353	-13,991	-14,169	-178	1%
Subtotal, Purchase Power and Wheeling	53,000	78,696	71,850	-6,846	-9%
Offsetting Collections Realized	-53,000	-78,696	-71,850	6,846	-9%
Total, Purchase Power and Wheeling Budget Authority	**0**	**0**	**0**	0	0%

Southeastern Power Administration
Purchase Power and Wheeling
($K)

Activities, Milestones, and Explanation of Changes ($K)

FY 2023 Enacted	FY 2024 Request	Explanation of Changes FY 2024 Request vs FY 2023 Enacted
Purchase Power and Wheeling $92,687	**$86,019**	**-$6,668**
Purchase Power $34,708	**$25,823**	**-$8,885**
• On-Peak Replacement Power purchased to meet contract minimum service in drought conditions. • Off-Peak Pumping Power purchased to supplement stream flow energy demand. • Jim Woodruff System Generating Support required for high river flows at low head plant.	• Continuing activities from prior year.	• Reflects anticipated needs based on projected market prices.
Wheeling $57,979	**$60,196**	**+$2,217**
• Transmission expenses based on contracts with area transmission providers to deliver specified amounts of Federal power from the hydropower projects to Federal power customers.	• Continued funding supports ongoing activities.	• Reflects variations in transmission rates.

Program Direction

Overview

Program Direction provides the Federal staffing resources and associated costs required to provide overall direction and execution of the Southeastern Power Administration. Provision is made for negotiation and administration of transmission and power contracts, collections of revenues, accounting and budget activities, development of wholesale power rates, amortization of the Federal power investment, energy efficiency and competitiveness programs, investigation and planning of proposed water resources projects, scheduling and dispatch of power generation, scheduling storage and release of water, administration of contractual operation requirements, and determination of methods of operating generating plants individually and in coordination with others to obtain maximum allowable utilization of resources.

Highlights of the FY 2024 Budget Request

The FY 2024 Budget Request provides for the continuation of Southeastern's activities related to Program Direction at the level necessary to meet mission requirements.

Program Direction Funding ($K)

	FY 2022 Enacted	FY 2023 Enacted	FY 2024 Request	FY 2024 Request vs FY 2023 Enacted ($)	FY 2024 Request vs FY 2023 Enacted (%)
Program Direction Summary					
Southeastern Power Administration					
Salaries and Benefits	5,600	5,800	6,075	275	5%
Travel	50	50	120	70	140%
Support Services	0	0	0	0	0%
Other Related Expenses	1,634	2,423	2,254	-169	-7%
Subtotal, Southeastern Power Administration	**7,284**	**8,273**	**8,449**	176	2%
Offsetting Collections (annual expenses)	-7,184	-8,173	-8,449	-276	3%
Alternative Financing, PD	-100	-100	0	100	-100%
Total, Program Direction	**0**	**0**	**0**	0	0%
Federal FTEs	**44**	**44**	**44**	0	0%
Support Services and Other Related Expenses					
Support Services					
Management and Professional Support Services	0	0	0	0	0%
Total, Support Services	**0**	**0**	**0**	0	0%
Other Related Expenses					
Training	21	35	40	5	14%
Communications, Utilities, Misc.	215	285	287	2	1%
Equipment	132	426	250	-176	-41%
Maintenance Agreements	338	570	540	-30	-5%
Land and Structures	0	0	0	0	0%
Rent to GSA	0	0	0	0	0%
Tuition	50	75	80	5	7%
Contract Services	482	552	617	65	12%
Audit of Financial Statements	263	320	260	-60	-19%
Supplies and Materials	74	85	95	10	12%
Working Capital Fund	50	65	75	10	15%
Printing and Reproduction	9	10	10	0	0%
Total, Other Related Expenses	**1,634**	**2,423**	**2,254**	-169	-7%

Program Direction
($K)

Activities, Milestones, and Explanation of Changes ($K)

FY 2023 Enacted	FY 2024 Request	Explanation of Changes FY 2024 Request vs FY 2023 Enacted
Program Direction $8,273	**$8,449**	**+$176**
Salaries and Benefits $5,800	**$6,075**	**+$275**
The funding supports Federal salaries and benefits for 44 FTEs who market Federal hydropower, promote energy efficiency and renewable energy, administrative support, and workloads in cybersecurity and operational reliability. These estimates are derived from the current year budgeted salaries, plus cost-of-living adjustments, promotions, within-grade increases, overtime, DOE-cascading performance awards, retirement payouts for unused leave, and newly hired FTEs.	Continue funding support for Federal salaries and benefits for 44 FTEs.	Continue funding support for Federal salaries and benefits including the recruiting and retaining of FTEs.
Travel $50	**$120**	**+$70**
Funding supports transportation and per diem expenses incurred for preference customer meetings, relocation expenses for new FTEs, contract negotiations, rate forums, Congressional hearings, site visits, and operations meetings with industry organizations.	Continue funding supports ongoing activities.	Continue funding support for transportation and per diem expenses incurred for various meetings and site visits.
Support Services $0	**$0**	**$0**
No funding requested for FY 2023	No funding is requested for FY 2024.	Reduced customer participation in program funding.
Other Related Expenses $2,423	**$2,254**	**-$169**
Funding provides administrative support for headquarters office, emergency control center, communications, maintenance, utilities, contract services, supplies, materials, training, equipment and support for cyber and physical security. Training expenses for power operator certification and support for installation of electronic hardware and software for the operations center which provides maintenance to integrate real-time data from the control area and provides the data to other transmission operators and NERC.	Continue funding support for Southeastern Power Administration's headquarters office and emergency control center, along with services of the Power Marketing Liaison Office, and the Human Resources Shared Service Center (HRSSC).	Reflects required hardware purchases and software service agreements and updates along with training, tuition, and communications costs. Costs are based on the historical usage and actual cost of similar items as well as inflationary increases.

Additional Tables

Revenue and Receipts ($K)

	FY 2022 Actual	FY 2023 Estimate	FY 2024 Estimate	FY 2025 Estimate	FY 2026 Estimate	FY 2027 Estimate	FY 2028 Estimate
Gross Revenues	306,606	317,955	320,109	322,378	324,759	327,261	329,889
Net Billing (Credited as an Offsetting Receipt)	-13,782	-13,991	-14,169	-14,355	-14,551	-14,757	-14,973
Total Cash Receipts	292,824	303,964	305,940	308,023	310,208	312,504	314,916
Use of Offsetting Collections to fund PPW	-53,000	-78,696	-71,850	-73,933	-76,118	-78,415	-80,825
Use of Offsetting Collections to fund Annual Expenses	-7,184	-8,273	-8,449	-8,443	-8,598	-8,753	-8,909
Total Receipts, net use of Offsetting Collections	232,640	216,995	225,641	225,647	225,492	225,336	225,182
Cumberland Rehabilitation	-43,328	-50,000	-50,000	-50,000	-50,000	-50,000	-50,000
GA-AL-SC Rehabilitation	-870	-15,000	-15,000	-15,000	-15,000	-15,000	-15,000
Kerr-Philpott Rehabilitation	-7,384	-5,000	-5,000	-5,000	-5,000	-5,000	-5,000
Jim Woodruff	0	-1,000	-1,000	-1,000	-1,000	-1,000	-1,000
Accts Rec Yearly Difference	-6,941	0	0	0	0	0	0
Total Proprietary Receipts	174,117	145,995	154,641	154,647	154,492	154,336	154,182
Percent of Sales to Preference Customers	99%	99%	99%	99%	99%	99%	99%
Energy Sales and Power Marketed (megawatt-hours)	7,409,202	5,587,740	5,587,740	5,587,740	5,587,740	5,587,740	5,587,740

Alternative Financing2022	Transmission	Purchase Power	Offsetting Collections	Net Billing	Appropriated Funds
Jim Woodruff System	377	1,141	-634	-884	0
Kerr-Philpott System	16,526	0	-16,526	0	0
GA-AL-SC System	20,959	17,928	-35,725	-3,162	0
Cumberland System	9,851	0	-115	-9,736	0
	47,713	19,069	-53,000	-13,782	0

2023	Transmission	Purchase Power	Offsetting Collections	Net Billing	Appropriated Funds
Jim Woodruff System	348	2,000	-1,648	-700	0
Kerr-Philpott System	18,477	0	-18,477	0	0
GA-AL-SC System	29,339	32,708	-58,492	-3,555	0
Cumberland System	9,815	0	-79	-9,736	0
	57,979	34,708	-78,696	-13,991	0

2024	Transmission	Purchase Power	Offsetting Collections	Net Billing	Appropriated Funds
Jim Woodruff System	348	2,000	-1,648	-700	0
Kerr-Philpott System	19,461	0	-19,461	0	0
GA-AL-SC System	30,568	23,823	-50,658	-3,733	0
Cumberland System	9,819	0	-83	-9,736	0
	60,196	25,823	-71,850	-14,169	0

Power Marketed, Wheeled, or Exchanged by Project

Project	State	Plants	Installed Capacity (KW)	FY 2022 Estimated Power (GWH)	FY 2023 Estimated Power (GWH)	FY 2024 Estimated Power (GWH)
Kerr-Philpott System				293	293	293
John H. Kerr	VA-NC	1	291,000			
Philpott	VA	1	15,000			
Georgia-Alabama-South Carolina System				2,508	2,508	2,508
Allatoona	GA	1	82,000			
Buford	GA	1	127,000			
Carters	GA	1	600,000			
J. Strom Thurmond	GA-SC	1	364,000			
Walter F. George	GA-AL	1	160,000			
Hartwell	GA-SC	1	424,000			
R. F. Henry	AL	1	82,000			
Millers Ferry	AL	1	90,000			
West Point	GA-AL	1	87,000			
Richard B. Russell	GA-SC	1	656,000			
Jim Woodruff Project	FL-GA	1	43,500	148	148	148
Cumberland System				2,481	2,481	2,481
Barkley	KY	1	130,000			
Center Hill	TN	1	135,000			
Cheatham	TN	1	36,000			
Cordell Hull	TN	1	99,900			
Dale Hollow	TN	1	54,000			
Old Hickory	TN	1	103,752			
J. Percy Priest	TN	1	28,000			
Wolf Creek	TN	1	270,000			
Laurel	TN	1	61,000			
Total Power Marketed		22	3,939,152	5,430	5,430	5,430

System Statistics

	FY 2022 Actual	FY 2023 Estimate	FY 2024 Estimate
Generating Capacity:			
Nameplate Capacity (KW)	3,939,152	3,939,152	3,939,152
Peak Capacity (KW) [a]	4,330,000	4,330,000	4,330,000
Generating Stations			
Generating Projects (Number)	22	22	22
Available Energy			
Energy from Stream-flow (MWH)	6,988,186	4,685,000	4,685,000
Energy generated from Pumping (MWH)	414,132	745,100	745,100
Energy Purchased for Replacement (MWH)	6,884	157,640	157,640
Total, Energy available for marketing [b] (MWH)	7,409,204	5,587,740	5,587,740

[a] Southeastern markets capacity based on nameplate plus an overload factor. NERC requires that Southeastern keep a portion of the capacity in reserve for emergency purposes and to cover losses.

[b] Gross amount. Transmission losses are deducted from this amount to estimate the amount of energy marketed.

Southwestern Power Administration
Proposed Appropriation Language

For expenses necessary for operation and maintenance of power transmission facilities and for marketing electric power and energy, for construction and acquisition of transmission lines, substations and appurtenant facilities, and for administrative expenses, including official reception and representation expenses in an amount not to exceed $1,500 in carrying out section 5 of the Flood Control Act of 1944 (16 U.S.C. 825s), as applied to the Southwestern Power Administration, [$53,488,000]$52,326,000 to remain available until expended: Provided, That notwithstanding 31 U.S.C. 3302 and section 5 of the Flood Control Act of 1944 (16 U.S.C. 825s), up to [$42,880,000]$40,886,000 collected by the Southwestern Power Administration from the sale of power and related services shall be credited to this account as discretionary offsetting collections, to remain available until expended, for the sole purpose of funding the annual expenses of the Southwestern Power Administration: Provided further, That the sum herein appropriated for annual expenses shall be reduced as collections are received during the fiscal year so as to result in a final fiscal year 2023 appropriation estimated at not more than [$ 10,608,000]$11,440,000: Provided further, That, notwithstanding 31 U.S.C. 3302, up to [$70,000,000]$80,000,000 collected by the Southwestern Power Administration pursuant to the Flood Control Act of 1944 to recover purchase power and wheeling expenses shall be credited to this account as offsetting collections, to remain available until expended for the sole purpose of making purchase power and wheeling expenditures: Provided further, That for purposes of this appropriation, annual expenses means expenditures that are generally recovered in the same year that they are incurred (excluding purchase power and wheeling expenses).

Explanation of Changes

No changes.

Public Law Authorizations

Southwestern Power Administration:

- P.L. 78-534, Section 5, Flood Control Act of 1944
- P.L. 95–91, Section 302, DOE Organization Act of 1977
- P.L. 100-71, Supplemental Appropriations Act, 1987
- P.L. 101–101, Title III, Continuing Fund (amended 1989)
- P.L. 102-486, Section 721, Energy Policy Act of 1992
- P.L. 108-447, Appropriations Act, FY 2005
- P.L. 111-85, Appropriations Act, FY 2010

Southwestern Power Administration
Overview
($K)

	FY 2022 Enacted	FY 2023 Enacted	FY 2024 Request
Gross	125,816	162,802	189,737
Offsets	-115,416	-152,194	-178,297
Net BA	10,400	10,608	11,440

Overview

Southwestern Power Administration's (Southwestern) mission is to market and reliably deliver Federal hydroelectric power, with preference to public bodies and cooperatives. This is accomplished by maximizing the use of Federal assets to repay the Federal investment, participating with other water resource users in an effort to balance diverse interests with power needs within broad parameters set by the U.S. Army Corps of Engineers (Corps), and implementing public policy.

Southwestern markets and delivers power at wholesale rates to 78 municipal utilities, 21 rural electric cooperatives, and 3 military installations in the six states of Arkansas, Kansas, Louisiana, Missouri, Oklahoma, and Texas[1]. In turn, these customers distribute that power to approximately 10 million end users in the six-state area. To integrate the operation of the Federal hydroelectric generating plants and to transmit power from 24 multi-purpose Corps dams to customers, Southwestern operates and maintains 1,381 miles of high-voltage transmission lines, 26 substations/switchyards, and 51 microwave and very high frequency (VHF) radio sites. Southwestern is headquartered in Tulsa, Oklahoma, and has maintenance facilities in Gore, Oklahoma; Jonesboro, Arkansas; and Springfield, Missouri. In addition, around-the-clock power scheduling and dispatching are conducted by staff in Southwestern's Operations Center located in southwest Missouri.

Southwestern participates in the Southwest Power Pool (SPP) Regional Transmission Organization (RTO) and the Midcontinent Independent System Operator (MISO) RTO, which reinforces Southwestern's role as part of the Nation's interconnected generation and transmission system. In participation with the RTOs, Southwestern works on regional and interregional transmission policy initiatives in response to the evolution of the electric utility industry. Furthermore, Southwestern coordinates its varied utility activities in conjunction with a broader group of stakeholders. As the demand for the transmission of power increases across regional and interregional footprints, maintaining and improving the Nation's energy infrastructure through improvements, replacements, interconnections, and coordination with the RTOs in Southwestern's marketing area has become more critical than ever. Southwestern assures the efficient and reliable delivery of Federal hydropower, thus fulfilling clean energy security for the present as well as for future generations.

Southwestern's marketing services and delivery capability provide for recovery of all annual operating costs, including the Corps' hydropower related costs, and for repayment of taxpayer investment in all assets and facilities that support the Federal hydropower program. Hydropower is not only an important part of the Nation's clean energy portfolio due to clean generation capabilities, but it also provides support for other renewable resources. Federal hydropower supports the Nation's grid and complements other generation to create stability as the industry faces energy production changes, organized market evolution and increased threats to the grid. Hydroelectric power is a domestic energy source that helps America achieve clean energy security. Southwestern markets an average of 5,570 gigawatt-hours of clean renewable hydroelectric energy annually.

Southwestern will use the following strategies to fulfill its mission:

[1] Southwestern's system map can be found at https://www.energy.gov/sites/default/files/2022-08/SWPA_System_Map.pdf.

- Market and deliver, at the lowest possible cost, all available Federal hydropower generated at the Corps multipurpose projects and work with the Corps, States, cooperatives, and municipalities to meet its statutory requirements while balancing the interests of other water users.
- Maintain infrastructure and modernize systems to increase the resilience, reliability, efficiency, and use of Federal assets. This will be accomplished using appropriations; Federal power receipts; and alternative financing arrangements, which include net billing and/or reimbursable authority (customer advances).[2]
- Conduct annual power repayment studies to ensure power rates are sufficient to repay all annual operating costs and the Federal investment with interest.
- Meet Southwestern's 1200-hour peaking power contractual obligations with necessary purchase power and wheeling using Federal power receipts; alternative financing arrangements, which include net billing and/or reimbursable authority (customer advances); and the Continuing Fund as necessary in periods of below-average hydropower generation.
- Operate the transmission system efficiently to support the Nation's integrated power grid and engage in transmission policy initiatives within the RTOs in Southwestern's marketing area to respond effectively to the evolution of the electric utility industry.
- Meet requirements for Southwestern's compliance with the latest North American Electric Reliability Corporation (NERC) standards.
- Bolster Southwestern's grid resilience and cyber and physical security postures using best-available technologies and in cooperation with Department of Energy (DOE) and industry partners to protect the Federal transmission system and the Nation's power grid. Ongoing assessments, realigning vacant positions, investments in the cyber and physical security programs, and infrastructure protection improvements enable Southwestern to continue to provide a safe and reliable product. Southwestern will continue to emphasize security, both cyber and physical, as an agency priority.

External factors that present potential impacts to the overall achievement of the programs' strategic goals include weather, natural disasters, NERC reliability standards, industry market developments, physical and cybersecurity, changing electric industry organizational structure, interconnections, open access, the uncertainty of sustainable funding resources, competing uses' demand for the limited water resource, and other unforeseen requirements. More specifically:

- The bulk of Southwestern's transmission infrastructure is approximately 60 years old and requires ongoing maintenance and replacement while concurrently balancing changing and increasing demands for availability.
- Industry efforts to improve the reliability of the Nation's power grid are placing more requirements on Southwestern's workforce to implement mandatory reliability standards.
- The potential for malicious physical and cyber-attacks on Southwestern's assets remains a primary concern. These attacks, cyber and physical, on a utility's operation would threaten electric system reliability and potentially result in large scale power outages.
- As more of Southwestern's employees retire or leave Federal service, Southwestern must compete with the rest of the electric utility industry to attract and retain the quality workforce needed to provide a reliable power supply and transmission service.
- Southwestern is increasingly challenged by more complex transmission policy developments including intricate energy and capacity markets, transmission planning processes, and technical rate structures; the deployment of new technologies such as renewables and distributed generation; and heightening emissions and environmental restrictions.
- The Corps water resources projects from which Southwestern markets the hydropower are all multi-purpose. As the demand for water for other purposes increases, energy generation and operating capacity of the hydropower units can be impacted by loss of water storage and availability as well as required operational changes.
- Extreme regional weather events have demonstrated increased price volatility for potential replacement energy purchases necessary to meet contractual power delivery obligations.

[2] Southwestern's authority to use net billing is inherent in the authority provided by the Flood Control Act of 1944 and has been affirmed by the Comptroller General to the Honorable Secretary of the Interior B-125127 (February 14, 1956).

- Greater support for climate resilience, regional grid reliability, infrastructure investment, and rate stability as regional utility customers make decisions to transition to cleaner energy resources.

Highlights of the FY 2024 Budget Request

Southwestern requests a net appropriation of $11.44 million for FY 2024. Southwestern's appropriation consists of four subprograms: Operations and Maintenance, Construction, Purchase Power and Wheeling, and Program Direction. Southwestern utilizes a variety of financing methods including appropriations, Federal power receipts, and alternative financing arrangements, which include net billing and/or reimbursable authority (customer advances).

Southwestern Power Administration
Outyear Funding

Net BA ($K)

	FY 2024 Request	FY 2025	FY 2026	FY 2027	FY 2028
Operation and Maintenance	11,440	11,703	11,972	12,247	12,529

Major Outyear Priorities and Assumptions

Outyear funding levels for Southwestern's Operation and Maintenance net appropriation total $47,547,000 for FY 2025 through FY 2028. Operation and Maintenance priorities include the following:

- Priority is placed on maintenance, upgrades, physical and cybersecurity, compliance, and cost containment.
- Replacement of Southwestern's transmission line structures many of which are approaching the estimated average service life for the components, to include the related capitalized payroll and travel costs.
- Increase physical security over Southwestern's assets to include the Substation Security Fence Replacement Program and IT's hardware and software upgrades that improve the ability to manage IT assets while driving efficiencies, controlling costs, maintaining compliance and reducing vulnerability.
- Implementation of DOE Order 470.3C Design Basis Threat (DBT) which places greater emphasis on limiting physical security risks at Power Marketing Administrations to include enhanced intrusion detection with surveillance cameras that link to existing Genetec Security system.

Southwestern Power Administration
Funding by Congressional Control ($K)

	FY 2022 Enacted	FY 2023 Enacted	FY 2024 Request	FY 2024 Request vs FY 2023 Enacted ($)	FY 2024 Request vs FY 2023 Enacted (%)
Operation and Maintenance					
Operations and Maintenance (O&M)	**11,082**	15,517	16,759	+ 1,242	+ 8%
Construction (CN)	**15,901**	16,035	13,806	- 2,229	- 14%
Purchase Power and Wheeling (PPW)	**62,000**	93,000	120,000	+ 27,000	+ 29%
Program Direction (PD)	**36,833**	38,250	39,172	+ 922	+ 2%
Subtotal, Operation and Maintenance	**125,816**	**162,802**	**189,737**	**+ 26,935**	**+ 17%**
Offsetting Collections, O&M	**-4,395**	- 7,998	- 8,884	- 886	- 11%
Offsetting Collections, PD	**-33,529**	- 34,882	- 32,002	- 2,880	- 8%
Offsetting Collections, PPW	**-39,000**	- 70,000	- 80,000	- 10,000	- 14%
Alternative Financing, O&M	**-4,591**	- 5,279	- 4,388	+ 891	+ 17%
Alternative Financing, CN	**-10,901**	- 11,035	- 8,806	+ 2,229	+ 20%
Alternative Financing, PD	**-0**	-0	- 4,217	- 4,217	- 100%
Alternative Financing, PPW	**-23,000**	- 23,000	- 40,000	- 17,000	- 74%
Net Budget Authority, Operation and Maintenance	**10,400**	**10,608**	**11,440**	**+ 832**	**+ 8%**
Federal FTEs	**194**	194	194	0	0%

Operation and Maintenance
Explanation of Major Changes ($K)

	Explanation of Changes FY 2024 Request vs FY 2023 Enacted
Operations and Maintenance: The change reflects an increase in IT related support services, hardware and software upgrades, and an overall increase in equipment and material costs.	**+ 1,242**
Construction: The net change in the construction subprogram reflects a decrease due to a postponement of the Bull Shoals Communication Tower replacement project, and an increase for the Weleetka transformer purchase.	**- 2,229**
Purchase Power and Wheeling: The request reflects the anticipated needs for periods of severe drought or low water conditions, that can develop rapidly in Southwestern's region, based on projected market prices. It is important for Southwestern to maintain access to funding via spending authority from offsetting collections and alternative financing, at a level that provides Southwestern PPW funding options to best plan for and respond to varied hydrologic conditions, as well as operational impacts, such as hydropower unit outages for major rehabilitation.	**+ 27,000**
Program Direction: The increase in the program direction subprogram reflects aggressive recruiting to fill several technical hard to fill positions, back-filling retirees, cost of living increases for craft workers and power system dispatchers, and filling succession planning positions for knowledge transfer. Also, increase in support services for projected contractual cost of living adjustments.	**+ 922**
Total, Southwestern, Operation and Maintenance	**+ 26,935**

Operations and Maintenance
Funding ($K)

	FY 2023 Enacted	FY 2024 Request	FY 2024 Request vs FY 2023 Enacted ($)
Operations and Maintenance (O&M)			
Power Marketing	200	200	0
Operations	9,888	9,215	- 673
Maintenance	2,930	5,294	+ 2,364
Capitalized Moveable Equipment	2,499	2,050	- 449
Subtotal, Operations and Maintenance	**15,517**	**16,759**	**+ 1,242**
Offsetting Collections (annual expenses)	- 7,998	- 8,884	- 886
Alternative Financing	- 5,279	- 4,388	+ 891
Total, Operations and Maintenance	**2,240**	**3,487**	**+ 1,247**

Southwestern Power Administration
Operations and Maintenance

Description

The activities of the Operations and Maintenance (O&M) subprogram are critical components in maintaining the reliability of the Federal power system, which is part of the Nation's interconnected generation and transmission system. By marketing and delivering hydroelectric energy, Southwestern makes a meaningful contribution of clean, safe, reliable, affordable, and secure renewable hydroelectric energy to our Nation. The Energy Policy Act (EPACT) and the DOE and Administration's policies emphasize its significant contribution to the Nation's past, current, and future energy supply; and identify Southwestern's important role in meeting electricity demand by supplying hydroelectric energy to its customers. These laws and policies emphasize the need to repair, maintain, and improve transmission and generation facilities to ensure safety, security, resilience, and reliability of the Nation's energy infrastructure. SWPA continuously assesses changing climate forecast data to improve climate resilience, including efforts to support the value and stability of the SWPA Federal hydropower products and to ensure response and recovery from climate and extreme weather events. SWPA is participating in the DOE Climate Adaptation and Resilience Plan implementation, and as part of that effort SWPA is in the process of conducting a Vulnerability Assessment and Resilience Plan.

Southwestern's planned O&M projects are subject to change due to unanticipated equipment failure, customer needs, and weather conditions. The realities of maintaining a complex interconnected electric power system periodically require unforeseen reprioritizations of planned projects. All projects share the commonality of maintaining, repairing, and improving the aging infrastructure to ensure the resilience and reliability of the Federal power system.

Power Marketing

The Power Marketing activity funds technical and economic studies to support Southwestern's transmission planning, water resources management, and communication functions. Technical and economic studies provide data to analyze and evaluate the impacts of proposed operational changes and decision-making based on cost-benefit analysis. Funding is also required for Southwestern's coordination with the RTOs and to provide regional power restoration assistance to other non-hydropower generation sources during electric power grid emergencies. The National Electric Transmission Congestion Study identified constraints in the Nation's interconnected electrical grid which could impede power flows. Studies to identify any constraints on Southwestern's system will continue to be conducted. These studies show how the marketing and delivery of power is operationally impacted. The funding level for this activity is derived from Southwestern's engineering plan, negotiated architect/engineering contracts, and the number of studies required per year.

Operations

The Operations activity funds communication functions associated with the dispatch and delivery of power; environmental, safety, and health activities; and other transmission activity costs such as physical security, cybersecurity, and day-to-day power dispatch functions. The Operations activity includes three subactivities:

Communications

This subactivity funds telemetering improvements, technical support to protect cyber infrastructure, an e-tagging system that electronically schedules power for customers, load forecasting, digital test equipment, the radio frequency spectrum fee, and supplies and materials. The telemetering improvements include replacement of obsolete power and energy accounting equipment and modification of existing remote terminal units that improve the reliability of the power system, specifically in the areas of monitoring and control. Funding is required for upgrades that enable Southwestern to meet the goals of the EPACT and NERC by replacing aging infrastructure while assuring reliability and continuing to coordinate with the RTOs in its marketing area.

Southwestern will continue to strengthen cyber and physical security postures using strong and proven technologies that are part of the Continuous Diagnostics and mitigation (CDM) program. In addition to CDM, Southwestern continues to look for other technologies that can be leveraged to ensure compliance with applicable laws and standards to protect the Federal transmission system and the Nation's power grid.

Environmental, Safety, and Health

This subactivity funds environmental activities including waste disposal and clean-up of transformers, grounding and drainage, cultural resource reviews, and environmental assessments for threatened and endangered species such as the American Burying Beetle, various endangered bats, the Leopard Darter, and Interior Least Tern. Additionally, Southwestern may have environmental activities it performs as a Consulting Agency or participating agency resulting from a Biological Opinion or Biological Assessment, or as a participant on an interagency committee or working group. This subactivity also funds property transfers, wetland assessments, environmental library access, Toxic Substance Control Act and Resource Conservation Recovery Act compliance, contractor services, and requirements of the Environmental Protection Program as identified in DOE Order 450.1. The Safety and Health Program activities require funding for aviation safety, industrial hygiene, medical examinations, medical officer, wellness program, safety equipment, and first aid equipment and supplies.

Other Transmission

This subactivity funds physical security, field utility costs, and day-to-day power expenses of the dispatch center and the Alternate Control Center.

Maintenance

The Maintenance activity funds routine repair, maintenance, and improvement of Southwestern's substations/switchyards and high-voltage transmission lines and ensures delivery of reliable, efficient, and clean power to its customers. Southwestern's initial facilities, which were built approximately 60 years ago, are constantly evaluated. Internal and external factors that impact SWPA's maintenance activities and the asset replacement plan include obsolescence of technology and unavailability of replacement parts. By replacing aging equipment and removing constraints that impede power flows, Southwestern ensures the provision of a reliable Federal transmission system. The maintenance activity includes two subactivities:

Substation Maintenance

This subactivity funds power circuit breakers, disconnect switches, instrument transformers, protective relays and related equipment, computer aided drafting and design, revenue meters, vehicle maintenance, fuel, and other equipment to reliably perform general maintenance projects.

Transmission Line Maintenance

This subactivity funds the purchase and maintenance of wood and steel structures, crossarms and braces, right-of-way (ROW) clearing, herbicide application, aerial patrol of the transmission system to identify maintenance needs, routine vehicle repair and maintenance, tractors, equipment, and fuel. The number of steel or wood poles and crossarms and high-voltage insulators replaced is derived from internal maintenance information system criteria. Emphasis has been placed on ROW clearing since NERC identified improper/insufficient ROW clearing as a major factor in potential blackouts. The funding level is appropriate for the number of structures and components to be replaced and the miles of ROW to be cleared as set forth by Southwestern's maintenance plan for meeting the goals of the EPACT and NERC to maintain a reliable transmission system.

Capitalized Moveable Equipment

This activity funds the replacement of vehicles, tractor-trailers, and heavy equipment used for the maintenance and repair of the transmission system and facilities. These vehicles and equipment have exceeded their useful lives and require high levels of maintenance. The vehicle cost estimates are derived from General Services Administration (GSA) pricing schedules.

Activities and Explanation of Changes

FY 2023 Enacted	FY 2024 Request	Explanation of Changes FY 2024 Request vs FY 2023 Enacted
Operations and Maintenance $15,517,000	**$16,759,000**	**+ $1,242,000**
Power Marketing $200,000	**$200,000**	**$0**
• The Power Marketing activity funds the technical and economic studies to support transmission planning.	• The Power Marketing activity funds the technical and economic studies to support transmission planning.	• Funding request remains the same.
Operations $9,888,000	**$9,215,000**	**-$673,000**
Communications ($6,466,000) • This subactivity funds telemetering improvements, technical support to protect cyber infrastructure, SCADA/EMS system maintenance, load forecasting, and digital testing equipment.	*Communications ($7,002,000)* • This subactivity funds telemetering improvements, technical support to protect cyber infrastructure, SCADA/EMS system maintenance, load forecasting, and digital testing equipment.	*Communications (+ $536,000)* • The increase reflects required hardware and software, and support services.
Environmental, Safety, and Health ($2,161,000) • The subactivity funds environmental, safety, and health services.	*Environmental, Safety, and Health ($1,367,000)* • The subactivity funds environmental, safety, and health services.	*Environmental, Safety, and Health (- $794,000)* • The decrease reflects the use of retained funds during renegotiation of the cultural resources archeological survey on Southwestern's transmission lines for phase 2 to be completed in FY 2024.
Other Transmission ($1,261,000) • The subactivity funds physical security, field utility costs, and day to day expenses of the dispatch center. Headquarters (HQ) utility costs were included in O&M for FY 2023.	*Other Transmission ($846,000)* • The subactivity funds physical security, field utility costs, and day to day expenses of the dispatch center.	*Other Transmission (- $415,000)* • The decrease reflects HQ utility costs being moved to Program Direction in FY 2024.

FY 2023 Enacted	FY 2024 Request	Explanation of Changes FY 2024 Request vs FY 2023 Enacted
Maintenance $2,930,000	**$ 5,294,000**	**+ $2,364,000**
Substation ($1,462,000) • This subactivity funds all equipment, parts, and materials for the operation of high voltage substations.	*Substation ($3,435,000)* • This subactivity funds all equipment, parts, and materials for the operation of high voltage substations.	*Substation (+ $1,973,000)* • The increase reflects parking lot refurbishment at 2 locations and increasing costs related to equipment purchases.
Transmission Line Maintenance ($1,468,000) • This subactivity funds all equipment, parts, and materials for the operation of the high voltage transmission system. Also, vegetation management contracts.	*Transmission Line Maintenance ($1,859,000)* • This subactivity funds all equipment, parts, and materials for the operation of the high voltage transmission system. Also, vegetation management contracts.	*Transmission Line Maintenance (+ $391,000)* • The change reflects an increase in cost of materials.
Capitalized Moveable Equipment $2,499,000	**$2,050,000**	**- $449,000**
• This activity funds the replacement of vehicles, tractor-trailers, and heavy equipment used for the maintenance and repair of the transmission system and facilities.	• This activity funds the replacement of vehicles, tractor-trailers, and heavy equipment used for the maintenance and repair of the transmission system and facilities.	• The decrease reflects fewer estimated replacements.

Construction
Funding ($K)

	FY 2023 Enacted	FY 2024 Request	FY 2024 Request vs FY 2023 Enacted ($)
Construction			
Transmission System			
Substation Upgrades	567	1,610	+ 1,043
Communication Upgrades	4,122	480	- 3,642
Transmission Upgrades	11,346	11,716	+ 370
Subtotal, Construction	**16,035**	**13,806**	**- 2,229**
Alternative Financing	- 11,035	- 8,806	+2,229
Total, Construction	**5,000**	**5,000**	**0**

Southwestern Power Administration
Construction

Description

The activities of the Construction subprogram enable Southwestern to market and deliver Federal hydropower in the most reliable, safe, efficient, and cost-effective manner to meet the operational criteria required by the North American Electric Reliability Corporation while avoiding transmission infrastructure deterioration. Southwestern's planned construction projects are subject to change based on unanticipated equipment failure, customer needs, and weather conditions. The realities of maintaining a complex interconnected power system include unforeseen priority projects which arise periodically, causing a reprioritization of planned projects. All projects share the commonality of replacing aging infrastructure necessary to maintain the resilience and reliability of the Federal power system. SWPA supports climate resilience through improved response and recovery controls aimed to reduce the impact of various potential natural disaster risks to the transmission system.

Transmission System

This activity funds current construction projects that require expansion of, or additions to, existing facilities. Southwestern ensures system reliability and resiliency by replacing aging equipment and removing constraints that limit power flows. The projects outlined below address Southwestern's efforts to reduce the risk of extended service outages, avoid more costly replacements in the future, and support the increased transmission system usage. The funding level for this activity is derived from internal and external management decisions and field crew observations. System age, risk of equipment failure, life-cycles, obsolescence of technology and unavailability of spare parts, cost, and demand for more capacity are also considered in these budgeting decisions. These variables are assessed and incorporated into Southwestern's ten-year construction plan. The transmission activity includes three subactivities:

Substation Upgrades

This subactivity funds the construction and upgrade of the substations and the components necessary to provide improved system reliability and reduce future maintenance and equipment costs. Southwestern owns and operates 26 substation/switching stations. Many of these facilities were designed and constructed over 60 years ago. The equipment which will be replaced or upgraded includes power transformers, circuit breakers, and control equipment, as well as the structural components necessary to sustain reliable power delivery and support a stable, flexible interconnected power grid.

Communication Upgrades

This subactivity funds all communication equipment planned to provide improved system reliability and reduce future maintenance and equipment costs. This subactivity also provides funding for microwave radios and microwave tower additions, replacements, and modifications that will increase the reliability of communications with generating plants and substations. The communication system provides for the transfer of voice and data traffic to allow monitoring and control of power system generation and transmission assets.

Transmission Upgrades

This subactivity funds transmission system upgrades. Much of the conductor, optical ground wire (OPGW), and static wire on Southwestern's transmission lines has reached the end of its original assumed service life. With this assumed service life, approximately 20 to 30 miles of transmission line, including the conductor, OPGW, static wire, and structures, will need to be replaced each year. As Southwestern replaces the conductor, Southwestern will use the opportunity to increase line capacity where practical to accommodate increased loads in the region.

Spectrum Relocation

The Commercial Spectrum Enhancement Act of 2004 (CSEA, Title II of P.L. 108-494) created the Spectrum Relocation Fund (SRF) to streamline the relocation of Federal systems from existing spectrum bands and accommodate commercial use by facilitating reimbursement of relocation costs to affected agencies. Southwestern has received $42.8 million in spectrum relocation funds, as approved by the Office of Management and Budget, and as reported to the Congress. Southwestern has completed 100 percent of the tower installation project and anticipates completing antenna and radio installation and

obtaining comparable capability by September 30,2024. These mandatory funds will remain available until expended, and Southwestern will return any amounts received in excess of actual relocation costs to the SRF. Spectrum relocation activities were funded from spectrum auction proceeds; thus, no funding is requested in this subactivity.

Activities and Explanation of Changes

FY 2023 Enacted	FY 2024 Request	Explanation of Changes FY 2024 Request vs FY 2023 Enacted
Construction $16,035,000	**$13,806,000**	**- $2,229,000**
Transmission System $16,035,000	**$13,806,000**	**- $2,229,000**
Substation Upgrades ($567,000) • This subactivity funds all substation equipment replacements.	*Substation Upgrades ($1,610,000)* • This subactivity funds all substation equipment replacements.	*Substation Upgrades (+ $1,043,000)* • The increase reflects additional costs for the Weleetka transformer replacement.
Communication Upgrades ($4,122,000) • This subactivity funds all communication equipment additions and upgrades. Projects include microwave equipment, fiber terminal equipment upgrades, and microwave tower at Bull Shoals.	*Communication Upgrades ($480,000)* • This subactivity funds all communication equipment additions and upgrades.	*Communication Upgrades (- $3,642,000)* • The decrease reflects the postponement of the Bull Shoals Communication Tower.
Transmission Upgrades ($11,716,000) • This subactivity funds transmission system upgrades such as structure rebuilds, reconductoring, etc..	*Transmission Upgrades ($11,716,000)* • This subactivity funds transmission system upgrades such as structure rebuilds, reconductoring, etc..	*Transmission Upgrades (+ $370,000)* • The increase in the transmission upgrades reflects the additional materials needed for the increase in line miles to be rebuilt.

Purchase Power and Wheeling
Funding ($K)

	FY 2023 Enacted	FY 2024 Request	FY 2024 Request vs FY 2023 Enacted ($)
Purchase Power and Wheeling			
System Support	89,500	116,500	+ 27,000
Other Contractual Services	3,500	3,500	0
Subtotal, Purchase Power and Wheeling	**93,000**	120,000	**+ 27,000**
Offsetting Collections (PPW)	- 70,000	- 80,000	- 10,000
Alternative Financing	- 23,000	- 40,000	- 17,000
Total, Purchase Power and Wheeling	**0**	**0**	**0**

Southwestern Power Administration
Purchase Power and Wheeling

Description

The Purchase Power and Wheeling (PPW) subprogram provides for the purchase of energy to meet peaking power contractual obligations and the delivery of Federal power. Except for contractual arrangements pertaining to a few electrically-isolated hydropower projects, Southwestern's power sales contracts provide for 1200-hours of peaking power per year delivered from its interconnected system of hydropower projects. At times, due to below average water conditions or hydropower unit outages, Southwestern must purchase power when the hydropower projects cannot produce enough to fulfill its 1200-hour contract obligations. Blending purchased power with the Federal hydropower provides a reliable product while ensuring contract fulfillment occurs. Extreme regional weather events in recent years have demonstrated increased price volatility for potential replacement energy purchases. Availability of requested PPW funding levels supports rate stability. Rate stability is increasingly important as regional utility customers make decisions regarding Federal hydropower and other clean energy resources as part of their evolving energy portfolios.

Southwestern assesses its purchase power needs based on hydrologic conditions and anticipated hydropower unit outages. Hydrologic conditions can vary widely and change rapidly, such that purchase power needs are assessed at least seasonally and can change daily. Unit outages for major rehab and replacement work are known years in advance so that purchase power needs can be planned; however, forced outages or delays in units returning to service can cause sudden changes to anticipated purchase power needs. Power purchases are typically made through contractual arrangements but may also be made on the spot market when conditions are more severe than anticipated or otherwise unexpected. Delivery of purchase power to Southwestern's system is made via the SPP RTO or Southwestern's own transmission system.

In prior years, inadequate funding for PPW and hydrological fluctuations required multiple requests to access the Continuing Fund to ensure sufficient funding was available to fulfill Southwestern's 1200-hour peaking power contractual obligations. Today, requirements associated with utilizing the Continuing Fund for PPW needs could spike power rates for customers and limits the usefulness of this tool for replacement energy needs. In FY 2001, Southwestern requested, and Congress enacted, authority to use Federal power receipts that recover purchase power and wheeling expenses (offsetting collections) to fund its PPW program (up to a specified limit). However, since FY 2018, the enacted levels have been significantly below the requested levels. The use of requested offsetting collections will be largely dependent upon the hydrological conditions realized during the fiscal year. Under average conditions, less than half of the limit requested will be collected and used.

Southwestern's Budget Request for the PPW subprogram reflects the maximum anticipated need to ensure adequate funding to fulfill its 1,200-hour peaking power contractual obligations considering volatile market prices, unknown forced generation outages, and all but the most severe hydrological conditions. Southwestern will continue to use offsetting collections and alternative financing arrangements, which include net billing and/or reimbursable authority (customer advances), to fund this subprogram. When hydropower generation falls significantly below normal due to severe drought conditions or major outages, Southwestern will utilize the Continuing Fund for emergency PPW expenses.

Southwestern employs a risk mitigation strategy to ensure continuous operations during periods of significant drought. The strategy involves maintaining an unobligated reserve balance of funds from receipts credited as offsetting collection for PPW, in order to respond to rapid-developing severe drought conditions. Any receipts retained are available until expended and are available only for PPW expenses. As of the end of FY 2022, Southwestern's PPW reserve balance was $108 million. Customers will provide other power resources and/or purchases for the remainder of their firm loads.

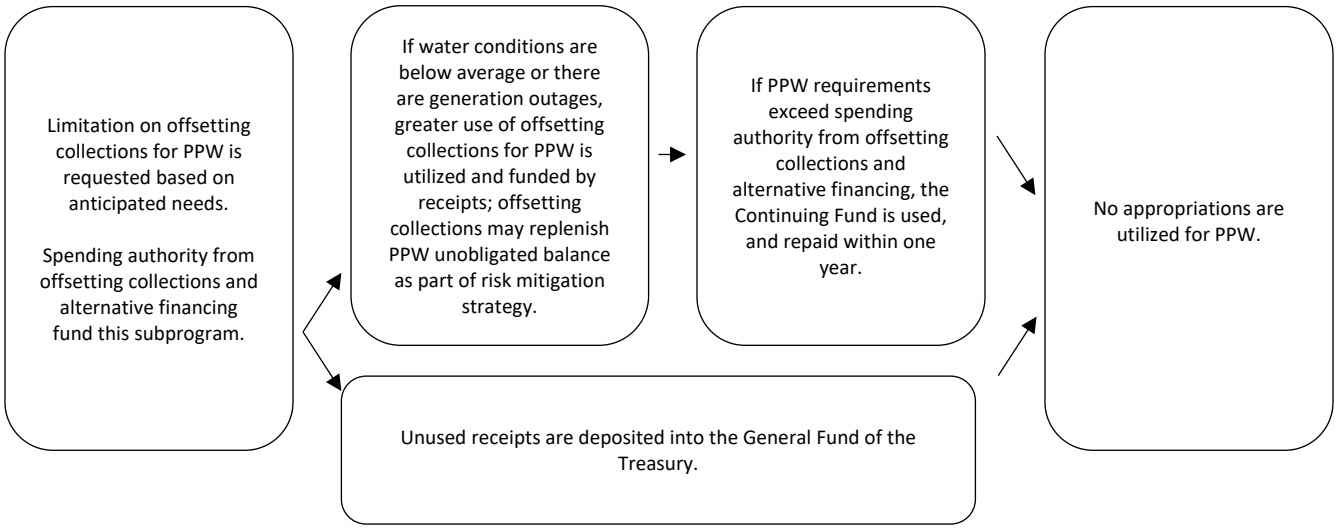
The activities of the PPW subprogram provide for the purchase of power that helps fulfill limited peaking power contractual obligations, thereby ensuring the marketability of the Federal hydropower resource and repayment of the Federal investment. This subprogram also provides for wheeling services that deliver Federal power to optimize the operation of the hydropower facilities marketed by Southwestern. This subprogram enhances the reliability of the electrical transmission grid. PPW includes two activities:

System Support

This activity funds Southwestern's purchase power requirements needed to fulfill all 1200-hour contractual peaking power obligations with customers. System support requirements depend on the conditions of the interconnected system of hydropower projects which is affected by weather, unit operational condition, power market prices (which can be volatile), and limited availability of energy banks. Since the rates Southwestern charges its customers are based on full cost recovery, Southwestern has a built-in incentive to minimize expenditures for purchase power.

Other Contractual Services

This activity funds other contractual services that provide for wheeling associated with the purchase of transmission service to meet limited peaking power obligations and for the integration of projects for the delivery of Federal power. The funding level is derived from contractual wheeling requirements. The FY 2023 funding request reflects the projected cost for wheeling services based on contractual pricing and delivery terms.



Activities and Explanation of Changes

FY 2023 Enacted	FY 2024 Request	Explanation of Changes FY 2024 Request vs FY 2023 Enacted
Purchase Power and Wheeling $93,000,000	**$ 120,000,000**	**+ $27,000,000**
System Support ($89,500,000)	*($116,500,000)*	*(+ $27,000,000)*
• This activity funds purchase power requirement needed to fulfill all 1200-hour contractual peaking power obligations with customers.	• This activity funds purchase power requirement needed to fulfill all 1200-hour contractual peaking power obligations with customers.	• The overall increase in system support reflects maximum anticipated needs based on projected market prices and severe drought hydrologic conditions. Droughts in Southwestern's region can develop in a matter of months, such that adequate PPW funding must be available for proactive planning and rapid response.
Other Contractual Services ($3,500,000)	*($3,500,000)*	*(+ $0)*
• Contractual services for wheeling associated with the purchase of transmission service.	• Contractual services for wheeling associated with the purchase of transmission service.	• Funding request remains the same.

Program Direction
Funding ($K)

	FY 2023 Enacted	FY 2024 Request	FY 2024 Request vs FY 2023 Enacted ($)
Southwestern Power Administration			
Salaries and Benefits	28,528	28,667	+ 139
Travel	1,654	1,490	- 164
Support Services	4,387	3,963	- 424
Other Related Expenses	3,681	5,052	+ 1,371
Subtotal, Southwestern Power Administration	**38,250**	**39,172**	**+ 922**
Offsetting Collections (annual expenses)	-34,882	-32,002	+ 2,880
Alternative Financing	-0	-4,217	- 4,217
Total, Program Direction	**3,368**	**2,953**	**- 415**
Federal FTEs	194	194	0
Support Services			
Management Support			
Engineering and Technical Services	0	0	0
Technical Support			
Management and Professional Support Services	4,387	3,963	- 424
Total Support Services	4,387	3,963	- 424
Total, Support Services	**4,387**	**3,963**	**- 424**
Other Related Expenses			
Rent to Others	0	0	0
Communication, Utilities, Misc.	882	890	+ 8
EITS	50	85	+ 35
Printing and Reproduction	45	45	0
Other Services	766	1,011	+ 245
Training	197	200	+ 3
Power Marketing Liaison	104	125	+ 21
Financial Audit	450	440	- 10
Supplies and Materials	150	153	+ 3

	FY 2023 Enacted	FY 2024 Request	FY 2024 Request vs FY 2023 Enacted ($)
Equipment	473	1,463	+ 990
Working Capital Fund	564	640	+ 76
Total, Other Related Expenses	**3,681**	**5,052**	**+ 1,371**

Program Direction

Overview

Southwestern's Program Direction subprogram ensures continued reliability of the Federal power system by utilizing Federal staffing resources and associated funds required to provide overall direction and execution of Southwestern's Operation and Maintenance Program.

The Program Direction subprogram supports DOE's and Southwestern's missions by providing compensation and all related expenses for its workforce, including those employees that operate and maintain Southwestern's high-voltage interconnected transmission system and associated facilities; those that plan, design, and supervise the construction of replacements, upgrades, and additions (capital investments) to the transmission facilities; those that market the power and energy produced to repay annual expenses and capital investment; those that perform cyber and physical security roles; and those that administratively support these functions.

Southwestern will use available programs and develop new strategies to hire and train the next generation of engineers, cyber and physical security specialists, power system dispatchers, high voltage electricians, and linemen. These initiatives will address the shortage of these valuable resources because of retirement trends, and the ever-expanding demands on the electric utility industry, such as compliance with NERC and FISMA standards.

Southwestern trains all employees on a continuing basis in occupational safety and health regulations, policies, and procedures to keep the safety culture strong. Accidents are always reviewed to ensure lessons are learned and proper work protocol is in place.

Program Direction is mainly funded from offsetting collections. Other funding utilized for Program Direction is appropriations and if necessary alternative financing arrangements.

Program Direction

Activities and Explanation of Changes

FY 2023 Enacted	FY 2024 Request	Explanation of Changes FY 2024 Request vs FY 2023 Enacted
Program Direction $38,250,000	**$39,172,000**	**+ $922,000**
Salaries and Benefits ($28,528,000)	*($28,667,000)*	*(+ $139,000)*

Program Direction

Activities and Explanation of Changes

FY 2023 Enacted	FY 2024 Request	Explanation of Changes FY 2024 Request vs FY 2023 Enacted
• The FY 2023 level supports 194 Federal employees: 54 percent of the employees are GS; salaries of the remaining 46 percent (craft workers and power system dispatchers) are determined through union negotiations and wage surveys. This activity also includes overtime, awards, relocation, workers' compensation, recruitment bonuses, retention pay, and advanced in-hire rates. By the end of FY 2023, approximately 27 percent of Southwestern's staff will be eligible for optional retirement. Southwestern will continue to invest in its employees, emphasizing strong development programs, completing skills gap analyses, and pursuing aggressive recruitment and retention efforts.	• The FY 2024 level supports 194 Federal employees: 54 percent of the employees are GS; salaries of the remaining 46 percent (craft workers and power system dispatchers) are determined through union negotiations and wage surveys. This activity also includes overtime, awards, relocation, workers' compensation, recruitment bonuses, retention pay, and advanced in-hire rates. By the end of FY 2024, approximately 25 percent of Southwestern's staff will be eligible for optional retirement. Southwestern will continue to invest in its employees, emphasizing strong development programs, completing skills gap analyses, and pursuing aggressive recruitment and retention efforts.	• The increase in Salaries and Benefits reflects aggressive recruiting to fill several technical hard to fill positions, back-filling retirees, and filling succession planning positions for knowledge transfer.
Travel ($1,654,000)	*($1,490,000)*	*(- $164,000)*
• This activity funds all related travel and per diem expenses for mission-related travel to maintain the integrity and reliability of Southwestern's geographically dispersed power system. The funding level for this activity is primarily derived from the daily requirement of the field maintenance personnel to maintain 1,381 miles of transmission lines, 26 substations/switchyards, 51 microwave/radio sites, communication equipment, and the Supervisory Control and Data Acquisition network. Travel for the performance of general and administrative functions is also included.	• This activity funds all related travel and per diem expenses for mission-related travel to maintain the integrity and reliability of Southwestern's geographically dispersed power system. The funding level for this activity is primarily derived from the daily requirement of the field maintenance personnel to maintain 1,381 miles of transmission lines, 26 substations/switchyards, 51 microwave/radio sites, communication equipment, and the Supervisory Control and Data Acquisition network. Travel for the performance of general and administrative functions is also included.	• The decrease in travel reflects estimated transmission policy related efforts, water resource activities, and field maintenance crew travel.

FY 2023 Enacted	FY 2024 Request	Explanation of Changes FY 2024 Request vs FY 2023 Enacted
Support Services ($4,387,000)	*($3,963,000)*	*(+ $424,000)*
• This activity funds contracted management support services including information technology, E-Government, and administrative/records management support. The funding level for this activity is derived from the most recent negotiated contract for support services essential to achieve Southwestern's mission.	• This activity funds contracted management support services including information technology, E-Government, and administrative/records management support. The funding level for this activity is derived from the most recent negotiated contract for support services essential to achieve Southwestern's mission.	• Decrease for a change in allocation of service contract costs between HQ and field.
Other Related Expenses ($3,681,000)	*($5,052,000)*	*(+ $1,371,000)*
• This activity funds rental space, facility security, the financial audit, services of the Power Marketing Liaison Office, the Human Resources Shared Service Center (HRSSC), the working capital fund, technology refresh in the areas of personal computers, hardware and software, printing and reproduction, and training and tuition fees in support of workforce planning and required training to meet the NERC emergency operations requirement. Rental space costs assume the GSA inflation factor. Other costs are based on the historical usage and actual cost of similar items.	• This activity funds facility security, the financial audit, services of the Power Marketing Liaison Office, the Human Resources Shared Service Center (HRSSC), the working capital fund, technology refresh in the areas of personal computers, hardware and software, printing and reproduction, and training and tuition fees in support of workforce planning and required training to meet the NERC emergency operations requirement. Costs are based on the historical usage and actual cost of similar items.	• Change reflects increase in software updates and maintenance costs required for FY 2024.

Southwestern Power Administration
Revenues and Receipts
Funding ($K)

	FY 2022 Actual	FY 2023 Estimate	FY 2024 Estimate	FY 2025 Estimate	FY 2026 Estimate	FY 2027 Estimate	FY 2028 Estimate
Gross Revenues							
Sale and Transmission of Electric Energy	211,577	198,610	198,610	198,610	198,610	198,610	198,610
Alternative Financing Credited as an Offsetting Receipt (O&M, CN, PD, PPW), Net Billing	-38,438	-39,314	-57,411	-59,056	-58,853	-58,320	-61,372
Alternative Financing Credited as an Offsetting Receipt (Section 212), Net Billing[3]	-60,365	-39,909	-5,000	-3,000	-3,500	-3,500	-1,000
Offsetting Collections, Annual Expenses (Net Zero)	-37,924	-42,880	-40,886	-41,564	-40,691	-41,527	-42,038
Offsetting Collections, Purchase Power and Wheeling ('up to' ceiling)[4]	-39,000	-70,000	-80,000	-80,000	-80,000	-80,000	-80,000
Total Proprietary Receipts	35,850	6,507	15,313	14,990	15,566	15,263	14,200
Percent of Sales to Preference Customers	100%	100%	100%	100%	100%	100%	100%
Energy Sales from Power Marketed (billions of kilowatt hours)	5.4	5.3	5.4	5.4	5.4	5.4	5.4

[3] Actual Alternative Financing in estimated years may be more than estimated to provide funding to the WRDA 2000 Section 212 Customer Funding Program, as authorized, dependent upon available receipts based on actual revenues from the sale and transmission of electric energy and utilization of PPW offsetting collections and/or Alternative Financing for PPW in each FY.

[4] FY 2022 amount enacted for the limit on PPW offsetting collections was $39 million. For FY 2023 through FY 2028, the estimated amount of offsetting collections for PPW is equivalent to the "up to" amount enacted (FY 2023), requested (FY 2024), or anticipated to be requested (FY 2025-2028) in the Budget. The PPW offsetting collections limit requested (when matched with PPW receipts), along with alternative financing used for PPW, could potentially fund a drought for one year or replenish unobligated balances after a drought has occurred. This will also allow funding to be collected in case the drought persists for more than a year.

Southwestern Power Administration
Estimate of Offsetting Collections for Reimbursable Work and Work for Others[5]

	Funding ($K)		
	FY 2022	FY 2023	FY 2024
Offsetting Collections for Reimbursable Work [6]			
Alternative Financing			
Operations and Maintenance	4,591	5,279	4,388
Construction	10,901	11,035	8,806
Purchase Power and Wheeling (PPW)	23,000	23,000	40,000
Program Direction	0	0	4,217
Subtotal, Alternative Financing	**38,492**	**39,314**	**57,411**
Offsetting Collections not anticipated for obligation in budget year	0	0	0
Subtotal, Offsetting Collections for Reimbursable Work	**38,492**	**39,314**	**57,411**
Offsetting Collections for Reimbursable Work-for-Others [7]			
Non-Federal	**12,508**	**12,686**	**12,589**
Federal	**6,000**	**6,000**	**6,000**
Total, Offsetting Collections for Reimbursable	**57,000**	**58,000**	**76,000**

[5]Southwestern received permanent non-Federal reimbursable authority pursuant to 16 USC 825s-4. Table is shown for transparency purposes.

[6]Southwestern relies significantly on alternative financing arrangements with customers to finance much of its direct mission work on a reimbursable basis.

[7] Southwestern utilizes various forms of Federal and non-Federal reimbursable agreements. Work-for-Others agreements include interconnection requests, system upgrades for reliability, relocation of structures for State and Federal highways and work for other Federal agencies.

Southwestern Power Administration
System Statistics

	FY 2022 Actual	FY 2023 Estimate	FY 2024 Estimate	FY 2025 Estimate	FY 2026 Estimate	FY 2027 Estimate	FY 2028 Estimate
Installed Capacity	2,213,500	2,242,500	2,242,500	2,242,500	2,242,500	2,242,500	2,242,500
Marketed Capacity	2,058,500	2,058,500	2,058,500	2,058,500	2,058,500	2,058,500	2,058,500
Generating Stations							
Generating Projects (Number)	24	24	24	24	24	24	24
Substations/Switchyards (Number)	26	26	26	26	26	26	26
Substations/Switchyards (kVA Capacity)	1,026,900	1,026,900	1,026,900	1,026,900	1,026,900	1,026,900	1,026,900
Energy Generated	4,818,706	5,177,500	5,098,400	5,139,700	5,152,400	5,152,400	5,152,400
Energy Received	138,427	241,500	249,900	246,700	244,800	244,800	244,800
Total, Energy Available for Marketing	4,957,133	5,419,000	5,348,300	5,386,400	5,397,200	5,397,200	5,397,200
161-KV	1,118	1,118	1,118	1,118	1,118	1,118	1,118
138-KV	164	164	164	164	164	164	164
69-KV	99	99	99	99	99	99	99
Total, Transmission Lines	1,381	1,381	1,381	1,381	1,381	1,381	1,381

Power Marketed, Wheeled, or Exchanged by Project

	State	Number of Plants	Installed Capacity (kW)	Marketed Capacity (kW)	FY 2022 Actual Energy (GWh)	FY 2023 Estimated Energy (GWh	FY 2024 Estimated Energy (GWh)	FY 2025 Estimated Energy (GWh)	FY 2026 Estimated Energy (GWh)	FY 2027 Estimated Energy (GWh)	FY 2028 Estimated Energy (GWh)
Power Marketed											
Integrated System:											1,871
	Missouri	4	470,000	713,166	1,739	1,879	1,854	1,867	1,871	1,871	
	Arkansas	9	1,058,050	395,856	965	1,043	1,029	1,037	1,039	1,039	1,039
	Oklahoma	7	514,100	426,635	1,040	1,124	1,109	1,117	1,119	1,119	1,119
	Texas	2	112,000	162,527	396	428	422	426	426	426	426
	Louisiana	0	0	136,495	333	360	355	357	358	358	358
	Kansas	0	0	164,510	401	433	428	431	432	432	432
Subtotals		22	2,154,150	1,999,188	4,874	5,268	5,197	5,235	5,246	5,246	5,246

Isolated:
(Sam Rayburn and Robert D. Willis Projects)

	Texas	2	59,350	29,675	60	76	76	76	76	76	76
	Louisiana	0	0	29,675	24	76	76	76	76	76	76
Subtotals		2	59,350	59,350	84	152	152	152	152	152	152
				2,058,338							5,397
Total, Power Marketed[8]		24	2,213,500		4,957	5,419	5,348	5,386	5,397	5,397	
Power Wheeled (MW)					611	589	592	595	598	598	598

[8] Total, Power Marketed: actual energy data is the energy delivered and therefore net of losses and other non-marketed energy; estimated data comes from Southwestern's 2022 power repayment studies.

Construction, Rehabilitation, Operation and Maintenance
Western Area Power Administration
Proposed Appropriation Language

For carrying out the functions authorized by title III, section 302(a)(1)(E) of the Act of August 4, 1977 (42 U.S.C. 7152), and other related activities including conservation and renewable resources programs as authorized, $313,289,000, including official reception and representation expenses in an amount not to exceed $1,500, to remain available until expended, of which $313,289,000 shall be derived from the Department of the Interior Reclamation Fund: Provided, That notwithstanding 31 U.S.C. 3302, section 5 of the Flood Control Act of 1944 (16 U.S.C. 825s), and section 1 of the Interior Department Appropriation Act, 1939 (43 U.S.C. 392a), up to $213,417,000 collected by the Western Area Power Administration from the sale of power and related services shall be credited to this account as discretionary offsetting collections, to remain available until expended, for the sole purpose of funding the annual expenses of the Western Area Power Administration: Provided further, That the sum herein appropriated for annual expenses shall be reduced as collections are received during the fiscal year so as to result in a final fiscal year 2024 appropriation estimated at not more than $99,872,000 of which $99,872,000 is derived from the Reclamation Fund: Provided further, That notwithstanding 31 U.S.C. 3302, up to $475,000,000 collected by the Western Area Power Administration pursuant to the Flood Control Act of 1944 and the Reclamation Project Act of 1939 to recover purchase power and wheeling expenses shall be credited to this account as offsetting collections, to remain available until expended for the sole purpose of making purchase power and wheeling expenditures: Provided further, That for purposes of this appropriation, annual expenses means expenditures that are generally recovered in the same year that they are incurred (excluding purchase power and wheeling expenses).

Explanation of Changes

There is no change in the appropriation language.

Public Law Authorizations
P.L. 57-161, "The Reclamation Act of 1902"
P.L. 78-534, "Flood Control Act of 1944"
P.L. 95-91, "Department of Energy Organization Act" (1977)
P.L. 102-486, "Energy Policy Act of 1992"
P.L. 66-389, "Sundry Civil Appropriations Act" (1922)
P.L. 76-260, "Reclamation Project Act of 1939"
P.L. 80-790, "Emergency Fund Act of 1948"
P.L. 102-575, "Reclamation Projects Authorization and Adjustment Act of 1992"
"Economy Act" of 1932, as amended (41 stat. 613)
"Interior Department Appropriation Act of 1928" (44 Stat. 957)
P.L. 70-642, "Boulder Canyon Project Act" (1928)
P.L. 75-756, "Boulder Canyon Project Adjustment Act" (1940)
P.L. 98-381, "Hoover Power Plant Act of 1984"
P.L. 75-529, "The Fort Peck Project Act of 1938"
P.L. 84-484, "The Colorado River Storage Project Act of 1956"
P.L. 90-537, "The Colorado River Basin Project Act of 1968"
The Act of June 18, 1954 (68 Stat. 255)
P.L. No 111-5, "American Recovery and Reinvestment Act of 2009"

Falcon and Amistad Operating and Maintenance Fund
Proposed Appropriation Language

*For operation, maintenance, and emergency costs for the hydroelectric facilities at the Falcon and Amistad Dams, $3,425,000, to remain available until expended, and to be derived from the Falcon and Amistad Operating and Maintenance Fund of the Western Area Power Administration, as provided in section 2 of the Act of June 18, 1954 (68 Stat. 255): Provided, That notwithstanding the provisions of that Act and of 31 U.S.C. 3302, up to $3,197,000 collected by the Western Area Power Administration from the sale of power and related services from the Falcon and Amistad Dams shall be credited to this account as discretionary offsetting collections, to remain available until expended for the sole purpose of funding the annual expenses of the hydroelectric facilities of these Dams and associated Western Area Power Administration activities: Provided further, That the sum herein appropriated for annual expenses shall be reduced as collections are received during the fiscal year so as to result in a final fiscal year 2024 appropriation estimated at not more than $228,000: Provided further, That for purposes of this appropriation, annual expenses means expenditures that are generally recovered in the same year that they are incurred: Provided further, That for fiscal year 2024, the Administrator of the Western Area Power Administration may accept up to $1,872,000 in funds contributed by United States power customers of the Falcon and Amistad Dams for deposit into the Falcon and Amistad Operating and Maintenance Fund, and such funds shall be available for the purpose for which contributed in like manner as if said sums had been specifically appropriated for such purpose: Provided further, That any such funds shall be available without further appropriation and without fiscal year limitation for use by the Commissioner of the United States Section of the International Boundary and Water Commission for the sole purpose of operating, maintaining, repairing, rehabilitating, replacing, or upgrading the hydroelectric facilities at these Dams in accordance with agreements reached between the Administrator, Commissioner, and the power customers. (*Energy and Water Development and Related Agencies Appropriations Act, 2023.*)*

Explanation of Changes

There is no change in the appropriation language.

Public Law Authorizations
P.L. 103-236, "Foreign Relations Authorization Act, Fiscal Years 1994 and 1995"
The Act of June 18, 1954 (68 Stat. 255)

Western Area Power Administration
Funding ($K)

	FY 2022 Enacted	FY 2023 Enacted	FY 2024 Request
Gross	1,085,326	1,398,523	1,691,129
Offsets	-994,326	-1,299,563	-1,591,029
Net BA	**91,000**	**98,960**	**100,100**

Bipartisan Infrastructure Legislation (BIL) Appropriation ($K)

FY 2022 BIL Appropriation	FY 2023 BIL Appropriation	FY 2024 BIL Appropriation
499,500	**0**	**0**

Disaster Relief Supplemental (DRS) Appropriation ($K)

FY 2022 DRS Appropriation	FY 2023 DRS Appropriation	FY 2024 DRS Appropriation
0	**520,000**	**0**

Overview

Western Area Power Administration (WAPA) continues to support the Department of Energy (DOE) priorities for a resilient, reliable and secure North American electricity system.

WAPA's mission is to market and reliably deliver cost-based Federal hydroelectric power. WAPA markets power in 15 central and western states from Federally owned power plants operated primarily by the U.S. Army Corps of Engineers, U.S. Bureau of Reclamation and the Department of State's International Boundary and Water Commission. WAPA operates and maintains a high-voltage, integrated transmission system, including approximately 17,000 circuit-miles of high-voltage transmission lines, more than 300 substations/switchyards and associated power system controls, and communication and electrical facilities.

WAPA serves a diverse group of nearly 700 wholesale customers, including more than two dozen military installations, DOE National labs, municipalities, rural electric cooperatives, public utility and irrigation districts, Federal and state agencies and Native American tribes. In turn, WAPA's customers provide service to 40 million Americans, including many disadvantaged and energy communities.

WAPA's base program is funded through three appropriation accounts: 1) the Construction, Rehabilitation, Operation and Maintenance Account (CROM); 2) Falcon and Amistad Operating and Maintenance Fund; and 3) Colorado River Basins Power Marketing Fund (CRBPMF). Within these three accounts, there are seven subprograms: four in the CROM Account, one in the Falcon and Amistad Operating and Maintenance Fund and two in CRBPMF.

WAPA's request has been formulated to meet its power marketing and contractual power delivery obligations with continued high marks for reliability. The Request prioritizes grid modernization through data-driven investment decisions designed to improve resiliency and reliability of WAPA's transmission system.

Western Area Power Administration
Funding by Congressional Control ($K)

	FY 2022 Enacted	FY 2023 Enacted	FY 2024 Request	FY 2024 Request vs FY 2023 Enacted ($)	FY 2024 Request vs FY 2023 Enacted (%)
Construction, Rehabilitation, Operation and Maintenance (CROM)					
Operation and Maintenance	81,983	85,229	130,131	+44,902	+53%
Construction and Rehabilitation	35,185	47,189	0	-47,189	-100%
Purchase Power and Wheeling	443,677	715,824	715,824	0	0%
Program Direction	267,246	277,287	295,039	+17,752	+6%
Subtotal, CROM Program	**828,091**	**1,125,529**	**1,140,994**	**+15,465**	**+1%**
Alternative Financing					
Operation and Maintenance	-7,122	-7,641	-42,276	-34,635	+453%
Construction and Rehabilitation	-31,090	-38,219	0	+38,219	-100%
Purchase Power and Wheeling	-273,677	-240,824	-240,824	0	0%
Program Direction	-51,849	-54,868	-60,084	-5,216	+10%
Subtotal, Alternative Financing	**-363,738**	**-341,552**	**-343,184**	**-1,632**	**0%**
Offsetting Collections from Colorado River Dam Fund					
Operation and Maintenance	-1,491	-1,449	-1,530	-81	+6%
Program Direction	-7,625	-7,955	-7,991	-36	0%
Subtotal, Offsetting Collections from Colorado River Dam Fund	**-9,116**	**-9,404**	**-9,521**	**-117**	**+1%**
Offsetting Collections, annual Operation and Maintenance and Program Direction					
Operation and Maintenance	-27,530	-29,180	-29,449	-269	+1%
Program Direction	-166,935	-171,661	-183,968	-12,307	+7%
Subtotal, Offsetting Collections, annual Operation and Maintenance and Program Direction	**-194,465**	**-200,841**	**-213,417**	**-12,576**	**+6%**
Offsetting Collections, Purchase Power and Wheeling	-170,000	-475,000	-475,000	0	0%
Use of Prior Year Balances					
Annual Operation and Maintenance	0	0	0	0	0%
Annual Program Direction	0	0	0	0	0%
Subtotal, Use of Prior Year Balances	**0**	**0**	**0**	**0**	**0%**
Subtotal, CROM	**90,772**	**98,732**	**99,872**	**+1,140**	**+1%**
Rescission of Prior Year Balances	0	0	0	0	0%

	FY 2022 Enacted	FY 2023 Enacted	FY 2024 Request	FY 2024 Request vs FY 2023 Enacted ($)	FY 2024 Request vs FY 2023 Enacted (%)
Total, CROM	**90,772**	**98,732**	**99,872**	**+1,140**	**+1%**
Federal FTEs	**1,202**	**1,201**	**1,200**	**-1**	**0%**
Falcon and Amistad Operating and Maintenance Fund	7,545	7,928	8,297	+369	+5%
Offsetting Collections, annual Operation and Maintenance	-5,580	-6,102	-3,197	+2,905	-48%
Use of Prior Year Balances	0	0	-3,000	-3,000	0%
Alternative Financing	-1,737	-1,598	-1,872	-274	+17%
Total, Falcon and Amistad	**228**	**228**	**228**	**0**	**0%**
Federal FTEs	**0**	**0**	**0**	**0**	**0%**
Colorado River Basins Power Marketing Fund (CRBPMF)	237,290	258,466	535,238	+276,772	+107%
Offsetting Collections	-237,290	-258,466	-535,238	-276,772	+107%
Total, CRBPMF	**0**	**0**	**0**	**0**	**0%**
Federal FTEs	**308**	**308**	**311**	**+3**	**+1%**
Transmission Infrastructure Program Fund (TIP)					
Mandatory					
New Borrowing Authority	0	0	0	0	0%
Repayment of Borrowing Authority	0	0	0	0	0%
Subtotal, Borrowing Authority	**0**	**0**	**0**	**0**	**0%**
Operating & Debt Service	5,000	8,400	8,400	0	0%
Collections from Projects	-5,000	-8,400	-8,400	0	0%
Subtotal, Operating & Debt Service	**0**	**0**	**0**	**0**	**0%**
Total, Mandatory	**0**	**0**	**0**	**0**	**0%**
Discretionary					
Equipment, Contracts and Related Expenses	4	4	86	+82	+2,050%
Program Direction	12,396	6,596	6,514	-82	-1%
Subtotal, Discretionary	**12,400**	**6,600**	**6,600**	**0**	**0%**
Offsetting Collections	-12,400	-6,600	-6,600	0	0%
Total, Discretionary	**0**	**0**	**0**	**0**	**0%**

	FY 2022 Enacted	FY 2023 Enacted	FY 2024 Request	FY 2024 Request vs FY 2023 Enacted ($)	FY 2024 Request vs FY 2023 Enacted (%)
Total, TIP	**0**	**0**	**0**	**0**	**0%**
Federal FTEs	**11**	**12**	**10**	**-2**	**-17%**
Total, Western Area Power Administration	**91,000**	**98,960**	**100,100**	**+1,140**	**+1%**
Federal FTEs	**1,521**	**1,521**	**1,521**	**0**	**0%**

Construction, Rehabilitation, Operation and Maintenance
Western Area Power Administration
Funding ($K)

	FY 2022 Enacted	FY 2023 Enacted	FY 2024 Request
Gross	828,091	1,125,529	1,140,994
Offsets	-737,319	-1,026,797	-1,041,122
Subtotal	**90,772**	**98,732**	**99,872**
Rescission of prior year balances	0	0	0
Net BA	**90,772**	**98,732**	**99,872**

Overview

WAPA markets and delivers reliable, cost-based Federal hydroelectric power and related services. WAPA's marketing efforts and delivery capability provide for recovery of annual operational costs, including the generating agencies' hydropower related costs, and repayment of taxpayer investment in the Federal hydropower program. WAPA repays the Federal investment for which it is responsible within the timeframes established by law and regulations.

WAPA's Construction, Rehabilitation, Operation and Maintenance Account (CROM) is comprised of four subprograms:

- Operation and Maintenance (O&M)
- Construction and Rehabilitation (C&R)
- Purchase Power and Wheeling (PPW)
- Program Direction (PD)

WAPA's subprograms are funded using a variety of financing methods including appropriations, alternative financing (primarily customer advances), and use of receipt authorities.

Highlights of the FY 2024 Budget Request

WAPA's request has been formulated to meet its power marketing and contractual power delivery obligations. The Request prioritizes grid modernization through data-driven investment decisions designed to improve resiliency and reliability of WAPA's transmission system.

For FY24 and outyears, WAPA is adhering more strictly to common capital program definitions to improve consistency and transparency of budgeted activities in the O&M and C&R programs across WAPA's separate regions and power systems. There is no change in WAPA's overall capital program requirement.

- O&M Replacements, Additions & Upgrades will include all capital replacement activity, including minor related upgrades and additions. The C&R program will no longer include replacement and additions. Over the years, replacement activity (a maintenance activity) has migrated to the C&R program as the build-out of WAPA transmission system has effectively completed
- C&R will include capital investments greater than $25 million in total anticipated costs that meet the following criteria:
    - Construction of new facilities that provide service to new customers, expand service to existing customers or provide cost-effective benefits for WAPA customers
    - Major rehabilitation of existing infrastructure intended to restore assets to acceptable operating or environmental conditions

Outyear Funding
($K)

	FY 2024 Request	FY 2025	FY 2026	FY 2027	FY 2028
CROM Net BA	**99,872**	**102,170**	**104,520**	**106,924**	**109,383**

Major Outyear Priorities and Assumptions
Outyear funding levels for WAPA CROM total $422,997,000 for FY 2025 through FY 2028. The CROM appropriation priorities include:

- Operation and maintenance requirements for reliable and resilient transmission system
- Capital investments in grid modernization and safeguards
- Purchase power and wheeling to meet reserves and contractual power delivery obligations

Operation and Maintenance
Funding ($K)

	FY 2022 Enacted	FY 2023 Enacted	FY 2024 Request	FY 2024 Request vs FY 2023 Enacted ($)	FY 2024 Request vs FY 2023 Enacted (%)
Operation and Maintenance					
Regular Operation and Maintenance	36,322	38,490	38,965	+475	+1%
Replacements, Additions & Upgrades	45,661	46,739	91,166	+44,427	+95%
Total, Operation and Maintenance	**81,983**	**85,229**	**130,131**	**+44,902**	**+53%**
Alternative Financing	-7,122	-7,641	-42,276	-34,635	+453%
Use of Receipts from Colorado River Dam Fund	-1,491	-1,449	-1,530	-81	+6%
Offsetting Collections	-27,530	-29,180	-29,449	-269	+1%
Use of Prior Year Balances	0	0	0	0	0%
Total, Operation and Maintenance (Budget Authority)	**45,840**	**46,959**	**56,876**	**+9,917**	**+21%**
Replacements, Additions & Upgrades					
Aviation	650	450	450	0	0%
Communication	7,561	4,753	6,738	+1,985	+42%
Information Technology	6,588	5,488	5,228	-260	-5%
Miscellaneous	757	4,005	2,687	-1,318	-33%
Movable Equipment	11,184	10,057	11,935	+1,878	+19%
Substations	13,345	16,881	34,756	+17,875	+106%
Transmission Lines	5,576	5,105	29,372	+24,267	+475%
Total, Replacements, Additions & Upgrades	**45,661**	**46,739**	**91,166**	**+44,427**	**+95%**

Construction, Rehabilitation, Operation and Maintenance
Operation and Maintenance

Description
The Operation and Maintenance (O&M) subprogram provides the supplies, materials, equipment and infrastructure necessary for WAPA to continue to deliver on its mission of providing reliable, resilient domestic energy to 40 million Americans across its 15-state footprint.

Regular Operation and Maintenance
Supplies and materials necessary to respond to routine and emergency situations across WAPA's 17,000 miles of high-voltage interconnected transmission system will be purchased. This includes miscellaneous equipment and software used for power billing, transmission planning, e-tagging, and energy scheduling, as well as supplies and materials such as wood poles (individual pole replacement only; excludes whole line replacements), instrument transformers, meters, relays, etc. Additionally, cyber and physical security audits and monitoring as well as grid operations and monitoring are provided through this activity, funded primarily through offsetting collections and alternative customer financing.

Replacements, Additions & Upgrades
Equipment and infrastructure investments necessary to maintain required service levels across WAPA's footprint. Planned replacements, additions & upgrades activity is based on cyber and physical security audits, assessments of condition and criticality of equipment, maintenance and frequency of problems on individual items of equipment, availability of replacement parts, safety of the public and WAPA's personnel, environmental concerns and an orderly work plan. Cost estimates are based on analysis of system operation and maintenance requirements, customer-coordinated work plans, actual costs of recent similar projects, and bottom-up budgeting techniques. Planned activity is detailed by category below.

Aviation
Helicopter and helicopter equipment investments that add value to, or extend the service life of the helicopter fleet, such as engines, rotor blades, avionics, airframes, and other major components.

Communication
Investments supporting telephone, mobile radio, microwave, and fiber optics communication systems.

Information Technology
Hardware and software investments supporting cybersecurity, network, infrastructure, supervisory control and data acquisition (SCADA), enterprise applications, power management and marketing, and operations and maintenance.

Miscellaneous
Investments that support the bulk electric system, such as maintenance facilities, access roads, water systems, physical security enhancements, and facility decommissioning and removal costs.

Movable Equipment
Equipment that supports the bulk electric system such as specialized vehicles (e.g., bucket trucks, graders, bulldozers, excavators, forklifts, trailers, mobile transformers) and test equipment (e.g., meter and relay test sets, pentameters, Ohm testers, oil dielectric testers, battery load testers, and communication and environmental control test equipment).

Substations
Substation infrastructure and related components, such as circuit breakers, transformers, relays, batteries and chargers, reactors, meters, buses, surge arresters, capacitor banks, and disconnect switches.

Transmission Lines
Transmission line infrastructure and related components, such as transmission line structures, hardware, conductor, and static wires.

Activities and Explanation of Changes

FY 2023 Enacted	FY 2024 Request	Explanation of Changes FY 2024 Request vs FY 2023 Enacted
Operation and Maintenance $85,229,000	**$130,131,000**	**+44,902,000**
Regular O&M ($38,490,000) The continuing maintenance of WAPA's transmission system at or above industry standards supports DOE and WAPA missions by minimizing sudden failure, unplanned outages, and possible regional power system disruptions. The Request is based on projected work plans for activities funded from this account. Estimates are based on historical data of actual supplies needed to operate and maintain the transmission system and recent procurement of similar items. This Request also includes approximately $220,000 for appropriated O&M annual expenses that are required to fund WAPA's Salinity and Levee non-reimbursable power systems. The Request includes approximately $1,449,000 for activities in the Boulder Canyon Project, funded through receipts from the Colorado River Dam Fund.	*Regular O&M ($38,965,000)* The continuing maintenance of WAPA's transmission system at or above industry standards supports DOE and WAPA missions by minimizing sudden failure, unplanned outages, and possible regional power system disruptions. The Request is based on projected work plans for activities funded from this account. Estimates are based on historical data of actual supplies needed to operate and maintain the transmission system and recent procurement of similar items. This Request also includes approximately $248,000 for appropriated O&M annual expenses that are required to fund WAPA's Salinity and Levee non-reimbursable power systems. The Request includes approximately $1,530,000 for activities in the Boulder Canyon Project, funded through receipts from the Colorado River Dam Fund.	*Regular O&M (+$475,000)* Regular O&M increases are largely driven by transmission line maintenance requirements.
Replacements, Additions and Upgrades ($46,739,000) Replacement needs are based on age, reliability, and safety of equipment, customer-coordinated review, cost analysis of rebuild versus replacement, availability of replacement parts, and obsolescence of diagnostic maintenance tools. Estimates are determined using actual costs of similar items.	*Replacements, Additions and Upgrades ($91,166,000)* Replacement needs are based on age, reliability, and safety of equipment, customer-coordinated review, cost analysis of rebuild versus replacement, availability of replacement parts, and obsolescence of diagnostic maintenance tools. Estimates are determined using actual costs of similar items.	*Replacements, Additions and Upgrades (+44,427,000)* Replacements, Additions and Upgrades increases reflect a shift in activities previously included in the Construction and Rehabilitation subprogram. The combination of this activity and the C&R subprogram actually represents a decrease of $2.8 million year over year.

Construction and Rehabilitation
Funding ($K)

	FY 2022 Enacted	FY 2023 Enacted	FY 2024 Request	FY 2024 Request vs FY 2023 Enacted ($)	FY 2024 Request vs FY 2023 Enacted (%)
Construction and Rehabilitation					
Nogales to Saguaro Transmission Line	0	0	0	0	0%
Transmission Lines and Terminal Facilities	28,400	15,027	0	-15,027	-100%
Substations	888	22,801	0	-22,801	-100%
Other	5,897	9,361	0	-9,361	-100%
Subtotal, Construction and Rehabilitation	**35,185**	**47,189**	**0**	**-47,189**	-100%
Alternative Financing	-31,090	-38,219	0	+38,219	-100%
Total, Construction and Rehabilitation (Budget Authority)	**4,095**	**8,970**	**0**	**-8,970**	-100%

Construction, Rehabilitation, Operation and Maintenance
Construction and Rehabilitation

Description

The Construction and Rehabilitation (C&R) subprogram supports WAPA's mission to deliver reliable, clean Federal hydroelectric power by emphasizing the construction of new facilities that provide service to new customers, expand service to existing customers, or provide cost-effective benefits across the customer base intended to provide continued reliability, improved connectivity, and increased resilience, flexibility and capability to the power grid; or major rehabilitation of existing infrastructure intended to restore assets to acceptable operating or environmental conditions.

Financing of the C&R subprogram is expected to rely primarily on voluntary stakeholder participation in alternative methods for capital financing except where specific infrastructure appropriations are made available. Stakeholder financing may be provided as either advances that are re-paid to the stakeholder through bill credits or as direct work for others financing resulting in contributed assets to WAPA without repayment to the stakeholder. The latter will be reflected in the Activities and Explanation of Changes at $0, with reimbursable authority included within the work for others request.

Activities and Explanation of Changes

FY 2023 Enacted	FY 2024 Request	Explanation of Changes FY 2024 Request vs FY 2023 Enacted
Construction and Rehabilitation $47,189,000	**$0**	**-$47,189,000**

	Nogales to Saguaro Transmission Line ($0)
	• Public/private partnership:
	  ○ Customer will advance funds to WAPA for all project costs (no repayment by WAPA)
	  ○ WAPA will design, procure and construct the project at no cost to ratepayers
	• Construction of the following facilities:
	  ○ Rebuild/upgrade 64-mile 115-kV single circuit transmission line (wood H-frame structures) located on existing WAPA rights-of-way between Nogales (AZ) and Saguaro (AZ) substations to 230-kV double circuit transmission line (steel monopole structures)
	  ○ New 230-kV connections to three existing customer substations
	• Ownership:
	  ○ WAPA and customer will each own a 230-kV circuit with WAPA's operated at 115-kV
	• Benefit to WAPA customers:
	  ○ Rebuild of existing transmission system infrastructure with no impact on WAPA rates
		Nogales to Saguaro Transmission Line (+$0)
		Funding for this project is being provided through the work for others program at no cost to WAPA.

Transmission and Terminal Facilities ($15,027,000) • Continue rehabilitation and construction required on WAPA's transmission lines and terminal facilities to cost-effectively market and deliver clean Federal hydropower and promote a strong record of reliability and safety. • Address additional system reliability risk and operational problems. • Appropriations ($2,220,000) are requested for the following projects in FY 2023:		*Transmission and Terminal Facilities (-$15,027,000)* The decrease represents increased adherence to the definitions for replacements, additions and upgrades. Most projects recently reflected in the C&R subprogram were primarily larger scale replacements, additions, and upgrades, which are now more appropriately reflected within the Operations and Maintenance subprogram.

FY 2023 Enacted	FY 2024 Request	Explanation of Changes FY 2024 Request vs FY 2023 Enacted
○ Trinity-Weaverville-Lewiston (CA) upgrade rights-of-way for existing 17-mile segment of transmission line to reduce the risk of wildfires and increase reliability and safety of the surrounding community • Alternative financing ($12,807,000) sought for the following projects in FY 2023: ○ Parker-Bouse (AZ) construct 15-mile segment of 230-kV double circuit transmission line and upgrade equipment at Bouse substation to improve reliability of service, improve safety, and reduce ongoing maintenance costs ○ Bouse-Kofa 161kV (AZ) rebuild of 75.6 miles of 161-kV transmission line to comply with NERC standards, increase reliability and reduce maintenance costs ○ Parker-Blythe 161-kV #2 Rebuild (AZ/CA) rebuild of 63.9 miles of 161-kV transmission line structure to increase reliability and reduce maintenance costs ○ Blythe-Knob (CA) replacement of failed and deteriorating wood transmission line structures to increase reliability and reduce maintenance costs		
Substations ($22,801,000) • Continue construction, modification, and rehabilitation of WAPA's substations to ensure power system reliability and stability. • Address additional system reliability risk and operational problems. • Appropriations ($4,100,000) are requested for the following projects in FY 2023:		*Substations (-$22,801,000)* The decrease represents increased adherence to the definitions for replacements, additions and upgrades. Most projects recently reflected in the C&R subprogram were primarily larger scale replacements, additions, and upgrades, which are now more appropriately reflected within the Operations and Maintenance subprogram.

FY 2023 Enacted	FY 2024 Request	Explanation of Changes FY 2024 Request vs FY 2023 Enacted
○ Yellowtail Substation (MT) replacement of entire protection and control system, including control building, to increase reliability Alternative financing ($18,701,000) is being sought for the following projects in FY 2023: ○ Eagle Butte Substation (SD) replacement of existing single bus configuration with 115 kV ring bus to increase reliability and simplify maintenance procedures ○ Groton Substation (SD) transformer (40+ years) and control building replacement to reduce the risk of catastrophic failure, and increase reliability and safety ○ Philip Substation (SD) transformer replacement due to age (50+ years) and other asset management factors which could result in catastrophic failure, reliability, and customer outages ○ Sand Creek Switching Station (CO) installation of 3 breaker ring bus (power circuit breakers and control panels) to sectionalize the Erie-Hoyt-Willoby 115-kV transmission lines and to increase reliability and safety ○ Stegall Substation (NE) replacement of existing main and transfer bus configuration with breaker and a half arrangement to increase reliability and reduce maintenance requirements		

FY 2023 Enacted	FY 2024 Request	Explanation of Changes FY 2024 Request vs FY 2023 Enacted
Other ($9,361,000) • Appropriations ($2,650,000) are requested for the following projects in FY 2023: o Mead Substation (NV) roadway improvements to increase accessibility and safety o Mead Substation (NV) domestic water system improvements to increase reliability and safety • Alternative financing ($6,711,000) sought for the following projects in FY 2023: o Cottonwood Substation (CA) control building replacement (age and excessive maintenance requirements) to increase service reliability and reduce maintenance costs o Folsom Substation (CA) station service equipment upgrades to mitigate safety hazards and increase reliability o Rapid City Substation (SD) maintenance building replacement (40+ years old) will accommodate crew quarters, shop areas, house vehicles, and provide equipment storage and enable WAPA to be more efficient in maintenance and response to emergencies o Yuma (AZ) retrofit and equip newly acquired maintenance building critical to supporting aged and deteriorating transmission system infrastructure and increasing reliability for key preference customers		*Other (-$9,361,000)* The decrease represents increased adherence to the definitions for replacements, additions and upgrades. Most projects recently reflected in the C&R subprogram were primarily larger scale replacements, additions, and upgrades, which are now more appropriately reflected within the Operations and Maintenance subprogram.

Purchase Power and Wheeling
Funding ($K)

	FY 2022 Enacted	FY 2023 Enacted	FY 2024 Request	FY 2024 Request vs FY 2023 Enacted ($)	FY 2024 Request vs FY 2023 Enacted (%)
Purchase Power and Wheeling					
Central Valley	261,742	348,414	348,414	0	0%
Pick-Sloan Missouri Basin and other Programs	181,935	367,410	367,410	0	0%
Subtotal, Purchase Power and Wheeling	**443,677**	**715,824**	**715,824**	**0**	**0%**
Alternative Financing Needed	-273,677	-240,824	-240,824	0	0%
Offsetting Collections	-170,000	-475,000	-475,000	0	0%
Total, Purchase Power and Wheeling (Budget Authority)	**0**	**0**	**0**	**0**	**0%**

Construction, Rehabilitation, Operation & Mainenance
Purchase Power and Wheeling

Description
The Purchase Power and Wheeling (PPW) subprogram continues to support WAPA's marketing efforts and delivery capability which spans a 1.3 million square mile area serving a diverse group of several hundred wholesale customers, including municipalities, cooperatives, public utility and irrigation districts, Federal and state agencies and Native American tribes. No appropriated budget authority is necessary.

For a historical perspective, WAPAs PPW subprogram is highly variable; it is affected by reservoir storage levels, annual and long-term drought conditions, downstream flow concerns due to icing, flooding, environmental, health and safety, recreation, irrigation, and navigation requirements. In recent years, PPW costs for WAPA Construction, Rehabilitation, Operation and Maintenance (CROM) account using PPW receipt authority and emergency appropriations have increased significantly, from $147 million in FY 2020, to $361 million in FY 2021, $418 million in FY 2022, and enacted at $475 million for FY 2023. The year-over-year increase is +146%, +16%, and +14% for FY 2021, FY 2022, and FY 2023 respectively. WAPA's budget request reflects anticipated requirements utilizing current information on hydro conditions, generation, contractual commitments, and power pricing.

WAPA has implemented a PPW risk mitigation strategy to ensure continuous operations during periods of significant drought. The strategy was developed consistent with existing authorities, and with the participation and support of WAPA power customers. Under this approach, WAPA retains receipts from the recovery of purchase power and wheeling expenses within the 'up to' amount specified by Congress. The receipts retained are available until expended and are available only for purchase power and wheeling expenses.

WAPA received a $500 million emergency appropriation through the Infrastructure Investment and Jobs Acts, providing near-term relief for immediate concerns regarding the reduced level of PPW reserves. Funds can be transferred from WAPA's CROM account to the Colorado River Basins Power Marketing Fund (CRBPMF) account as WAPA's Administrator determines is needed for purchase of power and transmission services per statute. The allocation of the IIJA funding will be prioritized in a manner that facilitates the restoration of PPW reserves in both the CROM and CRBPMF accounts.

WAPA received an additional $520 million appropriation through the Disaster Relief Supplemental for PPW support in FY 2023. Up to $100 million can be transferred from WAPA's CROM account to the Colorado River Basins Power Marketing Fund (CRBPMF) account as WAPA's Administrator determines is needed for purchase of power and transmission services per statute. The allocation of the DRS funding will be prioritized in a manner that facilitates the restoration of PPW reserves in both the CROM and CRBPMF accounts.

Since WAPA's inception, the full cost of the PPW program has been included in the rate setting process. Through this process, and utilizing interim rate adjusting capabilities, all PPW costs are fully recovered through WAPA's rates.

<u>Central Valley Project</u>
WAPA continues to deliver on its contractual power commitments to customers under the Central Valley Project's Post 2004 Marketing Plan. The Budget Request assumes current full load service customers will continue to choose service from WAPA through "Custom Product" contractual agreements. WAPA also purchases power to support variable resource customers on a pass-thru basis. If project net generation is not sufficient, WAPA may also purchase to support project use load, First Preference Customer load, and sub-control area reserve requirements. As part of the Order 741, FERC promulgated guidance requiring RTO/ISOs to take physical title/ownership to the energy bought/sold in their respective markets, making it necessary for WAPA to acknowledge that customers receive the financial, and not the physical benefit of their Federal power allocations. In order to provide service in the state, WAPA is voluntarily participating in the California greenhouse gas cap-and-trade program which became effective January 1, 2013.

<u>Pick-Sloan Missouri Basin and Other Programs</u>

The Budget Request continues to support long-term firm power commitments to customers of the eastern and western divisions of the Pick-Sloan Missouri Basin Program, the Fryingpan-Arkansas Project, and the Parker-Davis Project commensurate with the levels of average firm hydroelectric energy marketed by WAPA. The Request also provides transmission support for the Pacific Northwest-Southwest Intertie Project. The total program estimates shown are based primarily on market pricing of short-term firm energy, negotiated transmission rates, and WAPA and generating agency's forecasts.

Activities and Explanation of Changes

FY 2023 Enacted	FY 2024 Request	Explanation of Changes FY 2024 Request vs FY 2023 Enacted
Central Valley Project		
Program Requirements ($348,414,000) The Purchase Power and Wheeling subprogram continues to support WAPA's power marketing effort by providing for power purchases to firm the variable hydropower resource and securing transmission services as necessary to meet its contractual power delivery.	*Program Requirements (348,414,000)* The Purchase Power and Wheeling subprogram continues to support WAPA's power marketing effort by providing for power purchases to firm the variable hydropower resource and securing transmission services as necessary to meet its contractual power delivery.	*Program Requirements ($0)* No change year over year. Program amounts are financed through offsetting collections (from WAPA receipts) and alternative financing (to include net billing, bill crediting, energy exchanges and direct customer funding); no direct appropriations are requested for this activity.
Pick-Sloan Missouri Basin		
Program Requirements ($367,410,000) The Purchase Power and Wheeling subprogram continues to support WAPA's power marketing effort by providing for power purchases to firm the variable hydropower resource and securing transmission services as necessary to meet its contractual power delivery.	*Program Requirements ($367,410,000)* The Purchase Power and Wheeling subprogram continues to support WAPA's power marketing effort by providing for power purchases to firm the variable hydropower resource and securing transmission services as necessary to meet its contractual power delivery.	*Program Requirements ($0)* No change year over year. Program amounts are financed through offsetting collections (from WAPA receipts) and alternative financing (to include net billing, bill crediting, energy exchanges and direct customer funding); no direct appropriations are requested for this activity.

Construction, Rehabilitation, Operation & Maintenance
Program Direction

Overview

WAPA's Program Direction subprogram provides compensation and all related expenses for its workforce, including those employees that operate and maintain WAPA's high-voltage interconnected transmission system and associated facilities; those that plan, design, and supervise the construction of replacements, upgrades and additions (capital investments) to the transmission facilities; those that market the power and energy produced to repay annual expenses and capital investment; and those that administratively support these functions.

The Program Direction subprogram supports DOE's and WAPA's mission of operating and maintaining a resilient and secure energy grid by attaining and developing a critical highly skilled workforce of engineers, dispatchers, linemen, power system operators, and high voltage electricians. The Program Direction subprogram also includes the administrative staff, including those positions that monitor, detect, and deter physical and cyber-attacks on WAPA's infrastructure.

WAPA trains its employees on a continuing basis in occupational safety and health regulations, policies, and procedures, and conducts safety meetings at employee, supervisory and management levels to keep the safety culture strong. Accidents are reviewed to ensure lessons are learned and proper work protocol is in place.

In consultation with its customers, WAPA reviews required replacements and upgrades to its existing infrastructure to sustain reliable power delivery to its customers and to contain annual maintenance expenses. The timing and scope of these replacements and upgrades are critical to assure that WAPA's facilities remain a reliable and resilient component of the nations interconnected power grid. WAPA pursues opportunities to join with neighboring utilities to jointly finance activities, which avoid redundant facilities and result in realized cost savings and/or increased efficiencies for all participants.

Program Direction
Funding ($K)

	FY 2022 Enacted	FY 2023 Enacted	FY 2024 Request	FY 2024 Request vs FY 2023 Enacted ($)	FY 2024 Request vs FY 2023 Enacted (%)
Program Direction					
Salaries and Benefits	183,875	191,911	205,871	+13,960	+7%
Travel	10,497	10,610	10,336	-274	-3%
Support Services	36,732	36,958	35,737	-1,221	-3%
Other Related Expenses	36,142	37,808	43,095	+5,287	+14%
Total, Program Direction	**267,246**	**277,287**	**295,039**	**+17,752**	**+6%**
Use of Alternative Financing	-51,849	-54,868	-60,084	-5,216	+10%
Use of Receipts from Colorado River Dam Fund	-7625	-7,955	-7,991	-36	0%
Offsetting Collections, Other Expenses	-166,935	-171,661	-183,968	-12,307	+7%
Use of Prior Year Balances	0	0	0	0	0%
Total, Program Direction (Budget Authority)	**40,837**	**42,803**	**42,996**	**+193**	**0%**
Federal FTEs	**1,202**	**1,201**	**1,200**	**-1**	**0%**
Support Services					
Technical Support					
Economic and Environmental Analysis	13,583	15,995	15,777	-218	-1%
Total, Technical Support	**13,583**	**15,995**	**15,777**	**-218**	**-1%**
Management Support					
Automated Data Processing	13,445	11,645	11,525	-120	-1%
Training and Education	3,537	3,313	3,000	-313	-9%
Reports and Analysis, Management and General Administrative Support	6,167	6,005	5,435	-570	-9%
Total Management Support	**23,149**	**20,963**	**19,960**	**-1,003**	**-5%**
Total, Support Services	**36,732**	**36,958**	**35,737**	**-1,221**	**-3%**
Other Related Expenses					
Rent to GSA	2,398	2,200	2,423	+223	+10%
Communication, Utilities, Misc.	7,930	6,969	7,140	+171	+2%
Printing and Reproduction	105	81	65	-16	-20%

	FY 2022 Enacted	FY 2023 Enacted	FY 2024 Request	FY 2024 Request vs FY 2023 Enacted ($)	FY 2024 Request vs FY 2023 Enacted (%)
Other Services	11,019	12,189	17,874	+5,685	+47%
Training	12	2	0	-2	-100%
Purchases from Gov. Accounts	1,341	1,285	924	-361	-28%
Operation and Maintenance of Equipment	6,201	6,784	7,273	+489	+7%
Supplies and Materials	2,293	2,285	2,076	-209	-9%
Equipment	2,304	3,205	2,603	-602	-19%
Working Capital Fund	2,539	2,808	2,717	-91	-3%
Total, Other Related Expenses	**36,142**	**37,808**	**43,095**	**+5,287**	**+14%**

Construction, Rehabilitation, Operation & Maintenance
Program Direction

Activities and Explanation of Changes

FY 2023 Enacted	FY 2024 Request	Explanation of Changes FY 2024 Request vs FY 2023 Enacted
Program Direction $277,287,000	**$295,039,000**	**+$17,752,000**
Salaries and Benefits $191,911,000	**$205,871,000**	**+$13,960,000**
Salary and benefits provide for Federal employees who construct and replace, operate and maintain and secure, on a continuing basis, WAPA's high-voltage interconnected transmission system. Salary and benefits fund those FTEs assigned to this account, including those salaries determined through negotiations.	Salary and benefits funding is for Federal employees who construct and replace, operate and maintain and secure, on a continuing basis, WAPA's high-voltage interconnected transmission system.	The salary and benefits reflect known and anticipated increases for General Schedule, Wage Board and Administratively Determined employees.
Travel $10,610,000	**$10,336,000**	**-$274,000**
This activity funds all travel, and related expenses associated with WAPA's mission-related operation and maintenance activities, and those functions that support them.	Request funds all travel, and related expenses associated with WAPA's mission-related operation and maintenance activities, and those functions that support them.	Request reflects variabilities in scope and location associated with mission related operation and maintenance travel, and travel for cross-functional collaboration among various internal and external programs.
Support Services $36,958,000	**$35,737,000**	**-$1,221,000**
Support Services funded in this category include information technology, job related training and education, engineering, miscellaneous advisory and reporting services, and general administrative support.	Request funds information technology, job related training and education, engineering, miscellaneous advisory and reporting services, and general administrative support services.	Request reflects decrease in technical support for operations security and environmental services, and general administrative support.

Other Related Expenses $37,808,000	$43,095,000	+$5,287,000
Other related expenses include rental space, utilities, supplies and materials, telecommunications, information technology modernization (data/network), printing and reproduction, training tuition, and DOE's Working Capital Fund distribution. Rental space costs assume the General Services Administration's (GSA) inflation factor. Other costs are based on historical usage and actual cost of similar items.	Request funds rental space, utilities, supplies and materials, telecommunications, information technology modernization (data/network), printing and reproduction, training tuition, and DOE's Working Capital Fund distribution. Rental space costs assume the General Services Administration's (GSA) inflation factor. Other costs are based on historical usage and actual cost of similar items.	The primary increase is attributable to infrastructure other services related to substation and transmission facility maintenance and operations and slight increases in facility rent, communication, utilities; with decreases for equipment purchases and supplies and materials.

Falcon and Amistad Operating and Maintenance Fund
Funding ($K)

	FY 2022 Enacted	FY 2023 Enacted	FY 2024 Request
Gross	7,545	7,928	8,297
Offsets	-7,317	-7,700	-8,069
Net BA	**228**	**228**	**228**

Overview

The Falcon and Amistad Operating and Maintenance fund (Maintenance Fund) was established in the Treasury of the United States as directed by the Foreign Relations Authorization Act, FYs 1994 and 1995. The Maintenance Fund is administered by WAPA's Administrator for use by the Commissioner of the U. S. Section of the International Boundary and Water Commission (IBWC) to defray administrative, O&M, replacement, and emergency costs for the hydroelectric facilities at the Falcon and Amistad Dams. IBWC owns and operates the U.S. portion of the projects, and Federal staff funded under this program continues to be allocated to the U.S. Section of IBWC by the Department of State. The Falcon and Amistad project supports WAPA's program goals by providing power to rural electric cooperatives through WAPA. With the exception of monies received from the Government of Mexico, all revenues collected from the sale of electric power generated at the Falcon and Amistad Dams are credited to the Maintenance Fund. Monies received from the Government of Mexico are credited to the General Fund of the U.S. Treasury. Revenues collected in excess of operating expenses are used to repay, with interest, the cost of replacements and original investments. Full funding will support 24-hour/day operation and maintenance of the two power plants to ensure response to ever-changing water conditions, customer demand, and continual coordination with operating personnel of the Government of Mexico.

Highlights of the FY 2024 Budget Request

WAPA's request has been formulated to meet its power marketing and contractual power delivery obligations. Revenue collected from customers to recover the costs of the Federal Power Program will be sufficient to provide for planned expenses for the facilities operated by the IBWC. Also included is the continuation of WAPA's request to allow for U.S. customer(s) of the Falcon and Amistad Dams to contribute funds for use by the IBWC in fulfilling their duties in accordance with agreements between WAPA, IBWC, and the power customers. The contributed funds are planned to predominantly assist in capitalized replacement projects.

Outyear Funding
($K)

	FY 2024 Request	FY 2025	FY 2026	FY 2027	FY 2028
Falcon and Amistad Operating and Maintenance Fund Net BA	**228**	**233**	**238**	**244**	**249**

Major Outyear Priorities and Assumptions

Outyear funding levels for the Maintenance Fund total $964,000 for FY 2025 through FY 2028. Maintenance Fund priorities include the following:

- Annual operations and maintenance expenses will be offset by revenues collected from the customer
- The annual appropriation, along with customer advances, are necessary for capitalized replacement projects

Falcon and Amistad Operating and Maintenance Fund
Funding ($K)

	FY 2022 Enacted	FY 2023 Enacted	FY 2024 Request	FY 2024 Request vs FY 2023 Enacted ($)	FY 2024 Request vs FY 2023 Enacted (%)
Western Area Power Administration					
Falcon and Amistad Operating and Maintenance Fund	7,545	7,928	8,297	+369	+5%
Subtotal, Falcon and Amistad Operating and Maintenance Fund	**7,545**	**7,928**	**8,297**	**+369**	**+5%**
Offsetting Collections	-5,580	-6,102	-3,197	+2,905	-48%
Use of Prior Year Balances	0	0	-3,000	-3,000	0%
Alternative Financing	-1,737	-1,598	-1,872	-274	+17%
Total, Falcon and Amistad Operating and Maintenance Fund	**228**	**228**	**228**	**0**	**0%**

Falcon and Amistad Operating and Maintenance Fund

Description

The Falcon and Amistad Project consists of two international dams located on the Rio Grande River between Texas and Mexico. The United States and Mexico operate separate hydroelectric power plants on each side of the Rio Grande River. The power plants are independent and legislatively severable from the international reservoir storage dams. The Operating and Maintenance Fund was established in the Treasury of the United States and is administered by WAPA's Administrator for use by the Commissioner of the U.S. Section of the IBWC to defray administrative, O&M, replacement, and emergency costs for the hydroelectric facilities at the Falcon and Amistad Dams.

IBWC

O&M

Activities include salaries and benefits for the approximately 40 positions of the U.S. Section of the IBWC who operate and maintain the two power plants on a 24-hour/day basis, planned maintenance activities, required safety services, and emergency response to flood operations and/or equipment failure. O&M includes inspection and service of the HVAC and air compressor system, fire suppression systems, elevators, self-contained breathing apparatus, recharge and hydro-testing of fire extinguishers, calibration of test equipment, rebuild of electric motors, and repair of obsolete equipment when replacement parts are no longer available. Travel, training, communications, utilities, printing, and office supplies and materials for the IBWC employees and technical advisors is also funded by the O&M activity. The Request includes essential training for employees to comply with standards of the Interagency Commission on Dam Safety, Occupational and Health Administration, and the National Dam Safety Act.

Capital Investment

WAPA, the IBWC, and the customer have collaboratively developed a rehabilitation work plan to address immediate and future infrastructure needs for the hydroelectric facilities. Future infrastructure needs will be appropriately planned and categorized by all parties through regularly scheduled progress reviews.

WAPA

Marketing, Contract, Repayment Studies

This activity funds power marketing, administration of power contracts, and preparation of rate and repayment studies. Based on accurate studies, staff ensures power revenues are set at an appropriate level to recover annual expenses and meet repayment schedules.

Falcon and Amistad Operating and Maintenance Fund

Activities and Explanation of Changes

FY 2023 Enacted	FY 2024 Request	Explanation of Changes FY 2024 Request vs FY 2023 Enacted
Falcon and Amistad Operating and Maintenance Fund **$7,928,000**	**$8,297,000**	**+$369,000**
IBWC O&M ($6,041,000) This activity funds the salaries and benefits for those employees assigned to the U.S. Section of the IBWC who operate and maintain the two power plants, equipment inspections and maintenance services, and travel, training, communications, utilities, printing, and office supplies/materials for the IBWC employees and technical advisors.	*IBWC O&M ($6,147,000)* This activity funds the salaries and benefits for those employees assigned to the U.S. Section of the IBWC who operate and maintain the two power plants, equipment inspections and maintenance services, and travel, training, communications, utilities, printing, and office supplies/materials for the IBWC employees and technical advisors.	*IBWC O&M (+$106,000)* The Request reflects projects in the 10-year O&M work plan that was developed to address recommendations in the U.S. Army Corps of Engineers (USACE) inspection report completed in 2018. Projects planned include development of a circuit breaker testing program at Falcon. Amounts are for offsetting collections; no direct appropriations are requested for this activity.
IBWC Capital Investment ($1,826,000) This activity funds capital investment activities at the Falcon and Amistad hydroelectric facilities.	*IBWC Capital Investment ($2,100,000)* This activity funds capital investment activities at the Falcon and Amistad hydroelectric facilities.	*IBWC Capital Investment (+$274,000)* The Request reflects projects in the 10-year capital work plan that was developed to address recommendations in the U.S. Army Corps of Engineers inspection report completed in 2018. Projects planned include firewall containment improvements and repair/re-insulate stator winding at Falcon.
WAPA Marketing, Contracts, Repayment ($61,000) This activity funds power marketing, administration of power contracts, and preparation of rate and repayment studies.	*WAPA Marketing, Contracts, Repayment ($50,000)* This activity funds power marketing, administration of power contracts, and preparation of rate and repayment studies.	*WAPA Marketing, Contracts, Repayment (-$11,000)* The decrease is attributed to reduced costs associated with power repayment studies software. Amounts are for offsetting collections; no direct appropriations are requested for this activity.

Colorado River Basins Power Marketing Fund
Funding ($K)

	FY 2022 Enacted	FY 2023 Enacted	FY 2024 Request
Gross	237,290	258,466	535,238
Offsets	-237,290	-258,466	-535,238
Net BA	**0**	**0**	**0**

Overview
WAPA operates and maintains the transmission system for the projects funded in this account to ensure an adequate supply of reliable electric power in a clean and environmentally safe, cost-effective manner. The Colorado River Basins Power Marketing Fund Program (CRBPMF) is comprised of the Colorado River Storage Project, including the Dolores, Seedskadee, and Olmsted Projects, and the Fort Peck Project. WAPA is responsible for operation and maintenance, including purchase power and wheeling and capital replacement, additions, and upgrades of facilities for transmitting and marketing the electrical energy generated in these power systems.

Highlights of the FY 2024 Budget Request
WAPA's request has been formulated to meet its power marketing and contractual power delivery obligations. Revenues collected from customers to recover the costs of the Federal Power Program will be sufficient to provide for WAPA's planned expenses for the power systems in the CRBPMF. The Budget assumes continued severe drought conditions persist, impacting hydropower generation capability and significantly increasing purchase power and wheeling requirements.

Outyear Funding
($K)

	FY 2024 Request	FY 2025	FY 2026	FY 2027	FY 2028
CRBPMF Net BA	**0**	**0**	**0**	**0**	**0**

Major Outyear Priorities and Assumptions
Outyear funding levels for CRBPMF total $0 for FY 2025 through FY 2028. CRBPMF priorities include the following:

- Meeting power marketing and contractual power delivery obligations
- Addressing impact of severe drought and revenue concerns

Colorado River Basins Power Marketing Fund
Funding ($K)

	FY 2022 Enacted	FY 2023 Enacted	FY 2024 Request	FY 2024 Request vs FY 2023 Enacted ($)	FY 2024 Request vs FY 2023 Enacted (%)
Colorado River Basins Power Marketing Fund					
Equipment, Contracts and Related Expenses					
Supplies, Materials and Services	12,237	12,728	12,231	-497	-4%
Purchase Power Costs	104,946	119,236	401,799	+282,563	+237%
Capitalized Equipment	16,616	16,863	19,045	+2,182	+13%
Interest/Transfers	2,509	3,405	5,182	+1,777	+52%
Generating Agency Activities	26,401	26,695	16,600	-10,095	-38%
Total, Equipment, Contracts and Related Expenses	**162,709**	**178,927**	**454,857**	**+275,930**	**+154%**
Program Direction	**74,581**	**79,539**	**80,381**	**+842**	**+1%**
Total, Operating Expenses from new authority	**237,290**	**258,466**	**535,238**	**+276,772**	**+107%**
Offsetting Collections Realized	-237,290	-258,466	-535,238	-276,772	+107%
Total, Obligational Authority	**0**	**0**	**0**	**0**	**0%**

Colorado River Basins Power Marketing Fund
Equipment, Contracts and Related Expenses

Description

WAPA's equipment, contracts and related expenses are necessary to operate and maintain this activity. Revenues from the sale of electric energy, capacity and transmission services replenish the fund and are available for expenditure for operation, maintenance, power billing and collection, purchase power and wheeling, interest, emergencies, and other power marketing expenses.

Supplies, Materials and Services

This activity funds the procurement of supplies, materials, and services necessary to respond to routine and emergency situations in the transmission system. Estimates are based on recent actual costs for supplies needed to maintain transmission system reliability.

Purchase Power Costs

This activity funds the procurement of electrical power, transmission capacity and wheeling services on the open market. The Request anticipates persisting drought conditions and the results of continued low-steady-flow tests conducted at Glen Canyon Dam, as required by the Glen Canyon Dam Environmental Impact Statement Record of Decision. Additionally, the Request includes obligation authority to accommodate replacement power purchases for customers served by the Colorado River Storage Project. The replacement power purchases, a provision of the Salt Lake City Area Integrated Projects electric power contracts, are made at the request of power customers at times when WAPA lacks sufficient generation to meet its full contract commitment. The funds for the replacement power purchases are advanced by the requesting customers prior to the purchase.

Capitalized Equipment

This activity funds the procurement of capitalized equipment including circuit breakers, transformers, relays, switches, transmission line equipment, microwave, SCADA, and other communication and control equipment to assure reliable service to WAPA's customers. Replacement and upgrade of aged power system components are crucial to system reliability and transmission services.

Transmission line estimates include the purchase of poles, crossarms, conductors, fusion splicers, line switches, overhead ground wire and hardware for the continued transmission line rebuilds. This estimate includes line rebuilds with the anticipated completion of 10 miles a year.

Planned substation estimates include upgrades, replacement of breakers and circuit switches, and replacement of transformers, test equipment, as well as other aged equipment at various substations. WAPA cyclically replaces older electro-mechanical relays with microprocessor relays. The microprocessor relays assist in finding faults faster in order to restore service more efficiently to customers. Other miscellaneous items required for substation replacements include surge arrestors, batteries and chargers, and monitoring equipment.

Planned movable capitalized property estimates include replacements of special purpose trucks, replacement of generators to maintain the reliability and backup power to the communications system, and replacement of outdated test and recording equipment. Other estimates include the replacement of test equipment used to troubleshoot the new digital microwave radio system. Ongoing replacement is also planned for aging information technology support systems and

routers. Other requests include funding for other minor enhancements that provide for ease of maintenance, protection of equipment and materials, and environmental compliance.

Interest/Transfers

This activity funds interest payments to the U.S. Treasury. Estimates are based on Power Repayment Studies for the Projects funded in this account.

Generating Agency Activities

This activity direct funds the U.S. Army Corps of Engineers for operation and maintenance and procurement of capitalized equipment for the Fort Peck Power Plant. Estimates are based on recent actual costs for supplies needed to maintain generating system reliability.

Activities and Explanation of Changes

FY 2023 Enacted	FY 2024 Request	Explanation of Changes FY 2024 Request vs FY 2023 Enacted
Equipment and Related Expenses $178,927,000	**$454,857,000**	**+$275,930,000**
Supplies, Materials & Services ($12,728,000) This activity funds the procurement of supplies, materials, and services necessary to respond to routine and emergency situations in the transmission system.	*Supplies, Materials & Services ($12,231,000)* This activity funds the procurement of supplies, materials, and services necessary to respond to routine and emergency situations in the transmission system.	*Supplies, Materials & Services (-$497,000)* This is primarily attributed to decrease in purchases of non-capitalized equipment, supplies and services for general substation maintenance with slight offset for increase in IT maintenance services.
Purchase Power Costs ($119,236,000) This activity funds the procurement of electrical power, transmission capacity and wheeling services on the open market. Purchase power cost estimates are based on 24-month study factors including water cycle, snowpack, and market rates.	*Purchase Power Costs ($401,799,000)* This activity funds the procurement of electrical power, transmission capacity and wheeling services on the open market. Purchase power cost estimates are based on 24-month study factors including water cycle, snowpack, and market rates.	*Purchase Power Costs (+$282,563,000)* The increase is primarily attributed to purchase power requirements and costs. Severe drought conditions continue to persist and could lead to periods where hydrogeneration is significantly constrained.
Capitalized Equipment ($16,863,000) This activity funds the procurement of capitalized equipment including circuit breakers, transformers, relays, switches, transmission line equipment, microwave, SCADA, and other communication and control equipment to assure reliable service to WAPA's customers.	*Capitalized Equipment ($19,045,000)* This activity funds the procurement of capitalized equipment including circuit breakers, transformers, relays, switches, transmission line equipment, SCADA, and other communication and control equipment to assure reliable service to WAPA's customers.	*Capitalized Equipment (+$2,182,000)* Request reflects increases in Movable Property replacements and Substation replacements.

FY 2023 Enacted	FY 2024 Request	Explanation of Changes FY 2024 Request vs FY 2023 Enacted
Interest/Transfers ($3,405,000) This activity funds interest payments to the U.S. Treasury. Estimates are based on Power Repayment Studies for the Projects funded in this account.	*Interest/Transfers ($5,182,000)* This activity funds interest payments to the U.S. Treasury. Estimates are based on Power Repayment Studies for the Projects funded in this account.	*Interest/Transfers (+$1,777,000)* Reflectsincrease in interest as calculated in the Power Repayment Study.
Generating Agency Activities ($26,695,000) This activity direct funds the U.S. Army Corps of Engineers operation and maintenance and procurement of capitalized equipment for the Fort Peck Power Plant.	*Generating Agency Activities ($16,600,000)* This activity direct funds the U.S. Army Corps of Engineers for operation and maintenance and procurement of capitalized equipment for the Fort Peck Power Plant.	Generating Agency Activities (-$10,095,000) The decrease reflects scheduled replacements for capitalized communication, substation equipment and maintenance for the Fort Peck Power Plant.

Colorado River Basins Power Marketing Fund
Program Direction

Overview

Program Direction provides the Federal staffing resources and associated costs required to provide overall direction and execution of the Colorado River Basins Power Marketing Fund. WAPA trains its employees on a continuing basis in occupational safety and health regulations, policies, and procedures, and conducts safety meetings at employee, supervisory and management levels to keep the safety culture strong. Accidents are reviewed to ensure lessons are learned and proper work protocol is in place.

Highlights of the FY 2024 Budget Request

WAPA's request provides for the continuation of WAPA's revolving fund activities related to Program Direction at the level necessary to meet mission requirements.

Colorado River Basins Power Marketing Fund
Program Direction
Funding ($K)

	FY 2022 Enacted	FY 2023 Enacted	FY 2024 Request	FY 2024 Request vs FY 2023 Enacted ($)	FY 2024 Request vs FY 2023 Enacted (%)
Program Direction					
Salaries and Benefits	52,246	55,423	58,757	+3,334	+6%
Travel	3,466	3,428	3,024	-404	-12%
Support Services	8,176	9,032	8,019	-1,013	-11%
Other Related Expenses	10,693	11,656	10,581	-1,075	-9%
Total, Program Direction	**75,581**	**79,539**	**80,381**	**+842**	**+1%**
Federal FTEs	**308**	**308**	**311**	**+3**	**+1%**
Support Services					
Technical Support					
Engineering and Technical Services	2,214	2,858	2,397	-461	-16%
Total, Technical Support	**2,214**	**2,858**	**2,397**	**-461**	**-16%**
Management Support					
Automated Data Processing	2,921	3,225	3,003	-222	-7%
Training and Education	1,052	1,027	895	-132	-13%
Reports and Analyses, Management and General Administrative Support	1,989	1,922	1,724	-198	-10%
Total, Management Support	**5,962**	**6,174**	**5,622**	**-552**	**-9%**
Total, Support Services	**8,176**	**9,032**	**8,019**	**-1,013**	**-11%**
Other Related Expenses					
Rent to GSA	685	180	644	+464	+258%
Communication, Utilities, Misc.	2,227	2,466	1,850	-616	-25%
Printing and Reproduction	22	24	18	-6	-25%
Other Services	3,579	4,145	3,684	-461	-11%
Training	15	11	10	-1	-9%
Purchases from Gov. Accounts	343	364	258	-106	-29%
Operation and Maintenance of Equipment	1,782	2,008	2,040	+32	+2%

	FY 2022 Enacted	FY 2023 Enacted	FY 2024 Request	FY 2024 Request vs FY 2023 Enacted ($)	FY 2024 Request vs FY 2023 Enacted (%)
Supplies and Materials	659	676	583	-93	-14%
Equipment	662	949	730	-219	-23%
Working Capital Fund	719	833	764	-69	-8%
Total, Other Related Expenses	**10,693**	**11,656**	**10,581**	**-1,075**	**-9%**

Colorado River Basins Power Marketing Fund
Program Direction

Activities and Explanation of Changes

FY 2023 Enacted	FY 2024 Request	Explanation of Changes FY 2024 Request vs FY 2023 Enacted
Program Direction $79,539,000	**$80,381,000**	**+$842,000**
Salaries and Benefits $55,423,000	**$58,757,000**	**+$3,334,000**
Salary and benefits support General Schedule employees, as well as those salaries determined through negotiations. This activity provides for Federal employees who operate and maintain the Program's high-voltage integrated transmission system and associated facilities; plan, design, and supervise the replacement (capital investments) to the transmission facilities; and market the power and energy produced to repay annual expenses and capital investment.	Salary and benefits support General Schedule employees, as well as those salaries determined through negotiations. This activity provides for Federal employees who operate and maintain the Program's high-voltage integrated transmission system and associated facilities; plan, design, and supervise the replacement (capital investments) to the transmission facilities; and market the power and energy produced to repay annual expenses and capital investment.	The increase in salaries and benefits supports the level of FTE charging to this account for maintenance and capital activities as well as known and anticipated increases for General Schedule, Wage Board and Administratively Determined employees.
Travel $3,428,000	**$3,024,000**	**-$404,000**
This activity funds personnel travel and per diem expenses for essential mission-related activities, including the maintenance of transmission facilities. The Request includes estimates for the rent/lease of GSA vehicles and other transportation.	This activity funds personnel travel and per diem expenses for essential mission-related activities, including the maintenance of transmission facilities. The Request includes estimates for the rent/lease of GSA vehicles and other transportation.	The slight decrease in travel reflects continued effort to use technological capabilities to decrease travel requirements.
Support Services $9,032,000	**$8,019,000**	**-$1,013,000**
Support services funded in this category include information technology support, warehousing, computer-aided drafting/engineering, job related training and education, and general administrative support.	Support services funded in this category include information technology support, warehousing, computer-aided drafting/engineering, job related training and education, and general administrative support.	The decrease is primarily due to services that support technical engineering and advisory activities.
Other Related Expenses $11,656,000	**$10,581,000**	**-$1,075,000**

FY 2023 Enacted	FY 2024 Request	Explanation of Changes FY 2024 Request vs FY 2023 Enacted
Other related expenses include, but are not limited to, DOE's working capital fund distribution, space, utilities and miscellaneous charges, printing and reproduction, training tuition, maintenance of office equipment, supplies and materials, telecommunications, and office equipment to include computers.	Other related expenses include, but are not limited to, DOE's working capital fund distribution, space, utilities and miscellaneous charges, printing and reproduction, training tuition, maintenance of office equipment, supplies and materials, telecommunications, and office equipment to include computers.	The decrease to this activity is primarily driven by cyclic requirements for transmission, substation, communication and operation and maintenance services.

Transmission Infrastructure Program
Funding ($K)

	FY 2022 Enacted	FY 2023 Enacted	FY 2024 Request
Gross	17,400	15,000	15,000
Offsets	-17,400	-15,000	-15,000
Net BA	**0**	**0**	**0**

Overview

WAPA established the Transmission Infrastructure Program (TIP) and Office to implement Title III, Section 301 of the Hoover Power Plant Act of 1984 as amended by the American Recovery and Reinvestment Act of 2009 (Recovery Act), which provided WAPA borrowing authority of up to $3.25 billion for the purposes of: (1) constructing, financing, facilitating, planning, operating, maintaining, or studying construction of new or upgraded electric power transmission lines and related facilities with at least one terminus within the area served by WAPA; and (2) delivering or facilitating the delivery of power generated by renewable energy resources constructed or reasonably expected to be constructed after the Recovery Act's date of enactment.

TIP is expected to be an administratively self-sustaining program that relies on funding arrangements with project developers. When developers seek technical assistance, WAPA collects funds from the project developers to support development of eligible projects and to cover the overhead and administrative costs of the program. Reimbursable or Advance Funding Agreements with project developers are required prior to initiating efforts to evaluate the technical and financial merits of a potential project to ensure the full cost of services delivered are paid by project beneficiaries. For projects that are approved for use of WAPA's borrowing authority, the authority to cover the full amount of the loan is apportioned at the outset and cash is borrowed periodically from the Department of the Treasury (Treasury) as needed. The debt is repaid according to the financial agreement terms and conditions of each project.

As mandated, the TIP program is completely separate and distinct from WAPA's power marketing program.
TIP has one project currently using the borrowing authority for a total of $91 million in loan authority obligated.
All administrative costs for TIP are offset by advanced financing and collections. WAPA is not requesting any new annual appropriated funds for TIP.

Highlights of the FY 2024 Budget Request

Borrowing authority and interest assumptions are only included for projects that have an active loan and/or loan application. While there are numerous other ongoing projects at various stages of development at any given time, the decision and timing for loan applications is dependent on the project sponsors. Advance funding (non-Federal project sponsors) and reimbursable funding (Federal project sponsors) provide authority for development assistance activities prior to loan issuance.

Outyear Funding
($K)

	FY 2024 Request	FY 2025	FY 2026	FY 2027	FY 2028
TIP Net BA, Mandatory	**0**	**0**	**0**	**0**	**0**
TIP Net BA, Discretionary	**0**	**0**	**0**	**0**	**0**

Major Outyear Priorities and Assumptions
Outyear funding levels for TIP total $0 net mandatory and $0 net discretionary for FY 2025 through FY 2028. TIP priorities include the following:

- Mandatory amounts provide borrowing authority, offset by repayment of debt, for projects with an active loan and/or loan application (projects under development are not included)
- Discretionary amounts provide advance/reimbursable funding, offset by collections from project developers, for projects being evaluated for technical and financial merit prior to application for borrowing

Transmission Infrastructure Program
Funding ($K)

	FY 2022 Enacted	FY 2023 Enacted	FY 2024 Request	FY 2024 Request vs FY 2023 Enacted ($)	FY 2024 Request vs FY 2023 Enacted (%)
Mandatory, Direct Budget Authority					
New Borrowing Authority	0	0	0	0	0%
Repayment of Borrowing Authority	0	0	0	0	0%
Net, Borrowing Authority	**0**	**0**	**0**	**0**	**0%**
Operating Expenses	1,200	4,600	4,600	0	0%
Interest Payment to Treasury	2,311	2,311	2,311	0	0%
Other Uses	1,489	1,489	1,489	0	0%
Collections from Projects	-5,000	-8,400	-8,400	0	0%
Net, Operating & Debt Service	**0**	**0**	**0**	**0**	**0%**
Total Mandatory	**0**	**0**	**0**	**0**	**0%**
Federal FTEs (Mandatory)	**1**	**1**	**1**	**0**	**0%**
Discretionary, Reimbursable Budget Authority					
Program Direction	12,396	6,596	6,514	-82	-1%
Equipment, Contracts and Related Expenses	4	4	86	+82	+2,050%
Gross, Discretionary	**12,400**	**6,600**	**6,600**	**0**	**0%**
Advance Funding (Non-Federal)	-1,750	-5,000	-5,000	0	0%
Reimbursable Funding (Federal)	0	-200	-200	0	0%
Offsetting Collections	-10,650	-1,400	-1,400	0	0%
Net, Discretionary	**0**	**0**	**0**	**0**	**0%**
Federal FTEs (Discretionary)	**10**	**11**	**9**	**-2**	**-18%**
Total, Transmission Infrastructure Program	**0**	**0**	**0**	**0**	**0%**
Total, Federal FTEs	**11**	**12**	**10**	**-2**	**-17%**

Activities and Explanation of Changes

FY 2023 Enacted	FY 2024 Request	Explanation of Changes FY 2024 Request vs FY 2023 Enacted
Mandatory, Direct Budget Authority $0	**$0**	**$0**
New Borrowing Authority $0	**$0**	**$0**
Projected loan estimates for projects with active loans or active loan applications.	Projected loan estimates for projects with active loans or active loan applications.	There are no projects with an active loan or an active loan application with projected borrowing in FY 2024.
Repayment of Borrowing Authority $0	**$0**	**$0**
This activity represents repayments to Treasury from projects for principal.	This activity represents repayments to Treasury from projects for principal.	There are no anticipated repayments to Treasury in FY 2024.
Operating Expenses $4,600,000	**$4,600,000**	**$0**
Costs associated with operating and maintaining the ED5-PVH transmission system.	Costs associated with operating and maintaining the ED5-PVH transmission system.	No change to operating expenses.
Interest Payments to Treasury $2,311,000	**$2,311,000**	**$0**
Estimated interest payments to Treasury for the active ED5-PVH loan and other projects with active loan applications.	Estimated interest payments to Treasury for the active ED5-PVH loan and other projects with active loan applications.	No change to interest payments to Treasury.
Other Uses $1,489,000	**$1,489,000**	**$0**
This activity represents proceeds available for additional operating expenses or debt service requirements.	This activity represents proceeds available for additional operating expenses or debt service requirements.	No change to other uses.

Transmission Infrastructure Program
Program Direction

Overview

WAPA's TIP Program Direction subprogram provides compensation and all related expenses for its workforce, including those employees that are directly assigned to the program as project management, technical experts, finance and administration; those that provide expertise in land acquisition, engineering and environmental compliance; those that provide legal counsel; and those that administratively support these functions.

All TIP program direction costs are expected to be offset by customers over time, either through advanced funding agreements or offsetting collections. Advanced funding is provided to TIP from project applicants who use TIP's expertise in the development of their project. The advanced funding agreements fund Federal and/or contract staff working on the development of a specific project. Other sources of funds include the overhead rate applied to each active project; service charges; interest rate differentials; and the advance collection of Project Proposal and Business Plan Proposal evaluation expenses. These collections offset the costs of administering the TIP program and provide a risk mitigation reserve.

The Program Direction subprogram supports DOE and WAPA missions, specifically in facilitating delivery of renewable energy resources to market.

Program Direction
Funding ($K)

	FY 2022 Enacted	FY 2023 Enacted	FY 2024 Request	FY 2024 Request vs FY 2023 Enacted ($)	FY 2024 Request vs FY 2023 Enacted (%)
Transmission Infrastructure					
Salaries and Benefits	1,678	1,374	1,292	-82	-6%
Travel	94	44	44	0	0%
Support Services	1,485	60	62	+2	+3%
Other Related Expenses	9,139	5,118	5,116	-2	0%
Subtotal, Program Direction	**12,396**	**6,596**	**6,514**	**-82**	**-1%**
Use of Offsetting Collections	-12,396	-6,596	-6,514	+82	-1%
Total, Program Direction	**0**	**0**	**0**	**0**	**0%**
Federal FTEs (Mandatory)	**1**	**1**	**1**	**0**	**0%**
Federal FTEs (Discretionary)	**10**	**11**	**9**	**-2**	**-18%**
Federal FTEs (Total TIP)	**11**	**12**	**10**	**-2**	**-17%**
Support Services					
Technical Support					
Engineering and Technical Services	1,302	27	29	+2	+7%
Total, Technical Support	**1,302**	**27**	**29**	**+2**	**+7%**
Management Support					
Automated Data Processing	127	0	0	0	0%
Training and Education	12	13	13	0	0%
Reports and Analyses, Management and General Administrative Support	44	20	20	0	0%
Total Management Support	**183**	**33**	**33**	**0**	**0%**
Total, Support Services	**1,485**	**60**	**62**	**+2**	**+3%**
Other Related Expenses					
Communication, Utilities, Misc.	27	3	3	0	0%
Other Services	9,096	5,094	5,097	+3	0%
Working Capital Fund	16	21	16	-5	-24%
Total, Other Related Expenses	**9,139**	**5,118**	**5,116**	**-2**	**0%**

Program Direction

Activities and Explanation of Changes

FY 2023 Enacted	FY 2024 Request	Explanation of Changes FY 2024 Request vs FY 2023 Enacted
Program Direction $6,596,000	**$6,514,000**	**-$82,000**
Salaries and Benefits $1,374,000	**$1,292,000**	**-$82,000**
Salary and benefits provide for Federal employees that are directly assigned to the TIP program as project management, technical experts, finance and administration; those that provide expertise in land acquisition, engineering and environmental compliance; those that provide legal counsel; and those that administratively support these functions.	Salary and benefits provide for Federal employees that are directly assigned to the TIP program as project management, technical experts, finance and administration; those that provide expertise in land acquisition, engineering and environmental compliance; those that provide legal counsel; and those that administratively support these functions.	The decrease in salary and benefits reflects a reduction of two FTE budgeted for this activity offset by known and anticipated increases for General Schedule employees.
Travel $44,000	**$44,000**	**$0**
Planned essential travel supports TIP's mission related activities. TIP supports efficient spending initiatives and is cognizant of travel costs associated with general program operations. TIP focuses on using alternative means to conduct meetings and training sessions where appropriate.	Planned essential travel supports TIP's mission related activities. TIP supports efficient spending initiatives and is cognizant of travel costs associated with general program operations. TIP focuses on using alternative means to conduct meetings and training sessions where appropriate.	No change in anticipated travel.
Support Services $60,000	**$62,000**	**+$2,000**
Support services funded in this category include technical support costs directly associated with TIP projects including environmental, lands, engineering, and project management activities; and management support costs including information technology, job related training and education, and general administrative support.	Support services funded in this category include technical support costs directly associated with TIP projects including environmental, lands, engineering, and project management activities; and management support costs to include information technology, job related training and education, and general administrative support.	The increase in support services is due to the growth in technical support associated with project management and stage of development of projects given revised work scope demands.
Other Related Expenses $5,118,000	**$5,116,000**	**-$2,000**
Other related expenses include communications, utilities, other services such as outside financial support and legal counsel, and DOE's working capital fund.	Other related expenses include communications, utilities, other services such as outside financial support and legal counsel, and DOE's working capital fund.	The decrease is due to lower anticipated outside financial support and legal counsel.

Estimate of Gross Revenues [1]

(Dollars in Thousands)

	FY 2022 [2]	FY 2023	FY 2024
Boulder Canyon Project	69,825	93,752	96,153
Central Valley Project	315,521	412,452	420,435
Falcon-Amistad Project	8,188	8,796	7,517
Fryingpan-Arkansas Project	21,393	23,149	23,149
Pacific Northwest-Southwest Intertie Project	60,211	38,792	38,792
Parker-Davis Project	98,117	92,258	94,488
Pick-Sloan Missouri Basin Program	640,645	654,025	656,371
Provo River Project	485	459	494
Washoe Project	474	436	436
Salt Lake City Area Integrated Projects	255,106	166,724	166,392
Other	182,672	0	0
Total, Gross Revenues	**1,652,637**	**1,490,843**	**1,504,227**

[1] Amounts for FY 2023 and FY 2024 are based on the FY 2021 Final Power Repayment Studies (PRS).

[2] FY 2022 amounts are actuals from the preliminary annual financial reports. For Central Valley Project, FY 2022 amounts reported exclude contractual pass-through purchase power arrangements which are included in the PRS estimates. The 'Other' FY 2022 amounts shown represent WAPA activities reported in the financials that are not reimbursable through the power and transmission rate-setting process and are not forecasted through the PRS.

Estimate of Proprietary Receipts

(Dollars in Thousands)

	FY 2022 Actual	FY 2023	FY 2024
Mandatory Receipts			
Falcon Amistad Maintenance Fund	271	0	0
Sale and Transmission of Electric Power, Falcon and Amistad Dams	600	1,000	1,000
Sale of Power and Other Utilities Not Otherwise Classified	0	0	0
Sale of Power–WAPA–Reclamation Fund	298,206	45,453	85,321
Total, Mandatory Receipts	**299,077**	**46,453**	**86,321**
Discretionary Receipts			
Offsetting Collections from the Recovery of Power Related Expenses – WAPA CROM	170,000	475,000	475,000
Less Purchase Power and Wheeling Expenses	-170,000	-475,000	-475,000
Subtotal, WAPA CROM Recovery of Power Related Expenses	0	0	0
Offsetting Collections from the Recovery of Annual Expenses – WAPA CROM	194,465	200,841	213,417
Less Operating and Maintenance expenses	-27,530	-29,180	-29,449
Less Program Direction Expenses	-166,935	-171,661	-183,968
Subtotal, WAPA CROM Recovery of Annual Expenses	0	0	0
Offsetting Collections from the recovery of power related expenses – Falcon and Amistad	5,580	6,102	3,197
Less Operating and Maintenance expenses	-5,580	-6,102	-3,197
Subtotal, Falcon and Amistad Recovery of Power Related Expenses	0	0	0
Total, Discretionary Receipts	**0**	**0**	**0**
Total, Proprietary Receipts	**299,077**	**46,453**	**154,321**

Western Area Power Administration
Estimate of Offsetting Collections for Reimbursable Work and Work-for-Others

	(Dollars in Thousands)		
	FY 2022	FY 2023	FY 2024
Construction, Rehabilitation, Operation and Maintenance (CROM)			
Offsetting Collections for Reimbursable Work [1]			
Alternative Financing			
Operations and Maintenance	7,122	7,641	42,276
Construction and Rehabilitation	31,090	38,219	0
Purchase Power and Wheeling (PPW)	273,677	275,322	240,824
Program Direction	51,849	54,868	60,084
Subtotal, Alternative Financing	363,738	376,050	343,184
Offsetting Collections not anticipated for obligation in budget year	188,792	74,137	102,690
Less PPW net billing, bill crediting, energy exchange	-242,646	-238,591	-243,395
Offsetting collections from Colorado River Dam Fund	9,116	9,404	9,521
Subtotal, Offsetting Collections for Reimbursable Work	**319,000**	**221,000**	**212,000**
Offsetting Collections for Reimbursable Work-for-Others [2]	**337,000**	**390,000**	**416,000**
Total, Offsetting Collections for Reimbursable	**656,000**	**611,000**	**628,000**

[1] WAPA relies significantly on alternative financing arrangements with customers to finance much of its direct mission work on a reimbursable basis.

[2] WAPA has partnering arrangements with many power customers and Federal agencies to perform electrical systems operations, maintenance, construction, purchase power, and transmission services on a reimbursable basis.

BONNEVILLE POWER ADMINISTRATION

FY 2024 Congressional Justification

March 2023

Bonneville Power Administration

FY 2024 Congressional Justification

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Bonneville Power Administration FY 2024 Congressional Justification

FY 2024 Expenditure Authorization

Expenditures from the Bonneville Power Administration Fund, established pursuant to Public Law 93-454, are approved for official reception and representation expenses in an amount not to exceed $5,000, provided that during fiscal year 2024 no new direct loan obligations may be made. (Consolidated Appropriation Act, 2023.)

Explanation of Changes

The proposed appropriations language restricts new direct loans in FY 2024 as in FY 2022. This bill language is drafted consistent with the Credit Reform Act of 1990.

Overview

The Bonneville Power Administration (Bonneville) operates under a business-type budget under the Government Corporation Control Act, 31 U.S.C 9101-10, and on the basis of the self-financing authority provided by the Federal Columbia River Transmission System Act of 1974 (Transmission Act) (Public Law 93-454). Bonneville has authority to borrow from the U.S. Treasury under the Transmission Act, and the Pacific Northwest Electric Power Planning and Conservation Act of 1980 (Northwest Power Act) (Public Law 96-501) for acquisition of energy conservation, renewable and other power resources, investment in fish facilities, and other purposes, as well as the American Recovery and Reinvestment Act of 2009 (Public Law 111-5), the Infrastructure Investment and Jobs Act of 2021 (Section 40110, Public Law 117-58) and other legislation.

Authority to borrow from the U.S. Treasury is available to Bonneville on a permanent, revolving basis. The principal amount of U.S. Treasury borrowing outstanding at any time may not exceed $17.70 billion. The “obligation” of the $10.0 billion in additional borrowing authority that is made available to the Bonneville Administrator under Section 40110 of Public Law 117-58 shall not exceed $6 billion before fiscal year 2028. Bonneville finances its total program by using its power and transmission revenues, and the proceeds of borrowing authority from the U.S. Treasury. Bonneville’s estimated FY 2024 obligations and cash transfers total approximately $4.5 billion.

This budget has been prepared in accordance with the Statutory Pay-As-You-Go Act (PAYGO) of 2010. Under PAYGO, all Bonneville budget estimates are treated as mandatory and are not subject to the discretionary caps included in the Budget Control Act of 2011. These estimates support activities that are separate from discretionary activities and accounts. Thus, any changes to Bonneville estimates cannot be used to affect any other budget categories, which have their own dollar caps. Because Bonneville’s obligations are and will be incurred under pre-existing legislative authority, Bonneville is not subject to a "pay-as-you-go" test regarding its revision of current law funding estimates.

Please note – The FY 2024 Bonneville Congressional Budget submission includes FY 2023 budget estimates.

Bonneville Funding Profile by Subprogram[1/]

(Accrued Expenditures in Thousands of Dollars)

	Fiscal Year			
	2022 Actuals	2023 Original [/2]	2023 Revised [/2]	2024 Proposed
Capital Investment Obligations				
Associated Project Costs [3/]	190,294	264,120	281,260	270,000
Fish & Wildlife	16,119	43,000	43,000	41,335
Subtotal, Power Services	206,413	307,120	324,260	311,335
Transmission Services	373,500	497,086	497,160	593,840
Capital Equipment & Bond Premium	20,905	22,002	21,047	23,983
Total, Capital Obligations [3/]	600,818	826,208	842,468	929,159
Expensed and Other Obligations				
Expensed	2,994,653	2,733,825	2,758,063	2,879,919
Projects Funded in Advance [4/]	120,536	55,775	61,166	45,924
Total, Obligations	3,716,007	3,615,808	3,661,697	3,855,001
Capital Transfers (cash)	694,200	696,000	735,596	673,266
Bonneville Total (Oligations & Capital Transfers)	4,410,207	4,311,808	4,397,293	4,528,267
Bonneville Net Outlays	(806,000)	(324,967)	(332,469)	(208,923)
Full-time Equivalents (FTEs) [5/]	2,847	3,000	3,000	3,000

Public Law Authorizations include:

Bonneville Project Act of 1937, Public Law No. 75-329

Federal Columbia River Transmission System Act of 1974, Public Law No. 93-454

Regional Preference Act of 1964, Public Law No. 88-552

Flood Control Act of 1944, Public Law No. 78-543

Pacific Northwest Electric Power Planning and Conservation Act of 1980 (Northwest Power Act), Public Law No. 96-501

Bonneville Outyear Funding Profile by Subprogram[1/]

(Accrued Expenditures in Thousands of Dollars)

	Fiscal Year			
	2025	2026	2027	2028
Capital Investment Obligations				
Associated Project Costs [3/]	275,675	281,620	288,001	294,794
Fish & Wildlife	41,300	29,000	15,700	15,000
Subtotal, Power Services	316,975	310,620	303,701	309,794
Transmission Services	581,009	555,897	537,180	546,032
Capital Equipment & Bond Premium	22,830	24,990	23,180	23,970
Total, Capital Obligations [3/]	920,814	891,507	864,061	879,796
Expensed and Other Obligations				
Expensed	2,993,800	3,094,149	3,176,877	3,257,217
Projects Funded in Advance [4/]	55,007	53,073	53,907	54,751
Total, Obligations	3,969,620	4,038,729	4,094,846	4,191,763
Capital Transfers (cash)	646,624	660,089	612,307	406,879
Bonneville Total (Oligations & Capital Transfers)	4,616,244	4,698,818	4,707,153	4,598,642
Bonneville Net Outlays	(137,386)	(121,344)	(102,062)	(49,988)
Full-time Equivalents (FTEs) [5/]	3,000	3,025	3,075	3,125

These notes are an integral part of this table.

1/ This budget has been prepared in accordance with PAYGO. Under PAYGO all Bonneville budget estimates are treated as mandatory and are not subject to the discretionary caps included in the Budget Control Act of 2011. These estimates support activities that are separate from discretionary activities and accounts. Thus, any changes to Bonneville estimates cannot be used to affect any other budget categories which have their own dollar caps. Because Bonneville's obligations are and will be incurred under pre-existing legislative authority, Bonneville is not subject to a "pay-as-you-go" test regarding its revision of current-law funding estimates.
For BP-1 table, the CJ reflects forecasted outlays while the yearend GTAS reflects the actual outlay in the Budget Appendix.

2/ Original estimates reflect Bonneville's FY 2024 OMB Budget Submission. Revised estimates, consistent with Bonneville's annual near-term funding review process, provide notification to the Administration and Congress of updated capital and expense funding levels for FY 2024. The BPA estimates in this budget are consistent with the BP-24 IPR.

3/ Includes infrastructure investments to address the long-term electric power related needs of the Northwest and significant changes affecting Bonneville's power and transmission markets.

4/ In this instance, Projects Funded in Advance represents prepayment of Power customers' bills reimbursed by future credits and third party non-federal financing for Conservation initiatives. Also this category includes those facilities and/or equipment where Bonneville retains control or ownership which are funded or financed by a third party, revenue, or with Power or Transmission reserves, either in total or in part.

5/ As of 10/20/2022, DOE HR staff has reported FY 2022 BPA's FTE useage at 2,847.

Additional table notes are on the following page.

Additional Notes

Capital funding levels reflect external factors such as the significant changes affecting West Coast power and transmission markets, along with planned infrastructure investments designed to address the long-term needs of the region.

Cumulative advance amortization payments as of the end of FY 2022 are $6,600 million.

Refer to 16 USC Chapters 12B, 12G, 12H, and Bonneville's other organic laws, including P.L. 100-371, Title III, Sec. 300, 102 Stat. 869, July 19, 1988, regarding Bonneville's ability to obligate funds.

Budget estimates included in this budget are subject to change due to rapidly changing economic and institutional conditions in the evolving electric utility industry.

Net Outlay estimates are based on current cost savings to date and anticipated cash management goals. They are expected to follow anticipated management decisions throughout the rate period that, along with actual market conditions, will impact revenues and expenses. Actual Net Outlays are volatile and are reported in Report on Budget Execution and Budgetary Resources (SF-133). Actual Net Outlays could differ from estimates due to changing market conditions, streamflow variability, continued restructuring of the electric industry, and other reasons.

Revenues, included in the Net Outlay formulation, are calculated consistent with cash management goals and assume a combination of adjustments. Assumed adjustments include the use of a combination of tools, including upcoming rate adjustment mechanisms, a net revenue risk adjustment, debt service refinancing strategies and/or short-term financial tools to manage net revenues and cash. Some of these potential tools will reduce costs rather than generate revenue, causing the same Net Outlay result. Adjustments for depreciation and 4(h)(10)(C) credits of the Northwest Power Act are also assumed.

FY 2022 Net Outlays are calculated using Bonneville's FY 2022 EOY Actuals. FY 2023 is based off of rate case and FY 2024 to 2028 Net Outlays are based on BP-24 IPR assumptions and an escalation factor from using the FY 2022 Whitebook Loads and Resources Report.

FTE outyear data are estimates and may change. Bonneville is facing a dynamic and changing energy marketplace and operations while, at the same time, many of its employees are eligible to retire in the near future. It is important that Bonneville continue to attract and retain skilled individuals to meet the growing demands of a competitive and rapidly changing industry. Accordingly, FTE estimates may need to be adjusted in the future.

Amounts in tables and schedules may not add to totals due to rounding.

Major Outyear Considerations

Bonneville's outyear estimates reflect ongoing efforts to achieve its long-term mission and strategic direction. The outyear estimates are developed with consideration and support of Bonneville's multi-year performance targets that lay out the course for achieving Bonneville's long-term objectives. Outyear capital investment levels support Bonneville's infrastructure program, hydro efficiency program, and its fish and wildlife mitigation projects.

Bonneville continues to incorporate the various aspects of the Energy Policy Act of 2005 related to its business, in particular the energy supply, conservation, and new energy technologies for the future that are highlighted in the legislation.

Description of Bonneville Operations & Services

Bonneville markets power, provides transmission services, and acquires energy efficiency from its power customers. Bonneville's service territory is defined as the Pacific Northwest, which includes a 300,000 square mile area including the states of Oregon, Washington, Idaho, western Montana, and small parts of eastern Montana, California, Nevada, Utah, and Wyoming with a population of about 14 million people. Bonneville markets the electric power produced from 31 Federal Columbia River Power System (the FCRPS) hydro projects in the Pacific Northwest owned by the Corps and the Bureau of Reclamation. In addition, Bonneville also acquires power from non-federal generating resources, including the power from a nuclear power plant, the Columbia Generating Station (CGS). Bonneville uses the power from its non-federal resources and the Federal projects primarily to meet the Administrator's long term firm power sales contract obligations. Bonneville currently maintains and operates 15,108 circuit miles of transmission lines, 262 substations, and associated power system control and communications facilities over which this electric power is delivered. Bonneville has capital and similar leases for certain transmission facilities. Bonneville also supports the protection and enhancement of fish and wildlife, and encourages the development of conservation and energy efficiency, as part of meeting its obligations to supply power and balance the economic and environmental benefits of the FCRPS.

The organization of Bonneville's FY 2024 Budget reflects Bonneville's business services basis for utility enterprise activities. Bonneville's two major areas of activity on a consolidated budget and accounting basis are Power Services and Transmission Services and include their related administrative costs. Power Service's costs include line items for Fish & Wildlife, Energy Efficiency, the Residential Exchange Program, Federal Projects Operations & Maintenance (O&M) Costs, and the Northwest Power and Conservation Council (NPCC or Council). Transmission Service's costs include line items for Engineering, Operations, and Maintenance for Bonneville's electric transmission system.

Bonneville's mission as a public service organization is to create and deliver Federal power and transmission services at cost as it acts to assure its customers in the Pacific Northwest have the following: (1) an adequate, efficient, economical, and reliable power supply; (2) an open access transmission system that is adequate for integrating and transmitting power from Federal and non-federal generating units, providing service to Bonneville's customers, providing interregional interconnections, and maintaining electrical reliability and stability; and (3) mitigation of the impacts on fish and wildlife from the federally owned hydroelectric projects from which Bonneville markets power.

Bonneville's vision is to be an engine of the Northwest's economic prosperity and environmental sustainability by advancing a Northwest power and transmission system that is a national leader in providing high reliability, low rates consistent with sound business principles, responsible environmental stewardship, and accountability to the region, all through a commercially successful business. Bonneville pursues this vision consistent with its four core values of safety, trustworthy stewardship, collaborative relationships, and operational excellence.

Legislative History

The Bonneville Project Act of 1937 provides the statutory basis for Bonneville's power marketing responsibilities and authorities. In 1974, passage of the Federal Columbia River Transmission System Act (Transmission Act) applied provisions of the Government Corporation Control Act (31 U.S.C. §§ 9101-9110) to Bonneville. The Transmission Act provides Bonneville with "self-financing" authority, establishes the Bonneville Fund (a permanent, indefinite appropriation) allowing Bonneville to use its revenues from electric power and transmission ratepayers to fund all programs without further appropriation, and authorizes Bonneville to sell bonds to the U.S. Treasury. As of the end of FY 2022, Bonneville had revolving U.S. Treasury borrowing authority of $13.7 billion, of which approximately $8.02 billion remains available to be drawn.

The 1980 enactment of the Northwest Power Act expanded Bonneville's authorities, obligations, and responsibilities. The purposes of the act include: encouraging development of electric energy conservation to meet regional electric power loads placed on Bonneville; the development of renewable energy resources within the Pacific Northwest; to assure the Northwest an adequate, efficient, economical, and reliable power supply; to promote regional participation and planning; and to protect, mitigate, and enhance the fish and wildlife affected by development and operation of Federal hydroelectric projects on the Columbia River and its tributaries. The Northwest Power Act also established a revised statutory framework for Bonneville's administrative ratesetting process and established judicial review of Bonneville's final actions in the U.S. Court of Appeals for the Ninth Circuit.

Financial Mechanisms

Bonneville's program is treated as mandatory and nondiscretionary. Bonneville is "self-financed" from its own revenues and does not rely on annual appropriations from Congress. Under the Transmission Act, Bonneville funds the expense portion of its budget and repays the Federal investment with revenues from electric power and transmission sales. Bonneville's revenues fluctuate for a variety of reasons, including in response to variations in market prices for fuels and stream flow in the Columbia River System caused by variations in weather conditions and fish mitigation needs.

In the FY 2024 Budget, the term Bonneville "bonds" refers to the debt instruments under which Bonneville receives advances of funds from the U.S. Treasury. This reference is consistent with Section 13(a) of the Transmission Act, which defines "bonds" as all bonds, notes, and other evidences of indebtedness issued and sold by Bonneville to the U.S. Treasury.

Bonneville and the U.S. Treasury have a comprehensive banking arrangement that covers Bonneville's short- and long-term Federal borrowings. This provides Bonneville with the ability to borrow from the U.S. Treasury to finance capital investments and, on a short-term basis, to cover Northwest Power Act-related operating expenses. This latter ability provides Bonneville with much needed liquidity to help manage within-year cash flow needs and mitigate risk. Access to this use of U.S. Treasury borrowing authority has been incorporated into and relied upon in Bonneville's ratesetting process.

As of May 2022, debt instruments issued by non-federal entities but secured by payment and other financial commitments provided by Bonneville received the following credit ratings: Moody's at Aa2 with a positive outlook, Standard & Poor's at AA- with a stable outlook, and Fitch at AA with a stable outlook.

U.S. Treasury Payments & Budget Overview

Bonneville's FY 2022 payment to the U.S. Treasury was approximately $951 million. This was the 39th consecutive year that Bonneville made its scheduled payments to the U.S. Treasury on time and in full. The payment included $694 million in principal, which included $346 million in early retirement of U.S. Treasury debt, $194 million for interest, $17 million in irrigation assistance payments, and $37 million in pension and post-retirement benefits. Total credits applied toward Bonneville's U.S. Treasury payment were about $136 million for FY 2022. The majority of these credits are established and applied under Section 4(h)(10)(C) of the Northwest Power Act. The FY 2023 and 2024 U.S. Treasury payments are currently estimated at $965 million and $895 million, respectively. The FY 2023 and 2024 4(h)(10)(C) credits are estimated to be $94.2 million and $111.3 million, respectively.

Bonneville's FY 2023 payment to the U.S. Treasury is currently estimated at approximately $965 million. Based on final FY 2022 financial results, operating conditions and financial reserves, Bonneville fully expects to make its FY 2023 Treasury payment on time and in full. This would be the 40th consecutive year that Bonneville has done so. Estimates of interest and amortization levels for outyear U.S. Treasury payments are included in the FY 2022-2023 final transmission and power rates. Bond and Appropriations Interest will continue to be revised based on upcoming capital investments and debt management actions. These estimates may change due to revised capital investment plans and actual U.S. Treasury borrowing. In recent years, Bonneville has made amortization payments in excess of those scheduled in its FERC-approved rate filings resulting in a balance of advance repayment. The cumulative balance of advance amortization payments as of the end of FY 2022 was in excess of $6.6 billion.

Bonneville has direct funding arrangements to fund the power-related portion of O&M and capital investments at Corps and Reclamation facilities as well as the expense O&M costs of the U.S. Fish and Wildlife Service (USFWS) Lower Snake River Compensation Plan facilities. Direct-funded FCRPS capital costs, which had been funded exclusively through appropriations to the Corps and Reclamation prior to the initiation of direct funding, are now funded primarily from the proceeds of bonds issued by Bonneville to the U.S. Treasury. Certain power prepayments have also been a source of funds for direct funding. Bonneville's aggregate direct funding provided for capital and O&M was $410 million in FY 2022.

Bonneville manages its overall debt portfolio, which includes both debt that is issued by non-federal entities and secured by Bonneville's financial commitments ("Non-Federal Debt"), and Bonneville's repayment obligations to the U.S. Treasury, to meet the objectives of: (1) minimizing the cost to Bonneville's ratepayers, (2) maximizing Bonneville's access to its lowest cost capital sources to meet future capital needs, and (3) maintaining sufficient financial flexibility to meet Bonneville's financial requirements.

Starting in FY 2014, Bonneville and Energy Northwest, the Washington state joint operating agency that owns and operates the CGS nuclear plant, have continued working together on an integrated debt management for their combined total debt portfolios. The debt service of these portfolios is borne by Bonneville and recovered from Bonneville ratepayers through Bonneville's rates. Energy Northwest-related debt, as refinanced under this effort, is called Regional Cooperation Debt.

The initial efforts under the Regional Cooperation Debt program included the issuance of Net Billed Bonds to refund outstanding Net Billed Bonds in Fiscal Year 2014 through Fiscal Year 2020. This enabled Bonneville to repay, earlier than would otherwise occur, Federal Appropriations Repayment Obligations.

The second phase of Regional Cooperation Debt program, which started in FY 2021, will have the effect of freeing up amounts in the Bonneville Fund that otherwise would have been used to fund the repayment of the principal of the refunded Net Billed Bonds, and that will instead be used to make payments to reduce the outstanding principal amount of bonds issued by Bonneville to the U.S. Treasury. Bonneville estimates that the aggregate remaining potential principal amount of refinancing Net Billed Bonds that could be issued in FY 2023 through 2030 could be up to $2.9 billion.

Bonneville can incur a bond premium when it repays a U.S. Treasury bond before the due date. When bonds are refinanced and premiums are incurred, the bond premiums can be capitalized. Historically, Bonneville generally has chosen to finance capitalized bond premiums with bonds issued to the U.S. Treasury, as envisioned by the Transmission Act.

Budget Estimates & Planning

This FY 2024 Budget proposes estimated accrued expenditures of $2,879 million for operating expenses, $46 million for Projects Funded in Advance (PFIA), $929 million for capital investments, and $673 million for capital transfers in FY 2024.

The estimated spending levels in this budget are still subject to change to accommodate competitive dynamics in the region's energy markets, debt management strategies, continuing changes in the electric industry, and other factors.

This FY 2024 Budget includes capital and expense estimates based on initial approved cost forecasts from Bonneville's BP-24 Integrated Program Review (IPR). Capital investment levels reflect Bonneville's capital asset management process and external factors such as changes affecting the West Coast power and transmission markets, along with planned infrastructure investments designed to address the long-term needs of the region and national energy security goals.

Bonneville utilizes a structured capital project selection process requiring submission of a standardized business case for review. Each business case consists of a description of the project, a clear statement of objectives, description and mitigation of risks, and a rigorous analysis of project costs and benefits, including a status quo assumption and preferred alternatives. In addition, both annual and end-of-project targets are set for each project covering cost, scope, and schedule. Progress reports on these targets are provided to Bonneville's senior executives at least quarterly.

FY 2023-2028 revenue estimates in this budget, included in the Net Outlay formulation, reflect revised cost estimates, debt management strategies, and capital financing assumptions. The Net Outlay also includes depreciation and U.S. Treasury repayment credit assumptions. These U.S. Treasury repayment credits offset, among other things, Bonneville's Fish & Wildlife program costs allocable to the non-power project purposes of the FCRPS, as provided under Section 4(h)(10)(C) of the Northwest Power Act.

Overview of Detailed Justifications

In Bonneville's Detailed Justification Summaries accrued expenditure is the basis of presenting Bonneville's program funding levels in the power and transmission ratemaking processes and the basis upon which Bonneville managers control their resources to provide products and services. Accrued expenditures relate period costs to period performance. Traditional budget obligation requirements for Bonneville's budget are assumed on the Program and Financing Summary Schedule prepared in accordance with Office of Management & Budget (OMB) Circular A-11.

The organization of Bonneville's FY 2024 Budget and these performance summaries reflect Bonneville's business services basis for its utility enterprise activities. Bonneville's major areas of activity on a consolidated budget and accounting basis include power and transmission, with administrative costs included. Power Services includes line items for fish and wildlife, energy efficiency, Residential Exchange Program, associated projects O&M costs, and the Northwest Power Council. Environmental activities are shown in the relevant Power Services and Transmission Services sections, as are reimbursable costs. Bonneville's interest expense, pension and post-retirement benefits, and capital transfers to the U.S. Treasury are shown by program.

The first section of performance summaries, **Capital Investments**, includes accrued expenditures for investments in electric utility and general plant associated with the FCRPS generation and transmission services, fish and wildlife, and capital equipment. These capital investments are estimated to require budget obligations and expected use of $929 million in bonds to be issued and sold to the U.S. Treasury in FY 2024.

The near-term forecast of capital funding levels has undergone an extensive internal review as a result of Bonneville's development of asset management plans. These plans encompass project cost management initiatives, capital investment assessments, and categorization of capital projects to be funded based on risk and other factors. Consistent with Bonneville's near-term asset planning process and Bonneville's standard operating budget process, this FY 2024 Budget includes updated capital investment levels for FY 2023 estimated at $785 million. Utilizing this review process helps Bonneville in its efforts as a participant in wholesale energy markets. Bonneville will continue to work with the Corps and Reclamation to optimize the mix of projects.

The second section of Bonneville's performance summaries, entitled **Annual Operating Expenses**, includes accrued expenditures for services and program activities financed by power sales revenues, transmission sales revenues, and projects funded in advance. For FY 2024, total budget expense and capital obligations are estimated at $3,854 million. The total program requirements of all Bonneville programs, including total obligations and $673 million of capital transfers, are estimated at $4,527 million for FY 2024.

Evidence & Analysis in the Budget

Bonneville has undertaken several initiatives and processes to determine appropriate budget expenditures.

Through Bonneville's IPR process, the public is able to see all relevant FCRPS expense and capital forecast costs in the same forum. In addition, Bonneville's IPR process allows the public to review and comment on Bonneville's 10-year capital forecasts. The IPR occurs every two years, prior to each Bonneville rate case, and provides the public an opportunity to review and comment on Bonneville's forecast costs prior to being set for inclusion in rate cases.

Bonneville conducted the BP-24 IPR, which reviewed forecast costs for the FY 2024 rate period and FY 2025 during the summer of 2022. Bonneville was guided by the 2018 Strategic Direction goal to hold costs at or below the level of inflation through 2028, though Bonneville is experiencing greater cost pressures. Bonneville issued the closeout report for the BP-24 IPR in October 2022.

The forecast cost increases for Power Services are $96.5 million above BP-22. The primary drivers for the cost increase are adequately funding our generating partners; needed investments in core information technology (IT) systems and cybersecurity; supporting staffing levels in key areas; establishing the new Chief Workforce and Strategy Office; and meeting fish and wildlife program obligations.

Transmission Services is facing greater cost pressures and is projecting costs above BP-22 by $80 million. Projected cost increases include investments in core IT systems, the labor-related cost of Bonneville's current workforce, wildfire mitigation, cybersecurity, Grand Coulee Dam substation assets, and support for Bonneville's current workforce.

Judicial & Regulatory Activity

The Energy Policy Act of 2005 authorized the Federal Energy Regulatory Commission (FERC) to approve and enforce mandatory electric reliability standards with which users, owners, and operators of the bulk electric power system, including Bonneville, are required to comply. These standards became enforceable on June 18, 2007, and compliance is monitored by the North American Electric Regulatory Corporation (NERC) and the regional reliability organizations.

FCRPS Cost Allocations

The FY 2021 Energy and Water Development Appropriations Act included report language requesting that Bonneville, the Corps, and Reclamation provide quarterly reports on their work to resolve policy differences for the allocation of costs for multi-purpose projects of the FCRPS. This followed language in the House Committee on Appropriations report in the FY 2020 Energy and Water Development Appropriations Act, noting that the allocation of cost sharing among the authorized project purposes can be decades old and requesting that the three agencies return an outline of how cost allocations may be updated. The three agencies provided the subcommittee with an outline of cost allocation methods and authorities in June 2020, noting specific policy differences. Bonneville is continuing to provide the subcommittee with Quarterly reports of its progress.

BPA appreciates the OMB budget guidance to BPA indicating that Bonneville should work with the Corps of Engineers to determine if changes in cost allocation may be warranted and present a joint proposal to OMB for consideration for the FY 2025 Budget if both agencies agree changes may be warranted.

BPA agrees that a joint proposal to OMB would support the effort to determine whether or not project costs are being appropriately allocated to power, thus ensuring carbon free and reliable FCPRS hydropower costs are not inflated by non-joint, non-power costs. The joint effort also would support the federal interest determination portion of completing the directed studies on disposition of hydropower at the Willamette dams, authorized by the enacted into federal law on December 23, 2022 as Section 8220, Disposition Study of hydropower in the Willamette, Valley, Oregon (pp. 3162-6), of Division H. of Title LXXXI, the Water Resources Development Act of 2022 (WRDA), of the James M. Inhofe National Defense Authorization Act (NDAA), P.L. 117-263, and directed to be completed by June 2024. Thus, the timing for this joint effort is critical to assuring decarbonization goals and certain fish mitigation activities.

BPA appreciates OMB scheduling a joint meeting of OMB, the Corps and BPA to discuss cost allocation and potential development of a joint proposal. BPA intends to discuss with OMB and the Corps a proposed schedule for the BPA and the Corps joint report to OMB by August 1. And assuming the report will note reallocation is warranted, BPA intends to discuss with OMB and the Corps a joint proposal for commencing the cost allocation update process by September 15 for the FY 2025 Budget. BPA believes that the subcommittee continues to have an interest in expeditious commencement of these activities.

Strategic Direction

Bonneville's 2018-2023 Strategic Plan, released in 2018, describes how it will operate in a commercially successful manner while meeting its statutory obligations. Bonneville developed this strategic plan after listening to customers and constituents express their interests in Bonneville's commercial viability and ability to meet those obligations. The strategic plan was developed at the point when Bonneville was midway through 20-year firm power sales contracts with its preference power customers. Those customers continue to evaluate how Bonneville will be positioned to meet their needs beyond the terms of their current contracts.

The strategic plan is framed by these goals:

- Strengthen financial health
- Modernize assets and system operations
- Provide competitive power products and services
- Meet transmission customer needs efficiently and responsively

In 2020, Bonneville reassessed and reconfirmed its strategic goals and objectives. In its Strategic Plan Update, Bonneville added a fifth goal, "Value people and deliver results," which captures the agency's commitment to its workforce and the people it serves.

In calendar year 2023, Bonneville expects to complete a strategic planning refresh to prepare its 2024-2028 Strategic Plan.

The following provides more detail about the strategic plan's goals.

Strategic Goal: Strengthen Financial Health

Financial Plan

In 2018, Bonneville completed its Financial Plan to address the Strategic Plan's direction to maintain and enhance the agency's financial strength. The 2018 Financial Plan establishes a guiding framework for decision-making by defining the financial constraints within which Bonneville operates, and outlines Bonneville's financial health objectives. The plan contains Bonneville's statutory obligations and authorities, financial policies and established practices, and financial health objectives.

Bonneville adopted the Financial Reserves Policy (FRP), which guides the level of financial reserves Bonneville and each business line should hold, how to build financial reserves when they fall below a prescribed level, and a process to consider repurposing financial reserves when they exceed a prescribed level. The policy provides a framework to help ensure Bonneville maintains a minimum of 60 days cash on hand for each business line.

In FY 2022, Bonneville held a public process to refresh its Financial Plan. The objective of the Financial Plan Refresh was to ensure Bonneville's long-term financial goals are supported with the appropriate targets, metrics and policies. The scope of the project focused on debt management, debt capacity, and capital execution performance reporting. From September 2021 through March 2022, Bonneville engaged customers and constituents through a series of workshops to discuss proposals. Bonneville completed a Record of Decision in July 2022 to support a new Sustainable Capital Financing policy and issued the updated Financial Plan in September 2022.

The Sustainable Capital Financing Policy guides Bonneville's use of debt and revenue financing to finance its capital investments. The policy creates a default structure of 90 percent debt and 10 percent revenues for financing Bonneville's capital program. If a business unit is not on track to reach a debt-to-asset ratio of no more than 60 percent by 2040, the revenue financing will increase to the lower of 20 percent or an approximate 1 percent incremental rate impact per rate period.

Increase in Bonneville's Treasury Borrowing Authority

Section 40110 of Infrastructure Investment and Jobs Act of 2021, Public Law 117-58, enacted on November 15, 2021 (during FY 2022), provided the Bonneville Administrator with $10 billion in additional permanent borrowing authority" to assist in the financing, acquisition and replacement of the Federal Columbia Power System and to implement the authority of the Administrator of the Bonneville Power Administration . . . ." Section 40110 specifies that the "obligation" of the $10 billion in additional borrowing authority shall not exceed $6 billion by fiscal year 2028. With the new law, Bonneville is authorized by Congress to have outstanding at any time up to $13.7 billion of bonds through fiscal year 2027. Beginning in fiscal year 2028, an additional $4 billion will become available to have outstanding for a total of $17.7 billion. At the end of FY 2022, Bonneville had $8.02 billion of borrowing authority available against the current cap of $13.7 billion.

Strategic Goal: Modernize Assets and System Operations

Asset Management

The foundation of Bonneville's value is the base of the generating resources from which it markets electricity, and Federal transmission assets it owns and operates. Bonneville utilizes an Asset Management Program based on The Institute of Asset Management's (IAM's) conceptual model that aligns with the International Organization of Standardization (ISO) 55000 Series and Publically Available Specification (PAS) 55 standards. Investments are created, selected, and executed based on a strategy to apply best-practice industry standards to manage the lifecycle costs of Federal assets. This is central to maintaining the long-term value and reliability of the power and transmission systems. Achieving these objectives for power requires collaborative, long-term planning with Bonneville's Federal partners, the Corps, and Reclamation. Through the Asset Investment Excellence Initiative, the three agencies are establishing a long-term asset investment plan, applying prioritization tools to inform investment decisions to ensure the long-term affordability and reliability of the hydropower assets.

Bonneville operates within a complex environment that requires asset management tradeoffs. Bonneville's business decisions consider five dimensions of risk: financial, reliability, compliance, safety, and environmental. Reliability and safety remain Transmission Services' priorities. Transmission's asset management capability is continually maturing to maximize the value of its assets and help Bonneville maintain competitive advantage in the marketplace, enable industry change, and deliver on public responsibilities; as well as maintain financial strength through the management of lifecycle costs.

Infrastructure Investments

The FCRPS is one of the nation's largest nearly carbon-free power systems, and preserving and enhancing the value of the FCRPS for the future continues to be a major Bonneville focus. Bonneville's ongoing prioritization and execution of capital investment in transmission and FCRPS generation assets is the foundation for delivering clean, low-cost power to support the communities and economies of the region well into the future.

Bonneville continues to assess needed infrastructure investments in the Pacific Northwest to meet transmission capacity and reliability needs.

In January 2022, Bonneville signed a non-binding term sheet to clarify its role in the Boardman-to-Hemingway transmission project that would connect from northeast Oregon to southwest Idaho. Bonneville's role would be to acquire transmission service on the line, allowing Bonneville to reliably and cost-effectively serve six southeast Idaho preference customers. Bonneville has been evaluating options to serve these customers following the termination of legacy transmission service

agreements. Bonneville held a public review process in early 2022 to invite customer and public comment on this proposed participation.

Bonneville continues to evaluate additional transmission investments and alternative non-wires solutions across the Pacific Northwest to improve reliability and support both load and renewable generation needs. Bonneville makes use of certain alternative capital financing mechanisms, in addition to or in lieu of the use of its U.S. Treasury borrowing authority, to sustain funding for its infrastructure investment requirements. These approaches include revenue and financial reserves financing some amount of either or both power and transmission investments, or seeking, when feasible, third-party financing sources. See the BP-5 Potential Third-Party Financing Transparency table on page 101 of the Additional Tables section at the back of this document.

Bonneville plays a key role in advancing energy efficiency across the region consistent with its statutes, including developing and promoting related technologies, and exploring demand-side management opportunities.

Bonneville is also making disciplined technology innovation investments and looking to apply new operational and market mechanisms that enhance the reliability, efficiency, and flexibility of system operations.

Transmission Facilities Capital Projects

In 2021, Bonneville began construction of a new Technical Services Building to replace 80-year-old facilities at the Ross Complex in Vancouver, Washington. The facility includes lab space to support Bonneville's communication systems testing and diagnostics functions as well as one floor of general office space. The new facility offers long-term cost savings and supports Bonneville's ability to maintain system stability.

Bonneville is also continuing design and other activities related to its plans to replace the Dittmer Control Center, also located in the Ross Complex. After consultation with customers in the 2021 Integrated Program Review 2 process, Bonneville adjusted planned spending in Fiscal Year 2022 to just over $12 million and revised its proposed construction schedule.

Power Prepayment Program

Bonneville undertook a Power Prepayment Program in FY 2013 under which all Bonneville preference customers had an opportunity to submit formal offers to provide lump-sum payments to Bonneville as prepayments of a portion of their power purchases through September 30, 2028, the termination date of their current Long-Term Regional Dialogue Power Sales Contracts. Bonneville accepted power prepayments from four preference customers.

Upon Bonneville's receipt of the agreed-to, lump-sum prepayments, the selected preference customers became entitled to future portions of their electricity from Bonneville without further payment. The power prepayments are and will be recognized in the customers' future power bills from Bonneville as fixed, equal monthly prepayment credits. In effect, the amount of electricity that is prepaid may vary by month, depending on Bonneville's power rates and rate schedules that apply to electricity purchases by the prepaying customers in the related month. Because this is structured as a variable amount of prepayment and not as a fixed-price/fixed-amount type of prepayment, Bonneville maintains flexibility to establish rates for the electric power that is prepaid.

As a result of the FY 2013 Prepayment solicitation, Bonneville received $340 million in prepayments, which Bonneville is using to fund needed FCRPS investments. The aggregate prepayment credits are set at $2.55 million per month through FY 2028.

Depending on a variety of factors it is possible that Bonneville may seek to implement later phases of the Power Prepayment Program in connection with future FCRPS hydroelectric investment needs.

Radio Spectrum Communications

Bonneville's wireless communication system is used to operate and control critical national transmission grid infrastructure in a reliable, secure, and safe manner. Bonneville's communication systems are designed to meet strict reliability/availability objectives required by NERC and Western Electricity Coordinating Council (WECC) standards. Concerning proper spectrum stewardship, Bonneville designs highly efficient radio systems that use minimal radio frequency (RF) channel bandwidths to meet critical mission needs. However, in certain circumstances, efficiently designed spectrum radio systems will require broad RF channels and/or lower state RF modulation schemes to meet existing and future requirements in order to meet operational and reliability/availability objectives.

To meet Bonneville's mission/operational requirements, RF communication equipment approved for system use goes through a rigorous evaluation and testing process. RF spectrum efficiency factors are considered during the evaluation/testing period. RF terminal equipment approved for use is normally purchased directly from vendors and is not typically supplied through a Request for Proposal process.

Bonneville's operational telecommunications and other capital equipment and systems are acquired using Bonneville's self-financing and procurement authorities. The Bonneville budget includes a systemwide electric reliability performance indicator, consistent with NERC rules, to track and evaluate performance.

Bonneville may share temporarily-available spare capacity on its RF communication system with other government agencies (both Federal and state), and with other electric utilities in the region whose power systems interconnect with Bonneville. Non-critical administrative traffic is typically supported by commercial carrier enterprises. However, to meet the NERC and WECC electrical bulk transmission requirements, Bonneville exclusively operates highly critical transmission control traffic over its private telecommunication system as Bonneville has no control over the reliability/availability of the commercial enterprise or on how quickly critical operational control circuits are restored to active service during an interruption.

For high-capacity communication system applications, Bonneville considers and operates non-spectrum dependent alternatives such as fiber optic cable infrastructure systems.

During FY 2014, Bonneville began upgrading the Very High Frequency (VHF) land mobile system and installing a number of digital Synchronous Optical Network (SONET) rings typically consisting of fiber segments in combination with point-to-point microwave hops operating in the 4 GHz and 7/8 GHz bands. These various telecommunication systems operate within Bonneville's approximate 300,000 square mile regional utility service territory (Oregon, Washington, Idaho, western Montana) with the majority of the RF infrastructure located in low-population rural areas.

The FCRPS hydroelectric projects, owned by the Corps and Reclamation, also utilize Federal radio spectrum to preserve very high operational telecommunications and power system reliability.

In FY 2014, Bonneville completed work costing approximately $40 million, funded through the Spectrum Relocation Fund (SRF), to relocate its operational telecommunication systems from the 1710-55 MHz radio spectrum bands to alternative Federal radio spectrum bands, part of the AWS-1 Federal Spectrum Relocation. In accordance with Federal law, Bonneville plans to return the approximately $8.2 million of excess funds to the U.S. Treasury, via the SRF, as soon as the National Telecommunications and Information Administration (NTIA) officially notifies the Federal Communications Commission (FCC) that the DOE relocation effort is complete.

Bonneville began participating in a new spectrum relocation effort in FY 2015 to relocate its operational telecommunication systems from the 1755-80 MHz radio spectrum bands. The NTIA has approved and, in July 2014, web-posted Federal agency relocation plans, including the Bonneville relocation plan. The FCC held an auction of this spectrum on November 13, 2014. Bonneville received an additional $5.2 million from the SRF on July 29, 2015, to fully pay for this new relocation effort, including, as in the prior relocation, the purchase and installation of new digital radio equipment. Bonneville received obligational authority to proceed with this relocation effort by apportionment on July 24, 2015.

Bonneville has worked to complete its move off of 1755-80 MHz in two stages. First, Bonneville moved off of the old Federal frequencies and "retuned" to new alternate Federal frequencies in the band segment of 1780-1850 MHz, which is above the highest frequency involved in the auction. Three hops Federal frequency moves/retuning were completed as of June 7, 2017. The last remaining path, Happy Camp to Hilltop in northern California near the Oregon-California Border, was moved/retuned, and as of July 31, 2018, Bonneville was off AWS-3 radio frequencies, meeting the commitment date promised to the NTIA.

Bonneville still has additional work remaining to finish the construction related to the AWS-3 relocations. Bonneville will use the SRF relocation funds until the AWS-3 relocation work is completed and closed out. Bonneville will then complete its move of these four microwave hops to 7GHz-8GHz. This will take additional time because two of four hops require building construction to complete the work. AWS-3 funds will need to be retained by Bonneville at least through FY 2023 to complete construction of two communications buildings. This will accommodate the adjusted construction schedule with contingency for minor access issues due to weather or fire. Glass Butte was under construction during FY 2021 and is expected to be completed in FY 2023. Then, microwave installations can begin. Richland Franklin construction began in July of CY/FY 2021. The building construction occurred in FY 2021 with cutovers to the new radio equipment and retirement of

old radio equipment likely concluding in FY 2023. Bonneville will assure that "comparable capability" has been achieved for these four AWS-3 relocated Bonneville operational telecommunication hops.

Strategic Goal: Provide Competitive Products and Services

Provider of Choice

With Bonneville's current power sales contracts set to expire in 2028, Bonneville is planning for successor agreements. Bonneville' Provider of Choice initiative is laying the foundation to deliver competitively priced power beyond 2028. The initiative seeks to develop the policies and contracts Bonneville will offer its customers to meet their evolving needs well into the future.

Bonneville released a Provider of Choice Concept Paper in July 2022. The concept paper includes a high-level framework for post 2028 contract policies, products, services, and rate structures. Bonneville will invite its customers and other interested regional parties to participate in regional policy discussions to complete a Provider of Choice policy. Bonneville expects to issue a draft policy in the spring of 2023 and complete a final policy and Record of Decision in January 2024. Bonneville would then seek to enter contract negotiations and drafting in 2025 to be able to offer and execute contracts for service after 2028.

Fiscal Year 2022 and 2023 Rates

Bonneville adopted its power and transmission rates for FY 2022 and 2023 in July 2021. FERC approved the rates in March 2022. The average BP-22 power rate decreased by 2.5 percent compared to BP-20 rates. For transmission rates, the weighted average is an increase of approximately 5.4 percent for the two-year rate period. The power rates and transmission rates will be in effect through September 30, 2023. In November, 2022, Bonneville proposed new power and transmission rates for FY 2024 and 2025 and begin formal rates proceedings. BPA has made its decision on the application of the FY 2022 Power Reserves Distribution Clause Amount. The Administrator's final decision was released on Nov. 16, 2022. Funds will be distributed in FY 2023, which includes to customers.

Grid Modernization

Through FY 2023, Bonneville will continue a cross-agency Grid Modernization Initiative. Bonneville's reliance on legacy systems and non-standard commercial practices are costly to maintain and have led to Bonneville being conservative in its power and transmission operations, planning, and marketing. Bonneville's strategic objective is to modernize Federal power and transmission systems and their supporting technology. Bonneville's Grid Modernization Initiative includes 34 projects designed to increase automation, improve accuracy and enhance visibility into how the Federal power and transmission systems are functioning in real time, to ultimately enhance the optimization, resilience and reliability of the grid. The program includes upgrades to metering technology, outage management systems and other operational tools that improve visibility and accuracy in Bonneville's operations.

Bonneville's grid modernization effort included preparation for and successful initiation of participation in the Western Energy Imbalance Market (WEIM). The WEIM is operated by the California Independent System Operator and is a real-time wholesale electricity market with current participation of 17 western balancing authorities. Bonneville joined the WEIM after extensive consultations with its customers and constituents through regular public workshops. The rate and tariff issues for WEIM participation were included in the TC-22 and BP-22 cases, which were completed in July 2021. Bonneville continues to hold public workshops to report on WEIM performance and operational issues.

Regional Resource Adequacy

Bonneville continues to forecast that it has adequate power resources to meet its long-term contractual obligations to supply its regional firm power customers' demands in all foreseeable conditions. Recent regional forecasts, however, have shown that the Pacific Northwest as a whole is nearing periods of times of the year when regional power supplies may not be adequate to meet demand. Bonneville is joining other regional utilities through the Northwest Power Pool Western Resource Adequacy Program (WRAP) initiative to create a regional resource adequacy program. This effort seeks to develop a program that is based on voluntary participation with binding commitments to ensure that the region maintains a balance of supplies and demand in a very high percentage of likely conditions.

On September 29, 2021, Bonneville committed to participating in the non-binding forward-showing phase (Phase 3A) of the WRAP. The non-binding program participation is expected to run through the forward-showings for winter 2022-2023 and summer 2023. Bonneville continues to engage with its customers and regional leaders to gain more information about the binding program and to develop a better understanding of the business case and principles for Bonneville's potential

participation. Bonneville expects to make a decision on participating in the binding program in late 2022. FERC approval is required before the WRAP can become fully binding.

The Columbia River System Operations Environmental Impact Statement and associated Endangered Species Act consultations

In 2020, the Corps, Reclamation, and Bonneville completed the Columbia River System Operations (CRSO) Environmental Impact Statement (EIS) and associated Endangered Species Act (ESA) consultations on the Columbia River System (CRS) operations, maintenance and configuration for 14 Federal projects in the interior Columbia Basin. These 14 CRS Federal projects are a subset of the FCRPS. In the CRSO EIS, the three agencies prepared a reasonable range of alternatives for long-term system operations and evaluated the potential environmental and socioeconomic impacts on a number of system purposes, including flood risk management, irrigation, power generation, navigation, fish and wildlife, cultural resources and recreation.

The on-going action that requires evaluation under the National Environmental Policy Act (NEPA) is the long-term coordinated management of CRS projects. An underlying need to which the co-lead agencies responded is reviewing and updating the management of these projects, including evaluating measures to avoid, offset, or minimize impacts to resources affected by the management of the CRS in the context of new information and changed conditions in the Columbia River basin. In addition, the co-lead agencies responded to the Opinion and Order issued by the U.S. District Court for the District of Oregon such that this EIS evaluated how to ensure that the prospective management of the system is not likely to jeopardize the continued existence of any endangered species or threatened species or result in the destruction or adverse modification of designated critical habitat, including evaluating mitigation measures to address impacts to listed species. The co-lead agencies released a final Record of Decision (ROD) in September 2020. Regional parties subsequently challenged the CRSO EIS ROD in court.

In October 2021, the Administration announced a short-term agreement on operations of the Federal CRS multiple purpose projects. The agreement paused litigation over the selected alternative in the CRSO EIS ROD and associated ESA consultations. On August 4, 2022 the Administration announced the pause in the litigation would be extended one year to August 31, 2023, in the District Court and September 8, 2023, in the Ninth Circuit.

Discretionary taxpayer funds requested or enacted for litigation stay-related activities must be non-reimbursable in Federal law in order to assure such activities are not in lieu of ongoing priorities and programmatic and financial responsibilities of the other Federal agencies (Corps, Reclamation, USFWS, etc.). Those discretionary, non-reimbursable funds may not be recovered in Bonneville's wholesale electric power rates. Other Federal agencies that are seeking to fund stay activities beyond existing Bonneville funding priorities and beyond statutory obligations or responsibilities must seek non-reimbursable appropriations for those activities.

Fish and Wildlife Program Overview

Bonneville remains committed to funding its share of the region’s efforts to protect and mitigate Columbia River Basin fish and wildlife affected by the construction and operations of the FCRPS. To the extent possible, Bonneville integrates actions to protect species listed for protection under the ESA in response to relevant FCRPS Biological Opinions (BiOPs) with the Fish & Wildlife Program of the NPCC. Implementation of these efforts involve significant collaboration with Pacific Northwest states, Indian tribes, local communities and other Federal agencies.

Included in the Additional Tables section at the back of this document, on page 107, is the current tabulation of Bonneville’s Fish & Wildlife costs from FY 2012 through FY 2022.

The Columbia River Treaty

The U.S. Government reached consensus on a high level position for negotiations of the post-2024 future of the Columbia River Treaty in June 2015, and received authorization to negotiate with Canada on the Columbia River Treaty in October 2016. Government Affairs Canada notified the U.S. State Department in December 2017 of Canada's mandate to negotiate the Columbia River Treaty with the United States. Negotiations began in spring 2018 and continue to date. Both the U.S. State Department and Canadian negotiators have discussed shared objectives and exchanged information on flood risk management, hydropower, and ecosystem considerations.

Strategic Goal: Meet Transmission Customer Needs Efficiently and Responsively

Revised Transmission Tariff

In 2019, Bonneville adopted a broad regional settlement of a new Transmission Tariff, which included terms and conditions that would apply to all of Bonneville's customers. The Tariff set forth the process Bonneville may use to make future modifications to it and positioned the region to take advantage of opportunities in the rapidly changing industry as well as further its objectives for improving the agency's commercial performance.

Bonneville will conduct a Terms and Conditions Tariff Proceeding beginning in fall of 2022 to set or modify the terms and conditions of the Transmission Tariff. The proceeding will run concurrently with the BP-24 rate case.

Integrating Regional Transmission Planning

Bonneville participates in the NorthernGrid regional planning organization. Bonneville's 2018-2023 Strategic Plan included the objective of pursuing a single planning region in order to consolidate regional planning efforts and reduce duplication. In support of that objective, Bonneville worked together with other entities to scope and develop a new, single regional planning organization. The result of that effort is NorthernGrid. NorthernGrid is an association of member utilities that offers a forum for coordination of regional transmission planning activities. Participation in NorthernGrid facilitates Bonneville's efforts to meet transmission customer needs efficiently and responsibly through coordination of transmission planning across a broad spectrum of participants and a larger footprint. It includes participation by both FERC-jurisdictional and non-jurisdictional entities.

Wildfire Risk Mitigation

In 2020, Bonneville released its Wildfire Mitigation Plan to reduce the risk of Bonneville transmission lines and other assets from sparking wildfires, and to protect Bonneville's lines and assets from the threat of wildfires. The plan incorporated wildfire mitigation into Transmission Services' asset management planning strategy. In 2021, Bonneville updated the plan to add a public safety power shutoff (PSPS) procedure to further mitigate the risk of fire igniting from its transmission lines. PSPS is proactive de-energization of transmission lines and facilities based on a number of factors, including extreme weather like high winds, other environmental conditions, and asset condition.

Strategic Goal: Value People and Deliver Results

COVID-19 Response

Beginning in March 2020, Bonneville responded to the expanding COVID-19 pandemic by instructing all non-mission-critical operating personnel to telework for an indefinite period of time. Bonneville suspended transmission construction projects and limited field operations to critical work. As local health directives permitted, Bonneville resumed construction and maintenance activities. In June 2020, Bonneville completed an expedited rate proceeding to suspend its Financial Reserve Policy surcharge to provide its public power preference customers about $3 million per month of rate relief for the remainder of FY 2020 and a total of $30 million for FY 2021. Bonneville has since maintained a flexible telework policy that includes guidance from local health authorities in the communities where the agency has facilities. Bonneville has made a number of FCRPS self-financed expenditures to respond to the COVID-19 pandemic to keep employees safe and reliably continue power and transmission operations. The health and safety of Bonneville Federal and contract workers are of paramount importance and guides all actions to reenter agency facilities. Federal Centers for Disease Control (CDC) protocols as outlined in "Work Places and Businesses I COVID-19 I CDC" are being used, as practical and appropriate, to lower risk.

Educational Activities

Bonneville is a supporter of science, technology, engineering, and math (collectively known as "STEM") education programs. These programs provide support and encouragement to middle and high school students to study the sciences in school and to pursue careers in these fields. As a regional leader in STEM education, Bonneville proudly supports and organizes an award-winning Science Bowl. Bonneville also sponsors science fair competitions for students in Washington State, as well as a First Robotics tournament championship. Bonneville employees also serve as volunteer ambassadors, providing presentations, curricula, and activities to K-12 schools that enhance the learning experience for students and teachers, and extend awareness of the role of the region's hydroelectric system.

Justice40 Initiative

Recently the U.S. Department of Energy (DOE) announced its list of existing programs that provide Justice40 or Justice40-like benefits. While Bonneville is not a taxpayer-funded entity like other DOE elements, Bonneville does support the spirit of

Justice40 through its business activities and statutory requirements that benefit the people of the Northwest. Bonneville listed five large categories of our activities that provide Justice40-like benefits: Fish and Wildlife Mitigation Program; energy efficiency; Tribal STEM Grant Program; AIESEC internship partnership; public processes, including rate cases; and carbon-free, flexible hydropower and nuclear capacity and energy.

The following pages provide more specifics on the primary budget categories and subcategories.

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Funding Schedule by Activity

Funding ($K)

Power Services - Capital	FY 2022 Actuals	FY 2023 Estimate	FY 2024 Estimate	FY 2024 vs FY 2023 $	FY 2024 vs FY 2023 %
Associated Projects	$ 190,294	$ 281,260	$ 270,000	$ (11,260)	-4.0%
Fish & Wildlife	$ 16,119	$ 43,000	$ 41,335	$ (1,665)	-3.9%
Power Information Technology	$ 778				
Power Non-IT	$ 1,033				
Total, Power Services - Capital	**$ 208,224**	**$ 324,260**	**$ 311,335**	**$ (12,925)**	**-4.0%**

Outyears ($K)

Power Services - Capital	FY 2024 Estimate	FY 2025 Estimate	FY 2026 Estimate	FY 2027 Estimate	FY 2028 Estimate
Associated Projects	$ 270,000	$ 275,675	$ 281,620	$ 288,001	$ 294,794
Fish & Wildlife	$ 41,335	$ 41,300	$ 29,000	$ 15,700	$ 15,000
Total, Power Services - Capital	**$ 311,335**	**$ 316,975**	**$ 310,620**	**$ 303,701**	**$ 309,794**

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Power Services – Capital

Overview

Under the Power Services – Capital category, there are three subcategories. **Associated Project** costs provide for direct funding of additions, improvements, and replacements of existing the Corps and Reclamation hydroelectric projects in the Pacific Northwest. The FCRPS hydro projects produce a large portion of the electric power that is marketed by Bonneville.

Maintaining the availability and increasing the efficiency of the FCRPS is critical to ensuring that the region has an adequate, efficient, economic, and reliable power supply. The FCRPS represents about 80 percent of Bonneville's firm power supply and includes 31 operating Federal hydroelectric projects with over 200 generating units. These projects have an average age of about 50 years, with some that exceed 60 years of age. Through direct funding and the cooperation of the Corps and Reclamation, Bonneville uses its U.S. Treasury borrowing authority and other sources to make investments needed to restore generation availability and improve efficiency, reducing demand on Corps and Reclamation appropriations for power-related investments.

Since the beginning of direct funding in 1997, Bonneville has invested over $3 billion in direct capital in the FCRPS with the goal of maximizing system value for the region and its stakeholders. Ongoing analysis with its operating partners, the Corps and Reclamation, has identified ongoing investment needs for the foreseeable future to maintain the health of the hydro system.

These planned investments, included in the FY 2024 Budget estimates, will maintain the generation performance of the FCRPS. Moving forward with the cost-effective opportunities to preserve and enhance the capability of the FCRPS is a smart, economic, and environmentally beneficial decision for serving the growing Pacific Northwest electricity needs of Bonneville customers, particularly when compared to purchasing power from the wholesale power market.

Fish & Wildlife capital costs incurred by Bonneville are directed at activities that mitigate the impacts of the FCRPS on fish and wildlife resources. Bonneville uses a combination of capital and U.S. Treasury reimbursements to fund projects designed to increase juvenile and adult fish passage through the Federal hydrosystem, to increase fish production and survival through construction and operation of hatchery, acclimation and fish monitoring facilities, and to protect wildlife and resident fish populations through land acquisitions and associated habitat maintenance. These capital projects support both Northwest Power Act and ESA priorities and are integrated with the NPCC's Columbia Basin Fish and Wildlife Program (NPCC's Program) to efficiently meet Bonneville's responsibilities under the Northwest Power Act and other statutes to mitigate Federal hydrosystem impacts to Columbia River Basin fish and wildlife.

Under the Northwest Power Act, the NPCC must develop a program of measures designed to protect, mitigate, and enhance Columbia River Basin fish and wildlife affected by the Federal and non-federal hydroelectric projects in the basin while assuring the Pacific Northwest an adequate, efficient, economical, and reliable power supply. The NPCC Program, the Columbia River System BiOps, other BiOps, and Bonneville's long-term agreements include prioritized strategies for mitigation actions and projects to meet Bonneville's responsibilities under the Northwest Power Act, the ESA, the Federal Clean Water Act, and other laws. When issues arise that potentially trigger the in-lieu provision of the Northwest Power Act, which prohibits Bonneville from funding mitigation that other entities are authorized or required to undertake, Bonneville works with the NPCC and regional fish and wildlife managers, customers, and tribes, as appropriate, to ensure ratepayers fund only appropriate mitigation.

Most projects recommended by the NPCC also undergo independent scientific review as directed by the 1996 Energy and Water Development Appropriations Act, which added Section 4(h)(10)(D) to the Northwest Power Act. As a result, the Council appoints an Independent Scientific Review Panel (ISRP) "to review a sufficient number of projects" proposed to be funded through Bonneville's annual Fish & Wildlife budget "to adequately ensure that the list of prioritized projects recommended is consistent with the Program." The Northwest Power Act further states that "in making its recommendations to Bonneville, the Council shall consider the impact of ocean conditions on fish and wildlife populations and shall determine whether the projects employ cost-effective measures to achieve program objectives." Today, most mitigation projects funded by Bonneville receive ISRP review as part of the NPCC recommendation process. The NPCC uses a multi-year project review cycle during which the ISRP reviews categories of projects grouped together.

To comply with the ESA, Bonneville funds capital investment actions to avoid jeopardizing listed species. Guidance for those actions is found in the current BiOps issued by the National Oceanic and Atmospheric Administration (NOAA) and the USFWS.

Under these collective BiOps, the Action Agencies (Bonneville, Corps, Reclamation) have committed to implement hydro, habitat, hatchery, and other actions throughout the Columbia River Basin to address impacts stemming from the operation of the Federal hydro-electric dams on ESA-listed fish, and to ensure that operations of the Federal dams do not jeopardize the continued existence of the ESA-listed species or adversely modify their designated critical habitat.

The Action Agencies also signed the 2008 Columbia Basin Fish Accords (Fish Accords or Accords) with five Northwest Tribes and the states of Idaho and Montana. In 2009, an agreement was signed with the state of Washington and Federal agencies (the state of Washington Estuary agreement). And in 2012, the Action Agencies signed an agreement with the Kalispel Tribe of Indians covering Albeni Falls Dam and FCRPS operations. Wildlife settlement agreements have been signed with the states of Oregon and Idaho to help complete mitigation for the flooding and inundation caused by the construction of FCRPS dams operating in those states. These Fish Accords and settlements complement the BiOps and provide firm commitments to prioritize mitigation actions and secure funding over the life of the agreements.

As of September 30, 2022, BPA has long-term fish and wildlife agreements with estimated contractual commitments of $372.9 million, which are likely to result in future expenses or regulatory assets. These agreements will expire at various dates through fiscal year 2027 and do not include the Columbia Basin Fish Accords extension agreements. As of November 1, 2022, BPA, the Corps, and Reclamation are in the process of signing agreements to extend the Columbia Basin Fish Accords with current Accords partners, namely certain states and tribes. The Accords and associated BPA funding commitments facilitate implementation of projects that provide BPA with legal compliance actions under applicable laws, including the Northwest Power Act and Endangered Species Act, and that benefit Columbia River Basin fish and wildlife. The existing agreements expired September 30, 2022, and will be extended until September 30, 2025. The extension agreements are expected to commit approximately $409 million for fish and wildlife protection and mitigation, which will result in future expenses or regulatory assets.

As noted above, BiOps, Fish Accord extensions, and wildlife settlement commitments are integrated with other projects and implemented through the NPCC Program under the Northwest Power Act. They provide the basis for Bonneville's planned capital investment for fish and wildlife.

There are no anticipated expenditures under the third subcategory, **Projects Funded In Advance,** during this budget period.

Accomplishments

Power Services – Capital expenditures over the past fiscal year resulted in the following:

- The BP-22 Draft ROD was issued in June 2021 and the final ROD was issued in late July
- 45,134 acre-feet/year of water protected and conserved
- 6,242 acres improved and protected in riparian areas
- 29,545 acres protected by purchase or lease
- 258 cubic-feet per second (cfs) of water flow protected and conserved
- 191 miles of stream improved and protected in riparian areas
- 129 miles of habitat accessed
- Completed switchyard modernization at Palisades
- Completed station service breaker replacement at Ice Harbor
- Completed intake gantry crane controls replacement at Ice Harbor
- Completed drainage system oil water separator at McNary
- Completed tailrace gantry crane rehabilitation at Dworshak
- Completed generator coolers replacement at Bonneville
- Completed transformers replacement at The Dalles
- Completed main unit breakers and station service upgrades at Bonneville
- Completed GDACS replacement at Chief Joseph
- Completed SCC board replacement at Chief Joseph

Explanation of Changes

Bonneville's budget includes $311.3 million in FY 2024 for Power Services – Capital, which is a 4.0 percent decrease from the FY 2023 forecasted level. The FY 2024 level allows additional work efforts while continuing to align with Bonneville's strategic asset management plans, which focus on the need for investment in hydroelectric system assets and investments necessary to implement the BiOps, Fish Accord extensions, and other Columbia Basin fish and wildlife activities.

The FY 2024 budget decreases the levels for Associated Projects by $11.2 million and decreases the funding level for Fish & Wildlife, by $1.67 million compared to FY 2023.

Strategic Management

Bonneville markets available electric power to meet requested load while supporting the achievement of its vital responsibilities for fish and wildlife, energy efficiency, renewable resources, and low-cost power in the Pacific Northwest region. Bonneville will continue to implement the following strategies to serve the region:

1. Bonneville coordinates its power operational activities with the Corps, Reclamation, NERC, regional electric reliability councils, its customers, and other stakeholders to provide the most efficient use of Federal assets.
2. Ongoing work with the Corps and Reclamation is focused on improving the reliability of the FCRPS, increasing its generation efficiency, and optimizing hydro facility operation.
3. Bonneville is committed to funding efforts to protect listed fish and wildlife species in the Columbia Basin under the ESA and working closely with the NPCC, regional fisheries managers, and other Federal agencies to prioritize and manage projects to mitigate fish and wildlife impacts by the FCRPS.
4. Bonneville's utility customers have been, and continue to be, a critical part of Bonneville's collaborative efforts to promote and foster the efficient use of energy.
5. Bonneville has assisted with a DOE Wind Power cross-cutting initiative to strengthen energy security.

The following external factors present the most significant risk and impact to overall achievement of the strategies listed above:

1. Continually changing regional economic and institutional conditions;
2. Competitive dynamics; and
3. Ongoing changes in the electric industry.

The following pages discuss budget specifics under two of the three Power Services – Capital subcategories: Associated Projects and Fish & Wildlife Projects.

Associated Projects – Capital

Overview

Bonneville will work with both the Corps and Reclamation to reach mutual agreement on budgeting and scheduling capital improvement projects that are cost-effective and provide system or site-specific enhancements, increase system reliability, or provide generation efficiencies.

The work is focused on improving the reliability of the FCRPS and on increasing its generation efficiency or capacity through turbine runner replacements, optimizing hydro facility operation, and new unit construction. Also, limited investments may be made in joint-use facilities that are beneficial to both the FCRPS operations and to other Corps and Reclamation project purposes.

The text below discusses Corps projects first, followed by Reclamation projects.

Corps of Engineers Projects
($K)

FY 2022 Actuals	FY 2023 Estimate	FY 2024 Estimate
$162,988	$229,286	$201,075

Bonneville Dam:

- FY 2022. Continued generator coolers replacement, control room fire protection upgrades, oil storage room fire protection upgrades, trashracks replacement, elevators rehabilitation, feeder boards replacement, and tailrace gantry crane replacement. Began Headgate repair pit rehabilitation.
- FY 2023. Complete feeder boards replacement and oil storage room fire protection upgrades. Continue elevators rehabilitation, trashracks replacement, tailrace gantry crane replacement and headgate repair pit rehabilitation. Begin digital governors replacement, main unit breakers replacement, and spillway gate repair.
- FY 2024. Complete headgate repair pit rehabilitation and tailrace gantry crane replacement. Continue digital governors replacement, main unit breakers replacement and spillway gate repair. Begin spillway rock mitigation and Bradford Island Service Building PRQ switchgear upgrade.

John Day Dam:

- FY 2022. Completed unwatering system condition intervention. Continued BLH turbine hub upgrades and fixed blade conversions, control room fire protection upgrades, and emergency gantry crane replacement. Began trashracks replacement, turbine pit pumps replacement, and submerged traveling screen (STS) crane replacement.
- FY 2023. Complete control room fire protection upgrades. Continue BLH turbine hub upgrades and fixed blade conversions, control room fire protection upgrades, emergency gantry crane replacement, trashracks replacement, turbine pit pumps replacement, and submerged traveling screen (STS) crane replacement.
- FY 2024. Continue BLH turbine hub upgrades and fixed blade conversions, emergency gantry crane replacement, trashracks replacement, turbine pit pumps replacement, and STS crane replacement. Begin generator cooling water system, and turbine runner replacement and generator rewinds.

The Dalles Dam:

- FY 2022. Continued gate repair pit upgrades, intake and tailrace crane rails replacement, intake gantry crane replacement. Began oil accountability measures.
- FY 2023. Complete thrust bearing oil coolers. Continue intake gantry crane replacement, intake gantry crane rails replacement and oil accountability measures.
- FY 2024. Complete intake gantry crane replacement. Continue intake gantry crane rails replacement and oil accountability measures.

Willamette Plants:

- FY 2022. Completed powerhouse and transformer oil water separator at Foster. Continued GDACS installation at Cougar, spillway gate rehabilitation and wildfire debris boom at Detroit, butterfly valves project at Cougar, main

unit breakers and electrical reliability upgrades at Foster and Hills Creek, and wildlife sediment and debris modeling and Big Cliff.

- FY 2023. Complete wildfire sediment and debris modeling at Big Cliff, wildfire debris boom at Detroit, and intake gantry crane at Dexter. Continue butterfly valves project, spillway gate rehabilitation and GDACS installation at Cougar, main unit breakers and electrical reliability upgrades at Foster and Hills Creek. Begin bridge crane replacement at Green Peter.
- FY 2024. Complete electrical reliability upgrades at Foster and butterfly valves at Cougar. Continue spillway gate rehabilitation and GDACS installation at Cougar, bridge crane replacement at Green Peter, and main unit breakers and electrical reliability upgrades at Hills Creek. Begin powerhouse and transformer oil water separator at Detroit.

Albeni Falls Dam:

- FY 2022. Continued main unit transformers replacement.
- FY 2023. Complete installation of main unit transformers.
- FY 2024. Begin bridge crane rehabilitation and emergency diesel generator Installation.

Libby Dam:

- FY 2022 Continued system control console replacement and DC boards and breakers replacement. Began powerhouse gantry crane rehabilitation.
- FY 2023. Continue powerhouse gantry crane rehabilitation, system control console replacement, and DC boards and breakers system replacement.
- FY 2024. Complete DC boards and breakers system replacement, powerhouse gantry crane rehabilitation and system control console replacement. Begin 6th unit installation.

Chief Joseph Dam:

- FY 2022. Continued intake gantry crane replacement. Began upgrades for station service units.
- FY 2023. Continue intake gantry crane rehabilitation and upgrades for station service units. Begin Units 1-16 generator rewinds, freight elevator rehabilitation, powerhouse elevator rehabilitation, powerhouse sump pump and controls replacement and Units 1-16 exciters replacement.
- FY 2024. Continue upgrades for station service units, Units 1-16 generator rewinds, freight elevator rehabilitation, powerhouse elevator rehabilitation, Units 1-16 exciters replacement, and powerhouse sump pump and controls replacement. Begin power bus replacement.

Dworshak Dam:

- FY 2022. Completed RO valve upgrade and tailrace gantry crane upgrade.
- FY 2023. No planned capital projects.
- FY 2024. No planned capital projects.

McNary Dam:

- FY 2022. Completed headgate repair pit upgrade and 230kv transformer purchase. Continued digital governors upgrade, exciters upgrade, headgate system rehabilitation, intake gantry crane rehabilitation, iso-phase and HV bus replacement, powerhouse control system upgrades, station service turbine rehabilitation, tailrace gantry crane 4 replacement, and turbine design and replacement.
- FY 2023. Complete tailrace gantry crane 4 replacement and intake gantry crane rehabilitation. Continue digital governors upgrade, exciters upgrade, governors rehabilitation, headgate system rehabilitation, , ISO-phase and HV bus replacement, powerhouse control system upgrades, station service turbine rehabilitation, and turbine design and replacement.
- FY 2024. Continue digital governors upgrade, exciters upgrade, headgate system rehabilitation, iso-phase and HV bus replacement, powerhouse control system upgrades, and turbine design and replacement. Complete station service turbine rehabilitation.

Ice Harbor Dam:

- FY 2022. Completed intake gantry crane controls upgrade. Continued Units 1-3 turbine runners replacement and Units 1-3 stator windings replacement.
- FY 2023. Continue Units 1-3 turbine runner replacements and stator winding replacements. Begin intake gate hydraulic system upgrades.

- FY 2024. Continue Units 1-3 turbine runner replacements, stator winding replacements, intake gate hydraulic system upgrades.

Little Goose Dam:

- FY 2022. Continued headgate repair pit upgrade, iso-phase bus upgrades, Unit 5 rotor frame and bracket repair, and powerhouse roof replacement. Began DC system and LV switchgear upgrades.
- FY 2023. Complete powerhouse roof replacement and Unit 5 rotor frame and bracket repair. Continue DC system and LV switchgear upgrades, headgate repair pit upgrade, and iso-phase bus upgrades. Begin intake gate rehabilitation.
- FY 2024. Continue DC system and LV switchgear upgrade, headgate repair pit upgrade, intake gate rehabilitation, and iso-phase bus upgrades.

Lower Granite Dam:

- FY 2022. Completed main Units 3-6 blade seal replacement and DC system and LV switchgear upgrade. Continued digital governors replacement, drainage system oil water separator, iso-phase bus and housing upgrade, and main Unit 2 blade sleeve upgrade and rehabilitation.
- FY 2023. Complete iso-phase bus and housing upgrade. Continue main Unit 2 blade sleeve upgrade and rehabilitation. Begin trashrake crane and rake replacement.
- FY 2024. Continue Trashrake Crane and Rake Upgrade and Main Unit 2 Blade Sleeve upgrade and rehabilitation. Begin Turbine Intake Gate Hydraulic System Upgrade.

Lower Monumental Dam:

- FY 2022. Completed station service compressed air system and main Units 2-6 blade seal repair. Continued headgate repair pit upgrades, iso-phase bus upgrades and trash rake crane and rake upgrades. Began DC system and LV switchgear upgrades.
- FY 2023. Complete headgate repair pit upgrades. Continue iso-phase bus upgrades, trashrake crane and rake upgrades, DC system and LV switchgear upgrades and intake gate rehabilitation.
- FY 2024. Complete iso-phase bus upgrades and trashrake crane and rake upgrades. Continue DC system and LV switchgear upgrades and intake gate rehabilitation.

Bureau of Reclamation Projects
($K)

FY 2022 Actuals	FY 2023 Estimate	FY 2024 Estimate
$27,306	$51,974	$68,925

Grand Coulee Dam:

- FY 2022. Continued G11-18 transformers replacement, Block 31 elevator replacement, LPH/RPH bridge crane replacement, and TPP crane controls upgrade.
- FY 2023. Complete TPP crane control upgrades. Continue Block 31 elevator replacement, G11-18 transformers replacement, and LPH/RPH bridge crane replacement. Begin G1-18 iso-phase bus replacement, inclined elevator rehabilitation and radio system modernization.
- FY 2024. Continue LPH/RPH bridge crane replacement, station service compressed air system replacement, G11-18 transformers replacement, and TPP crane controls upgrade. Begin Inclined elevator rehabilitation, fire protection modernization and radio system modernization.

Keys Pump Generating Plant:

- FY 2022. Continued P1-P6 coaster gate replacement, P1-P6 exciters, relays and unit controls, PG7-12 governors, exciters, relays and unit controls and phase reversal switch replacement.
- FY 2023. Complete phase reversal switch replacement. Continue P1-P6 coaster gate replacement, P1-P6 exciters, relays and unit controls, PG7-12 governors, exciters, relays and unit controls and phase reversal switch replacement.
- FY 2024. Continue P1-P6 exciters, relays and unit controls, PG7-12 governors, exciters, and relays and unit controls.

Hungry Horse Dam:

- FY 2022. Completed SCADA replacement. Continued powerplant crane controls, disconnect switches replacement and main unit transformer fire protection system replacement. Begin radio system modernization.
- FY 2023. Complete main unit transformer fire protection system replacement and powerplant crane controls. Continue radio system modernization. Begin exciters replacement.
- FY 2024. Continue exciters replacement and radio system modernization.

Chandler Dam:

- FY 2022. No planned capital projects.
- FY 2023. No planned capital projects.
- FY 2024. No planned capital projects.

Palisades Dam:

- FY 2022. Completed switchyard modernization and microwave system backbone replacement. Continue hollow jet valve replacement.
- FY 2023. Complete hollow jet valve replacement.
- FY 2024. No planned capital projects.

Green Springs Dam:

- FY 2022. No planned capital projects.
- FY 2023. No planned capital projects.
- FY 2024. No planned capital projects.

Black Canyon Dam:

- FY 2022. Continue station service arc flash mitigation and Units 1 & 2 life safety modernization.
- FY 2023. Continue station service arc flash mitigation and Units 1 & 2 life safety modernization. Begin trash rake installation.
- FY 2024. Continue station service arc flash mitigation and Units 1 & 2 life safety modernization.

Anderson Ranch Dam:

- FY 2022. No planned capital projects.
- FY 2023. No planned capital projects.

- FY 2024. No planned capital projects.

Roza Dam:

- FY 2022. Completed switchyard rehabilitation and breaker upgrade.
- FY 2023. No planned capital projects.
- FY 2024. No planned capital projects.

Minidoka Dam:

- FY 2022. Complete microwave system backbone modernization and switchyard modernization.
- FY 2023. No planned capital projects.
- FY 2024. No planned capital projects.

Fish & Wildlife Projects – Capital

Overview

Bonneville continues to develop budgets for the suite of fish and wildlife mitigation projects originally adopted in FY 2007 based on recommendations from the NPCC. Bonneville reaffirmed and expanded many project-specific commitments in subsequent agreements and processes, including BiOps and 2022 Fish Accord extensions, and since then, virtually all these projects received independent science review through the NPCC and its project review processes. Bonneville's funding decisions embrace many of the management objectives and priorities in the NPCC's Program and continue to integrate ESA compliance as described in the NOAA Fisheries' and USFWS's FCRPS BiOps. Coordination continues among Bonneville, NPCC, Federal resource management agencies, states, tribes, and others to support the projects that satisfy Bonneville's mitigation responsibilities.

Fish & Wildlife Projects

($K)

FY 2022 Actuals	FY 2023 Estimate	FY 2024 Estimate
$16,119	$43,000	$41,335

Bonneville intends to continue implementing the types of capital projects listed below. These projects are based upon the best available science and are regionally important in that they provide high priority mitigation and protection actions for fish and wildlife populations affected by the construction and operation of the FCRPS dams. Projects and facilities listed below deliver direct, on-the-ground benefits to both ESA listed and non-listed fish and wildlife throughout the Columbia River Basin and have been evaluated and coordinated with the Council, state, Federal and tribal fish and wildlife resource managers, local governments, watershed and environmental groups, and other interested parties. Specifically, as capital construction projects, hatchery facilities typically go through the NPCC's three-step process, which includes development of a master plan, environmental compliance, ESA consultation, value-engineering analysis, and review by the ISRP.

The three types of fish and wildlife projects that Bonneville capitalizes are as follows:

1) Fish passage structures – Structures funded with capital that enhance fish access to habitat in the Columbia River Basin including but not limited to wells, ladders, screens, pumping, culverts, diversion (irrigation) consolidation, piping to reduce water loss, irrigation efficiencies (drip irrigation), lining of ditches (seepage reduction), removal of objects impeding fish passage or pushup dams, and construction-related habitat restoration.
2) Hatchery facility construction – Projects and activities relating to the construction, improvement, and replacement of fish hatcheries, including related satellite facilities (acclimation ponds and collection weirs). This may also include construction-related habitat restoration.
3) Land acquisition and stewardship – Land acquisition projects that protect, enhance, and maintain fish and wildlife habitat and provide credit to Bonneville, such as acres for wildlife or instream miles for resident fish, to fulfill the legal obligation of Bonneville to mitigate the impacts from construction and operation of the FCRPS.

New projects included in this budget include the following.

Colville Tribes Resident Fish Hatchery Expansion:

Constructed to produce 50,000 pounds of trout annually, this facility is unable to meet all its annual spring stocking goals for Buffalo, North Twin, South Twin, and Rufus Woods lakes as identified in the 2020 Fisheries Management Plan. To meet annual stocking goals for these four lakes, the hatchery began contracting with a commercial net pen operator in 2010 to rear a component of the hatchery's Rainbow Trout in net pens located in Lake Rufus Woods. Poor net pen water quality conditions have consistently contributed to annual mortality rates between 33-50 percent. The Confederated Tribes of the Colville Reservation is exploring the feasibility of expanding on-site hatchery rearing vessels to increase on-site production and reduce net pen rearing. The expansion would allow the hatchery to utilize clean, cool, pathogen-free water and intended to increase trout survival, helping meet stocking objectives identified in the management plan. In 2021, the Colville Tribe hired a licensed engineering firm to complete a conceptual design and construction cost estimates for a facility capable of producing 25,000 triploid rainbow trout at a maximum size of 2 pounds each. The documents produced will provide the Colville Tribes Fish and Wildlife Department with a plan and construction cost estimate that will assist in determining if the project should continue to the next phase. Design for the project has not begun and the expected start date is yet to be determined.

Chief Joseph Hatchery Water Quality Project:

The Chief Joseph Hatchery was a 2008 Accord commitment with the Confederated Tribes of the Colville Reservation; construction began in fiscal year 2010, with fish production starting in 2013. The Chief Joseph Hatchery operates to restore and enhance depleted runs of spring and summer/fall salmon Chinook salmon for release into the Columbia and Okanogan rivers. Current infrastructure/operational constraints are preventing the hatchery from achieving full production of 2.9 million Chinook smolts; Bonneville and Colville Tribal staff are developing a coordinated approach and plan to address water temperature and production issues at the hatchery. Design for the project has not begun and expected start date yet to be determined.

Umatilla Hatchery Facility:

The NPCC in 1990 recommended that Bonneville construct the Umatilla Hatchery, just east of the town of Irrigon, Oregon, to mitigate for the loss of salmon and steelhead habitat and migration blockage resulting from the CRS dams. Umatilla River anadromous fish had been largely extirpated in the early 1900s by irrigation dams, prior to construction of the CSR dams. Current hatchery production includes 810,000 spring Chinook, 600,000 fall Chinook, 500,000 coho, and 150,000 summer steelhead. Construction of the Umatilla Hatchery was completed in 1991 at a cost of $14 million. Bonneville funds the Oregon Department of Fish and Wildlife (ODFW) to operate the hatchery and the Confederated Tribes of the Umatilla Indian Reservation to operate acclimation facilities supporting the hatchery. The available water supply at the hatchery never met expected production levels, and water supply has continued to deteriorate over time. To preserve and improve fish production at the hatchery, Bonneville is exploring options to address the water supply issue and is in the early evaluation phase. It appears costs will exceed the statutory threshold of $2.5 million and have an estimated life of 15 years or more, thus triggering the need to obtain expenditure authority from Congress, prior to commencing construction, as required by 16 U.S.C. 839b(h)(10)(B), as amended by Section 307 of the FY 2012 Consolidated Appropriations Act, P.L. 112–74 125 STAT. 877. (Dec. 23, 2011). Congress originally authorized Bonneville expenditure authority for construction of the Umatilla Hatchery under P.L. 98-360, 98 STAT. 403, 415 (July 16, 1984).).

UmaBirch Conservation Easement Project:

Fish and wildlife mitigation and ecology restoration is proposed for the UmaBirch Conservation Easement. The easement includes 774 acres for fish and wildlife mitigation and ecological restoration. Bonneville is currently working with the Confederated Tribes of the Umatilla Reservation to design a stream and floodplain restoration in the area. The majority of the instream and floodplain improvements would occur at the confluence of the Umatilla River and Birch Creek (Project Area 2) to benefit multiple life stages of salmonids and lamprey. Actions likely would include added complexity for 1 mile of the Umatilla River and 0.3 miles of Birch Creek; removal of 1.3 miles of agricultural berms and removal of 0.3 miles of Corps levee; reconnection of tens of acres (exact acreage TBD) of floodplain rearing habitat; and the restoration of over 100 acres of riparian vegetation. The project would help implement the proposed action consulted upon in the 2020 BiOp and the project sponsor, the Confederated Tribes of the Umatilla Indian Reservation, has designated the project a high priority due to linkages with the Umatilla Habitat Program Objectives and Umatilla

River Vision. This project requires the environmental compliance process be complete, which may impact implementation timeframes; the project is currently expected to start construction in FY 2024.

New construction-related habitat restoration projects that require capital funds in FY 2023 include the following:

Svensen Island:

The Svensen Island Restoration Project would reconnect the 320-acre island, east of Astoria, Oregon, directly to the mainstream Columbia River to increase ecological function and provide refuge and rearing capacity for out-migrating juvenile salmon and steelhead. Specifically, the project would remove and lower approximately 1.5 miles of existing levee and remove approximately 100 pile dikes on the northern side of the island to provide unobstructed access to 40 acres of re-connected and newly excavated floodplain and tributary habitats for salmonids and lamprey. The Columbia Restoration Group is leading the project, in partnership with the Columbia Land Trust. This estuary project ranks high on the list of priorities in the estuary and will help to meet the proposed action consulted upon in the 2020 BiOp. This project requires the environmental compliance process be complete, which may impact implementation timeframes; the project is currently expected to start construction in FY 2023.

Catherine Creek/Hall Ranch:

This project is intended to improve off-channel rearing habitat complexity for Chinook, steelhead, and bull trout by restoring dynamic channel geomorphology and habitat-forming processes in Catherine Creek and Milk Creek. It would improve floodplain connectivity through removal and relocation of 1 mile of Washington State Route 203 and re-connecting 50 acres of the historic Catherine Creek floodplain and channel network. The Request is for a project-funding match of $3,294,616 from Bonneville against additional project investment from other Federal and state partners, for a total projected project cost of $5,994,616. This project has multiple coordination points and requires the environmental compliance process be complete, which may impact implementation timeframes; the project is currently expected to start construction in FY 2023.

The Further Consolidated Appropriations Act, 2019 (Public Law 116-94) provided expenditure authority for the following project:

Steigerwald Project:

The Steigerwald Floodplain Restoration Project is a collaborative project that will reconfigure the Port of Camas-Washougal's (Port's) existing Columbia River levee system to reduce flood risk, reconnect 960 acres of Columbia River floodplain, and increase ecological function at the Steigerwald Lake National Wildlife Refuge. Specifically, the project will construct 1.6 miles of setback levee, completely remove 2.2 miles of existing levee, provide unobstructed access to floodplain and tributary habitats for salmonids and lamprey, and greatly reduce flood risk to the Port's Industrial Park and City of Washougal's wastewater treatment plant, which serves 15,000 residents. Bonneville is working with the lower Columbia Estuary Partnership, which is leading the project. The project will provide seven survival benefit units (~15 percent of the Action Agencies' total goal in the estuary). Other partners include the Port, USFWS, Washington State Department of Transportation, City of Washougal, and several private landowners. Capital construction began in FY 2020 and will last three years.

The Consolidated Appropriations Act, 2016 (Public Law 114-113) provided expenditure authority for the following projects:

Shoshone Paiute Trout Hatchery:

The Shoshone Paiute Tribes of the Duck Valley Reservation, Idaho, have proposed that Bonneville fund the purchase or construction of a trout hatchery. The Tribes would own and operate the hatchery to produce trout to stock the Duck Valley Reservation reservoirs. The hatchery would meet contemporary aquaculture standards and achieve fish production goals. The Tribes believe they can reduce Federal reservoir stocking costs, some of which Bonneville currently pays on an annual basis. Design for the project has not begun and the expected start date is yet to be determined.

The FY 2014 Omnibus Appropriations Act (Public Law No. 113-76) provided expenditure authority for the following projects:

John Day Reprogramming and Construction:

The Columbia River Inter-Tribal Fish Commission (CRITFC) has proposed this project to balance the upriver and downriver salmon hatchery production mitigating for the effects of John Day and The Dalles dams within the Zone 6 area in the mainstream Columbia River, from the base of McNary Dam downstream to The Dalles Dam. The Tribes,

Corps, and Bonneville have proposed to site the project at Prosser Hatchery. Bonneville would fund the construction of four circular tanks utilizing water reuse systems and the Corps would take over the operations and maintenance for the new infrastructure, which accommodates the reprogramming of hatchery fish. The project began design in FY 2022.

Columbia River Basin White Sturgeon Hatchery:

This project, proposed by the CRITFC, would mitigate for the decline of the white sturgeon population caused by consistently poor recruitment upstream of Bonneville Dam. Bonneville would fund the construction of a new facility, or the acquisition of an existing facility, to produce 15,000-30,000 yearling white sturgeon per year. The final project may include the collection, holding and spawning of broodstock, the rearing of wild-spawned juveniles, and the acclimation of juveniles prior to release. The site of the Yakama Nation's existing Marion Drain Sturgeon Hatchery near Toppenish, Washington, has been proposed as a location. The project team is working on additional analyses to respond to Council comments and to begin the environmental review process. Design for the project has not begun and the expected start date has yet to be determined.

Kelt Reconditioning and Reproductive Success Evaluation Research:

CRITFC is proposing a facility to recondition female steelhead (kelts) after they have spawned. The fish will be held and fed until they have re-matured and then be released into the Snake River where they will contribute to the spawning run. The capital portion of the project is expected to be constructed in the Snake River Basin, at the Nez Perce Tribal Hatchery in Idaho. Pursuant to the 2008 FCRPS BiOp and Supplemental FCRPS BiOps issued in 2010 and 2014, and consistent with the proposed action consulted upon in the 2020 CRS BiOp, Bonneville will implement the kelt reconditioning plan to improve the productivity of Snake River basin B-run steelhead populations that are listed for protection under the ESA. NOAA's analysis of prospective actions indicates that a combination of transportation, kelt reconditioning, and in-stream passage improvements (e.g., spill-flow modifications) could increase kelt returns enough to achieve a targeted 6 percent increase in the number of returning Snake River B-run steelhead spawners to Lower Granite Dam. Construction is expected to start in FY 2023.

Ongoing projects (expenditure authority previously received):

Klickitat Production Expansion:

In 2008, the Klickitat River Master Plan was submitted by the Yakama Nation, reviewed by the ISRP, recommended with comments by the NPCC, and conditionally approved by Bonneville. The plan's original goals were to protect and increase naturally producing populations of spring Chinook and steelhead, localize brood collection of harvest stocks (fall Chinook and coho), while protecting the biological integrity and the genetic diversity of indigenous fish stocks in the sub-basin. A component of the master plan was implemented in 2009, including the completion of upgrades to Lyle Falls Fishway and Castile Falls Fishway, and the construction of a new bridge at the Klickitat Hatchery. In July 2009, a new Klickitat Hatchery Complex EIS was initiated to examine options for the development and operation of new production and supplementation facilities, acclimation alternatives, and additional upgrades to the existing hatchery facility. The Yakama Nation issued a revised master plan in July, 2012, that provided updates to its fish management plans. Bonneville suspended the NEPA process while the Yakama Nation refined its proposal in response to site and budgetary limitations and comments on the draft EIS.

Since that time, the National Marine Fisheries Service (NMFS) has completed its Mitchell Act EIS and BiOp, helping inform its funding responsibilities in the sub-basin. Bonneville negotiated a new scope of work with the Yakama Nation, and a revised Master Plan was submitted to the NPCC in 2017 and approved in 2018. The new scope of work targets design and construction activities for the expansion of the current spring Chinook program only, from 600,000 to 800,000 smolt, and converting to a wild broodstock collection program, as well as general water supply and water abatement upgrades. Construction will occur after Bonneville completes its environmental compliance and alongside a three-way operations and maintenance agreement which affirms that NMFS will remain responsible for providing funding post-construction. Project design was initiated in summer of 2021.

Mid-Columbia Coho Restoration:

This Yakama Accord project is intended to re-establish naturally reproducing coho salmon populations in the Wenatchee River and Methow River sub-basins at biologically sustainable levels that also provide significant harvests. This program will construct a facility on the Wenatchee River for holding and spawning broodstock, incubating eggs, and rearing juveniles. Additional semi-natural ponds will also be constructed in the Wenatchee and Methow sub-basins for acclimating smolts prior to their release. The phased approach, including associated facilities, incorporates

development of a mid-Columbia hatchery broodstock, local adaptation to tributaries in the Wenatchee and Methow Basins, and habitat restoration that will benefit coho as well as ESA-listed spring Chinook, steelhead, and bull trout.

Potential non-construction capital wildlife and resident fish habitat acquisitions (including conservation easements) eligible for capitalization are:

- Albeni Falls Wildlife Mitigation
- Willamette Wildlife Habitat Acquisitions
- Libby and Hungry Horse Reservoirs Resident Fish Acquisitions
- Southern Idaho Habitat Acquisitions

Power Services – Capital: Activities, Milestones and Explanation of Changes ($K)

FY 2023 Estimate	FY 2024 Estimate	Explanation of Changes FY 2024 vs FY 2023 Estimate
Power Services – Capital $324,260	**$311,335**	**$-12,925/-4.0%**
Associated Projects $281,260	**$270,000**	**$-11,260/-4.0%**
Milestones: Complete control room fire protection upgrades at Bonneville Dam. Complete emergency gantry crane replacement, SQ board replacement and trash rack crane replacement at John Day Dam. Complete fish unit breaker replacement and gate repair pit upgrades at The Dalles Dam. Complete spillway gate rehabilitation at Detroit, intake gantry crane at Dexter and Oil Water Separator at Foster. Complete powerhouse gantry crane rehabilitation at Libby Dam. Complete intake gantry crane rehabilitation at Chief Joseph Dam. Complete RO valve upgrade at Dworshak Dam. Complete tailrace gantry crane 4 replacement at McNary Dam. Complete intake gantry crane controls upgrade at Ice Harbor Dam. Complete powerhouse roof replacement at Little Goose Dam. Complete iso-phase bus and housing upgrade at Lower Granite Dam. Complete iso-phase bus upgrades at Lower Monumental Dam. Complete P1-P6 coaster gate replacement at Keys Pump Generating Plant.	Milestones: Complete emergency gantry crane rehabilitation at The Dalles Dam. Complete butterfly valves and spillway gates at Cougar Dam. Complete main unit transformers installation at Albeni Falls Dam. Complete DC boards and breakers system replacement at Libby Dam. Complete Unit 5 rotor frame and bracket repair at Little Goose Dam. Complete DC system and LV switchgear upgrade, trashrake crane and rake upgrade and main unit 2 blade sleeve upgrade and rehabilitation at Lower Granite Dam. Complete trash rake crane and rake upgrades at Lower Monumental Dam. Complete LPH/RPH bridge crane replacement and station service compressed air system replacement at Grand Coulee Dam. Complete hollow jet valve replacement at Palisades Dam. Complete station service turbine rehab at McNary. Complete DC boards and breakers system replacement at Libby. Complete system control console replacement at Libby.	The decrease reflects additional work efforts while continuing to align with Bonneville's strategic asset management plans.

FY 2023 Estimate	FY 2024 Estimate	Explanation of Changes FY 2024 vs FY 2023 Estimate
Complete SCADA replacement and main unit transformer fire protection system replacement at Hungry Horse Dam. Complete switchyard modernization at Palisades Dam. Complete switchyard rehabilitation and breaker upgrade at Roza Dam. Complete microwave system backbone modernization at Minidoka Dam.		
Fish & Wildlife $43,000	**$41,335**	**$-1,665/-3.9%**
Milestones: Continue implementation of the Program, BiOps and applicable Fish Accord extensions.	Milestones: Continue implementation of the Program, BiOps and applicable Fish Accord extensions.	Fish & Wildlife will continue long-term, planned effort to reshape funding necessary to implement the BiOps, applicable Fish Accord extensions, Columbia River Basin fish and wildlife activities.

Funding Schedule by Activity

Funding ($K)

Transmission Services - Capital	FY 2022 Actuals	FY 2023 Estimate	FY 2024 Estimate	FY 2024 vs FY 2023	
				$	%
Main Grid	$ 8,611	$ 6,219	$ 38,285	$ 32,066	515.6%
Area & Customer Services	$ 47,768	$ 71,520	$ 38,285	$ (33,235)	-46.5%
Upgrades & Additions	$ 81,931	$ 113,430	$ 151,074	$ 37,644	33.2%
System Replacements	$ 316,041	$ 305,991	$ 366,197	$ 60,206	19.7%
Projects Funded in Advance	$ 34,771	$ 61,166	$ 45,924	$ (15,242)	-24.9%
Environmental Capital	$ 7,978				
Total, Transmission Services - Capital	**$ 497,100**	**$ 558,327**	**$ 639,764**	**$ 81,437**	**14.6%**

Outyears ($K)

Transmission Services - Capital	FY 2024 Estimate	FY 2025 Estimate	FY 2026 Estimate	FY 2027 Estimate	FY 2028 Estimate
Main Grid	$ 38,285	$ 38,521	$ 40,318	$ 35,963	$ 27,669
Area & Customer Services	$ 38,285	$ 44,024	$ 39,625	$ 45,183	$ 51,657
Upgrades & Additions	$ 151,074	$ 146,503	$ 100,826	$ 54,415	$ 58,084
System Replacements	$ 366,197	$ 351,960	$ 375,128	$ 401,618	$ 408,621
Projects Funded in Advance	$ 45,924	$ 55,007	$ 53,073	$ 53,907	$ 54,751
Revenue Financing					
Total, Transmission Services - Capital	**$ 639,764**	**$ 636,016**	**$ 608,970**	**$ 591,087**	**$ 600,783**

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Transmission Services – Capital

Overview

Transmission Services is responsible for about 75 percent of the Pacific Northwest's high-voltage transmission. Transmission Services provides funding for all additions and upgrades ("expand" investments), and replacements ("sustain" investments) to the Bonneville transmission system, resulting in reliable service to Northwest generators and transmission customers. The Bonneville transmission system also facilitates the delivery of power under sales and exchange agreements to and from the Pacific Northwest Region. The Transmission Services Capital Program is structured with a balanced focus on expand and sustain investments.

In addition to replacing aging and obsolete equipment, Transmission Services continues to make significant infrastructure improvements and additions to the system to assure continued reliable transmission in the Northwest. These improvements and additions will help the Bonneville transmission system continue to comply with national reliability standards and remove constraints that limit economic trade or the ability to maintain the system. Some of the proposed Transmission Services projects may be funded through Bonneville lease-purchase agreements. The lease-purchases obligate Bonneville to make expenditures to acquire the use of the related facilities and are identified on an as-needed basis. Bonneville may also make related expenditures to facilitate lease-purchase opportunities.

Strategic Asset Management

Transmission Services' efforts are coordinated through Bonneville's Strategic Asset Management Plan (SAMP) development. Based on strategic goals, Transmission Services implements integrated, detailed asset plans to guide the following activities:

1. Improvements to system adequacy, reliability, and availability. These projects address multiple challenges, such as integration of renewable energy, the need to relieve a number of congested transmission paths, the challenge to keep up with growing energy demands, and the need to meet changing regulatory and customer requirements.
2. An open access policy in support of competitive markets for load and generation.
3. Replacement of aging assets, which is vital to the reliability of the existing transmission system. To that end, Transmission Services has developed specific long-term strategies for the following asset categories:
    a. Substations AC
    b. Power system control/system telecommunications
    c. Wood lines
    d. Steel lines
    e. Rights-of-way (ROW), (land rights, access roads, and vegetation management)
    f. System protection and control
    g. Control centers
    h. Non-electric facilities

The following external factors present the strongest impact to overall achievement of Transmission Services' strategic goals:

- Continually changing economic and institutional conditions
- Competitive dynamics
- Ongoing regulatory and technology changes in the electric industry
- Siting issues

The following text discusses "Expand" or expansion investments first, following by "Sustain" or replacement investments.

Expand Investments

Expand (or expansion) investments continue to make significant infrastructure improvements and additions to the Bonneville transmission system to assure reliable transmission operations in the Northwest and fall into two categories:

1. Internally driven expansion requests, which are derived from system engineering studies, technology innovation research, system operations and maintenance functions, and system event analysis.
2. Externally driven expansion Investment requests, which are derived from governmental initiatives and regulations, consumer demand, and the integration of customer load service and generation needs.

These investments are further categorized into:

1. **Main Grid** – System investments affecting the major interties or internal paths and flowgates that transfer bulk power across the system.
2. **Area & Customer Service** – System investments related to geographical load service areas.
3. **Upgrades & Additions** – Upgrades are system investments that replace existing assets to increase capacity, reliability, or functionality, while additions are net new assets added to the system.
4. **Projects Funded in Advance (PFIA)** – System investments that are requested, and funded in advance, by customers.

Congressionally-approved Production Tax Credits (PTC) for renewable energy were enacted in 2005, and were to phase out beginning in 2023. The Inflation Reduction Act (IRA), enacted by President Biden on August 16, 2022, substantially changes and expands existing Federal income tax benefits for renewable energy, including extending the Wind PTC through 2033. The incentives created by these credits, along with Renewable Portfolio Standards (RPS) mandates implemented by the states of Oregon, Washington, and California, have spurred a large number of renewable projects interconnection requests to the Bonneville transmission system grid. As of September 30, 2022, Bonneville had interconnected between 8,000 and 8,583 MW of renewable qualified generation projects. Bonneville has more than 60,000 MW in additional renewable (wind, solar, biomass, geothermal, etc.) interconnection requests still remaining in the study queue. Solar project interconnection requests are currently making up the majority of the new requests in Bonneville's queue. The current projections are possibly 11,000 MW of renewable generation projects interconnected by 2026. Much of the remaining generation project transmission demand is the result of the RPS and other legislation enacted by Oregon and Washington that require retail utilities to acquire more than 8,000 MW of renewable energy in the Northwest by 2025, some of which will connect to Bonneville. Exports of power from the Northwest to California are currently limited by California laws to 2,000-2,500 MW. If California chooses to allow more exports from the Northwest, the exports will be limited to about 6,000 MW by the ratings of the physical infrastructure between the Northwest and California. Bonneville could possibly expect another 1,000 to 2,000 MW to connect to our system in that event. Also in the Bonneville transmission interconnection request queue is approximately 2,500 MW of natural gas-fired generation. Efficiency improvements to the FCRPS hydro units that qualify as renewable are also proposed between 2023 and 2024.

In June 2008, Bonneville's first Network Open Season (NOS) received 153 requests from 28 customers for 6,410 MW of new service, about three-fourths for wind energy integration. Bonneville subsequently offered 1,782 MW of new transmission service on its existing system. Bonneville identified four new Main Grid capital projects from the 2008 NOS: (1) McNary-John Day 500 kV transmission line (part of West of McNary Reinforcements Group 1); (2) Big Eddy-Knight 500 kV transmission line and substation (part of West of McNary Reinforcements Group 2); (3) Central Ferry- Lower Monumental 500 kV Reinforcement (formerly Little Goose Area Reinforcement); and (4) I-5 Corridor 500 kV Reinforcement. Construction of the McNary-John Day 500 kV transmission line is complete and Bonneville has completed construction of the Big Eddy-Knight project and the Central Ferry-Lower Monumental 500 kV Reinforcement project. On May 18, 2017, Bonneville announced its decision to not build the I-5 Corridor Reinforcement Project. Bonneville continues to work with constituents and stakeholders to study more cost-effective options to mitigate the current limitations along this path. Public meetings began in July 2017 to address alternatives to building. An update to Bonneville's Available Transfer Capability (ATC) methodology increased the available transmission service on the Westside paths by a few hundred megawatts. Other alternatives, such as energy storage devices, are still being evaluated.

Bonneville's 2009, 2010, 2013, 2016, 2019, 2020, 2021 and 2022 study processes for new Transmission Service Requests (TSR) total 38,397 MW, including approximately 12,600 MW of wind project interconnection and 12,800 MW of solar project interconnection. The 2010 study process identified the Montana to Washington project, for which environmental review was begun, however, the original requests to support this project have been subsequently withdrawn and so all work on the project was terminated. Subsequent TSRs also require this project, and Bonneville is now undertaking preliminary engineering activities on it again to move wind generation in Montana to the Northwest. The 2016 and 2019 study processes re-identified the Montana-to-Washington and Garrison-to-Ashe projects to move new wind generation in Montana to the Northwest. Requests to support the Garrison-to-Ashe project have subsequently been withdrawn as that project was terminated.

The 2013 study process identified upgrades to the Monroe-Novelty Hill 230-kV transmission line which were re-identified for additional new requests in the 2016 study process. The 2016 study process identified network upgrades in Central

Oregon, Walla Walla, Washington, and across the Raver-Paul flowgate. The 2019 study process identified additional reinforcements across the Raver-Paul flowgate, the same Central Oregon and Walla Walla projects, and some significant impacts to third parties, specifically Portland General Electric and Puget Sound Energy. The 2020 study process identified an additional Schultz-Raver Series Capacitor project. The 2021 study process identified major reinforcements to transfer more power to the loads on the Olympic peninsula. The 2022 study identified massive upgrades in central Oregon and the southern Oregon coast, along with moderate reinforcements of both the Cross Cascades North and Cross Cascades South paths, as well as more modest upgrades of the Raver-Paul, South of Allston, and South of Knight paths. Efforts are currently underway to provide required studies capacity to requesting customers.

Sustain Investments

Sustain investments are made to maintain the health of the existing infrastructure to assure reliable transmission in the Pacific Northwest. These investments enable continued compliance with national reliability standards, replace aging and obsolete equipment, and remove constraints that limit economic trade or the ability to maintain the transmission system.

In 2009, Bonneville Transmission Services began implementing best practice frameworks that provide a standardized structure and approach to asset management. As a result, Transmission Services' asset management strategies, derived from the agency's strategic plan, drive Bonneville's asset plans, which determine its capital and expense investment priorities. Sustain investments are forecasted, prioritized within asset programs, and optimized across the asset base for asset planning and approval. Bonneville now bundles both sustain and expand capital projects in an effort to improve execution and to lower risks and costs. Transmission Services' capital program does remain somewhat fluid and subject to changes as the complexity of the transmission system produces unexpected needs resulting from equipment failure, climate/weather incidents, changes in performance and/or operation of connected systems, outage schedules and conflicts, updated regulations, customer interconnection requests, etc. For these and other reasons, specificity with sustain investments in the transmission system is somewhat limited.

Transmission Services' sustain program asset programs include:

1. Steel Lines – Transmission lines with steel structures including footings, insulators assemblies, vibration dampers, grounding systems, conductor, ground wire.
2. Wood Lines – Transmission lines with wood structures including cross arm systems, insulator assemblies, vibration dampers, grounding systems, conductor, ground wire.
3. Rights-of-Way – Real property including land parcels, easements, use right, access roads.
4. AC Substations – Substations managing AC current including transformers, reactors, shunt capacitors, power circuit breakers, circuit switchers, series capacitors, disconnect switches.
5. Power System Controls and System Telecommunications – Control and communication equipment including SCADA, transfer trips, fiber, communications, SONET, Telephone, RAS.
6. System Protection and Control – Control equipment including relays, control houses, meters.
7. DC Substations – Celilo DC converter station, static VAR compensators, DC control systems.
8. Control Centers – Various control equipment and software.
9. Tools and Equipment Acquisition Program (TEAP) –Tools, equipment, fleet.
10. Facilities – Non-electric facilities including warehouses, operational structures, hangar, and maintenance centers.

In 2019, Transmission Services began an effort to determine the "Criticality, Health and Risk" (CHR) of major assets within the system. While all assets have not been analyzed through this effort as of yet, most of the major substations and lines have been assessed. The resulting information (the CHR score) is used to prioritize work on the system for all sustain work. Expand work is also routed to the sustain asset managers to determine if there is any sustain work that should be bundled with the expand work based upon the CHR score. The bundling of expand and sustain work began in 2014 to increase efficiencies of the crews on site and minimize the overlap of projects on the same site.

Given the recent disasters in California involving transmission and distribution lines being identified as the root cause of many wildfires, Bonneville has begun assessing its transmission facilities for wildfire risks. This is an ongoing effort that began three years ago and continues to mature. During the dry hot summer periods Bonneville has proactively de-energized transmission lines to mitigate the risk of fire hazards to our customers and the region. Bonneville is continually looking to upgrade its forecasting and wildfire risk analysis tools and capabilities, as well as identify and implement other preventive steps to mitigate the risk of wildfires.

Notwithstanding that the capital program for Transmission Services is subject to change, Bonneville has identified several general areas where capital investments will occur.

Bonneville will continue to fund fiber optic communications facilities needed to meet Bonneville's projected operational needs. To the extent that these investments create temporary periods of excess fiber optic capacity, such fiber capacity can be made available to telecommunications providers and to non-profits to meet public benefit internet access needs for rural areas and other needs in Bonneville's service area. Bonneville's investments in fiber optics, including the role of the private sector in building fiber optic networks, is consistent with the "Fiber Optic Cable Plan" submitted to Congress on May 24, 2000, accompanying the FY 2000 Energy and Water Development Appropriations Act. In accordance with this plan, when possible, Bonneville will establish partnerships with fiber optic facility and service providers to meet its needs.

In December 2004, Congress passed and the President signed the Commercial Spectrum Enhancement Act (CSEA, Title II of P.L. 108-494), creating the Spectrum Relocation Fund (SRF) to streamline the relocation of Federal systems from certain spectrum bands to accommodate commercial use by facilitating reimbursement of relocation costs to affected agencies. The Federal Communications Commission (FCC) has auctioned licenses for reallocated Federal spectrum, which will facilitate the provision of Advanced Wireless Services (AWS) to consumers. Funds were made available to agencies in FY 2007 for relocation of communications systems operating on the affected spectrum. These funds are mandatory and will remain available until expended, and agencies will return to the SRF any amounts received in excess of actual relocation costs. The estimated Bonneville cost of this relocation was $48.7 million. The project was completed in November 2013 with a cost of approximately $40 million and the operational system performance was being observed during FY 2014 and early FY 2015 to determine that it has achieved comparable capability as defined under the CSEA. Bonneville determined in December 2014 that comparable capability had been achieved.

Bonneville began participating in a new spectrum relocation effort in FY 2015. The NTIA has approved and, in July 2014, web-posted Federal agency relocation plans, including the Bonneville relocation plan. The FCC held an auction of this spectrum on November 13, 2014. Bonneville received an additional $5.2 million from the SRF on July 29, 2015, to fully pay for this new relocation effort, including, as in the prior relocation, the purchase and installation of new digital radio equipment.

As part of the Homeland Security Presidential Directives, Bonneville has completed a physical security assessment of all critical facilities and is implementing security enhancements at these facilities. These security enhancements increase controlled access to Bonneville's facilities and provide video surveillance and monitoring capabilities.

Accomplishments

Transmission Services – Capital expenditures over the past fiscal year resulted in the following:

- Both BP-22 Draft ROD and Terms and Conditions (TC-22) were issued in June 2021 and the final ROD was issued in late July.
- Integrated 6524.66 MW of renewable energy through September 2022 on Bonneville's transmission system.
- Completed the addition of a 500 kV transformer for wind hubs at John Day and Central Ferry Subs.
- Completed the Bonneville-Hood River line upgrade.
- Completed the Lane-Wend -1: rebuild Lane to Walt section.
- Completed the Mone line relay replacement and re-termination of Bays 4 and 5 project.
- Completed the replacement of Raver Reactor Banks 3 and 4.
- Completed the security enhancements at BELL substation and maintenance yards
- Completed the addition of a new 230kV transformer, breaker and disconnects at Longview substation.
- Completed 5 Grid Mod projects, with 12 in construction, 1 in design, 2 Approved, 1 in draft and 11 in scoping and under development.
- Completed Morrow Flats UEC Phase 2 L0389.
- Completed Holcomb Naselle 1 line rebuild.
- Completed Ostrander and Malin substation security enhancements.
- Completed the PSANI project capital work in the Seattle area.
- Completed replacement of dilapidated control houses at Holcomb and Kerr. Richland, Warren and Wendson are under construction and Kitsap, Pendleton, Troy, Cosmopolis, and NaSelle will be the next group started.

- Completed the installation of new reactor at Fairview Substation
- Completed the installation of new transformers at Anaconda and Dixon and retired Silver Bow Substation. Sold Anaconda Substation and related facilities to Northwestern Energy.
- Added new 4th bay at Morrow Flats. New reactor to be installed in spring 2023 along with another reactor at Jones Canyon.
- Completed 230kV breaker replacement and addition at Tacoma Substation.
- Completed L0389 phase 2 for UEC new Industrial load.
- Completed four Grid Mod Metering installations through FY 2022. Anticipate completing six more by FY 2025.
- Completed Sonet Ring for Bell Boundary.
- Completed Holcomb Naselle Wood Line rebuild.
- Completed Avangrids Montague Solar and Wind interconnection.
- Completed addition of a single 500kV transformer at Slatt for wind projects.
- Began design of Big Eddy-Ostrander-1 2.5" steel conductor replacement.

Explanation of Changes

Bonneville's Budget includes $639.7 million in FY 2024 for Transmission Services capital needs, which is a 14.6 percent increase from the FY 2023 forecasted level. The FY 2024 Budget increases the levels for Main Grid ($32.0 million), Upgrades & Additions ($37.6 million), and System Replacements ($60.2 million), but decreases the levels for Area & Customer Services ($33.2 million) and PFIA ($15.2 million).

The following pages discuss budget specifics under the five Transmission Services subcategories noted above: Main Grid, Area & Customer Services, Upgrades & Additions, System Replacements, and Projects Funded in Advance.

Main Grid

Overview

Bonneville's strategic objectives for Main Grid projects are to assure compliance with the NERC and WECC reliability criteria, provide voltage support, provide a reliable transmission system for open access, and provide for relief of transmission system congestion. During this budgeting period, projects are planned that will provide transmission reinforcement and voltage support to major load areas that are primarily west of the Cascade Mountains.

Main Grid
($K)

FY 2022 Actuals	FY 2023 Estimate	FY 2024 Estimate
$8,611	$ 6,219	$38,285

Continued investments in Main Grid assets include the following projects. Some of these projects require that the environmental compliance process be complete, which may impact implementation timeframes.

Schultz-Wautoma 500KV Series Capacitors:

- FY 2022. Begin construction.
- FY 2023. Continue construction.
- FY 2024. Complete construction.

Montana-Washington:

- FY 2022. Begin design of TSEP Montana to Washington Project.
- FY 2023. Complete design, begin construction.
- FY 2024. Continue construction.

Continue Planning Studies *(all years):*

- Identify infrastructure additions.
- Identify projects driven by NERC and WECC reliability criteria.
- Identify system reactive needs to mitigate unacceptable low or high voltage problems and other system additions.
- Relieve transmission system congestion and integrate new generation facilities.

Area & Customer Service

Overview

Bonneville's strategic objective for Area and Customer Service projects is to assure that Bonneville meets reliability standards and contractual obligations to its load service areas.

Area & Customer Service
($K)

FY 2022 Actuals	FY 2023 Estimate	FY 2024 Estimate
$47,768	$71,520	$38,285

Continued investments in Area & Customer Service assets include the following projects. Some of these projects require that the environmental compliance process be complete, which may impact implementation timeframes.

Midway Grandview Line Upgrade:

- FY 2022. Project is complete.
- FY 2023. No planned capital projects.
- FY 2024. No planned capital projects.

Whistling Ridge 230kV Ring Buss Substation:

- FY 2023 Begin Scoping
- FY 2024 Begin Design

Big Eddy Breaker Additions

- FY 2022. No planned capital projects.
- FY 2023. No planned capital projects.
- FY 2024 No planned capital projects.

Midway –Ashe Double Circuit 230kV Line:

- FY 2022. Finalize design and begin construction.
- FY 2023. Continue construction.
- FY 2024. Continue construction.

Carlton Substation Upgrade:

- FY 2022. Begin construction.
- FY 2023. Complete construction.
- FY 2024. No planned capital projects.

Conkelley Substation Retirement:

- FY 2022. Begin construction.
- FY 2023. Continue construction.
- FY 2024. Continue construction.

South Tri-Cities Reinforcement:

- FY 2022. Begin design.
- FY 2023. Begin construction.
- FY 2024. Continue construction.

LaPine Substation Upgrade TSEP – 2016:

- FY 2022. Begin design.
- FY 2023. Begin construction.
- FY 2024. Continue construction.

Longview Transformer Addition:

- FY 2022. Continue construction.

- FY 2023. Complete construction.
- FY2024. No new capital projects planned.

Continuous Activities (*all years*):

- Continue preliminary engineering and design for miscellaneous facilities required to meet contractual obligations and maintain reliable service for Bonneville's service area.

Upgrades & Additions

Overview

Bonneville's strategic objectives for Upgrades & Additions are to replace older 60 Hertz (Hz) communications and controls with newer technology, including fiber optics, to maintain or enhance the capabilities of the transmission system, to implement special remedial action control schemes to accommodate new generation and mitigate immediate operational and market-constrained paths, and to support communications and remedial action schemes, among other proposals.

Upgrades & Additions
($K)

FY 2022 Actuals	FY 2023 Estimate	FY 2024 Estimate
$81,931	$113,430	$151,074

During this Budget period, Bonneville will complete design, material acquisition, construction, and activation of several fiber optics facilities to provide bandwidth capacity and high-speed data transfers to eventually replace microwave analog radios, which are technologically obsolete and nearing the end of their useful life. Temporarily, in some areas, excess fiber capacity is being offered for a term to telecommunications providers or to public entities such as public utilities, schools, libraries, and hospitals, providing them access to high-speed telecommunication services as a public benefit.

Continued investments in Upgrades & Additions assets include the following projects. Some of these projects require that the environmental compliance process be complete, which may impact implementation timeframes.

VHF Radio System Upgrade:

- FY 2021. Complete construction.
- FY 2022. No planned capital projects.
- FY 2023. No planned capital projects.
- FY 2024. No planned capital projects.

Vancouver Control Center (VCC):

- FY 2022. Complete design.
- FY 2023. Begin demolition of North Ampere building.
- FY 2024. Begin construction of VCC building.

500 kV Spares at Wind Integration Substations:

- FY 2022. Continue construction
- FY 2023. Continue construction.
- FY 2024. Complete construction.

Ross Station Service Upgrade:

- FY 2022: Finish design.
- FY 2023: Begin and complete construction

Continuous Activities (*all years*):

- Upgrading two miles of fiber between Bonneville Power House and Bonneville Control House.
- Planning, design, material acquisition, and construction of special remedial action control schemes required for interconnecting new generation projects and mitigating immediate constrained paths.
- Planning, design, material acquisition, and construction of various system additions and upgrades necessary to maintain a reliable system for Bonneville's service area.
- Construction of secondary fiber related projects and digital radio system upgrades to improve the operational telecommunication system.
- Material procurement and construction to upgrade the main fiber optic backbone system (#KC and #NC systems).

System Replacements

Overview

Bonneville's strategic objectives for the Sustain Program are to replace high-risk, obsolete, and maintenance-intensive facilities and equipment and to reduce the chance of equipment failure by: (1) replacing high voltage transformers and power circuit breakers which are at or near the end of their useful life; (2) replacing risky, outdated and obsolete control and communications equipment and systems, including mandated replacements due to legislation; and (3) replacing all other existing high-risk equipment and facilities affecting the safety and reliability of the transmission system. Transmission Services uses a total economic cost model to determine priorities for replacement.

System Replacements
($K)

FY 2022 Actuals	FY 2023 Estimate	FY 2024 Estimate
$316,041	$305,991	$366,197

Continued investments in System Replacements assets include the following.

Non-Electric Replacements:

- Continue non-electric replacements as necessary.
- Continue the design, material acquisition, and construction for the access road program capital component and the Land Rights program capital component in support of the Lines and ROW Programs.
- Continue design and construction of capital improvements for identified existing facilities.
- Continue replacement of tools, equipment, and vehicle fleet.
- Replaced a Bonneville fixed-wing aircraft with a new helicopter in April, 2022 utilizing General Services Administration (GSA) exchange sale authority.
- Replace four helicopters with four new helicopters utilizing GSA exchange sale authority in FY 2023.
- Replace a fixed-wing aircraft with a new fixed-wing aircraft utilizing GSA exchange sale authority in FY 2024, with procurement starting in FY 2023.

Electric Replacements:

- Continue replacement of system protection and control equipment and other substation and line facilities as needed to maintain reliability using reliability centered maintenance criteria. Such replacements include relays, annunciators, oscillographs, metering, and various types of communication related equipment replacing and migrating analog to digital technology and SCADA equipment.
- Begin replacement of Big Eddy-Ostrander-1 2.5" steel in FY 2023.
- Continue replacement of under-rated and high maintenance substation equipment.
- Continue replacing insulators and refurbishing foundations on 500 kV Lines.
- Continue replacement of older generations of digital equipment that is obsolete.
- Continue replacing critical, operational tools and business systems at the Dittmer and Munro Control Centers.
- Continue replacing deteriorating wood pole transmission line structures, spacer dampers, and insulators.

Projects Funded in Advance

Overview

The PFIA subcategory includes those facilities and/or equipment where Bonneville retains control or ownership but which are funded or financed by a third party, revenue, or with reserves, either in total or in part.

Projects Funded in Advance
($K)

FY 2022 Actuals	FY 2023 Estimate	FY 2024 Estimate
$ 34,771	$61,166	$45,924

Continued investments in PFIA assets include the following projects. Some of these projects require that the environmental compliance process be complete, which may impact implementation timeframes.

Umatilla Electrical Cooperative - Phase 2:

- FY 2022. No planned capital projects.
- FY 2023. No planned capital projects.
- FY 2024. No planned capital projects.

Bakeoven Wind Project:

- FY 2022. Begin project construction.
- FY 2023. Continue construction.
- FY 2024. Continue construction.

Quenett Creek Load Service Project:

- FY 2022. Start design.
- FY 2023. Begin construction.
- FY 2024. Continue construction at Big Eddy.

PacifiCorps' Ponderosa Project Vitesse:

- FY 2022. No planned capital projects.
- FY 2023. Project completion.
- FY 2024. No planned capital projects.

Midway-Ashe Line Project:

- FY 2022. In design.
- FY 2023. Begin construction.
- FY 2024. Continue construction.

Avangrid Montague 1 Wind Project:

- FY 2022. Complete construction.
- FY 2023. No planned capital projects.
- FY 2024. No planned capital projects.

Morrow Solar Project:

- FY 2022. Project deferred for one year.
- FY 2023. Begin design.
- FY 2024. Begin construction.

NextEra's Ella Butte Wind Project:

- FY 2022. No planned capital projects.
- FY 2023. Begin design.
- FY 2024. Begin construction.

Morrow Flat 230kV Shunt Reactor:

- FY 2022. Begin design.
- FY 2023. Start construction.
- FY 2024. Complete construction.

Jones Canyon 230kV Shunt Reactor:

- FY 2022. Begin design.
- FY 2023. Begin construction.
- FY 2024. Complete construction.

Spar Canyon 230kV Reactor Addition:

- FY 2022. Begin design.
- FY 2023. Begin construction.
- FY 2024. Complete construction.

Whistling Ridge 230 kV Ring Bus Project:

- FY 2022. No planned capital projects.
- FY 2023. Begin Scoping and design.
- FY 2024. Complete design and begin construction.

Badger Canyon 1:

- FY 2022. Begin design.
- FY 2023. Begin construction.
- FY 2024. Continue construction.

Badger Canyon 2:

- FY 2022. Begin design.
- FY 2023. Complete design and begin construction.
- FY 2024. Continue construction.

Invenergy Crider Valley Wind:

- FY 2022. Begin design.
- FY 2023. Begin construction.
- FY 2024. Continue construction.

Boyd Ridge Substation:

- FY 2022. Not started due to shortage of TE staff.
- FY 2023. Begin design.
- FY 2024. Complete design and begin construction.

McNary 230KV section bay addition:

- FY 2022. Begin design.
- FY 2023. Complete design and start construction.
- FY 2024. Continue construction.

Continuous Activity (*all years*):

- Continue to integrate various new generation and line/load projects into Bonneville transmission grid based on requests placed and processed in accordance with transmission tariff.
- Continue planning studies to identify system impacts and needs regarding proposed new generation projects.
- Engineer and begin construction of several large wind generation interconnection substations.

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Transmission Services – Capital: Activities, Milestones and Explanation of Changes ($K)

FY 2023 Estimate	FY 2024 Estimate	Explanation of Changes FY 2024 vs FY 2023 Estimate
Transmission Services – Capital $558,327	**$639,764**	**$81,437/14.6%**
Main Grid $6,219 Milestones: • Continue construction of Schultz-Wautoma 500KV series capacitors. • Begin design of TSEP Montana-to-Washington Project.	**$38,285** Milestones: • Complete construction of Schultz-Wautoma 500kv series capacitors. • Complete design and begin construction TSEP Montana-to-Washington Project.	$**32,066/515.6%** The increase reflects additional funding needs for investment in the transmission system assets.
Area & Customer Service $71,520 Milestones: Finalize design and begin construction of Midway-Ashe double circuit 230kV line. Complete construction of Carlton Substation Upgrade. Begin construction of Conkelly Substation retirement. Begin design of south Tri-Cities reinforcement. Continue construction of Longview transformer addition.	**$38,285** Milestones: Continue construction of Midway-Ashe double circuit 230kV line. Begin construction of south Tri-Cities reinforcement.	**$-33,235/-46.5%** The decrease in the costs reflects a reshaping of funding needs for investment in the transmission system assets.
Upgrades & Additions $113,430 Milestones: Complete design and complete demolition of North Ampere building. Complete construction of 500kV Spares at wind integration substations. Finish design and start construction of Ross Station Service upgrade.	**$151,074** Milestones: Continue construction of Vancouver Control Center. Complete construction of Ross Station service upgrade.	**$37,644/33.2%** The increase reflects additional funding needs for investment in the transmission system assets.
Systems Replacements $305,991	**$366,197**	**$60,206/19.7%**

Transmission Services – Capital: Activities, Milestones and Explanation of Changes ($K)

FY 2023 Estimate	FY 2024 Estimate	Explanation of Changes FY 2024 vs FY 2023 Estimate
Milestones: Replaced a Bonneville fixed-wing aircraft with a new helicopter in April, 2022 utilizing GSA exchange sale authority. Continue non-electric replacements as necessary. Continue the design, material acquisition, and construction for the access road program capital component and the land rights program capital component in support of the lines and ROW programs. Continue design and construction of capital improvements for identified existing facilities. Continue replacement of tools, equipment, and vehicle fleet. Continue replacement of system protection and control equipment and other substation and line facilities as needed to maintain reliability using reliability centered maintenance criteria. Such replacements include relays, annunciators, oscillographs, metering, and various types of communication related equipment replacing and migrating analog to digital technology and SCADA equipment. Replace four helicopters with four new helicopters utilizing GSA exchange sale authority in FY 2023.	Milestones: Continue replacement of under-rated and high maintenance substation equipment. Continue replacing insulators and refurbishing foundations on 500 kV Lines. Continue replacement of older generations of digital equipment that is obsolete. Replace a fixed wing aircraft with a new fixed wing aircraft utilizing GSA exchange sale authority in FY 2024, with procurement starting in FY 2023. Continue replacing critical, operational tools and business systems at the Dittmer and Munro Control Centers. Continue replacing deteriorating wood pole transmission line structures, spacer dampers, and insulators.	The increase reflects additional funding needs for investment in the transmission system assets.
Projects Funded in Advanced $61,166	**$45,924**	**$-15,242/-24.9%**

Transmission Services – Capital: Activities, Milestones and Explanation of Changes ($K)

FY 2023 Estimate	FY 2024 Estimate	Explanation of Changes FY 2024 vs FY 2023 Estimate
Milestone: Start design of Quenett Creek/Big Eddy load service project. Begin construction of Midway-Ashe line project. Scoping and begin design of Morrow solar project. Begin design of Badger Canyon 1 project. No progress in customer negotiation on Crider Valley wind project. Begin scoping of Boyd Ridge Substation.	Milestones: Begin construction of Quenett Creek/Big Eddyload service project. Still in construction of Midway-Ashe line project. Still in design of Morrow solar project. Begin construction of Badger Canyon 1 project. Begin scoping and design of Invenergy Crider Valley wind project. Continue scoping and design of Boyd Ridge Substation.	The decrease in the costs reflects a reshaping of funding needs for investment in the transmission system assets.

Funding Schedule by Activity

Funding ($K)

Capital Information Technology (IT) & Equipment	FY 2022 Actuals	FY 2023 Estimate	FY 2024 Estimate	FY 2024 vs FY 2023 $	FY 2024 vs FY 2023 %
Capital IT & Equipment	$ 16,030	$ 21,047	$ 23,983	$ 2,936	14.0%
Total, Capital IT & Equipment	**$ 16,030**	**$ 21,047**	**$ 23,983**	**$ 2,936**	**14.0%**

Outyears ($K)

Capital Information Technology (IT) & Equipment	FY 2024 Estimate	FY 2025 Estimate	FY 2026 Estimate	FY 2027 Estimate	FY 2028 Estimate
Capital IT & Equipment	$ 23,983	$ 22,830	$ 24,990	$ 23,180	$ 23,970
Total, Capital IT & Equipment	**$ 23,983**	**$ 22,830**	**$ 24,990**	**$ 23,180**	**$ 23,970**

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Capital Information Technology & Equipment

Overview

Capital Information Technology (IT) & Equipment provides for the acquisition of general and some dedicated special purpose capital information technologies, and acquisition of special-use capital and IT equipment in support of Bonneville's strategic objectives. This category also includes Bonneville's on-going efforts to facilitate delivery of a highly resilient organization able to anticipate, withstand, and effectively respond to disruptive events affecting it and its partners in the Northwest region. The four main areas of resiliency focus continue to include asset management, emergency management, crisis management, and continuity of operations.

Capital Information Technology & Equipment
($K)

FY 2022 Actuals	FY 2023 Estimate	FY 2024 Estimate
$16,030	$21,047	$23,983

Bonneville continues to move its IT infrastructure to a more efficient architecture. This FY 2024 Budget supports this effort. IT continues to eliminate redundancies in tools and applications, establish an agency-wide IT enterprise architecture supported by standardized technical architecture, with standardization for IT purchasing criteria, software licensing processes with minimal agency liabilities through stronger contracts, continuous improvement practices for IT project management, and an agency IT portfolio cost management strategy. Other planned investments include acquisition of capital office furniture and equipment, capital automated data processing (ADP)-based administrative telecommunications equipment, ADP equipment (hardware), and support of capital software development for certain Bonneville programs.

The IT estimates in this FY 2024 Budget under Capital IT & Equipment include all IT functions within the agency except Transmission Services grid operations.

Continued investments in Capital IT & Equipment assets include the following.

Continuous Activity (*all years*):

- Capital system developments in support of
  - Corporate IT projects
  - IT Infrastructure projects
  - Power IT projects
  - Transmission Services IT projects (excluding grid operations)

Capital Information Technology & Equipment:
Activities, Milestones and Explanation of Changes ($K)

FY 2023 Estimate	FY 2024 Estimate	Explanation of Changes FY 2024 vs FY 2023 Estimate
Capital Information Technology & Equipment $21,047	**$23,983**	**$2,936/14.0%**
Capital Information Technology & Equipment $21,047	**$23,983**	**$2,936/14.0%**
Milestones: Capital system developments in support of: Corporate IT projects IT Infrastructure projects Power IT projects Transmission Services IT projects	Milestones: Capital system developments in support of: Corporate IT projects IT Infrastructure projects Power IT projects Transmission Services IT projects	The increase reflects additional funding needs for investment in IT system assets.

Funding Schedule by Activity

Funding ($K)

Power Services - Operating Expenses	FY 2022 Actuals	FY 2023 Estimate	FY 2024 Estimate	FY 2024 vs FY 2023 $	FY 2024 vs FY 2023 %
Production	$ 1,144,542	$ 919,422	$ 947,516	$ 28,095	3.1%
Associated Projects	$ 448,841	$ 462,020	$ 473,769	$ 11,749	2.5%
Fish & Wildlife	$ 234,971	$ 246,581	$ 268,620	$ 22,039	8.9%
Residential Exchange Program	$ 267,115	$ 266,696	$ 266,663	$ (33)	0.0%
Northwest Power & Conservation Council	$ 11,942	$ 12,431	$ 11,942	$ (489)	-3.9%
Energy Efficiency & Renewable Resources	$ 121,661	$ 150,734	$ 151,233	$ 500	0.3%
Total, Power Services - Operating Expenses	**$ 2,229,071**	**$ 2,057,883**	**$ 2,119,743**	**$ 61,861**	**3.0%**

Outyears ($K)

Power Services - Operating Expenses	FY 2024 Estimate	FY 2025 Estimate	FY 2026 Estimate	FY 2027 Estimate	FY 2028 Estimate
Production	$ 947,516	$ 1,014,401	$ 1,039,714	$ 1,064,847	$ 1,091,062
Associated Projects	$ 473,769	$ 486,375	$ 498,097	$ 509,770	$ 521,394
Fish & Wildlife	$ 268,620	$ 268,250	$ 274,922	$ 281,565	$ 288,177
Residential Exchange Program	$ 266,663	$ 266,696	$ 273,123	$ 279,524	$ 285,898
Northwest Power & Conservation Council	$ 11,942	$ 11,942	$ 12,230	$ 12,516	$ 12,802
Energy Efficiency & Renewable Resources	$ 151,233	$ 152,096	$ 155,761	$ 159,411	$ 163,047
Total, Power Services - Operating Expenses	**$ 2,119,743**	**$ 2,199,759**	**$ 2,253,847**	**$ 2,307,633**	**$ 2,362,379**

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Power Services – Operating Expense

Overview

This Budget category contains six subcategories. The **Production** subcategory includes certain Bonneville non-Federal amortization (including Energy Northwest amortization), O&M costs for Federal base power system generation resources (including CGS, business operations, and short- and long-term power purchases[1]), acquisition of conservation, marketing of power, and oversight of the FCRPS hydroelectric projects and CGS. Bonneville develops power products and services to meet the needs of Bonneville's wholesale customers and acquires power as needed.

In FY 2018, Bonneville completed a long-term resource program, with the purpose of assessing Bonneville's future need for power and reserves and to develop an acquisition strategy to meet those projected needs. In the event that Bonneville does acquire output from a generating resource on a long-term basis, Bonneville will comply with Section 6 of the Northwest Power Act and will modify its budget to reflect the acquisition.

The **Associated Projects** subcategory contains funding for O&M costs for the FCRPS hydroelectric projects, minor additions, improvements and replacements, and costs of Corps and Reclamation hydroelectric projects in the Pacific Northwest, which serve many purposes. All agencies emphasize efficient power production from existing facilities and improvement of the performance and availability of power generating units. Bonneville pays additional financing costs of the FCRPS facilities through its interest expense and capital transfer budget programs. Bonneville also provides direct funding to the USFWS for the operations and maintenance costs that are part of the USFWS's Lower Snake River Compensation Plan (LSRCP) hatcheries. Bonneville is responsible for annual payments to the Confederated Tribes of the Colville Reservation for their contribution to the production of hydropower by the Grand Coulee Dam in accordance with the Settlement Agreement between the United States and the Colville Tribes (April 1994). Additionally, the Spokane Tribe of Indians of the Spokane Reservation Equitable Compensation Act (Public Law 116-100), enacted on December 20, 2019, provides for equitable compensation to the Spokane Tribe of Indians of the Spokane Reservation for the use of tribal land for the production of hydropower by the Grand Coulee Dam, and for other purposes. The Act provides Bonneville and Northwest electric ratepayers cost certainty on this issue as we move toward discussions of long-term power sales contracts with our utility customers. Bonneville expenditures under the settlement that began in FY 2021 are estimated at $6 million annually.

Bonneville's **Fish & Wildlife Program** provides for extensive protection, mitigation, and enhancement of Columbia River Basin fish and wildlife adversely affected by the development and operation of the FCRPS. Bonneville satisfies its fish and wildlife responsibilities by funding projects and activities designed to be consistent with the NPCC's Program under the Northwest Power Act. Consistent with the NPCC's Program, Bonneville also implements measures to aid in the protection of fish and wildlife in the Columbia River and its tributaries, under the ESA (see ESA discussion in the Power Services – Capital Overview section).

Bonneville's mitigation expenditures will focus on activities that benefit Columbia River Basin fish and wildlife resources, following priorities established through ESA consultations, agreements with resource managers, and the NPCC's Program, including actions that:

- Increase survival of ESA-listed and non-listed fish at FCRPS dams and reservoirs;
- Increase survival of ESA-listed and non-listed fish throughout their life cycle by protecting and enhancing important habitat areas;
- Protect and enhance important wildlife habitat;
- Use hatcheries to contribute to conservation and recovery of ESA-listed and non-listed fish;
- Provide offsite mitigation projects and habitat, passage, and other improvements that address factors limiting improvements of target species; and
- Support a focused and well-coordinated research, monitoring, and evaluation program.

[1] Including expenses associated with the use of power financial instruments to hedge Bonneville's exposure to market price risk and certain index sales contract provisions as permitted by Bonneville's internal power transacting risk management guidance.

The **Residential Exchange Program (REP)** was created by Section 5(c) of the Northwest Power Act to extend the benefits of low-cost Federal power to the residential and small farm loads of Pacific Northwest retail electric utilities that have high average system costs. These benefits are passed directly to the consumers. Currently, the region's six investor-owned utilities (IOUs) and two of the region's consumer-owned utilities are actively participating in the REP. Payments under the REP are made to individual investor-owned utilities (IOUs) based on the difference between Bonneville's utility-specific Priority Firm (PF) Exchange rates and each utility's average system cost (ASC), times a utility's residential and small farm loads. ASCs are determined in accordance with Bonneville's 2008 Average System Cost Methodology (ASCM). Participating retail utility ASCs are established in a public process that occurs prior to and during Bonneville's power rate cases. Bonneville's utility-specific PF Exchange rates are determined each rate period. As described below, Bonneville and regional parties reached a settlement of the REP in 2011 under which the total amount of REP benefits available to the IOUs was established through 2028. Payments to the IOUs are made monthly based on historical invoiced exchange loads and the terms of the settlement.

Over the past decade, and prior to the settlement, regional parties filed multiple lawsuits challenging Bonneville's implementation of the REP. These lawsuits were consolidated into four cases that were stayed before the U.S. Court of Appeals for the Ninth Circuit. On July 26, 2011, Bonneville adopted a regionally supported settlement, referred to as the 2012 REP Settlement. Under the settlement, the region's six IOUs will receive about $4.1 billion in REP payments over the 17-year term of the settlement, beginning at $182.1 million in FY 2012, and increasing to $286.1 million in FY 2028. In addition to this settlement, Bonneville has reached related REP settlements with two consumer-owned utilities. A single challenge to the 2012 REP Settlement was dismissed by the U.S. Court of Appeals for the Ninth Circuit in October of 2013.

The **Northwest Power and Conservation Council** (NPCC) budget subcategory provides continued support of NPCC activities, as directed under the Northwest Power Act. The Energy and Water Development Appropriations Act of 1996 added Section 4(h)(10)(D) to the Northwest Power Act, directing the NPCC to appoint the Independent Scientific Review Panel (ISRP) "to review a sufficient number of projects" proposed to be funded through Bonneville's annual fish and wildlife budget "to adequately ensure that the list of prioritized projects recommended is consistent with the Program." The Northwest Power Act further states that "in making its recommendations to Bonneville, the NPCC shall consider the impact of ocean conditions on fish and wildlife populations and shall determine whether the projects employ cost effective measures to achieve program objectives." Today, most mitigation projects funded by Bonneville receive ISRP review as part of the NPCC recommendation process. The NPCC has shifted to a multi-year project review cycle during which the ISRP reviews categories of projects grouped together.

The NPCC's major activities include the periodic preparation of a Northwest Conservation and Electric Power Plan (a 20-year electric energy demand and resources forecast and conservation program – known as the Power Plan) and the Fish and Wildlife Program. The Northwest Power Act directs Bonneville's funding of the NPCC, subject to certain limits based on forecasted Bonneville power sales, be included in Bonneville's annual budget to Congress. The cost of funding the Council is recovered through Bonneville's power rates.

Under the **Energy Efficiency & Renewable Resources** subcategory, Bonneville's Energy Efficiency program promotes the efficient use of energy in the loads of customers and supports Bonneville's acquisition of conservation as the region's lowest cost resource. Such actions will: 1) meet energy efficiency targets; 2) achieve a least cost resource mix; 3) lessen the cost impacts of power purchases; 4) avoid the costs of ramping programs and infrastructure up and down; 5) extend the value of the FCRPS to customers; and 6) build the region's resource portfolio with energy efficiency.

Bonneville's Energy Efficiency program offers several ways for customer utilities to participate in energy conservation. Program components include:

1. Standard offer efficiency measures and custom projects, which result in customer proposals to conserve energy through such programs as residential weatherization; commercial lighting; heating, ventilation, and air conditioning (HVAC); industrial processes and lighting; and irrigated agriculture.
2. Third-party delivery programs, such as Comfort Ready Home, Energy Smart Industrial, and the Green Motors programs.
3. Programs to help regional Federal installations reduce energy use, including Federal hatcheries and irrigation districts, and to support the Corps and Reclamation in their efforts to reduce energy use.
4. Efficiency achieved independently through the market or through codes and standards, e.g., Momentum Savings.
5. Market transformation through the Northwest Energy Efficiency Alliance (NEEA).

6. Exploring integration of demand-side management, distributed generation and other leading-edge technologies which help manage peak loads.

Bonneville also acquires conservation energy savings from its firm power customers under long-term Energy Conservation Agreements, and provides research, evaluation, contract support, NEEA support, and emerging technology development. Additionally, customers perform self-funded conservation.

Explanation of Changes

Bonneville's Budget includes $2,119.7 million in FY 2024 for Power Services operating expenses, which is an increase of 3 percent over the FY 2023 forecasted level.

The FY 2024 Budget decreases the level for the Residential Exchange ($0.33 million), NPCC ($0.49 million), but increases the level for Production ($28.1 million), Associated Projects costs ($11.7 million), Fish & Wildlife ($22.0 million), and Energy Efficiency & Renewable Resources ($0.50 million).

The following pages discuss budget specifics under each of the six Power Services subcategories.

Production

Overview

Under the Production subcategory are three budget areas.

Production
($K)

FY 2022 Actuals	FY 2023 Estimate	FY 2024 Estimate
$1,144,542	$919,422	$947,516

Power Purchases includes power purchased to cover power supply obligations as well as balancing loads with generation from the hydro system. These power purchases can be made in the form of long-term purchases to meet Bonneville's contract obligations to its utility and other customers based on long-term planning requirements or they can be made within the year due to the monthly shape of the customers' loads and the monthly shape of the hydroelectric generation. Also, power purchases can be made within the month and within the day to fill temporary shortages due to fluctuations in the hydro system capability and in Bonneville's load.

Power Scheduling/Marketing relates to the scheduling and marketing (buy/sell) of electric energy with Bonneville's customers and the Pacific Northwest's interconnected utilities. Scheduling includes Power Services' implementation of physical and memo power schedules and associated transmission schedules, implementation of Electronic Tagging (ETag) in accordance with NERC and FERC, and implementation of electronic scheduling.

The third budget area is the **Columbia Generating Station (CGS).** Bonneville includes the project capability of CGS, a non-federal nuclear power plant, in the marketing of Federal power to meet Bonneville's long term firm power supply obligations. CGS is on a 24-month fuel and outage cycle. A maintenance and refueling outage occurred in the fall of 2021.

Operating expenses in Production include the following.

Continuous Activity (*all years*):

- Provide oversight of all power supply contracts and related projects from which Bonneville acquires generation capability to ensure that all Bonneville approval rights are protected; coordinate, communicate, and administer agreements, issues, and programs between Bonneville and the project owners.
- Provide wind resource integration services for wind generation.
- Power purchases.
- Power scheduling/marketing.
- Provide oversight of all contracts signed to date. Pursue cost-effective means to mitigate capacity demands associated with interconnecting large amounts of wind into the Bonneville system.
- Pursue acquisition of additional cost-effective generation to meet load growth.
- Provide oversight on the wind resource integration services currently purchased by public power customers and offer additional renewable resource shaping services to such customers using wind generation to serve their load.

Associated Projects

Overview

Under Associated Projects, funds are budgeted to support FCRPS project costs and work to strengthen interagency and regional relationships to improve project performance and supporting functions, and to better understand project resource requirements and costs. This helps to maintain FCRPS reliability and system performance, as well as to attain Bonneville's strategic business objectives.

Associated Projects
($K)

FY 2022 Actuals	FY 2023 Estimate	FY 2024 Estimate
$448,841	$462,020	$473,769

Continued investments in Associated Projects include the following.

Continuous Activity (*all years*):

- Bureau of Reclamation
  - Continue direct funding of Reclamation operations and maintenance (O&M) power activities.
- Corps of Engineers
  - Continue direct funding of Corps O&M power activities.

Fish & Wildlife Projects

Overview

As discussed at length on pages 30-34 of this document, Bonneville implements a mature Fish & Wildlife mitigation program based on NPCC Program measures and developed from recommendations made by the region's fish and wildlife management agencies and tribes. Several recent NPCC reviews have made additional fish and wildlife project recommendations to Bonneville. Bonneville, in coordination with the NPCC, reviews new and on-going projects for consistency with the NPCC's Program and purposes of the Northwest Power Act. Bonneville reviews and resets project-specific funding commitments annually, including for projects related to applicable BiOps and other agreements. Bonneville informs its funding decisions with the management objectives and priorities in the NPCC's Program (including ISRP reviews) and the Accords extension as it integrates their implementation with actions necessary to fulfill ESA responsibilities. Regular coordination on implementation priorities continues among Bonneville, the NPCC, federal resource management agencies, states, tribes, and others.

Fish & Wildlife
($K)

FY 2022 Actuals	FY 2023 Estimate	FY 2024 Estimate
$234,971	$246,581	$268,620

Continued investments in Bonneville's Fish &Wildlife Program include the following.

Continuous Activity (*all years*):

- Anadromous Fish: Continue implementing both ongoing and new projects that support ESA-listed species and other measures called for under applicable BiOps, the Washington Estuary Agreement, the Kalispel Agreement, the Willamette and Southern Idaho agreements, and applicable extensions of the Columbia Basin Fish Accords. Prioritize projects that address the factors that contribute most to mitigation success and that fulfill Bonneville's responsibility for mitigating the impacts from the FCRPS. Implement and develop activities that protect and enhance tributary and estuary habitat, improve mainstream habitat, reduce potentially harmful hatchery practices on ESA-listed populations, and contribute to sustainable fisheries.
- Resident Fish: Implement activities to mitigate the impacts of the CRS on lamprey, sturgeon, and bull trout and promote the reproduction and recruitment of Kootenai River white sturgeon. These activities have been proposed and consulted upon in the 2020 USFWS CRS BiOp, the NPCC Program, and the 2022 amendments to extend the Columbia Basin Fish Accords.
- Mitigation supporting resident fish to offset anadromous fish losses in areas of the basin where Federal dams have blocked anadromy (referred to as "substitution" in the NPCC's Program): mitigate for reservoir power operation impacts to resident fish and wildlife by seeking projects that benefit both simultaneously. Those resident fish habitat acquisition projects that meet Bonneville's capitalization policy will be funded under the capital portion of Bonneville's Fish & Wildlife budget and credited for both fish and wildlife where appropriate.
- Wildlife: Use existing Bonneville policies to continue the current effort to mitigate wildlife in a manner consistent with the NPCC Program and fulfill commitments in wildlife agreements such as the Kalispel Agreement, Willamette Wildlife Agreement, and Southern Idaho Wildlife Agreement. Those wildlife projects that meet Bonneville's capitalization policy will be funded under the capital portion of Bonneville's Fish & Wildlife budget and credited against both wildlife and fish obligations according to Bonneville's crediting policy and applicable mitigation contracts.

Residential Exchange Program, NPPC, Energy Efficiency & Renewable Resources

Overview

See detailed descriptions of these three budget subcategories on pages 64 and 65.

Residential Exchange, NPCC,
and Energy Efficiency & Renewable Resources
($K)

FY 2022 Actuals	FY 2023 Estimate	FY 2024 Estimate
$400,717	$429,861	$429,838

Continued investments in these three subcategories include the following.

Residential Exchange Program (REP)

- Includes forecasted REP benefits based on the 2012 REP Settlement.

Northwest Power & Conservation Council

- Continue support of NPCC activities, as directed under the Northwest Power Act, including regional power plan development and maintenance and fish and wildlife program activities.

Energy Efficiency & Renewable Resources

- Conservation purchases: Provide programmatic savings reimbursements and energy efficiency incentives to Bonneville customers to purchase conservation savings. This includes performance payments and Energy Smart Reserved Power payments for Federal installations and fish hatcheries and irrigation districts.
- Conservation infrastructure: All support for programs and operations, including third-party program implementation, contract support, market research (Momentum Savings research), evaluation, and emerging technology research.
- Market transformation: Support for NEEA's market transformation initiatives. NEEA identifies barriers and opportunities to increase the market adoption of efficiency by leveraging its regional partnerships.

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Residential Exchange Program, Northwest Power & Conservation Council
Energy Efficiency & Renewable Resources:
Activities, Milestones and Explanation of Changes ($K)

FY 2023 Estimate	FY 2024 Estimate	Explanation of Changes FY 2024 vs FY 2023 Estimate
Power Services - Operating Expense $2,057,883	**$2,119,743**	**$61,861/3.0%**
Production $919,422 Milestones: Continue to provide oversight of all signed contracts. Continue to provide wind resource integration services for customer wind generation.	**$947,516** Milestones: Continue to provide oversight of all signed contracts. Continue to provide wind resource integration services for customer wind generation.	**$28,095/3.1%** The increase is due to higher CGS and support costs.
Associated Project Costs $462,020 Milestones: Continue direct funding of Corps and Reclamation O&M power activities.	**$473,769** Milestones: Continue direct funding of Corps and Reclamation O&M power activities.	**$11,749/2.5%** The increase addresses inflation and the rise in labor costs.
Fish & Wildlife Costs $246,581 Milestones: Continue implementing both ongoing and new projects that support ESA-listed species and other measures called for under the current CRS BiOps, the 2018 Fish Accord extensions, the Washington Estuary Agreement, the Kalispel Agreement, the Southern Idaho Agreement, and the Willamette Agreement.	**$268,620** Milestones: Continue implementing both ongoing and new projects that support ESA-listed species and other measures called for under the current CRS BiOps, the 2018 Fish Accord extensions, the Washington Estuary Agreement, the Kalispel Agreement, the Willamette Agreement, and the Southern Idaho Agreement.	**$22,037/8.9%** The increase in the costs reflect funding associated with the BiOps, 2018 Fish Accord extension commitments, and Northwest Power Act activities.

FY 2023 Estimate	FY 2024 Estimate	Explanation of Changes FY 2024 vs FY 2023 Estimate
Residential Exchange Program $266,696 Milestones: Continue to provide REP benefits.	**$266,663** Milestones: Continue to provide REP benefits.	**$-33/0.0%** No change in scheduled amount of REP payments payable to IOUs prescribed by REP.
NW Power & Conservation Council $12,431 Milestones: Continue support of the NPCC activities, as directed under the Northwest Power Act, including regional power plan development and maintenance, and fish and wildlife program activities.	**$11,942** Milestones: Continue support of the NPCC activities, as directed under the Northwest Power Act, including regional power plan development and maintenance, and fish and wildlife program activities.	**$-489/-3.9%** The decrease reflects our cost cutting effort while continuing emphasis on the NPCC.
Energy Efficiency & Renewable Resources $150,734 Milestones: Continue close-out of the legacy conservation resource acquisition contracts, which support Bonneville's contractual obligation to serve customer loads. Continue to support utility incentive programs. Continue to support regional energy efficiency programs. Continue supporting energy efficiency at direct serve Federal agencies. .	**$151,233** Milestones: Continue close-out of the legacy conservation resource acquisition contracts, which support Bonneville's contractual obligation to serve customer loads. Continue to support utility incentive programs. Continue to support regional energy efficiency programs. Continue supporting energy efficiency at direct serve Federal agencies.	**$500/0.3%** The increase reflects higher funding while continuing emphasis on the energy efficiency program consistent with the Power Plan.

Funding Schedule by Activity

Funding ($K)

Transmission Services - Operating Expenses	FY 2022 Actuals	FY 2023 Estimate	FY 2024 Estimate	FY 2024 vs FY 2023 $	FY 2024 vs FY 2023 %
Engineering	$ 113,817	$ 86,842	$ 93,631	$ 6,789	7.8%
Operations	$ 221,869	$ 207,742	$ 240,459	$ 32,716	15.7%
Maintenance	$ 211,170	$ 218,972	$ 242,678	$ 23,705	10.8%
Total, Transmission Services - Operating Expenses	**$ 546,856**	**$ 513,557**	**$ 576,768**	**$ 63,211**	**12.3%**

Outyears ($K)

Transmission Services - Operating Expenses	FY 2024 Estimate	FY 2025 Estimate	FY 2026 Estimate	FY 2027 Estimate	FY 2028 Estimate
Engineering	93,631	95,090	97,736	100,376	103,000
Operations	240,459	249,048	257,716	266,134	274,479
Maintenance	242,678	250,399	258,481	266,529	274,513
Total, Transmission Services - Operating Expenses	**576,768**	**594,538**	**613,933**	**633,039**	**651,992**

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Transmission Services – Operating Expense

Overview

Under the Transmission Services – Operating Expense category are three subcategories: the transmission system services of **Engineering, Operations, and Maintenance** for Bonneville's electric transmission system and associated power system control and communication facilities. Primary goals of this program are:

1. Maintain the safety and reliability of the transmission system;
2. Increase the focus on meeting customers' needs;
3. Optimize the transmission system;
4. Provide open access and non-discriminatory transmission service; and
5. Improve Bonneville's cost effectiveness.

Explanation of Changes

Bonneville's Budget includes $576.8 million in FY 2024 for Transmission Services operating expense, which is a 12.3 percent increase over the FY 2023 forecasted level. The increase continues the operation and maintenance of Bonneville's transmission assets.

The FY 2024 Budget increases the levels for Engineering ($6.8 million), Operations ($32.7 million), and Maintenance ($23.7 million). Spending in each subcategory is discussed on the following pages.

Engineering

Overview

Funding allocated under the Engineering subcategory allows continued efforts to identify best methods for improving system reliability and maintenance practices, and continued cost reduction efforts by identifying opportunities for low-cost reinforcement and voltage support of the existing transmission system.

Engineering ($K)

FY 2022 Actuals	FY 2023 Estimate	FY 2024 Estimate
$113,817	$86,842	$93,631

Continued investments in Engineering include the following.

Continuous Activity (*all years*):

- Research and development (R&D): Conduct research focused on technologies related to business challenges Bonneville faces including reliability, energy efficiency, and integration of renewable energy resources. Technologies of interest are identified in Bonneville's Technology Roadmaps. A portfolio of research is selected every year through Bonneville's Portfolio Decision Framework.
- System development planning and analysis: Continue providing technical support and asset planning to deploy the asset management approach to sustain existing assets and expand the system to meet agency objectives.
- Technical support: Provide technical support activities, such as transmission system planning and studies to optimize portions of the system. Provide support for non-wires solutions studies and pilot projects.
- Capital-to-expense adjustments: Conduct annual analysis of Bonneville's outstanding capital work orders to assess whether they should be expensed. As obsolete inventory is identified and disposed of, it is expensed.
- Regulatory fees: WECC dues and loop flow payments, Department of Commerce/National Telecommunications and Information Administration licensing costs for radio frequencies, DOE Radio Spectrum staff and contractor support, and NERC Critical Infrastructure Protection (CIP) compliance program costs. Includes membership in a regional transmission planning organization.
- Reimbursable transactions: Enter into written agreements with Federal and non-federal entities that have work or services to be performed by Bonneville staff at the expense of the benefiting entities. The projects must be beneficial, under agreed-upon criteria, to Bonneville operations and to the Federal or non-federal entity involved or otherwise be aligned with or supportive of Bonneville's strategic objectives. Additionally, these activities generally contribute to more efficient or reliable construction of the Federal transmission system or otherwise enhance electric service to the region.
- Leased and other costs: Includes leases, lease purchases, and other costs of financing transmission, delivery, and voltage support facilities when such arrangements are operationally feasible and cost effective to deliver power. Leases and lease purchases enable Bonneville to continue to invest in infrastructure to support a safe and reliable system for the transmission of power. Other costs included are the accrued interest costs associated with Large Generator Interconnection Agreements (LGIA).

Operations

Overview

The following activities are funded under Operations.

Operations ($K)

FY 2022 Actuals	FY 2023 Estimate	FY 2024 Estimate
$221,869	$207,742	$240,459

Substation Operations: Perform operations functions necessary to provide electric service to customers and to protect the Federal investment in electric equipment and other facilities. Includes equipment adjustments, switching lines and equipment during emergencies or maintenance, isolating damaged equipment, restoring service to customers, inspecting equipment, and reading meters.

Power System Dispatching and Supporting Functions: Perform central dispatching, control, and monitoring of the electric operation of the Federal transmission system. Also includes load, frequency, and voltage control of Federal generating plants, and coordinating long- and short-term outages of system equipment. In addition, provides technical engineering support of dispatching function and provides all technical and systems support for Dittmer Control Center (DCC) and Munro Control Center (MCC).

Marketing and Sales: Provide management and direction of transmission rates, and provide business strategy in marketing of transmission and ancillary products and services of Transmission Services. Involve customers and constituents in the process of product and rate development. Maintain accurate and complete historical records of current and past legacy transmission agreements. Provide guidance for current and future transmission contract negotiations. Provide financial analysis of market strategies. Monitor and report on the financial health of Transmission Services. Support cost management by effective reporting and analysis of current expenditures. Ensure official budget submittals reflect current management financial strategies and adequately fund transmission programs.

Transmission Scheduling: Provide non-discriminatory, open access to the Bonneville transmission system consistent with Bonneville's Open Access Transmission Tariff (OATT). Schedule transmission capacity to eligible Bonneville customers, which include customers acquiring services under Use of Facilities (UFT), Formula Power Transmission (FPT), Integration of Resources (IR), and Part II or Part III of the OATT. Manage the reservations and scheduling of all transmission services associated with the OATT. Update practices, policies, and commercial systems to accommodate a large diversity of resources, including wind.

Continued investments in Operations include the following.

Continuous Activity (*all years*):

- Continue to operate within parameters of NERC and WECC.
- Continue support of increased compliance activities related to the reliability of the transmission system, including cybersecurity.
- Continue developing facilities, policies, procedures, and implementing systems to support integrating the diversity of resources into the transmission grid.
- Continue preparation for increased complexity of transmission scheduling, power system operations, and dispatching, including congestion management and outage scheduling.
- Continue developing the Dittmer Scheduling Center and Munro Scheduling Center facilities to support continuous real time scheduling operations from both facilities.
- Continue developing a long-term approach to optimize transmission availability through streamlined, cost-effective, and sustainable processes.
- Continue to address succession planning issues across key functions.
- Continue development and implementation of business systems and tools.

Maintenance

Overview

In all aspects of maintenance, Bonneville is continuing the use of reliability centered maintenance (RCM) practices. The use of RCM practices is focused on improving system reliability, increasing availability, and meeting new and existing compliance regulations at lowest lifecycle costs. In addition, Bonneville is deploying asset management to optimize maintain/replace decision making. Maintenance costs are expected to increase as Bonneville addresses the aging transmission system, meeting reliability standards, including vegetation management, and environmental constraints associated with construction, enhancement, and maintenance of the system. The Bonneville transmission system encompasses 15,108 circuit miles on over 11,860 rights-of-way miles (many of these miles are through rugged, inaccessible terrain).

Maintenance
($K)

FY 2022 Actuals	FY 2023 Estimate	FY 2024 Estimate
$211,170	$218,972	$242,678

Continued investments in Maintenance include the following

Continuous Activity (*all years*):

- Continue to improve performance to meet System Average Interruption Frequency Index (SAIFI) and System Average Interruption Duration Index (SAIDI) targets.
- Continue refining processes and procedures for monitoring and tracking compliance activities related to the reliability of the transmission system.
- Continue to improve system availability performance through new maintenance procedures and work practices.
- Continue to develop and implement work practices and procedures for implementation of a new specialty crew using bare-hand live line practices for maintenance of high-voltage transmission lines.
- Continue increased emphasis on replacement of line hardware (life extension programs for insulators, connectors, dampers, and fiber optic cable hardware).
- Continue to prepare for the impact of an expected high attrition rate among Bonneville's aging workforce by recruiting apprentices and replacements for critical minimum crew size workload positions.
- Increase outage-scheduling planning and coordination to increase customer satisfaction and system availability.
- Maintain vegetation management levels to ensure system reliability.
- Continue access road work to provide reliable access to facilities and ensure environmental compliance.
- Continue improving environmental stewardship.

Transmission Line Maintenance:

Maintain and repair 15,108 circuit miles of high voltage transmission lines, of which over 4,734 circuit miles are 500 kV transmission extra-high voltage (EHV). Maintenance of EHV lines is two and one-half times more labor-intensive than maintenance of lower transmission voltages, although more efficient in transmission of power. This responsibility includes maintaining transmission rights-of-way to ensure system reliability, safety, and environmental compliance. Adopt work practices that improve system availability, reliability, and compliance.

Right-of-Way Maintenance:

Maintain over 11,860 miles of Bonneville's rights-of-way. This responsibility includes vegetation management, danger tree management, and access road maintenance to ensure system reliability, safety, and environmental compliance. Adopt procedures and processes that improve system availability, reliability, environmental compliance, and reliability compliance. Continue to deploy new technologies such as LiDAR (Light Detection and Ranging) to reliably and cost-effectively manage vegetation.

Substation Maintenance:

Maintain and repair the transmission system power equipment located in Bonneville's 262 substations. Work includes inspections, diagnostic testing, and predictive and condition-based maintenance.

System Protection Maintenance:

Maintain relaying metering and remedial action scheme equipment used to control and protect the electrical transmission system and to meter energy transfers for the purpose of revenue billing. Additionally, field-engineering services provide technical advice and assure the correct operation of power system relaying and special control systems used to support interregional energy transmission capabilities.

Power System Control Maintenance:

Test, repair, and provide field engineering support of Bonneville's highly complex equipment, communications, and control systems, including seven major microwave systems, fiber optic systems, and other critical communications and control equipment that support the power system.

Non-Electric Plant Maintenance:

Maintain and manage Bonneville's non-electric facilities. Includes site, building, and building utility maintenance; custodial services; station utility; and other maintenance service activities, as well as facilities asset management on Bonneville-owned or Bonneville-leased non-electric facilities.

Maintenance Standards and Engineering:

Establish, monitor, and update system maintenance standards, policies, and procedures, and review and update long-range plans for maintenance of the electric power transmission system.

Transmission Services – Operating Expense: Activities, Milestones, and Explanation of Changes ($K)

FY 2023 Estimate	FY 2024 Estimate	Explanation of Changes FY 2024 vs FY 2023 Estimate
Transmission Services - Operating Expense $513,557	**$576,768**	**$63,211/12.3%**
Engineering $86,842	**$93,631**	**$6,789/7.8%**
Milestones: Continue efforts to identify best methods for improving system reliability and maintenance practices. Continue cost reduction efforts by identifying opportunities for low-cost reinforcement and voltage support of the existing transmission system.	Milestones: Continue efforts to identify best methods for improving system reliability and maintenance practices. Continue cost reduction efforts by identifying opportunities for low-cost reinforcement and voltage support of the existing transmission system.	The increase reflects continued emphasis on system reliability standards compliance and research and development.
Operations $207,742	**$240,459**	**$32,716/15.7%**
Milestones: Continue to operate within parameters of NERC and WECC. Continue support of increased compliance activities related to the reliability of the transmission system, including cybersecurity.	Milestones: Continue to operate within parameters of NERC and WECC. Continue support of increased compliance activities related to the reliability of the transmission system, including cybersecurity.	The increase reflects continued emphasis on reliability compliance activities, resource integration activities, key strategic initiative, security, and control center systems support.
Maintenance $218,972	**$242,678**	**$23,705/10.8%**
Milestones: Continue to improve performance to meet System Average Interruption Frequency Index (SAIFI) and System Average Interruption Duration Index (SAIDI) targets.	Milestones: Continue to improve performance to meet System Average Interruption Frequency Index (SAIFI) and System Average Interruption Duration Index (SAIDI) targets.	The increase reflects implementation of facilities asset management plans, continued implementation of live-line crew, NERC/WECC compliance activities related to land rights and vegetation management, continuing maintenance program activities, including system protection, right-of-way, line maintenance, and performance improvements.

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Interest, Pension, and Post-retirement Benefits Operating Expense

Funding ($K)

Interest, Pension, & Post-Retirement Benefits	FY 2022 Actuals	FY 2023 Estimate	FY 2024 Estimate	FY 2024 vs FY 2023 $	FY 2024 vs FY 2023 %
BPA Bond Interest (Net)	$ 152,803	$ 113,624	$ 120,768	$ 7,144	6.3%
BPA Appropriation Interest	$ -	$ -	$ -	$ -	0.0%
Corps of Engineers Appropriation Interest	$ 39,717	$ 39,893	$ 28,583	$ (11,310)	-28.4%
Lower Snake River Comp Plan Interest	$ 186	$ 186	$ 102	$ (84)	-45.4%
Bureau of Reclamation Appropriation Interest	$ 1,198	$ 1,198	$ 1,066	$ (132)	-11.0%
Bond Premiums Paid/Discounts (not capitalized)	$ -	$ (1,583)	$ (5,890)	$ (4,307)	272.0%
Subtotal, Interest - Operating Expense	**$ 193,903**	**$ 153,317**	**$ 144,628**	**$ (8,690)**	**-5.7%**
Additional Pension and Post-Retirement Benefits	$ 37,231	$ 32,306	$ 37,780	$ 5,474	16.9%
Total, Interest, Pension, & Post-Retirement Benefits	**$ 231,134**	**$ 185,623**	**$ 182,407**	**$ (3,216)**	**-1.7%**

Outyears ($K)

Interest, Pension, & Post-Retirement Benefits	FY 2024 Estimate	FY 2025 Estimate	FY 2026 Estimate	FY 2027 Estimate	FY 2028 Estimate
BPA Bond Interest (Net)	$ 120,768	$ 141,467	$ 167,982	$ 181,906	$ 196,591
BPA Appropriation Interest	$ -	$ -	$ -	$ -	$ -
Corps of Engineers Appropriation Interest	$ 28,583	$ 18,300	$ 15,488	$ 13,461	$ 13,598
Lower Snake River Comp Plan Interest	$ 102	$ 176	$ -	$ 88	$ 88
Bureau of Reclamation Appropriation Interest	$ 1,066	$ 982	$ 982	$ 357	$ 357
Bond Premiums Paid/Discounts (not capitalized)	$ (5,890)	$ 263	$ 2,681	$ 237	$ (8,860)
Subtotal, Interest - Operating Expense	**$ 144,628**	**$ 161,189**	**$ 187,132**	**$ 196,048**	**$ 201,774**
Additional Pension and Post-Retirement Benefits	$ 37,780	$ 38,314	$ 39,237	$ 40,157	$ 41,072
Total, Interest, Pension, & Post-Retirement Benefits	**$ 182,407**	**$ 199,503**	**$ 226,369**	**$ 236,205**	**$ 242,846**

Interest, Pension and Post-retirement Benefits Operating Expense

Overview

Interest expense provides for interest due on bonds issued to the U.S. Treasury and appropriations repayment responsibilities. The appropriation repayments relate to capital investment in FCRPS hydroelectric generating and transmission facilities of Bonneville, the Corps, and Reclamation. Investments were financed by Congressional appropriations and Bonneville borrowings from the U.S. Treasury. Bonneville repays these amounts through revenue raised in its power sales and transmission services revenues.

Since initially receiving U.S. Treasury borrowing authority in 1974 under the Transmission Act, all of Bonneville's U.S. Treasury borrowing has been at market rates. As of October 1, 1996, all of Bonneville's repayment obligations on FCRPS appropriated investment (Corps and Reclamation FCRPS investment and Bonneville investment financed with appropriations prior to the Transmission Act that were unpaid as of September 30, 1996) were restructured and assigned new current-market interest rates. The Bonneville Appropriations Refinancing Act of 1996 (Refinancing Act) called for re-setting (reducing) the unpaid principal of FCRPS appropriations and reassigning (increasing) interest rates. New principal amounts were established as of the beginning of FY 1997 at the present value of the principal and annual interest payments Bonneville would make to the U.S. Treasury for these obligations in the absence of the legislation, plus $100.0 million. The new principal amounts were assigned prevailing market interest rates as of October 1, 1996. Bonneville's outstanding appropriations repayment obligations at the end of FY 1996 were $6.7 billion with a weighted average interest rate of 3.4 percent. The refinancing reduced the principal amount to $4.1 billion with a weighted average interest rate of 7.1 percent. Implementation of the refinancing took place in 1997 after audited actual financial data were available. Pursuant to the legislation, Bonneville submitted its calculations and interest rate assignments implementing the Refinancing Act to the U.S. Treasury for its review and approval. The U.S. Treasury approved the implementation calculations in July 1997. The Refinancing Act also calls for all future FCRPS appropriations to be assigned prevailing U.S. Treasury yield curve interest rates. Bonneville's outstanding appropriations may be prepaid prior to their stated maturities.

Interest estimates are a function of costs of U.S. Treasury borrowing to Bonneville, repayment status of outstanding FCRPS investments, and projected additions to FCRPS plant in service. These estimates may change over time depending on forecasted market conditions. The interest cost estimates include the impact of Bonneville's appropriation refinancing legislation.

Federal employees associated with the operation of the FCRPS participate in either the Civil Service Retirement System or the Federal Employees Retirement System. Employees may also participate in the Federal Employees Health and Benefit Program and the Federal Employee Group Life Insurance Program. As a Federal agency, all post-retirement activity is managed by the Office of Personnel Management; therefore, neither the assets of the plans or the accumulated plan benefits are recorded by Bonneville. Since 1997, Bonneville has made additional annual contributions to the General Fund of the U.S. Treasury (receipt account 892889) related to the Federal post-retirement benefit programs provided to employees associated with the operation of the FCRPS.

Capital Transfers

Funding ($K)

Capital Transfers	FY 2022 Actuals	FY 2023 Estimate	FY 2024 Estimate	FY 2024 vs FY 2023 $	FY 2024 vs FY 2023 %
BPA Bond Amortization [1]	$ 689,200	$ 469,587	$ 388,297	$ (81,290)	-17.3%
Bureau of Reclamation Appropriation Amortization	$ 5,000	$ 3,072	$ 2,219	$ (853)	-27.8%
BPA Appropriation Amortization	$ -	$ -	$ -	$ -	0.0%
Corps of Engineers Appropriation Amortization	$ -	$ 261,018	$ 282,401	$ 21,383	8.2%
Lower Snake River Comp Plan Amortizatoin	$ -	$ 1,919	$ 349	$ (1,569)	-81.8%
Total, Capital Transfers	**$ 694,200**	**$ 735,596**	**$ 673,266**	**$ (62,330)**	**-8.5%**

Outyears ($K)

Capital Transfers	FY 2024 Estimate	FY 2025 Estimate	FY 2026 Estimate	FY 2027 Estimate	FY 2028 Estimate
BPA Bond Amortization [1]	$ 388,297	$ 538,077	$ 571,317	$ 612,307	$ 406,879
Bureau of Reclamation Appropriation Amortization	$ 2,219	$ 19	$ 19,237	$ -	$ -
BPA Appropriation Amortization	$ -	$ -	$ -	$ -	$ -
Corps of Engineers Appropriation Amortization	$ 282,401	$ 108,528	$ 69,535	$ -	$ -
Lower Snake River Comp Plan Amortizatoin	$ 349	$ -	$ -	$ -	$ -
Total, Capital Transfers	**$ 673,266**	**$ 646,624**	**$ 660,089**	**$ 612,307**	**$ 406,879**

[1] Bonneville "Bond(s)" in this FY 2024 Budget refers to all bonds issued by Bonneville to and advances received from the U.S. Treasury. This reference is consistent with section 13(a) of the Transmission Act (P.L. 93-454), which defines Bonneville bonds as all bonds, notes, and other evidences of indebtedness issued and sold by Bonneville to the U.S. Treasury.

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Capital Transfers

Overview

This activity conveys funds to the U.S. Treasury for repayment of certain FCRPS costs not included in the Associated Projects budget. Since capital transfers are cash transactions, they are not considered budget obligations.

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Additional Tables

BONNEVILLE POWER ADMINISTRATION
TOTAL OBLIGATIONS/OUTLAYS
Current Services
(in millions of dollars)

BP-1 SUMMARY[1/3/]	FISCAL YEAR 2022		2023		2024		2025	2026	2027	2028
	Oblig.	Outlays	Oblig.	Outlays	Oblig.	Outlays	Oblig.	Oblig.	Oblig.	Oblig.
1 Residential Exchange Program	267	267	267	267	267	267	267	273	280	286
2 Power Services [2/]	1,581	1,581	1,382	1,382	1,422	1,422	1,501	1,538	1,575	1,612
3 Transmission Services	920	920	1,011	1,011	1,171	1,171	1,176	1,170	1,170	1,198
4 Conservation & Energy Efficiency	122	122	151	151	151	151	152	156	159	163
5 Fish & Wildlife	251	251	290	290	310	310	310	304	297	303
6 Interest/ Pension [4/]	231	231	186	186	182	182	200	226	236	243
7 Associated Project Cost - Capital	190	190	281	281	270	270	276	282	288	295
8 Capital Equipment	21	21	21	21	24	24	23	25	23	24
9 Planning Council	12	12	12	12	12	12	12	12	13	13
10 Projects Funded in Advance	121	121	61	61	46	46	55	53	54	55
11 Capitalized Bond Premiums	0	0	0	0	0	0	0	0	0	0
12 **TOTAL OBLIGATIONS/OUTLAYS** [3/]	**3,716**	**3,716**	**3,662**	**3,662**	**3,855**	**3,855**	**3,970**	**4,039**	**4,095**	**4,192**

REVENUES AND REIMBURSEMENTS

Current Services

(in millions of dollars)

FISCAL YEAR

	BP-1 SUMMARY	2022		2023		2024		2025	2026	2027	2028
		Oblig.	Outlays	Oblig.	Outlays	Oblig.	Outlays	Oblig.	Oblig.	Oblig.	Oblig.
13	Revenues [5/]	4,396	4,396	3,933	3,933	4,018	4,018	4,052	4,107	4,143	4,187
14	Project Funded in Advance	121	121	61	61	46	46	55	53	54	55
15	**TOTAL**	**4,517**	**4,517**	**3,994**	**3,994**	**4,064**	**4,064**	**4,107**	**4,160**	**4,197**	**4,242**
16	**BUDGET AUTHORITY (NET) [6/]**	**(984)**		**107**		**256**		**274**	**231**	**252**	**473**
17	**OUTLAYS (NET) [6/7/8]**		**(806)**		**(332)**		**(209)**	**(137)**	**(121)**	**(102)**	**(50)**

These notes are an integral part of this table.

1/ This FY 2024 budget includes capital and expense estimates based on final spending proposals from Bonneville's BP-24 IPR process.

Capital funding levels reflect external factors such as the significant changes affecting West Coast power and transmission markets, along with planned infrastructure investments designed to address the long-term needs of the region.

Budget estimates included in this budget are subject to change due to rapidly changing economic and institutional conditions in the evolving electric utility industry.

2/ Power Services doesn't include Fish & Wildlife, Residential Exchange Program, Planning Council, Conservation & Energy Efficiency and Associated Project Costs which have been shown separately for display purposes.

3/ This budget has been prepared in accordance with PAYGO. Under PAYGO all Bonneville budget estimates are treated as mandatory and are not subject to the discretionary caps included in the Budget Control Act of 2011. These estimates support activities that are separate from discretionary activities and accounts. Thus, any changes to Bonneville estimates cannot be used to affect any other budget categories which have their own dollar caps. Because Bonneville's obligations are and will be incurred under pre-existing legislative authority, Bonneville is not subject to a "pay-as-you-go" test regarding its revision of current-law funding estimates.
For BP-1 table, the CJ reflects forecasted outlays while the yearend GTAS reflects the actual outlay in the Budget Appendix.

4/ See Interest Expense, Pension and Post-retirement Benefits and Capital Transfers section of this budget for a complete discussion of these cost estimates.

5/ Revenues, included in the Net Outlay formulation, are calculated consistent with cash management goals and assume a combination of adjustments. Assumed adjustments include the use of a combination of tools, including upcoming rate adjustment mechanisms, a net revenue risk adjustment, debt service refinancing strategies and/or short-term financial tools to manage net revenues and cash. Some of these potential tools will reduce costs rather than generate revenue, causing the same Net Outlay result. Adjustments for depreciation and 4(h)(10)(C) credits of the Northwest Power Act are also assumed.

6/ Bonneville received $48.7 million of additional budget authority in FY 2007 to accommodate the work necessary to relocate the radio spectrum consistent with the Commercial Spectrum Enhancement Act (P.L. 108-494). In accordance with Federal law, Bonneville plans to return the forecasted unused balance of approximately $8.2 million to the U.S. Treasury as soon as the National Telecommunications Information Administration notifies the Federal Communications Commission that the DOE relocation effort is complete.

7/ Net Outlay estimates are based on current cost savings to date and anticipated cash management goals. They are expected to follow anticipated management decisions throughout the rate period that, along with actual market conditions, will impact revenues and expenses. Actual Net Outlays are volatile and are reported in Report on Budget Execution and Budgetary Resources (SF-133). Actual Net Outlays could differ from estimates due to changing market conditions, streamflow variability, continued restructuring of the electric industry, and other reasons.

8/ FY 2022 Net Outlays are calculated using Bonneville's FY 2022 EOY Actuals. FY 2023 is based off of rate case and FY 2024 to 2028 Net Outlays are based on BP-24 IPR assumptions and an escalation factor from using the FY 2022 Whitebook Loads and Resources Report.

EXPENSED OBLIGATIONS/OUTLAYS [1,4/]
Current Services
(in millions of dollars)
FISCAL YEAR

BP-2	2022		2023		2024		2025	2026	2027	2028
	Oblig.	Outlays	Oblig.	Outlays	Oblig.	Outlays	Oblig.	Oblig.	Oblig.	Oblig.
1 Residential Exchange Program	267	267	267	267	267	267	267	273	280	286
2 Power Services [2/]	1,581	1,581	1,382	1,382	1,422	1,422	1,501	1,538	1,575	1,612
3 Transmission Services	547	547	514	514	577	577	595	614	633	652
4 Conservation & Energy Efficiency	122	122	151	151	151	151	152	156	159	163
5 Fish & Wildlife	235	235	247	247	269	269	268	275	282	288
6 Interest/ Pension [3/]	231	231	186	186	182	182	200	226	236	243
7 Planning Council	12	12	12	12	12	12	12	12	13	13
8 TOTAL EXPENSE	2,995	2,995	2,758	2,758	2,880	2,880	2,994	3,094	3,177	3,257
9 Projects Funded in Advance	121	121	61	61	46	46	55	53	54	55

CAPITAL OBLIGATIONS/OUTLAYS [1/]

Current Services

(in millions of dollars)

FISCAL YEAR

	BP-2 continued	**2022**		**2023**		**2024**		**2025**	**2026**	**2027**	**2028**
		Oblig.	**Outlays**	**Oblig.**	**Outlays**	**Oblig.**	**Outlays**	**Oblig.**	**Oblig.**	**Oblig.**	**Oblig.**
10	Transmission Services	374	374	497	497	594	594	581	556	537	546
11	Associated Project Cost	190	190	281	281	270	270	276	282	288	295
12	Fish & Wildlife	16	16	43	43	41	41	41	29	16	15
13	Capital Equipment	21	21	21	21	24	24	23	25	23	24
14	Capitalized Bond Premiums	0	0	0	0	0	0	0	0	0	0
15	**TOTAL CAPITAL INVESTMENTS**	**601**	**601**	**842**	**842**	**929**	**929**	**921**	**892**	**864**	**880**
16	**TREASURY BORROWING AUTHORITY TO**										
17	**FINANCE CAPITAL OBLIGATIONS** [4/]	**601**		**842**		**929**		**921**	**892**	**864**	**880**

These notes are an integral part of this table.

[1/] This FY 2024 budget includes capital and expense estimates based on final spending proposals from Bonneville's BP-24 IPR process.

Capital funding levels reflect external factors such as the significant changes affecting West Coast power and transmission markets, along with planned infrastructure investments designed to address the long-term needs of the region.

Budget estimates included in this budget are subject to change due to rapidly changing economic and institutional conditions in the evolving electric utility industry.

[2/] Power Services doesn't include Fish & Wildlife, Residential Exchange Program, Planning Council, Conservation & Energy Efficiency and Associated Project Costs which have been shown separately for display purposes.

[3/] See Interest Expense, Pension and Post-retirement Benefits and Capital Transfers section of this budget for a complete discussion of these cost estimates.

[4/] This budget has been prepared in accordance with PAYGO. Under PAYGO all Bonneville budget estimates are treated as mandatory and are not subject to the discretionary caps included in the Budget Control Act of 2011. These estimates support activities that are separate from discretionary activities and accounts. Thus, any changes to Bonneville estimates cannot be used to affect any other budget categories which have their own dollar caps. Because Bonneville's obligations are and will be incurred under pre-existing legislative authority, Bonneville is not subject to a "pay-as-you-go" test regarding its revision of current-law funding estimates.

BP-3

CURRENT SERVICES

(in millions of dollars)

CAPITAL TRANSFERS **FISCAL YEAR**

		2022 Payment	2023 Payment	2024 Payment	2025 Payment	2026 Payment	2027 Payment	2028 Payment
	Amortization:							
18	BPA Bonds	689	470	388	538	571	612	407
19	Reclamation Appropriations	5	3	2	0	19	0	0
20	BPA Appropriations	0	0	0	0	0	0	0
21	Corps Appropriations	0	261	282	109	70	0	0
22	Lower Snake River Comp Plan Amortization	0	2	0	0	0	0	0
23	**TOTAL CAPITAL TRANSFERS**	**694**	**736**	**673**	**647**	**660**	**612**	**407**
24	**FULL-TIME EQUIVALENT (FTE)**	**2,847**	**3,000**	**3,000**	**3,000**	**3,025**	**3,075**	**3,125**

PROGRAM & FINANCING SUMMARY

Current Services

(in millions of dollars)

Identification Code: 89-4045-0-3-271

		2022	2023 est.	2024	2025	2026	2027	2028
Program by activities:								
	Operating expenses:							
0.01	Power Services	1,133	919	948	1,014	1,040	1,065	1,091
0.02	Residential Exchange Program	267	267	267	267	273	280	286
	Associated Project Costs:							
0.05	Bureau of Reclamation	147	153	154	157	161	165	169
0.06	Corps of Engineers	244	253	259	269	276	282	289
0.07	Colville Settlement	20	22	22	22	23	23	24
0.08	Spokane Settlement	5	6	6	6	6	6	6
0.19	U.S. Fish & Wildlife Service	33	29	32	32	33	34	35
0.20	Planning Council	12	12	12	12	12	13	13
0.21	Fish & Wildlife	235	247	269	268	275	282	288
0.23	Transmission Services	547	514	577	595	614	633	652
0.24	Conservation & Energy Efficiency	122	151	151	152	156	159	163
0.25	Interest	194	153	145	161	187	196	202
0.26	Pension and Health Benefits [1/]	37	32	38	38	39	40	41
0.91	**Total operating expenses [2/]**	**2,995**	**2,757**	**2,879**	**2,994**	**3,094**	**3,177**	**3,257**
	Capital investment:							
1.01	Power Services	190	281	270	276	282	288	295
1.02	Transmission Services	374	497	594	581	556	537	546
1.04	Fish & Wildlife	16	43	41	41	29	16	15
1.05	Capital Equipment	21	21	24	23	25	23	24
1.06	Capitalized Bond Premiums	0	0	0	0	0	0	0
1.07	**Total Capital Investment [3/]**	**601**	**842**	**929**	**921**	**892**	**864**	**880**
2.01	Projects Funded in Advance	121	61	46	55	53	54	55
10.00	**Total obligations [4/]**	**3,716**	**3,661**	**3,854**	**3,970**	**4,039**	**4,095**	**4,192**

These notes are an integral part of this table.

[1/] See Interest Expense, Pension and Post-retirement Benefits and Capital Transfers section of this budget for a complete discussion of these cost estimates.

[2/] Assumes expense obligations, not accrued expenses.

Power Services doesn't include Fish & Wildlife, Residential Exchange Program, Planning Council, Conservation & Energy Efficiency and Associated Project Costs which have been shown separately for display purposes.

[3/] Assumes capital obligations, not capital expenditures.

[4/] This FY 2024 budget includes capital and expense estimates based on final spending proposals from Bonneville's BP-24 IPR process.

For purposes of this table, this FY 2024 budget reflects, for FY 2022, forecast third party financing expense only for PFIA.

Capital funding levels reflect external factors such as the significant changes affecting West Coast power and transmission markets, along with planned infrastructure investments designed to address the long-term needs of the region.

Budget estimates included in this budget are subject to change due to rapidly changing economic and institutional conditions in the evolving electric utility industry.

Refer to 16 USC Chapters 12B, 12G, 12H, and Bonneville's other organic laws, including P.L. 100-371, Title III, Sec. 300, 102 Stat. 869, July 19, 1988, regarding Bonneville's ability to obligate funds.

Program and Financing (continued)

Current Services

(in millions of dollars)

		2022	2023	est. 2024	2025	2026	2027	2028
Financing:								
1000	Unobligated balance available, start of year. [5/]	10	10	8	0	0	0	0
1050	Unobligated balance available, end of year.[5/]	11	8	8	0	0	0	0
1200	Appropriation[6/]	78						
1236	Appropriations applied to repay debt[6/]	(78)						
1900	**Budget authority (gross)**	**3,716**	**4,101**	**4,320**	**4,381**	**4,391**	**4,449**	**4,715**
Budget Authority:								
1400	Permanent Authority: Authority to borrow from Treasury (indefinite) [7/]	739	842	929	921	892	864	880
1600	Contract Authority	1,270						
1800	Spending authority from off-setting collections	4,517	3,994	4,064	4,107	4,160	4,197	4,242
1825	Portion applied to debt reduction	(611)	(736)	(673)	(647)	(660)	(612)	(407)
1850	**Spending authority from offsetting collections (adjusted)**	**1,707**	**3,259**	**3,391**	**3,460**	**3,500**	**3,585**	**3,835**
900	Total obligations	3,717	3,662	3,855	3,970	4,039	4,095	4,192
4110	Outlays (gross)	3,717	3,662	3,855	3,970	4,039	4,095	4,192
Adjustments to budget authority and outlays:								
	Deductions for offsetting collections:							
4120	Federal funds	(56)	(90)	(90)	(90)	(90)	(90)	(90)
4121	Interest on Federal Securities	(9)	(10)	0				
4123	Non-Federal sources	(4,461)	(3,894)	(3,974)	(4,017)	(4,070)	(4,107)	(4,152)
4130	Total, offsetting collections	(4,517)	(3,994)	(4,064)	(4,107)	(4,160)	(4,197)	(4,242)
4160	**Budget authority (net)**	**(984)**	**107**	**256**	**274**	**231**	**252**	**473**
4170	**Outlays (net) 8[/9/]**	**(806)**	**(332)**	**(209)**	**(137)**	**(121)**	**(102)**	**(50)**

These notes are an integral part of this table.

[5/] Reflects estimated cost for radio spectrum fund.

[6/] This entry reflects a unique mechanism developed by U.S. Treasury and implemented by U.S. Treasury and BPA to apply earned BPA fish credits to the repayment of BPA bonded debt owed to the U.S . Treasury. This entry does not reflect a tax-payer appropriation.

[7/] The Permanent Authority: Authority to borrow (indefinite) from the U.S. Treasury amounts reflect both Bonneville's capital program financing needs and either the use of, or creation of, deferred borrowing. Deferred borrowing is created when, as a cash and debt management decision, Bonneville uses cash from revenues to liquidate capital obligations in lieu of borrowing at that time from the U.S. Treasury. This temporary use of cash on hand instead of borrowed funds creates the ability in future years to borrow money, when fiscally prudent. The FY 1989 Energy and Water Development Appropriations Act (P.L. 100-371 0f 7/19/88) confirmed that Bonneville has authority to incur obligations in excess of U.S. Treasury borrowing authority and cash in the BPA fund.

Net Outlay estimates are based on current cost savings to date and anticipated cash management goals. They are expected to follow anticipated management decisions throughout the rate period that, along with actual market conditions, will impact revenues and expenses. Actual Net Outlays are volatile and are reported in Report on Budget Execution and Budgetary Resources (SF-133). Actual Net Outlays could differ from estimates due to changing market conditions, streamflow variability, continued restructuring of the electric industry, and other reasons.

Revenues, included in the Net Outlay formulation, are calculated consistent with cash management goals and assume a combination of adjustments. Assumed adjustments include the use of a combination of tools, including upcoming rate adjustment mechanisms, a net revenue risk adjustment, debt service refinancing strategies and/or short-term financial tools to manage net revenues and cash. Some of these potential tools will reduce costs rather than generate revenue, causing the same Net Outlay result. Adjustments for depreciation and 4(h)(10)(C) credits of the Northwest Power Act are also assumed.

[8/] This budget has been prepared in accordance with PAYGO. Under PAYGO all Bonneville budget estimates are treated as mandatory and are not subject to the discretionary caps included in the Budget Control Act of 2011. These estimates support activities that are separate from discretionary activities and accounts. Thus, any changes to Bonneville estimates cannot be used to affect any other budget categories which have their own dollar caps. Because Bonneville's obligations are and will be incurred under pre-existing legislative authority, Bonneville is not subject to a "pay-as-you-go" test regarding its revision of current-law funding estimates.

For BP-1 table, the CJ reflects forecasted outlays while the yearend GTAS reflects the actual outlay in the Budget Appendix.

[9/] FY 2022 Net Outlays are calculated using Bonneville's FY 2022 EOY Actuals. FY 2023 is based off of rate case and FY 2024 to 2028 Net Outlays are based on BP-

These notes are an integral part of this table.

BONNEVILLE POWER ADMINISTRATION
BPA STATUS of U.S. TREASURY BORROWING
CURRENT SERVICES

BP-4A

	Fiscal Year							
	2022				**2023**			
	Net Capital Obs	Net Capital Obs Subject to BA	Net Capital Expend.	Bonds Out-Standing	Net Capital Obs	Net Capital Obs Subject to BA	Net Capital Expend.	Bonds Out-Standing
Start-of-Year: Total	4,207	3,665	5,106	5,629	4,119	3,577	5,018	5,679
Plus: Annual Increase								
Cum.-Annual Treasury Borrowing								
Treasury Borrowing (Cash)	601	601	601	739	842	842	842	842
Less:								
BPA Bond Amortization	689	689	689	689	470	470	470	470
Net Increase/(Decrease):	(88)	(88)	(88)	50	373	373	373	373
Cum.-End-of-Year: Total	4,119	3,577	5,018	5,679	4,491	3,949	5,390	6,051
Total Remaining Treasury Borrowing Amount				8,021				7,649
Total Legislated Treasury Borrowing Amount				13,700				13,700

These notes are an integral part of this table.

In any given year, Bonneville may issue lower principal amount of bonds to the U.S. Treasury than forecast depending on net revenues, borrowing costs, and other cash management factors. In such cases, Bonneville accumulates a deferred borrowing balance that it accesses as necessary in the future.

Capital funding levels reflect external factors such as the significant changes affecting West Coast power and transmission markets, along with planned infrastructure investments designed to address the long-term needs of the region.

In this FY 2024 budget, Bonneville "bond(s)" refers to all bonds issued by Bonneville to and advances received from the U.S. Treasury. This reference is consistent with section 13 (a) of the Transmission Act, which defines Bonneville bonds as all bonds, notes, and other evidences of indebtednesses issued and sold by Bonneville to the U.S. Treasury.

As in the past, Bonneville may pursue future restructuring of total debt as opportunities arise.

Budget estimates included in this budget are subject to change due to rapidly changing economic and institutional conditions in the evolving electric utility industry.

Cumulative advance amortization payments as of the end of FY 2022 are $6,600 million.

Total includes BPA's self-financing activities. In addition, BPA has negotiated with the U.S. Treasury access to a $750 million short term note as part of the $17.7 billion borrowing authority.

Section 40110 of the Infrastructure Investment and Jobs Act of 2021, Public Law 117-58, enacted on November 15, 2021, provided the Bonneville Administrator with $10 billion in additional permanent borrowing authority "…to assist in the financing, acquisition and replacement of the Federal Columbia Power System and to implement the authority of the Administrator of the Bonneville Power Administration…" Section 40110 specifies that the "obligation"…of the $10 billion in additional borrowing authority…shall not exceed $6 billion by fiscal year 2028. BPA is authorized by Congress to have outstanding at any time up to $13.7 billion of bonds through fiscal year 2027. Beginning in fiscal year 2028, an additional $4 billion will become available to have outstanding for a total of $17.7 billion.

These notes are an integral part of this table.

BONNEVILLE POWER ADMINISTRATION
BPA STATUS of U.S. TREASURY BORROWING
CURRENT SERVICES
(in millions of dollars)

BP-4B

	2024				2025			
	Net Capital Obs	Net Capital Obs Subject to BA	Net Capital Expend.	Bonds Out-Standing	Net Capital Obs	Net Capital Obs Subject to BA	Net Capital Expend.	Bonds Out-Standing
Start-of-Year: Total	4,491	3,949	5,390	6,051	5,032	4,490	5,931	6,592
Plus: Annual Increase								
Cum.-Annual Treasury Borrowing	929	929	929	929	921	921	921	921
Treasury Borrowing (Cash)								
Less:								
Total BPA Bond Amortization	388	388	388	388	538	538	538	538
Net Increase/(Decrease):								
Total	541	541	541	541	383	383	383	383
Cum.-End-of-Year: Total	5,032	4,490	5,931	6,592	5,415	4,873	6,314	6,975
Total Remaining Treasury Borrowing Amount				7,108				6,725
Total Legislated Treasury Borrowing Amount				13,700				13,700

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Capital funding levels reflect external factors such as the significant changes affecting West Coast power and transmission markets, along with planned infrastructure investments designed to address the long-term needs of the region.

In this FY 2024 budget, Bonneville "bond(s)" refers to all bonds issued by Bonneville to and advances received from the U.S. Treasury. This reference is consistent with section 13 (a) of the Transmission Act, which defines Bonneville bonds as all bonds, notes, and other evidences of indebtednesses issued and sold by Bonneville to the U.S. Treasury.

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Budget estimates included in this budget are subject to change due to rapidly changing economic and institutional conditions in the evolving electric utility industry.

Cumulative advance amortization payments as of the end of FY 2022 are $6,600 million.

Total includes BPA's self-financing activities. In addition, BPA has negotiated with the U.S. Treasury access to a $750 million short term note as part of the $17.7 billion borrowing authority.

Section 40110 of the Infrastructure Investment and Jobs Act of 2021, Public Law 117-58, enacted on November 15, 2021, provided the Bonneville Administrator with $10 billion in additional permanent borrowing authority "…to assist in the financing, acquisition and replacement of the Federal Columbia Power System and to implement the authority of the Administrator of the Bonneville Power Administration…" Section 40110 specifies that the "obligation"…of the $10 billion in additional borrowing authority…shall not exceed $6 billion by fiscal year 2028. BPA is authorized by Congress to have outstanding at any time up to $13.7 billion of bonds through fiscal year 2027. Beginning in fiscal year 2028, an additional $4 billion will become available to have outstanding for a total of $17.7 billion.

These notes are an integral part of this table.

BONNEVILLE POWER ADMINISTRATION
BPA STATUS of U.S. TREASURY BORROWING
CURRENT SERVICES
(in millions of dollars)

BP-4C Fiscal Year

	2026				2027			
	Net Capital Obs	Net Capital Obs Subject to BA	Net Capital Expend.	Bonds Out-Standing	Net Capital Obs	Net Capital Obs Subject to BA	Net Capital Expend.	Bonds Out-Standing
Start-of-Year: Total	5,415	4,873	6,314	6,975	5,735	5,193	6,634	7,295
Plus: Annual Increase								
Cum.-Annual Treasury Borrowing	892	892	892	892	864	864	864	864
Treasury Borrowing (Cash)								
Less:								
Total BPA Bond Amortization	571	571	571	571	612	612	612	612
Net Increase/(Decrease):								
Total	320	320	320	320	252	252	252	252
Cum.-End-of-Year: Total	5,735	5,193	6,634	7,295	5,987	5,445	6,886	7,547
Total Remaining Treasury Borrowing Amount				6,405				6,153
Total Legislated Treasury Borrowing Amount				13,700				13,700

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Capital funding levels reflect external factors such as the significant changes affecting West Coast power and transmission markets, along with planned infrastructure investments designed to address the long-term needs of the region.

In this FY 2024 budget, Bonneville "bond(s)" refers to all bonds issued by Bonneville to and advances received from the U.S. Treasury. This reference is consistent with section 13 (a) of the Transmission Act, which defines Bonneville bonds as all bonds, notes, and other evidences of indebtednesses issued and sold by Bonneville to the U.S. Treasury.

As in the past, Bonneville may pursue future restructuring of total debt as opportunities arise.

Budget estimates included in this budget are subject to change due to rapidly changing economic and institutional conditions in the evolving electric utility industry.

Cumulative advance amortization payments as of the end of FY 2022 are $6,600 million.

Total includes BPA's self-financing activities. In addition, BPA has negotiated with the U.S. Treasury access to a $750 million short term note as part of the $17.7 billion borrowing authority.

Section 40110 of the Infrastructure Investment and Jobs Act of 2021, Public Law 117-58, enacted on November 15, 2021, provided the Bonneville Administrator with $10 billion in additional permanent borrowing authority "…to assist in the financing, acquisition and replacement of the Federal Columbia Power System and to implement the authority of the Administrator of the Bonneville Power Administration…" Section 40110 specifies that the "obligation"…of the $10 billion in additional borrowing authority…shall not exceed $6 billion by fiscal year 2028. BPA is authorized by Congress to have outstanding at any time up to $13.7 billion of bonds through fiscal year 2027. Beginning in fiscal year 2028, an additional $4 billion will become available to have outstanding for a total of $17.7 billion.

These notes are an integral part of this table.

BONNEVILLE POWER ADMINISTRATION
BPA STATUS of U.S. TREASURY BORROWING
CURRENT SERVICES
(in millions of dollars)

BP-4D

	Fiscal Year 2028			
	Net Capital Obs	Net Capital Obs Subject to BA	Net Capital Expend.	Bonds Out-Standing
Start-of-Year: Total	5,987	5,445	6,886	7,547
Plus: Annual Increase				
Cum.-Annual Treasury Borrowing	880	880	880	880
Treasury Borrowing (Cash)				
Less:				
Total BPA Bond Amortization	407	407	407	407
Net Increase/(Decrease):				
Total	473	473	473	473
Cum.-End-of-Year: Total	6,460	5,918	7,359	8,020
Total Remaining Treasury Borrowing Amount				9,680
Total Legislated Treasury Borrowing Amount				17,700

These notes are an integral part of this table.
In any given year, Bonneville may issue lower principal amount of bonds to the U.S. Treasury than forecast depending on net revenues, borrowing costs, and other cash management factors. In such cases, Bonneville accumulates a deferred borrowing balance that it accesses as necessary in the future.

Capital funding levels reflect external factors such as the significant changes affecting West Coast power and transmission markets, along with planned infrastructure investments designed to address the long-term needs of the region.

In this FY 2024 budget, Bonneville "bond(s)" refers to all bonds issued by Bonneville to and advances received from the U.S. Treasury. This reference is consistent with section 13 (a) of the Transmission Act, which defines Bonneville bonds as all bonds, notes, and other evidences of indebtednesses issued and sold by Bonneville to the U.S. Treasury.

As in the past, Bonneville may pursue future restructuring of total debt as opportunities arise.

Budget estimates included in this budget are subject to change due to rapidly changing economic and institutional conditions in the evolving electric utility industry.

Cumulative advance amortization payments as of the end of FY 2022 are $6,600 million.

Total includes BPA's self-financing activities. In addition, BPA has negotiated with the U.S. Treasury access to a $750 million short term note as part of the $17.7 billion borrowing authority.

Section 40110 of the Infrastructure Investment and Jobs Act of 2021, Public Law 117-58, enacted on November 15, 2021, provided the Bonneville Administrator with $10 billion in additional permanent borrowing authority "…to assist in the financing, acquisition and replacement of the Federal Columbia Power System and to implement the authority of the Administrator of the Bonneville Power Administration…" Section 40110 specifies that the "obligation"…of the $10 billion in additional borrowing authority…shall not exceed $6 billion by fiscal year 2028. BPA is authorized by Congress to have outstanding at any time up to $13.7 billion of bonds through fiscal year 2027. Beginning in fiscal year 2028, an additional $4 billion will become available to have outstanding for a total of $17.7 billion.

These notes are an integral part of this table.

BONNEVILLE POWER ADMINISTRATION
POTENTIAL THIRD PARTY FINANCING TRANSPARENCY
(in millions of dollars)

BP-5

		Fiscal Year						
Transmission Services - Capital		**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
Main Grid	Requirements	7	6	38	39	40	36	28
Area & Customer Services		39	72	38	44	40	45	52
Upgrades & Additions		64	113	151	147	101	54	58
System Replacements		264	306	366	352	375	402	409
Projects Funded in Advance		121	61	46	55	53	54	55
Total, Transmission Services - Capital		494	558	640	636	609	591	601
Associated Project Costs - Capital								
Associated Project Costs	Requirem	190	281	270	276	282	288	295
Projects Funded in Advance[1/]		0	0	0	0	0	0	0
Total, Associated Project Costs - Capital		190	281	270	276	282	288	295
Federal and Non-Federal Funding								
Projects Funded in Advance	Source	121	61	46	55	53	54	55
U.S. Treasury Borrowing Authority		564	778	864	857	838	825	841
Scenario								
Projects Funded in Advance[1/]	Scenario	0	0	0	0	0	0	0
Third Party Financing		93	124	148	145	139	134	137
Alternate Treasury Borrowing Authority		NA	654	715	711	699	691	704

These notes are an integral part of this table.

1/ In this instance, Projects Funded in Advance represents prepayment of Power customers' bills reimbursed by future credits and third party non-federal financing for Conservation initiatives. Also this category includes those facilities and/or equipment where Bonneville retains control or ownership which are funded or financed by a third party, revenue, or with Power or Transmission reserves, either in total or in part.

The table above shows both the potential use of U.S. Treasury borrowing authority for transmission capital projects based on this FY 2024 budget and the use adjusted for potential third-party financing to fund appropriate capital expenditures when feasible in lieu of U.S. Treasury borrowing. Estimates included in this FY 2024 budget are uncertain and may change due to revised capital investment plans, changing economic conditions, and an evolving financial market environment. The estimates of third-party financing included in the table show a reduction in the use of U.S. Treasury borrowing and do not reflect the actual notional third party financing commitment Bonneville may enter into in that particular year. The difference of reduction in use of U.S. Treasury borrowing and the actual notional third party financing commitment is primarily due to the difference in the timing of financing transactions between U.S. Treasury and third-party financing for capital projects with multi-year construction schedules.

Bonneville's Third Party Financing for Transmission Services consists primarily of lease-purchase agreements, which are capitalized obligations that enable Bonneville to acquire the use of transmission facilities over time. Bonneville also undertakes the construction and installation of facilities from funds that customers advance to Bonneville for construction of BPA-owned facilities that assist the customers in obtaining necessary transmission service from Bonneville. These customers receive monetary payment credits in bills for transmission services from Bonneville up to the amount of funds advanced to Bonneville, plus interest.

Bonneville's historical Third Party Financing amounts may vary over time due to re-assignment of certain lease-purchase agreements to Treasury Financing.

Bonneville Status of U.S. Treasury Borrowing with Potential Third Party Financing & PFIA Scenario

With the potential use of third party financing assumed in the scenario above, Bonneville's total remaining U.S. Treasury Borrowing Amount would be extended to the following amounts. See BP-4 BPA Status of Treasury Borrowing- Current Services.

	Fiscal Year						
	2022	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
Start-of-Year: Total Bonds Outstanding	5,629	5,679	5,927	6,320	6,557	6,738	6,856
Plus:							
U.S. Treasury Borrowing (Cash)	739	842	929	921	892	864	880
Less:							
Potential Third Party Financing & PFIA	93	124	148	145	139	134	137
BPA Bond Amortization	689	470	388	538	571	612	407
Net Increase/(Decrease) Bonds Outstanding:	50	249	392	237	181	117	336
Cum.-End-of-Year: Total	5,679	5,927	6,320	6,557	6,738	6,856	7,192
Total Remaining U.S. Treasury Borrowing Amount	8,021	7,773	7,380	7,143	6,962	6,844	10,508
Total Legislated U.S.Treasury Borrowing Amount	13,700	13,700	13,700	13,700	13,700	13,700	17,700

U.S. TREASURY PAYMENTS

(in millions of dollars)

		FISCAL YEAR						
		2022	2023	2024	2025	2026	2027	2028
A.	**INTEREST ON BONDS & APPROPRIATIONS**							
	Bonneville Bond Interest							
1	Bonneville Bond Interest (net)	128	114	121	141	168	182	197
2	AFUDC [1/]	25	30	31	29	25	22	21
	Appropriations Interest							
3	Bonneville	0	0	0	0	0	0	0
4	Corps of Engineers [2/]	40	40	29	18	15	13	14
5	Lower Snake River Comp. Plan	0	0	0	0	0	0	0
6	Bureau of Reclamation [3/]	1	1	1	1	1	0	0
7	Bond Premiums paid/Discounts (not capitalized)	0	-2	-6	0	3	0	-9
8	**Total Bond and Approp. Interest**	**194**	**184**	**176**	**190**	**213**	**218**	**223**
B.	**ASSOCIATED PROJECT COST**							
9	Bureau of Reclamation Irrigation Assistance	17	13	8	14	20	6	11
10	Bureau of Rec. O & M [4/]	0	0	0	0	0	0	0
11	Corps of Eng. O & M [4/]	1	0	0	0	0	0	0
12	L. Snake River Comp. Plan O & M [4/]	0	0	0	0	0	0	0
13	**Total Assoc. Project Costs**	**18**	**13**	**8**	**14**	**20**	**6**	**11**
C.	**CAPITAL TRANSFERS**							
	Amortization							
14	Bonneville Bonds [6/]	689	470	388	538	571	612	407
15	Bureau of Reclamation Appropriations	5	3	2	0	19	0	0
16	Corps of Engineers Appropriations	0	261	282	109	70	0	0
17	Lower Snake River Comp. Plan	0	2	0	0	0	0	0
18	Bonneville Appropriations	0	0	0	0	0	0	0
19	**Total Capital Transfers [/8]**	**694**	**736**	**673**	**647**	**660**	**612**	**407**
D.	**OTHER PAYMENTS**							
20	Unfunded Post-Retirement Liability [5/]	37	32	38	38	39	40	41
21	**TOTAL TREASURY PAYMENTS**	**943**	**965**	**895**	**889**	**932**	**877**	**683**

These notes are an integral part of this table.

1/ This interest cost is capitalized and included in BPA's Transmission System Development, System Replacements, and Associated Projects Capital programs. AFUDC is financed through the sale of bonds.

2/ Includes interest on construction funding for Corps of Engineers (Corps) Columbia River Fish Mitigation (CRFM).

3/ Includes interest on construction funding for Reclamation's Leavenworth Fish Hatchery at Grand Coulee and smaller appropriated projects.

4/ Costs for power O&M is funded directly by Bonneville as follows (in millions):

FISCAL YEAR	2022	2023	2024	2025	2026	2027	2028
Bureau of Reclamation	147	153	154	157	161	165	169
Corps of Engineers	244	253	259	269	276	282	289
Subtotal Bureau and Corps	391	406	414	427	437	447	457
Lower Snake River Comp. Plan	33	29	32	32	33	34	35
Total	424	435	446	459	470	481	492

5/ See Interest Expense, Pension and Post-retirement Benefits and Capital Transfers section of this budget for a complete discussion of these cost estimates.

6/ In this FY 2024 budget, Bonneville "bond(s)" refers to all bonds issued by Bonneville to and advances received from the U.S. Treasury. This reference is consistent with section 13 (a) of the Transmission Act, which defines Bonneville bonds as all bonds, notes, and other evidences of indebtednesses issued and sold by Bonneville to the U.S. Treasury.

7/ Does not include Treasury bond premiums on refinanced Treasury bonds.

8/ FY 2022 data reflects BPA's FY 2022 EOY Actuals.

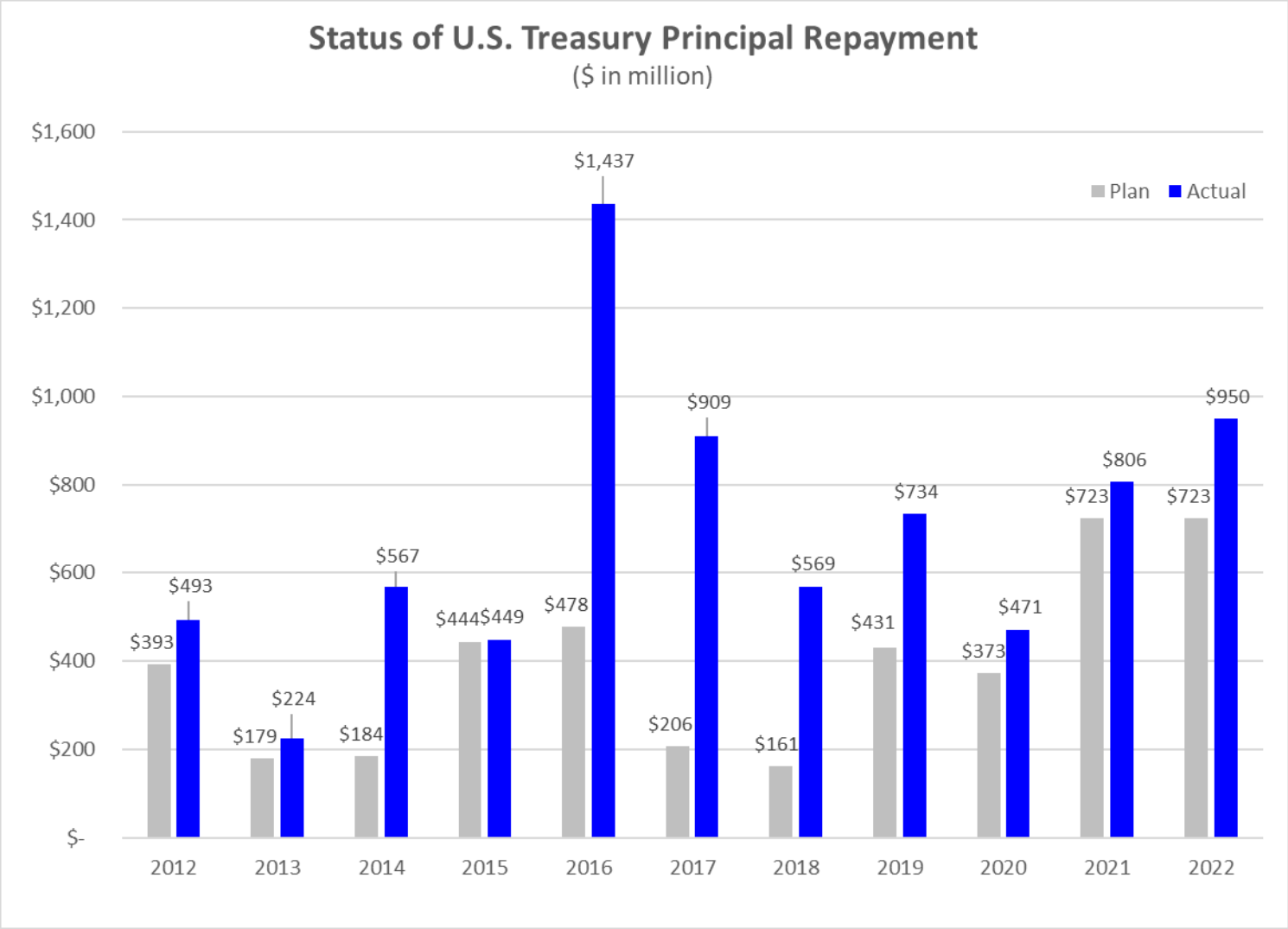


Chart Notes

[1/] This chart displays principal repayment only.

[2/] U.S. Treasury payment outyear estimates for planned amortization of principal are based on rate case estimates when available and are planned amortization for future rate case periods. These estimates may change due to revised capital investment plans, actual U.S. Treasury borrowing, and advanced amortization payments. Bonneville's FY 2022 payment to the U.S. Treasury was approximately $951 million. This was the 39th consecutive year that Bonneville made its scheduled payments to the U.S. Treasury on time and in full. The payment included $694 million in principal, which included $346 million in early retirement of higher interest rate U.S. Treasury debt, $194 million for interest, $17 million in irrigation assistance payments, and $37 million in pension and post-retirement benefits.

[3/] FYs 2002-2012 payments include portions of advance amortization amounts consistent with Bonneville's capital strategy plan and the Bonneville /Energy Northwest debt optimization program.

[4/] Advance amortization due to sale of transmission facilities includes $12.7 million in FY 2003, $5.3 million in FY 2006, $2.0 million in FY 2011, $0.4 million in FY 2013 and $0.4 million in FY 2014, and $0.6 million in FY 2017.

[5/] The cumulative balance of advance amortization payments as of the end of FY 2022 was in excess of $6.6 billion.

[6/] FYs 2014-2022 include advance amortization under the Regional Cooperation Debt initiative with Energy Northwest (EN) under which EN extended maturities on Bonneville-backed debt which enabled the early amortization of higher cost appropriations and bonds.

OBJECT CLASSIFICATION STATEMENT

(in millions of dollars)

		ESTIMATES		
		2022	**2023**	**2024**
11.1	Full-time permanent	293	289	304
11.3	Other than full-time permanent	2	2	2
11.5	Other personnel compensation	107	105	111
11.9	**Total personnel compensation**	**402**	**396**	**417**
12.1	Civilian personnel benefits	166	163	172
13.0	Benefits for former personnel	0	0	0
21.0	Travel and transportation of persons	3	3	3
22.0	Transportation of things	8	8	8
23.1	Rental payments to GSA	0	0	0
23.2	Rents, other	35	34	36
23.3	Communication, utilities & misc. charg	13	13	13
25.1	Consulting Services	104	102	108
25.2	Other Services	2437	2401	2527
25.5	R & D Contracts	4	4	4
26.0	Supplies and materials	29	29	30
31.0	Equipment	112	110	116
32.0	Lands and structures	88	87	91
41.0	Grants, subsidies, contributions	53	52	55
43.0	Interest and dividends	263	259	273
99.0	**Total obligations**	**3716**	**3661**	**3854**

Estimate of Receipts
(in millions of dollars)

	Fiscal Year						
	2022	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
Reclamation Interest	1	1	1	1	1	0	0
Reclamation Amortization	5	3	2	0	19	0	0
Reclamation O&M	0	0	0	0	0	0	0
Reclamation Irrig. Assist.	17	13	8	14	20	6	11
Revenues Collected by Reclamation	-17	-7	-5	-7	-7	-1	-6
Distributed in Treasury Account (credit)							
Colville Settlement (credit)	-5	-5	-5	-5	-5	-5	-5
Total 1/ Reclamation Fund	**1**	**5**	**1**	**3**	**29**	**1**	**1**
Corps O&M	0						
COE Approp. CRFM Studies Expense	8						
CSRS	37	32	38	38	39	40	41
Total 2/ Repayments on miscellaneous costs	**45**	**32**	**38**	**38**	**39**	**40**	**41**

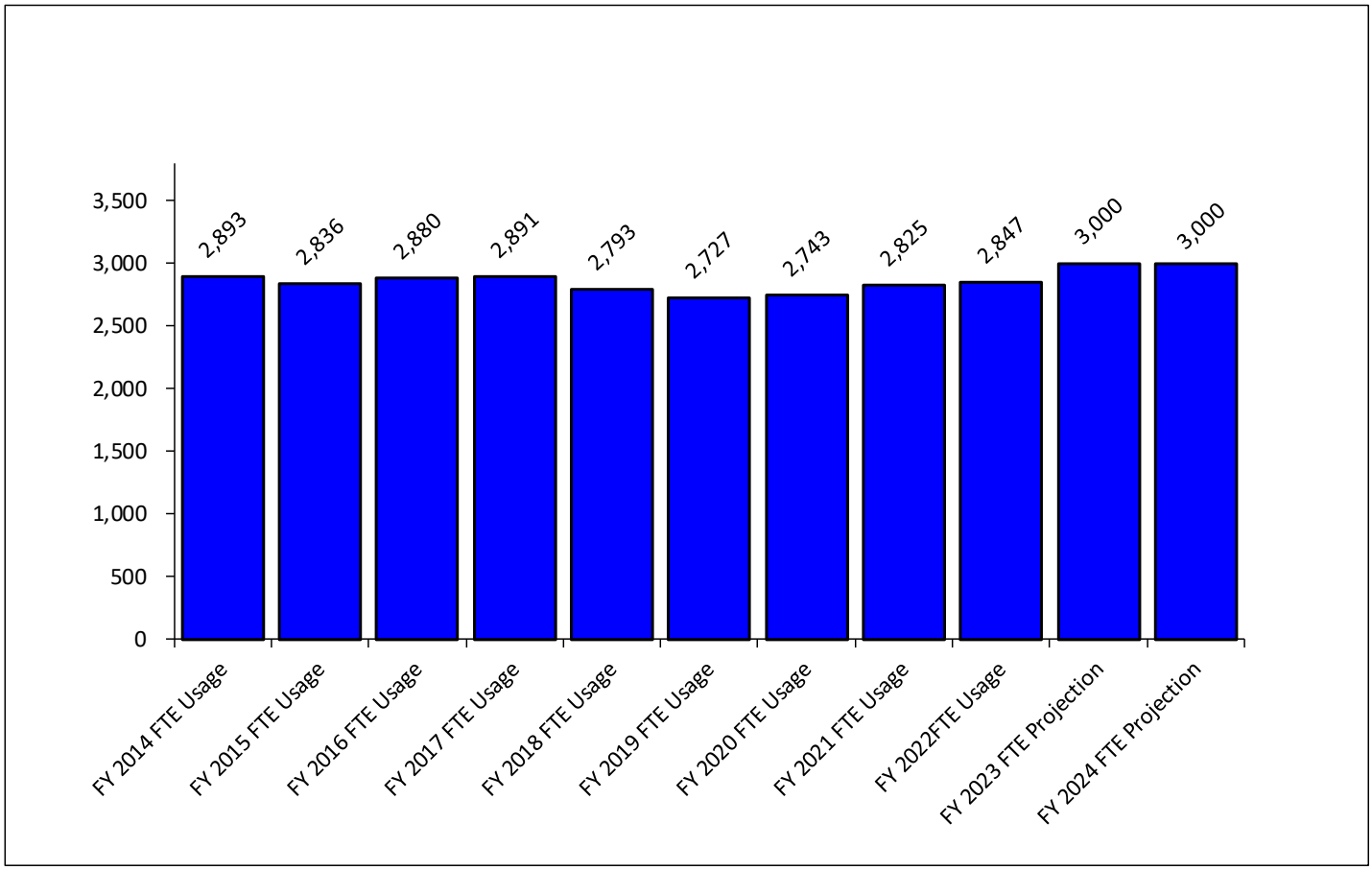
1/ Includes amortization of appropriations and irrigation assistance, and interest costs for Reclamation. The cost of power O&M for Reclamation is no longer included in Proprietary Receipts due to Direct Funding by Bonneville. Represents transfer to Account #895000.26

2/ The costs of power O&M for the Corps and Lower Snake River Comp. Plan are no longer included in Proprietary Receipts due to Direct Funding by Bonneville. Represents transfers to Account #892889, Repayments on misc. recoverable costs, not otherwise classified. Costs for power O&M is funded directly by Bonneville as follows (in millions).

	2022	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**
Bureau of Reclamation	147	153	154	157	161	165	169
Corps of Engineers	244	253	259	269	276	282	289
Lower Snake River Comp. Plan	33	29	32	32	33	34	35
Total	**424**	**435**	**446**	**459**	**470**	**481**	**492**

See Interest Expense, Pension and Post-retirement Benefits and Capital Transfers section of this budget for a complete discussion of these cost estimates.

BONNEVILLE FTE



These notes are an integral part of this chart.

1. Actual FTE data is consistent with DOE personnel reports.
2. FTE outyear data are estimates and may change. Bonneville is facing a dynamic and changing transmission marketplace and operations while, at the same time, many of its employees are eligible to retire in the near future. It is important that Bonneville continue to attract and retain skilled individuals to meet the growing demands of a competitive and rapidly changing industry. Accordingly, FTE estimates may need to be adjusted in the future.
3. As of 10 Oct 2022 DOE HR staff has reported FY 2022 BPA's FTE Usage at 2,847.

Total Cost of BPA Fish & Wildlife Actions

COST ELEMENT	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
CAPITAL INVESTMENTS [1/]										
BPA FISH AND WILDLIFE	52.1	37.4	21.4	16.0	5.4	30.7	22.3	40.2	41.9	16.1
BPA SOFTWARE DEVELOPMENT COSTS	0.0	0.1	1.4	1.2	1.4	0.8	0.0	0.0	0.0	0.0
ASSOCIATED PROJECTS (FEDERAL HYDRO)	103.6	101.7	81.4	34.1	58.9	51.8	55.5	106.6	66.7	10.4
TOTAL CAPITAL INVESTMENTS	**155.7**	**139.2**	**104.1**	**51.4**	**65.7**	**83.2**	**77.9**	**146.7**	**108.6**	**26.5**
PROGRAM EXPENSES										
BPA DIRECT FISH AND WILDLIFE PROGRAM	239.0	231.8	258.2	258.1	254.7	258.7	240.4	238.1	253.6	249.4
FISH & WILDLIFE SOFTWARE EXPENSE COSTS	0.2	0.3	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.2
SUPPLEMENTAL MITIGATION PROGRAM EXPENSES [2/]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
REIMBURSABLE/DIRECT-FUNDED PROJECTS [3/]										
O & M LOWER SNAKE RIVER HATCHERIES	28.7	31.0	30.9	28.6	26.0	31.4	26.7	31.9	30.7	33.0
O & M CORPS OF ENGINEERS	39.2	47.8	46.4	48.2	46.8	47.5	48.9	46.3	48.3	47.4
O & M BUREAU OF RECLAMATION	5.6	6.6	2.6	6.0	7.0	5.5	8.7	5.8	6.5	7.2
NW POWER AND CONSERVATION COUNCIL ALLOCATED @ 50%	5.0	4.9	4.9	5.4	5.4	5.5	5.6	5.6	5.5	6.0
SUBTOTAL (REIMB/DIRECT-FUNDED)	78.5	90.3	84.9	88.2	85.2	89.9	89.9	89.6	91.0	93.6
TOTAL OPERATING EXPENSES	**317.70**	**322.40**	**343.17**	**346.34**	**339.90**	**348.65**	**330.30**	**327.66**	**344.60**	**343.23**
PROGRAM RELATED FIXED EXPENSES [4/]										
INTEREST EXPENSE	89.1	83.4	89.2	85.6	58.6	41.0	39.7	32.5	29.3	29.4
AMORTIZATION EXPENSE	35.7	38.7	41.3	42.5	42.5	43.4	45.1	46.7	47.4	47.6
DEPRECIATION EXPENSE	18.6	19.2	20.1	20.1	20.3	20.8	21.0	21.1	22.0	22.0
TOTAL FIXED EXPENSES	**143.4**	**141.3**	**150.6**	**148.2**	**121.4**	**105.1**	**105.8**	**100.3**	**98.7**	**99.0**
GRAND TOTAL PROGRAM EXPENSES	**461.1**	**463.7**	**493.7**	**494.6**	**461.3**	**453.7**	**436.1**	**428.0**	**443.3**	**442.2**
FORGONE REVENUES AND POWER PURCHASES										
FOREGONE REVENUES	135.5	122.7	195.8	76.6	9.6	2.9	174.4	33.4	190.6	251.9
BPA POWER PURCH. FOR FISH ENHANCEMENT	85.8	196.2	67.5	50.3	(20.5)	24.3	177.6	150.0	110.6	237.9
TOTAL FOREGONE REVENUES AND POWER PURCHASES	**221.3**	**318.9**	**263.3**	**126.9**	**(10.9)**	**27.2**	**352.0**	**183.4**	**301.2**	**489.8**
TOTAL PROGRAM EXPENSES, FOREGONE REVENUES, & POWER PURCHASES	**682.4**	**782.6**	**757.0**	**621.5**	**450.4**	**480.9**	**788.1**	**611.5**	**744.5**	**932.1**
CREDITS										
4(h)(10)(C)	(84.1)	(103.9)	(77.7)	(72.6)	(53.7)	(70.1)	(98.2)	(95.5)	(90.6)	(112.3)
FISH COST CONTINGENCY FUND	-	-	-	-	-	-	-	-		-
TOTAL CREDITS	**(84.1)**	**(103.9)**	**(77.7)**	**(72.6)**	**(53.7)**	**(70.1)**	**(98.2)**	**(95.5)**	**(90.6)**	**(112.3)**

This information has been made publicly available by BPA on 3/25/2008. The figures shown are consistent with audited actuals that contain Agency approved financial information, except for forgone revenues and power purchases which are estimates and do not contain Agency approved financial information

1/ Capital Investments include both BPA's direct Fish and Wildlife Program capital investments, funded by BPA's Treasury borrowing, and "Associated Projects", which include capital investments at Corps of Engineers' and Bureau of Reclamation projects, funded by appropriations and repaid by BPA. The negative amount in FY 1997 reflects a decision to reverse "plant-in-service" investment that was never actually placed into service. The annual expenses associated with these investments are included in "Program-Related Fixed Expenses", below.

2/ Includes High Priority and Action Plan Expenses and other supplemental programs.

3/ "Reimbursable/Direct-Funded Projects" includes the portion of costs BPA pays to or on behalf of other entities that is determined to be for fish and wildlife purposes.

4/ "Fixed Expenses" include depreciation, amortization and interest on investments on the Corps of Engineers' projects, and amortization and interest on the investments associated with BPA's direct Fish and Wildlife Program.