BONNEVILLE POWER ADMINISTRATION

FY 2025 Congressional Budget

February 2024

Bonneville Power Administration
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FY 2025 Expenditure Authorization

Expenditures from the Bonneville Power Administration Fund, established pursuant to Public Law 93-454, are approved for: Rocky Reach Kelt Facility, and the Colville Acclimation Building Enclosures, and for official reception and representation expenses in an amount not to exceed $5,000: Provided, that during fiscal year 2025, no new direct loan obligations may be made.

Explanation of Changes

The proposed appropriation language provides expenditure approval for the Rocky Reach Kelt Facility, and the Colville Acclimation Building Enclosures, and restricts new direct loans in FY 2025 as in FY 2023. 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 cannot exceed $6 billion before FY 2028. Bonneville manages its overall debt portfolio by using its power and transmission revenues, and the proceeds of borrowing authority from the U.S. Treasury. Bonneville's estimated FY 2025 obligations and cash transfers total approximately $4.9 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 2025 Bonneville Congressional Budget submission includes FY 2024 budget estimates.

Bonneville Funding Profile by Subprogram[1/]

Bonneville Power Administration

Funding Profile by Subprogram [1/]

(Accrued Expenditures in Thousands of Dollars)

	Fiscal Year			
	2023 Actuals	2024 Original [/2]	2024 Revised [/2]	2025 Proposed
Capital Investment Obligations				
Associated Project Costs [3/]	207,454	270,000	270,000	275,675
Fish & Wildlife	14,646	41,335	41,335	41,300
Subtotal, Power Services	222,100	311,335	311,335	316,975
Transmission Services	623,478	593,840	650,468	753,151
Capital Equipment & Bond Premium	15,514	23,983	23,100	22,384
Total, Capital Obligations [3/]	861,092	929,158	984,903	1,092,510
Expensed and Other Obligations				
Expensed	4,318,630	2,879,919	2,901,692	2,999,286
Projects Funded in Advance [4/]	24,528	45,924	46,232	55,353
Revenue Financing	40,000	80,000	88,740	89,290
Total, Obligations	5,244,250	3,935,001	4,021,567	4,236,439
Capital Transfers (cash)	740,659	673,266	665,012	633,438
Bonneville Total (Oligations & Capital Transfers)	5,984,909	4,608,267	4,686,579	4,869,877
Bonneville Net Outlays	522,000	(208,923)	(177,405)	(142,204)
Full-time Equivalents (FTEs) [5/]	2,980	3,000	3,150	3,225

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			
	2026	2027	2028	2029
Capital Investment Obligations				
Associated Project Costs [3/]	281,620	288,001	294,794	301,833
Fish & Wildlife	29,000	15,700	15,000	15,000
Subtotal, Power Services	310,620	303,701	309,794	316,833
Transmission Services	916,428	1,034,988	1,002,813	742,743
Capital Equipment & Bond Premium	24,400	22,500	23,200	23,665
Total, Capital Obligations [3/]	1,251,448	1,361,189	1,335,807	1,083,241
Expensed and Other Obligations				
Expensed	3,090,303	3,178,271	3,274,007	3,342,540
Projects Funded in Advance [4/]	56,131	56,779	56,740	57,221
Revenue Financing	103,690	103,000	118,560	119,240
Total, Obligations	4,501,573	4,699,239	4,785,114	4,602,242
Capital Transfers (cash)	676,532	666,403	882,667	845,079
Bonneville Total (Oligations & Capital Transfers)	5,178,105	5,365,642	5,667,781	5,447,321
Bonneville Net Outlays	76,751	243,460	281,814	71,781
Full-time Equivalents (FTEs) [5/]	3,300	3,375	3,450	3,525

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 Congressional 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 2025. The BPA estimates in this budget are consistent with the BP-24 IPR and the increased expenditures for

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

5/ As of 9/30/2023, DOE HR staff has reported FY 2023 BPA's FTE actuals at 2,980

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 2023 are $7 Billion.

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

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 2023 Net Outlays are calculated using Bonneville's FY 2023 Actuals. FY 2024 is based off of rate case and FY 2025 to 2029 Net Outlays are based on BP-24 IPR assumptions, an escalation factor from using the FY 2023 Whitebook Loads and Resources Report, and the increased expenditures for Transmission Evolving Grid Projects.

FTE outyear data are estimates and may change. Bonneville is facing a dynamic and changing energy marketplace and operations, and it is important to 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 FCRPS hydro projects in the Pacific Northwest owned by the Corps and the Reclamation. In addition, Bonneville also acquires power from non-federal generating resources, including the power from a nuclear power plant, the Columbia Generating Station (Columbia).

Bonneville uses the power primarily from the Federal Columbia River Power System hydroelectric projects and Columbia to meet the Administrator's long term firm power sales contract obligations. Bonneville currently maintains and operates 15,179 circuit miles of transmission lines, 259 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 2025 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:

- An adequate, efficient, economical, and reliable power supply;
- 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
- 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.

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
- Encouraging the development of renewable energy resources within the Pacific Northwest
- Assuring the Northwest has an adequate, efficient, economical, and reliable power supply
- Promoting interregional participation and planning
- Protecting, mitigating, and enhancing 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 rate setting process and established judicial review of Bonneville's final actions in the U.S. Court of Appeals for the Ninth Circuit.

The 2022 Infrastructure Investment and Jobs Act added $10 billion to BPA's existing borrowing authority, bringing the total borrowing authority to $17.70 billion. Only up to $13.7 billion of the total may be outstanding at any time through fiscal year 2027. Beginning fiscal year 2028, the remaining $4 billion may be outstanding up to the overall limit of $17.7 billion. The borrowing authority may be used by BPA for any authorized BPA purpose. At of the end of FY 2023, Bonneville had revolving U.S. Treasury borrowing authority of $13.7 billion, of which approximately $7.9 billion remained available to be drawn.

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 2025 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 rate setting process.

In May 2023, debt instruments issued by non-federal entities but secured by payment and other financial commitments provided by Bonneville received the following credit ratings: Standard & Poor's

at AA- with a stable outlook and Fitch at AA with a stable outlook. Moody's upgraded Bonneville to Aa1 in June 2023 and then changed the outlook to negative in November 2023.

BACKGROUND: 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.

U.S. Treasury Payments & Budget Overview

Bonneville's FY 2023 payment to the U.S. Treasury was approximately $1 billion. This was the 40th consecutive year that Bonneville made its scheduled payments to the U.S. Treasury on time and in full. The payment included $741 million in principal, which included $426 million in early retirement of U.S. Treasury and appropriation debt, $218 million for interest, $13 million in irrigation assistance payments, and $39 million in pension and post-retirement benefits. Total credits applied toward Bonneville's U.S. Treasury payment were $284 million for FY 2023. The majority of these credits are established and applied under Section 4(h)(10)(C) of the Northwest Power Act. The FY 2024 and 2025 U.S. Treasury payments are currently estimated at $915 million and $885 million, respectively. The FY 2024 and 2025 4(h)(10)(C) credits are estimated to be $111.3 million and $111.5 million, respectively.

Estimates of interest and amortization levels for outyear U.S. Treasury payments are included in the FY 2024-2025 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 2023 was in excess of $7.0 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 $457 million in FY 2023.

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.

For years, 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 plan 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 FY 2014 through FY 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 2024 through 2030 could be up to $2.6 billion.

Bonneville can incur a bond premium or discount when it repays a U.S. Treasury bond before the due date. When bonds are refinanced and premiums or discounts are incurred, the resulting gains or losses associated with the bond premiums or discounts can be deferred. 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 2025 Budget proposes estimated accrued expenditures of $2,999 million for operating expenses, $55 million for Projects Funded in Advance (PFIA), $1,093 million for capital investments, and $633 million for capital transfers in FY 2025.

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 2025 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 2024-2029 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 2025 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 $1,067 million in bonds to be issued and sold to the U.S. Treasury in FY 2025.

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 2025 Budget includes updated capital investment levels for FY 2024 estimated at $985 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 2025, total budget expense and capital obligations are estimated at $4,236 million. The total program requirements of all Bonneville programs, including total obligations and $633 million of capital transfers, are estimated at $4,870 million for FY 2025.

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 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 and FY 2025 rate period 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.

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 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 intended to discuss with OMB and the Corps a proposed schedule for the BPA and the Corps joint report to OMB by August 1, 2023. However, this meeting has yet to convene. 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 for the FY 2025 Budget. BPA believes that the subcommittee continues to have an interest in expeditious commencement of these activities.

This provision continued Congress' interest in obtaining findings from the Corps on the impacts of deauthorizing the hydropower project purpose at Willamette dams. Section 218 of WRDA 2020 called for the report of the

Corps on the impacts on other authorized project purposes at the Detroit/Big Cliff and Cougar dams of the Willamette Valley project. This report was to be delivered to the Committee within two years of enactment in December 2020. The Corps has not delivered that report to the Committee nor made any initial findings available to Bonneville for review and comment.

As part of the provisions for the disposition study required by Section 8220 of 2022 WRDA, Congress provided that, until the report is issued, new construction-related expenditures by the Corps for the Willamette Valley are non-reimbursable.

It is unlikely that the Corps will complete the requested reports on deauthorization for consideration in the 2024 session of Congress. The Corps has informed Bonneville that it expects only to complete an initial portion of the report requested by WRDA 2022. The Corps has given no indication of when it will deliver the report request in 2020 WRDA.

In the meantime, the Bonneville Power Administration bears the risk of significant financial obligations for new expenditures by the Corps in the Willamette Valley while power output is significantly diminished by Corps operations for fish passage.

Overview of Bonneville Functions and Initiatives

On August 2, 2023, Bonneville released its 2024-2028 Strategic Plan. This update builds on Bonneville's previous 2018-2023 Strategic Plan, which described how Bonneville will operate in a commercially successful manner while meeting its statutory obligations. BPA's 2024-2028 Strategic Plan builds on the framework of its previous strategy, leveraging the foundational work of the last five years to position the agency as a leader in the clean energy transition. This crucial period will be marked by decarbonization, the buildout of renewable energy resources, and the associated demand for generation interconnections and transmission service.

This overview is organized by Bonneville's updated strategic goals.

- Invest in people
- Enhance the value of products and services
- Sustain financial strength
- Mature asset management
- Preserve safe and reliable system operations
- Modernize business systems and processes

Strategic Goal: Invest in People

Safety as a core value: Safety is one of Bonneville's four core values. Bonneville strives to provide a workplace free from safety and health hazards. Bonneville cultivates collaborative partnerships across its workforce and embraces a learning mindset to drive continuous improvement in all aspects of safety, both physical and psychological. Bonneville's objective is to become the safest utility in North America by continuously improving the physical and psychological safety of the BPA workforce.

Bonneville must continue to innovate, learn and adapt to an ever-changing industry environment. Bonneville adopts policies and practices that improve its ability to attract, retain and develop its workforce. This includes

examining and adopting workplace flexibilities that support retention, satisfaction and engagement while meeting the responsibilities of a not-for-profit Federal power marketing administration. Competition for talent within the electric power industry is increasingly difficult under the Federal General Schedule and government classification standards. This issue is becoming increasingly concerning to BPA's power and transmission customers.

[redacted]

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 (math and science competitions). Bonneville also sponsors science fair competitions for students in Washington, 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 has five large categories of activities that provide Justice40-like benefits: Fish & Wildlife Mitigation Program; Energy Efficiency; Tribal STEM Grant Program; AISES internship partnership; public processes, including rate cases; and carbon-free, flexible hydropower and nuclear capacity and energy.

Strategic Goal: Enhance the Value of Products and Services

Renewal of long-term power sale contracts: Bonneville's current long-term power sale contracts end in 2028. Bonneville is conducting its Provider of Choice initiative to consider with customers and constituents the policies and structures of future contracts. Bonneville is committed to being responsive to customers' evolving needs while working within the framework of Bonneville's statutes. In addition to delivering power through the Federal base system, Bonneville is discussing how to offer customers flexibilities that enable their investment in and integration of non-federal resources as well as providing options for Bonneville to serve growing load needs. The Provider of Choice initiative leads to the expected offer and execution of new long-term contracts in 2025 with power deliveries under the new contracts beginning in 2028.

Integrated wholesale markets and system operations: New markets present opportunities to enhance the delivery of reliable, affordable and carbon-free hydropower to BPA customers. Bonneville joined the Western Energy Imbalance Market in 2022. Building on that experience, Bonneville is participating in the development of two day-ahead market initiatives underway in the West — the California Independent System Operator's Extended Day Ahead Market and Southwest Power Pool's Markets Plus — to determine if they will be consistent with Bonneville's statutory obligations and support its customers' needs and interests. In July 2023, Bonneville initiated a public process with customers and the public on its decision to participate in either market option. This process will continue through early 2024.

Bonneville is also taking an incremental approach toward more integrated system operations that promise to enhance reliability and resilience. BPA will position itself to consider moving beyond a day-ahead market, if it decides to participate in one, through the evaluation of services and benefits that could be provided by a regional transmission operator.

Over the past four years, entities in the West have come together through an initiative facilitated by the Western Power Pool (WPP) to scope and develop a voluntary, regional resource adequacy compliance program known as the Western Resource Adequacy Program (WRAP). FERC accepted the WRAP tariff in February 2023. Bonneville played a leading role in the development of the WRAP, which is a major step toward ensuring reliability while integrating new clean resources into the grid and assuring it will have the resources needed to meet demand. WRAP participants are working together to determine when WRAP will transition into a fully binding program, between summer of 2025 and winter of 2027-2028.

Supporting regional carbon policies: State policies to reduce greenhouse gas emissions and expand clean energy are challenging the electric industry to develop clean generation alternatives to baseload fossil fuel generation. The federal base system is capable of providing flexible, reliable, carbon-free power that can further enhance regional efforts to reduce greenhouse gas emissions. The federal hydropower system and Columbia Generating Station produce carbon-free electricity and, on average, the power Bonneville sells is about 95 percent carbon-free. The emissions in the power Bonneville sells are attributed to the purchases Bonneville makes in the wholesale market, which Bonneville has historically relied upon to balance generation and loads. These unspecified power purchases cannot be attributed to a specific resource and therefore, states attribute emissions to them.

Going forward, Bonneville will strive to complement the existing system when acquiring energy from additional cost-effective carbon-free resources and enabling delivery of increasingly decarbonized power to the region. Acquiring carbon-free resources and market purchases, consistent with BPA's statutory obligations, could reduce Bonneville's total unspecified purchases and associated emissions and help us meet load growth with clean resources.

In addition, as Bonneville develops other agency policies, it will weigh the impacts of such decisions on the federal system's carbon content alongside other relevant considerations. The challenge of decarbonizing is a collective one. Given the interconnected nature of the electrical system and power markets, Bonneville promotes greater coordination across states to provide consistency in greenhouse gas accounting and tracking the environmental attributes of power.

Advancing transmission investments and innovative solutions to integrate loads and resources: The demand for clean energy is driving the need for transmission expansion to deliver energy from geographically dispersed resources to population centers where demand is expected to grow. Innovative solutions will be needed to address the sharp rise in generation interconnection requests and transmission service while maintaining reliability and managing costs.

In July 2023, Bonneville announced it is moving forward with more than $2 billion in multiple transmission substation and line projects to reinforce the regional grid and support its customers' and the region's clean energy goals. In a related effort, Bonneville is conducting a public process to propose generation interconnection queue reforms and related tariff changes necessary for a first ready/first served approach, allowing it to prioritize the most viable projects.

Fish and wildlife mitigation: Bonneville partners with states, tribes, federal and local governments, the NPCC, and many others to mitigate the effects of constructing and operating the FCRPS. Bonneville meets its mitigation responsibilities while balancing fish and wildlife stewardship with power operations and other river uses. Effectively managing agency costs helps sustain the agency's financial strength and resilience, and ensures that Bonneville can continue to invest in biologically-effective measures to enhance conditions for fish and wildlife.

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 the operation of the Federal CRS multiple purpose projects. The agreement paused litigation on 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. On August 31, 2023, the stay was extended by 60 days through October 31, 2023 in the District Court and on September 8, 2023, the stay was extended by 60 days through November 8, 2023 in the Ninth Circuit. On October 30, 2023 parties gave notice they will not seek to revive the litigation through December 15 to allow for continued mediation discussions. On December 14, 2023 the Biden-Harris Administration announced a historic agreement to work in partnership with Pacific Northwest Tribes and States to restore wild salmon populations, expand Tribally sponsored clean energy production, and provide stability for communities that depend on the Columbia River System. BPA's administrator stated in the agreement "BPA sought to provide our ratepayers operational certainty and reliability while avoiding costly, unpredictable litigation in support of our mission to provide a reliable, affordable power supply to the Pacific Northwest." This agreement concludes the mediation and extends the stay of litigation regarding the CRSO EIS.

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.

Energy Efficiency: For more than 40 years, Bonneville has been the catalyst in the Pacific Northwest in the development of conservation as a resource in meeting the load demands placed on Bonneville by its regional power customers. Conservation or energy efficiency is Bonneville's priority resource to meet its regional contractual firm power load obligations. As of 2023, Bonneville's cumulative energy efficiency savings totaled 2,582 average megawatts (aMW) since the passage of the Northwest Power Act in 1980.

Strategic Goal: Sustain Financial Strength

Financial Plan: Financial strength is an enduring priority for Bonneville. In the next five years, Bonneville will build on Bonneville's solid financial footing by focusing on the core objectives and metrics in Bonneville's Financial Plan. These objectives demonstrate Bonneville's commitment to deliver on Bonneville's public responsibilities and to maintain Bonneville's position as the region's leading power and transmission provider. Objectives:

- Maintain cost-management discipline and execute capital plans.
  Bonneville aggressively manages the costs of operating the federal power and transmission systems, consistent with its mission objectives and statutory obligations. Cost-management discipline remains a key focus, as outlined in the Financial Plan, recognizing it will require balancing different priorities and obligations. Bonneville will rely on input from customers and others through Bonneville's Integrated Program Review process, the public forum where Bonneville develops forecast program costs ahead of each rate case. As Bonneville continues to control operating costs, it is equally important to execute on Bonneville's capital plans to ensure Bonneville maintains and preserves the value of the FCRPS. While access to secure, low-cost capital will not be an issue for the near future thanks to Bonneville's recent substantial increase in U.S. Treasury borrowing authority, Bonneville remains committed to disciplined capital investments. Bonneville intends to develop and execute capital plans with the goal of making the right investments in the right assets at the right time, returning the highest possible value for Bonneville's ratepayers and the region.

- Maintain financial resiliency through adequate reserves, leverage, and U.S. Treasury borrowing authority.
  Financial resilience enables Bonneville to withstand disruptive events and conditions that impact revenues, expenses, or the delivery of power and transmission services and other regional benefits. Bonneville achieves financial resilience by having sufficient liquidity to ensure all bills are paid in full and on time; a prudent amount of leverage to help reduce and stabilize interest costs and maintain a stable cost of service over time; and enough debt capacity to ensure essential and ongoing capital investments are funded with certainty and at low cost.

- Maintain high investment-grade credit ratings.
  Bonneville seeks to maintain high investment-grade credit ratings on its nonfederal debt from all three major ratings agencies. Strong credit ratings are a reflection of Bonneville's financial strength and help ensure low costs on Bonneville -backed nonfederal debt.

Strategic Goal: Mature Asset Management

Asset Management Program: 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 has made significant progress by adopting the highest international standards for asset management. Bonneville has

implemented 10-year Strategic Asset Management Plans for each asset category and tied them to our Integrated Program Review process to better inform its capital spending forecasts.

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.

Southern Idaho Load Service: In 2023, Bonneville confirmed a long-term solution to reinforce the regional transmission system and assure access to clean, affordable and reliable power to some of the regions oldest public utilities, the Southern Idaho preference customers.

Bonneville provided a final decision to execute on contracts with Idaho Power and PacifiCorp for terms of service on their planned jointly owned transmission line connecting Boardman, Oregon, to Hemingway, Idaho, also known as B2H. Through this new plan of service, Bonneville will purchase transmission from Idaho Power over the new line, as well as existing Idaho Power transmission facilities, to its Southeast Idaho preference customers. This streamlines the current process, which involves buying transmission service from multiple utilities over frequently congested lines that reduce reliability in delivering power and increase costs.

Strategic Goal: Preserve Safe and Reliable Operations

Protect and enhance the delivery of power and transmission services in an evolving landscape: Bonneville has more than eight decades of experience maintaining safe, reliable power and transmission operations, a feat which required continual adjustment as the Northwest's grid evolved over time. We are prepared to continue this legacy as new and emerging reliability and security risks challenge the grid. Key considerations are the impacts of extreme weather, wildfires, cyber and physical attacks, and the integration of more variable energy resources.

BACKGROUND: Grid Reliability

The grid modernization initiative BPA launched in 2018 included a portfolio of projects aimed to improve automation, accuracy and visibility. Many of these projects, now completed, targeted operational and reliability benefits that BPA is able to leverage today through our participation in the Western Energy Imbalance Market. In addition, BPA actively engaged in the funding and development of the Western Resource Adequacy Program, which is now operating under a FERC-approved tariff and independent Board of Directors. BPA also invested in significant upgrades to its automatic generation control system, improving the flexibility of the federal hydropower system while preserving grid stability. BPA further advanced its goals for safe and reliable service through its Wildfire Mitigation Plan. Released in 2020, the plan aims to protect public safety and preserve the reliable delivery of electricity through proactive and responsive measures. BPA continues to enhance this plan, which includes a public safety power shutoff procedure and industry-leading vegetation management.

The operation of the interconnected power grid requires a greater level of collaboration and cooperation going forward to ensure Bonneville can operate a reliable, resilient and secure grid for the customers and communities it serves.

Operational improvements to support grid reliability: Bonneville seeks to maximize the capacity of the existing system through a combination of operational studies, visualization tools, congestion management and other operational improvements. While Bonneville's strategy includes non-wires solutions when available, Bonneville is also planning substantial transmission expansion investments.

Resilience in preparation for high-impact events and system change: Climate-related risks and security threats – both physical and cyber – have intensified. At the same time, the resource and load mix is changing, with fewer baseload resources available and more variable energy resources connecting to the grid. Bonneville will ensure it is better prepared to respond to and recover from high-impact events as the system continues to change.

Bonneville is hardening facilities and communications systems to enable continued operations through high-impact events; and prioritizing proactive actions to improve our ability to respond to disruptive events. This includes developing tools to improve situational awareness for wildfires, cyber threats and storms, and to better understand and mitigate the impacts of climate change on Bonneville systems.

A culture of compliance: Bonneville anticipates an evolving regulatory environment within which it operates. Improvements in internal practices and capabilities will accommodate change and reduce cost, complexity and risk associated with meeting evolving compliance standards. Work will include increased engagement with regulators, as well as advancements in internal controls and causal analysis.

Resilience and security of information and operational technology: Bonneville is constantly reviewing and improving its cybersecurity protections to guard the agency from the latest threats. One area of significant focus is overcoming barriers to real-time threat detection for critical infrastructure, with an eye toward centralized monitoring of substations and substation networks. This involves the deployment of automated systems that monitor and manage the generation and delivery of power, otherwise known as operational technology. Bonneville will continue to expand its Continuous Diagnostics and Mitigation Program, led by the Cybersecurity and Infrastructure Security Agency, for enhanced situational awareness. The sensors and tools that make up this program will set the foundation for zero-trust architecture to further fortify cybersecurity control.

BACKGROUND: Sustainability and Resilience

Sustainability and resilience are inextricably linked, with the shared goal to protect people, assets and the environment in uncertain, sometimes extreme conditions. BPA's Sustainability Office and Resilience Program work closely to ensure the agency continues to thrive in a rapidly-changing, resource-constrained environment. BPA developed its first Climate Vulnerability Assessment and Resilience Plan in late 2022, and both programs will continue to collaborate to further embed climate resilience into BPA's critical business functions.

Strategic Goal: Modernize Business Systems and Processes

Business transformation initiatives: Pursuant to the 2018-2023 Strategic Direction, Bonneville prioritized the budget and staffing resources for grid modernization. Bonneville took prudent cost-control measures in other parts of the business. Bonneville is now sharpening focus on needed investments to improve foundational

internal business systems and processes. These enhancements will support delivering reliable, resilient, and competitive power and transmission services as the electricity industry landscape continues to change.

Systems to manage technology and business operations: To keep pace with changing markets and customer needs, Bonneville will seek technology solutions that enable greater flexibility and enhance efficiency across our enterprise. Further development of enterprise architecture – a blueprint that helps converge technology and business processes – will create tighter alignment of agency priorities with information technology service delivery, reducing the cost and complexity of Bonneville's corporate operations.

BACKGROUND: Grid Modernization

With the emergence of new markets, BPA heightened its focus on systems that could facilitate BPA's participation and provide greater regional integration. Through a comprehensive grid modernization initiative, we enabled BPA's entry into the Western Energy Imbalance Market, set the stage for future market evolution, and supported the development of the Western Resource Adequacy Program. This foundational work was integral for greater market evolution and regional integration in support of grid efficiencies, reliability and resilience.

Radio Spectrum Communications: Bonneville has additional work remaining to finish the construction related to the Advanced Wireless Services (AWS)-3 relocations (see "Background" sidebar). Bonneville will then complete its move of these four microwave hops to 7GHz-8GHz. For the 13A system, the new radio equipment has been installed and tentatively accepted for operational use so comparable capability has already been achieved, but circuit cutovers are waiting for completion of work on a separate but related project in February 2024. Retirement of the 13A equipment can begin once circuit cutovers are complete. For the 4K system, the new radio equipment has been installed, but there is pending waveguide installation and HVAC work that must be completed at Glass Butte before 30-day burn-in can begin. Since site access at Glass Butte is weather limited, the outstanding work may not be completed until the site is accessible again in late spring 2024. Once that work has been completed and the 30-day burn-in period has cleared with no issues, comparable capability will have been achieved, and circuit cutovers can begin. Retirement of the 4K equipment can begin once those cutovers are complete. Bonneville has spent the remaining SRF relocation funds and will complete the remaining construction work described above using separate BPA funding. 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.

BACKGROUND: Radio Spectrum Communications

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 system wide electric reliability performance indicator, consistent with NERC rules, to track and evaluate performance.

Bonneville may share temporarily-available dark 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 dark 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 dark 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.

BACKGROUND: Radio Spectrum Communications (Continued)

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.

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

Power Services – Capital

Funding Schedule by Activity

Funding ($K)

Power Services - Capital	FY 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate	FY 2025 vs FY 2024 $	FY 2025 vs FY 2024 %
Associated Projects	$ 207,454	$ 270,000	$ 275,675	$ 5,675	2.1%
Fish & Wildlife	$ 14,646	$ 41,335	$ 41,300	$ (35)	-0.1%
Total, Power Services - Capital	**$ 222,100**	**$ 311,335**	**$ 316,975**	**$ 5,640**	**1.8%**

Outyears ($K)

Power Services - Capital	FY 2025 Estimate	FY 2026 Estimate	FY 2027 Estimate	FY 2028 Estimate	FY 2029 Estimate
Associated Projects	$ 275,675	$ 281,620	$ 288,001	$ 294,794	$ 301,833
Fish & Wildlife	$ 41,300	$ 29,000	$ 15,700	$ 15,000	$ 15,000
Total, Power Services - Capital	**$ 316,975**	**$ 310,620**	**$ 303,701**	**$ 309,794**	**$ 316,833**

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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 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. As noted earlier, 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.

These planned investments, included in the FY 2025 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.

Background: Investment in FCRPS

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.

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.

As of September 30, 2023, BPA has long-term fish and wildlife agreements with estimated contractual commitments of $649.3 million, which are likely to result in future expenses or regulatory assets. These agreements will expire at various dates through FY 2027 and do not include the Columbia Basin Fish Accords extension agreements. BPA, the Corps and Reclamation have signed 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 extension agreements committed 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.

Background: 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.

There are no anticipated expenditures under the third Power Services—Capital 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-24 Draft ROD was issued in June 2022 and the final ROD was issued in late July 2023
- 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 $316.9 million in FY 2025 for Power Services – Capital, which is a 1.8 percent increase from the FY 2024 forecasted level. The FY 2025 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 2025 budget increases the levels for Associated Projects by $5.6 million and decreases the funding level for Fish & Wildlife, by $35 thousand compared to FY 2024.

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 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate
$166,541	$201,075	$228,060

Bonneville Dam:

- FY 2023. Completed ice and trash sluice gate replacement, and oil storage room fire protection. Continued trashracks replacement, elevators rehabilitation, feeder boards replacement and tailrace gantry crane replacement. Began digital governors replacement and headgate repair pit rehabilitation.
- FY 2024. Complete feeder boards replacement and oil water separator improvements. Continue digital governors replacement, headgate repair pit rehabilitation, and trashracks replacement and elevators rehabilitation. Begin main unit breaker replacement.
- FY 2025. Complete trashracks replacement and elevators rehabilitation. Continue digital governors replacement, headgate repair pit rehabilitation, and main unit breaker replacement.

John Day Dam:

- FY 2023. Completed control room fire protection upgrades, feeder boards replacement, emergency gantry crane replacement and turbine pit pumps replacement. Continued BLH turbine hub upgrades and fixed blade conversions, HVAC system upgrade, and trashracks replacement. Began turbine pit pumps replacement.
- FY 2024. Complete turbine pit pumps replacement. Continue BLH turbine hub upgrades and fixed blade conversions, HVAC system upgrade, and trashracks replacement. Begin generator cooling water system upgrades.
- FY 2025. Continue BLH turbine hub upgrades and fixed blade conversions, generator cooling water system, HVAC system upgrades, and trashracks replacement. Begin installation of powerhouse oil detection system and turbine runner replacement and generator rewinds.

The Dalles Dam:

- FY 2023. Completed fish unit breaker replacement, gate repair pit upgrades and ice and trash sluiceway sprat controls. Continued intake and tailrace crane rails, intake gantry crane replacement and oil accountability measures.
- FY 2024. Continue intake and tailrace crane rails replacement, intake gantry crane replacement and oil accountability measures.

- FY 2025. Complete intake and tailrace crane rails replacement and intake gantry crane replacement. Continue oil accountability measures.

Willamette Plants:

- FY 2023. Completed intake gantry crane replacement at Dexter, powerhouse and transformer oil water separator at Foster, and oil water separator upgrades at Hills Creek. Continued butterfly valve replacement at Cougar, electrical reliability upgrades at Foster, main unit breakers and electrical reliability upgrades, spillway gate rehabilitation and spillway rock removal at Hills Creek. Began intake gantry crane replacement at Big Cliff, and spillway gates at Cougar.
- FY 2024. Complete butterfly valves replacement at Cougar and spillway gates rehabilitation at Detroit. Continue spillway gates replacement at Cougar, main unit breaker and electrical reliability upgrades, spillway gate rehabilitation and spillway rock removal at Hills Creek. Begin powerhouse and transformer oil water separator at Detroit.
- FY 2025. Complete spillway gate rehabilitation at Hills Creek. Continue main unit breakers and electrical reliability upgrades and spillway rock removal at Hills Creek. Begin trashracks and intake gate replacement at Big Cliff, turbine and generator rehab at Foster, bridge crane replacement and trashracks and intake gates replacement at Green Peter.

Albeni Falls Dam:

- FY 2023. Completed main unit transformers replacement.
- FY 2024. No planned capital projects.
- FY 2025. Begin bridge crane rehabilitation.

Libby Dam:

- FY 2023. Continued system control console replacement, powerhouse gantry crane rehabilitation and DC boards and breakers replacement.
- FY 2024. Complete system control console replacement. Continue powerhouse gantry crane rehabilitation and DC boards and breakers replacement. Begin 6th unit installation and GDACS installation.
- FY 2025. Complete DC boards and breakers system replacement, powerhouse gantry crane rehabilitation and system control console replacement. Continue 6th unit installation and GDACS installation.

Chief Joseph Dam:

- FY 2023. Continued feeder boards replacement, intake gantry crane replacement, tailrace crane replacement and generator rewinds.
- FY 2024. Complete feeder boards replacement. Continue intake gantry crane rehabilitation, generator rewinds and upgrades for station service units. Begin exciters replacement, powerbus replacement and powerhouse and sump pump controls.
- FY 2025. Continue intake gantry crane rehabilitation, generator rewinds and upgrades for station service units, exciters replacement, powerbus replacement and powerhouse and sump pump controls.

Dworshak Dam:

- FY 2023. No capital projects.
- FY 2024. Begin and complete fire-rated transformer containment walls.
- FY 2025. No planned capital projects.

McNary Dam:

- FY 2023. Completed headgate repair pit rehabilitation. Continued digital and mechanical governors upgrade, exciters upgrade, headgate system rehabilitation, intake gantry crane replacement, tailrace gantry crane replacement, iso-phase bus replacement, powerhouse control system upgrade, station

service turbine rehabilitation and turbine design and replacement. Began drainage, unwatering and equalization system rehabilitation.

- FY 2024. Complete intake gantry crane replacement, tailrace gantry crane replacement and station service turbine rehabilitation. Continue digital and mechanical governors upgrade, drainage, unwatering and equalization system rehabilitation, headgate system rehabilitation, iso-phase bus replacement, powerhouse control system upgrade, and turbine design and replacement. Begin life safety/fire alarm system upgrades.
- FY 2025. Complete drainage, unwatering and equalization system rehabilitation, mechanical governors, and life safety/fire alarm system upgrades. Continue digital governors upgrade, exciters upgrade, headgate system rehabilitation, iso-phase and HV bus replacement, powerhouse control system upgrades, and turbine design and replacement.

Ice Harbor Dam:

- FY 2023. Continued Units 1-3 turbine runners replacement and Units 1-3 stator windings replacement. Began EIM gen metering additions.
- FY 2024. Complete EIM gen metering additions. Continue Units 1-3 turbine runner replacements and stator winding replacements. Begin intake gate hydraulic system upgrades.
- FY 2025. Continue Units 1-3 turbine runner replacements, stator winding replacements, intake gate hydraulic system upgrades. Begin life safety fire alarm system upgrades.

Little Goose Dam:

- FY 2023. Continued headgate repair pit upgrade, iso-phase bus upgrades, trashrake crane and rake upgrade, and powerhouse roof replacement. Began DC system and LV switchgear upgrades.
- FY 2024. Complete powerhouse roof replacement, headgate repair pit upgrade and trashrack crane and rake upgrade. Continue DC system and LV switchgear upgrades, headgate repair pit upgrade, and iso-phase bus upgrades. Begin intake gate rehabilitation, main Unit 1-6 discharge ring upgrades and turbine blade cavitation repair, powerhouse control and annunciation system upgrades, and spare transformer purchase.
- FY 2025. Continue DC system and LV switchgear upgrades, headgate repair pit upgrade, iso-phase bus upgrades, intake gate rehabilitation, main Unit 1-6 discharge ring upgrades and turbine blade cavitation repair, powerhouse control and annunciation system upgrades, and spare transformer purchase.

Lower Granite Dam:

- FY 2023. Continued main Unit 2 blade sleeve upgrade and rehabilitation, and trashrack crane and rake upgrade.
- FY 2024. Complete trashrack crane and rake upgrade. Continue main Unit 2 blade sleeve upgrade and rehabilitation.
- FY 2025. Continue main Unit 2 blade sleeve upgrade and rehabilitation. Begin Turbine Intake Gate Hydraulic System Upgrade.

Lower Monumental Dam:

- FY 2023. Completed trash rake crane and rake upgrades and headgate repair pit upgrades. Continued DC system and LV switchgear upgrades, iso-phase bus upgrades and intake gate rehabilitation.
- FY 2024. Continue DC system and LV switchgear upgrades, iso-phase bus upgrades and intake gate rehabilitation. Begin powerhouse bridge crane and drive system upgrade.
- FY 2025. Complete DC system and LV switchgear upgrades and iso-phase bus upgrades. Continue powerhouse bridge crane and drive system upgrades.

Bureau of Reclamation Projects
($K)

FY 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate
$40,913	$68,925	$47,615

Grand Coulee Dam:

- FY 2023. Continued G11-18 transformers replacement, Block 31 elevator replacement, LPH/RPH bridge crane replacement, new firehouse construction, TPP K21-K24 transformers replacement, transformer dissolved gas-in-oil analyzers, and TPP crane controls upgrade. Began powerplant battery replacement.
- FY 2024. Complete new firehouse construction. Continue Block 31 elevator replacement, G11-18 transformers replacement, G1-G18 penstock stoplogs, LPH/RPH bridge crane replacement, powerplant battery replacement, TPP crane controls upgrade, K21-K24 transformers replacement and transformer dissolved gas-in-oil analyzers. Begin G19-G21 modernization, LPH/RPH cyclops semi-gantry crane replacement, radio system modernization, replacement of underground feeders to the town of Coulee Dam, and station service compressed air system upgrades.
- FY 2025. Complete Block 31 elevator replacement, G1-G18 penstock stoplogs, LPH/RPH bridge crane replacement, TPP crane controls upgrade, and transformer dissolved gas-in-oil analyzers installation. Continue G11-G18 transformers replacement, G19-G21 modernization, LPH/RPH cyclops semi-gantry crane replacement, powerplant battery replacement, radio system modernization, underground feeders to the town of Coulee Dam, station service compressed air system upgrades, and K21-K24 transformer replacement.

Keys Pump Generating Plant:

- FY 2023. Completed P5 and P6 impellers, stators and core rewinds. Continue P1-P6 coaster gate replacement, P1-P6 exciters, relays and controls and PG7-PG12 governors, exciters, relays and controls replacement, and phase reversal switch replacement. Begin KP10B transformer replacement.
- FY 2024. Complete phase reversal switch replacement and P1-P6 coaster gate replacement. Continue KP10B transformer replacement, and P6 exciters, relays and unit controls, PG7-12 governors, exciters, relays and unit controls. Begin PGP crane modernization.
- FY 2025. Continue KP10B transformer replacement, P1-P6 exciters, relays and unit controls, PG7-12 governors, exciters, and relays and unit controls, and PGP crane modernization.

Hungry Horse Dam:

- FY 2023. Completed control room panel revisions and powerplant cranes and controls replacement. Continued G1-G4 static exciters replacement, powerplant crane controls, main unit transformer fire protection system replacement, powerplant windows replacement, radio system addition and disconnect switches replacement.
- FY 2024. Complete powerplant windows replacement, radio system modernization and powerplant cranes and controls replacement. Continue G1-G4 static exciters replacement, main unit transformer fire protection system replacement and disconnect switches replacement. Begin domestic water system upgrades.
- FY 2025. Complete domestic water system upgrades. Continue G1-G4 static exciters replacement, main unit transformer fire protection system replacement and disconnect switch replacement.

Chandler Dam:

- FY 2023. No capital projects.
- FY 2024. No planned capital projects.
- FY 2025. No planned capital projects.

Palisades Dam:

- FY 2023. Continued hollow jet valve replacement.
- FY 2024. Complete hollow jet valve replacement.
- FY 2025. No planned capital projects.

Green Springs Dam:

- FY 2023. No planned capital projects.
- FY 2024. No planned capital projects.
- FY 2025. No planned capital projects.

Black Canyon Dam:

- FY 2023. Continued station service arc flash mitigation, Units 1 & 2 life safety modernization and trash rake system installation.
- FY 2024. Continue station service arc flash mitigation, Units 1 & 2 life safety modernization and trash rake system installation.
- FY 2025. Continue trash rake system installation. Complete station service arc flash mitigation and Units 1 & 2 life safety modernization.

Anderson Ranch Dam:

- FY 2023. No capital projects.
- FY 2024. No planned capital projects.
- FY 2025. Begin turbine runner replacement.

Roza Dam:

- FY 2023. No capital projects.
- FY 2024. No planned capital projects.
- FY 2025. No planned capital projects.

Minidoka Dam:

- FY 2023. No capital projects.
- FY 2024. No planned capital projects.
- FY 2025. 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 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate
$14,646	$41,335	$41,300

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:

Rocky Reach Kelt Facility:

Yakama Nation has proposed expansion of an existing facility for the purposes of collecting and reconditioning localized steelhead kelt. Steelhead are currently collected at Rock Island Hydro bypass and trucked to Methow National Fish Hatchery for reconditioning. Localizing the reconditioning facility could improve sub-basin capture, collection and effectiveness of release. This project is still in negotiation for Bonneville funding.

Colville Acclimation Building Enclosures

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. Juvenile salmon are transferred from the hatchery; reared, acclimated and released to acclimation facilities. The CCT have proposed construction of roof enclosures for acclimation facilities Omak and Riverside. The enclosures are intended to keep ice-cover off the ponds and to allow picking of mortalities throughout the winter for improved pond hygiene and reduced occurrence of disease.

Existing 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 been completed and the expected construction start date is yet to be determined.

Chief Joseph Hatchery Water Quality Project:

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. The Chief Joseph Hatchery was a 2008 Accord commitment with the Confederated Tribes of the Colville (CCT) Reservation; construction began in FY 2010, with fish production starting in 2013.

Umatilla Hatchery Facility and Acclimation Facilities:

Bonneville funds the Oregon Department of Fish and Wildlife (ODFW) to operate the hatchery and the Confederated Tribes of the Umatilla Indian Reservation (CTUIR) to operate acclimation facilities supporting the hatchery.

Congress originally authorized Bonneville expenditure authority for construction of the Umatilla Hatchery and acclimation facilities under P.L. 98-360, 98 STAT. 403, 415 (July 16, 1984). The NPCC recommended that Bonneville construct the Umatilla Hatchery, just east of the town of Irrigon, Oregon, and acclimation facilities, on the Umatilla River, 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 CRS dams. Current hatchery production includes 810,000 spring Chinook, 600,000 fall Chinook, 500,000 coho, and 150,000 native summer steelhead. Construction of the Umatilla Hatchery was completed in 1991. BPA built juvenile salmonid acclimation facilities at Minthorn, Imeques, C-mem-ini-kem, Thornhollow, and Pendleton locations, all within in the Umatilla River basin from 1985 to 1999 to place juvenile fish back in the basin to imprint on the Umatilla River water, so that adult fish would return to their natal waters.

At the hatchery, the available water supply 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.

At the acclimation facilities, water intakes have experienced clogging from debris and ice, due to their locations and configurations, resulting in emergency releases of juvenile salmon and steelhead, which have resulted in poor survival to adulthood. Alternatives to the current facility intake configurations will be designed to address these issues.

It appears costs of upgrades at the hatchery and acclimation sites 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). 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 CRS 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.

<u>UmaBirch Conservation Easement Project:</u>

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 2025.

New construction-related habitat restoration projects that require capital funds in FY 2025 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 2024.

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 2024.

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 was completed in June 2023.

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 new 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. Design for the project is complete and construction is scheduled to begin in FY2024.

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 2024.

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 and construction is expected to begin in FY2024.

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. The biological objective to develop a mid-Columbia hatchery broodstock includes 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. The fish programming was originally scoped for construction of a facility west of Leavenworth on the Wenatchee River near Natapoc Mountain for holding and spawning broodstock, incubating eggs, and rearing juveniles. The Yakama Nation has since determined the site to be infeasible for construction, given water quality and budget constraints. Additional semi-natural ponds and standard acclimation facilities have been constructed in the Wenatchee and Methow sub-basins for acclimating smolts prior to their release with one final site, Trinity Acclimation, to be completed. Construction is phased, with the first beginning early FY2024, followed by phase 2 in FY2024/2025.

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 2024 Estimate		FY 2025 Estimate	Explanation of Changes FY 2025 vs FY 2024 Estimate
Power Services – Capital	**$311,335**	**$316,975**	**$5,640/1.8%**
Associated Projects	**$270,000**	**$275,675**	**$5,675/2.1%**
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 trashrake 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 increase reflects additional work efforts while continuing to align with Bonneville's strategic asset management plans.

FY 2024 Estimate	FY 2025 Estimate	Explanation of Changes FY 2025 vs FY 2024 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 $41,335	**$41,300**	**$-35/-0.1%**
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.

Transmission Services – Capital

Funding Schedule by Activity

Funding ($K)

Transmission Services - Capital	FY 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate	FY 2025 vs FY 2024 $	FY 2025 vs FY 2024 %
Main Grid	$ 50,606	$ 38,527	$ 38,747	$ 221	0.6%
Area & Customer Services	$ 58,896	$ 38,527	$ 44,282	$ 5,756	14.9%
Upgrades & Additions	$ 73,393	$ 152,027	$ 147,362	$ (4,665)	-3.1%
System Replacements	$ 440,640	$ 365,387	$ 350,759	$ (14,628)	-4.0%
Projects Funded in Advance	$ 24,528	$ 46,232	$ 55,353	$ 9,121	19.7%
Total, Transmission Services - Capital	**$ 648,063**	**$ 640,700**	**$ 636,504**	**$ (4,196)**	**-0.7%**
Evolving Grid Projects	$ -	$ 56,000	$ 172,000	$ 116,000	207.1%
Total, Transmission Services - Capital + EGP	**$ 648,063**	**$ 696,700**	**$ 808,504**	**$ 111,804**	**16.0%**

Outyears ($K)

Transmission Services - Capital	FY 2025 Estimate	FY 2026 Estimate	FY 2027 Estimate	FY 2028 Estimate	FY 2029 Estimate
Main Grid	$ 38,747	$ 44,905	$ 39,745	$ 28,370	$ 22,888
Area & Customer Services	$ 44,282	$ 39,292	$ 45,423	$ 52,201	$ 48,924
Upgrades & Additions	$ 147,362	$ 99,914	$ 42,016	$ 47,268	$ 57,857
System Replacements	$ 350,759	$ 369,317	$ 407,803	$ 416,974	$ 404,073
Projects Funded in Advance	$ 55,353	$ 56,131	$ 56,779	$ 56,740	$ 57,221
Total, Transmission Services - Capital	**$ 636,504**	**$ 609,560**	**$ 591,767**	**$ 601,553**	**$ 590,964**
Evolving Grid Projects	$ 172,000	$ 363,000	$ 500,000	$ 458,000	$ 209,000
Total, Transmission Services - Capital + EGP	**$ 808,504**	**$ 972,560**	**$ 1,091,767**	**$ 1,059,553**	**$ 799,964**

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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, (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, customer 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.
5. **Evolving Grid Projects** – The EGPs are a group of 10 strategic capital projects needed across our service territory to eliminate chokepoints on our transmission system and enable renewable generation projects access to our transmission system and neighboring states’ utilities to market their production.

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 requesting to interconnect to the Bonneville transmission system grid. As of September 30, 2023, Bonneville had interconnected between 8,000 and 8,583 MW of renewable qualified generation projects and anticipates that number to climb to 10,000 MWs by the end of FY2024. Bonneville has more than 125,000 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 2025 and 2026.

Background: Expansion Investments

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 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.

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.

Background: Asset Management

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, 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.

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 yet, most major substations and lines have been assessed. The resulting information (the CHR score) is used to prioritize sustain work on the system. Expand work is also routed to the sustain asset managers to determine if there is any sustain work that should be bundled with expand work based on the CHR score. The bundling of expand and sustain work increases crew efficiencies on site and minimizes 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 been 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.

Background: Fiber Optic Networks and Spectrum Relocation

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 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 establishes 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:

- The Transmission rates (BP-24) Draft ROD was issued in June 2023 and the final ROD was issued in late July 2023.
- The Terms and Conditions (TC-24) ROD was issued in February 2023.
- Integrated 6524.66 MW of renewable energy through September 2023 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-Wendson-1 line rebuild.
- Completed the Monroe 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 and a new reactor will be installed in December 2023. A new reactor has already been installed at Jones Canyon. A new reactor was also installed at Spar Canyon
- Completed 230kV breaker replacement and addition at Tacoma Substation.
- We have 2 Grid Mod Metering installations that have been approved for funding, 2 that are not approved, 1 in initiation, 5 that are in scoping, 4 that are in design, 1 in construction and 1 in Completion in Process.
- Completed Sonet Ring for Bell Boundary.
- Completed Holcomb Naselle Wood Line rebuild.
- Completed Avangrid's 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. Installation is scheduled to be completed in FY2027.
- Completed replacements and upgrades of SVC equipment at Keeler and Maple Valley.
- Completed addition of bus tie breakers at Toledo.
- Implementation of the addition of a new OMS (Outage Management System) at Dittmer.

Explanation of Changes

Bonneville's budget includes $808.5 million in FY 2025 for Transmission Services capital needs, which is a 16 percent increase from the FY 2024 forecasted level. The FY 2025 budget increases the levels for Main Grid ($221 thousand), Area & Customer Services ($5.8 million), PFIA ($9.1 million), and Evolving Grid Projects ($116 million), but decreases the levels for Upgrades & Additions ($4.7 million) and System Replacements ($14.6 million).

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

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 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate
$50,606	$38,527	$38,747

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

Schultz-Wautoma 500KV Series Capacitors

- FY 2023. Continued construction.
- FY 2024. Complete construction.
- FY 2025. No planned projects.

Montana-Washington

- FY 2023. Began design of TSEP Montana to Washington Project.
- FY 2024. Complete design, begin construction.
- FY 2025. Continue construction.

Schultz Raver Series Cap Addition

- FY 2023. Began design of new Series cap installation.
- FY 2024. Begin site preparation and construction.
- FY 2025. 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 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate
$58,896	$38,527	$44,282

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

Whistling Ridge 230kV Ring Buss Substation

- FY 2023. Began Scoping.
- FY 2024. Begin Design.
- FY 2025. Continue Design.

Big Eddy Breaker Additions

- FY 2023. Began scoping and design.
- FY 2024. Begin construction.
- FY 2025. Continue Construction.

Midway –Ashe Double Circuit 230kV Line

- FY 2023. Continued construction.
- FY 2024. Continue construction.
- FY 2025. Continue construction.

Carlton Substation Upgrade

- FY 2023. SC Disruptions resulted in 1 year delay.
- FY 2024. Continue construction.
- FY 2025. Continue construction.

South Tri-Cities Reinforcement

- FY 2023. Began construction.
- FY 2024. Continue construction.
- FY 2025. Continue construction.

LaPine Substation Upgrade TSEP – 2016

- FY 2023. Began construction.
- FY 2024. Continue construction.
- FY 2025. Continue construction.

Longview Transformer Addition

- FY 2023. Completed construction.
- FY 2024. No new capital projects planned.
- FY 2025. 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, among other proposals.

Upgrades & Additions
($K)

FY 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate
$73,393	$152,027	$147,362

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 dark 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. These projects require environmental compliance be complete, which may impact implementation timeframes.

VHF Radio System Upgrade

- FY 2023. 3 sites still in design.
- FY 2024. Continue design.
- FY 2025. Start construction.

Vancouver Control Center (VCC)

- FY 2023. Continued design and technology planning
- FY 2024. Demolish Ampere Building
- FY 2025. Complete design of VCC building and begin construction.

500 kV Spares at Wind construction.

- FY 2024. No planned projects.
- FY 2025. No planned projects.

Ross Station Service Upgrade

- FY 2023. Finished design and started construction. (SC Cable shortages)
- FY 2024. Finish construction.
- FY 2025. No planned projects.

Dworshak Substation

- FY 2023. Began scoping.
- FY 2024. Begin design.
- FY 2025. Complete Design and begin construction.

Targhee Breaker Installation

- FY 2023. Began Design.
- FY 2024. Collect and map outage data to determine individual circuit solutions.
- FY 2025. Add information collected above to align the design with findings.

P03372 Bridge Substation Expansion

- FY 2023. Began Design.
- FY 2024. Complete Design and begin construction.
- FY 2025. Complete construction.

Conkelley Substation Retirement

- FY 2023. Continued construction.
- FY 2024. Continue construction.
- FY 2025. Complete construction.

New LaPine – Bonanza 230kV Line

- FY 2023. Began design.
- FY 2024. Continue design.
- FY 2025. Begin construction.

Bonanza Substation Project

- FY 2023. Begun design.
- FY 2024. Complete design.
- FY 2025. Begin construction.

LaPine Transformer Addition

- FY 2023. Begun design.
- FY 2024. Begin construction.
- FY 2025. Complete construction.

Rock Creek-John Day-1: 500kV Line Upgrade TSEP 2022

- FY 2023. No planned projects.
- FY 2024. Start design.
- FY 2025. Begin construction.

Troy Substation Expansion and Breaker Addition

- FY 2023. No planned projects.
- FY 2024. Begin design.
- FY 2025. Begin Construction.

Carlton PCB and Bus Tie Breaker Additions

- FY 2023. In construction. (Stalled due to Supply Chain issues)
- FY 2024. Resume construction.
- FY 2025. Complete construction.

Continuous Activities (*all years*)

- Transmission Services Building was completed in July 2023 and all occupants should be in place by the end of the year enabling the demolition of the Ampere Building in 2024 to make room for the new Vancouver Control Center. Construction will begin in 2025 with the cutover to the new building complete by 2032, if not sooner.
- Upgrading 2 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 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate
$440,640	$365,387	$350,759

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.
- 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 started 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.
- Began 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 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate
$24,528	$46,232	$55,353

Continued investments in PFIA assets include the following projects. These projects require environmental compliance be complete, which may impact implementation timeframes.

Avangrid Montague 1 Wind Project

- FY 2023. No planned capital projects.
- FY 2024. No planned capital projects.
- FY 2025. No planned capital projects.

Badger Canyon 1: (This project has been rolled into the Tri-Cities Project P04691)

- FY 2023. Began construction.
- FY 2024. Continue construction.
- FY 2025. Continue construction.

Badger Canyon 2: (This project has been rolled into the Tri-Cities Project P04691)

- FY 2023. Completed design and began construction.
- FY 2024. Continue construction.
- FY 2025. Continue construction.

Badger Mountain POI Substation

- FY 2023. Performed Studies.
- FY 2024. Begin design.
- FY 2025. Complete design and begin construction.

Badger Mountain Pumped Storage

- FY 2023. Performed Studies.
- FY 2024. Begin design.
- FY 2025. Complete design and begin construction.

Bakeoven Wind Project

- FY 2023. Continued construction.
- FY 2024. Project complete.
- FY 2025. No planned projects.

Benton Solar Project

- FY 2023. Began design.
- FY 2024. Complete design and begin construction.
- FY 2025. Complete construction.

Big River Wind Project

- FY 2023. Performed System Impact Studies.
- FY 2024. Begin design.
- FY 2025. Begin construction.

Boardman 69kV Line Relocation and 230kV stepdown

- FY 2023. No planned projects.
- FY 2024. Begin design.
- FY 2025. Complete design and begin construction.

Add new Bonanza Substation adjacent to Ponderosa

- FY 2023. Began design.
- FY 2024. Complete design and begin construction.
- FY 2025. Continue construction.

Buckley Substation

- FY 2023. Began design and completed construction of Bypass.
- FY 2024. Finish design and begin construction of new station.
- FY 2025. Continue construction.

L0496 Meriwether Data Center

- FY 2023. Completed Studies.
- FY 2024. Begin design.
- FY 2025. Complete design and begin construction.

Nolan Hills Wind

- FY 2023. Completed studies and begin design.
- FY 2024. Complete design.
- FY 2025. Begin construction.

North Hawk Solar

- FY 2023. Began design.
- FY 2024. Complete design.
- FY 2025. Begin construction.

Obsidian Solar New POI for 500kV

- FY 2023. Began design.
- FY 2024. Complete design.
- FY 2025. Begin construction.

Boyd Ridge Substation

- FY 2023. Late start due to shortage of TE staff. Now in Scoping.
- FY 2024. Begin design.
- FY 2025. Complete design and begin construction.

Columbia Basin Hydroelectric Generating

- FY 2023. Began design.
- FY 2024. Begin and complete construction.
- FY 2025. No planned projects.

Invenergy Crider Valley Wind: (project awaiting customer decision)

- FY 2023. Began design.
- FY 2024. Finish design and begin construction.
- FY 2025. Continue construction.

Longhorn Substation

- FY 2023. Finished design and began construction.
- FY 2024. Continue construction.
- FY 2025. Complete construction.

McNary 230KV Section Bay addition

- FY 2023. Completed design and started construction.
- FY 2024. Continue construction.
- FY 2025. Continue construction.

Midway-Ashe Line Project

- FY 2023. Began construction.
- FY 2024. Continue construction.
- FY 2025. Continue construction.

Morrow Solar Project

- FY 2023. Began design.
- FY 2024. Begin construction.
- FY 2025. Continue construction.

Morrow Flat 230kV Shunt Reactor

- FY 2023. Started construction.
- FY 2024. Complete construction.
- FY 2025. No planned projects.

NextEra's Ella Butte Wind Project

- FY 2023. No planned capital projects.
- FY 2024. Begin design.
- FY 2025. Start construction.

PacifiCorps' Ponderosa Project Vitesse

- FY 2023. Completed Project.
- FY 2024. No planned capital projects.
- FY 2025. No planned projects.

Quenett Creek Load Service Project

- FY 2023. Began construction.
- FY 2024. Continue construction at Big Eddy.
- FY 2025. Continue construction.

Spar Canyon 230kV Reactor

- FY 2023. Completed construction.
- FY 2024. No planned projects.
- FY 2025. No planned projects.

Wheat Ridge Technical Studies

- FY 2023. Performed studies.
- FY 2024. Begin design.
- FY 2025. Begin construction.

Whistling Ridge 230 kV Ring Bus Project

- FY 2023. Project cancelled.
- FY 2024. No planned projects.
- FY 2025. No planned projects.

New LaPine – Bonanza 230kV line

- FY 2023. No planned projects.
- FY 2024. Start design.
- FY 2025. Complete design.

Silver Lodge Power Project

- FY 2023. No planned projects.
- FY 2024. Begin design.
- FY 2025. Begin 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.

Evolving Grid Projects

Overview

BPA recently announced it is moving forward with over $2 billion in electricity grid improvement projects that will significantly increase the capacity and reliability of the Pacific Northwest grid and its ability to integrate new energy sources. The Evolving Grid Projects are a group of 10 strategic capital projects needed across BPA's service territory to eliminate chokepoints on BPA's Transmission system and enable renewable generation projects access to BPA's Transmission system and neighboring states' utilities to market their production. Projects will increase transmission capacity by up to 6 gigawatts, enough to power about 4.5 million homes—and help meet growing demand for more affordable clean power. BPA's generating and transmission portfolio consists primarily of emissions-free sources and is the backbone of an electricity system that is relied on by tens of millions of people throughout the Western United States. DOE estimates that the Pacific Northwest will need to add 56 percent more transmission capacity by 2040. The NPCC calculates the region will need 3,500 MW of new renewable generation by 2027 and an additional 14,000 MW by 2040.

Evolving Grid Projects
($K)

EGP		
FY 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate
$0	$56,000	$172,000

Continued investments into Evolving Grid assets include the following projects. These projects require environmental compliance be complete, which may impact implementation timeframes.

Cross Cascades North: Schultz – Raver Reconductor P05470

- FY 2023. Completed scoping.
- FY 2024. Begin design.
- FY 2025. Complete design and begin construction.

Cross Cascades South: Big Eddy – Chemawa 500kV Rebuild P05468

- FY 2023. Began scoping.
- FY 2024. Complete scoping and begin design.
- FY 2025. Complete design and begin construction.

Raver Paul: Chehalis – Cowlitz Tap 230kV Rebuild P01277

- FY 2023. Began scoping.
- FY 2024. Continue scoping.
- FY 2025. Begin design.

South of Knight: Rock Creek – John Day Upgrade P05472

- FY 2023. No planned projects.
- FY 2024. Begin scoping.
- FY 2025. Complete scoping and begin design.

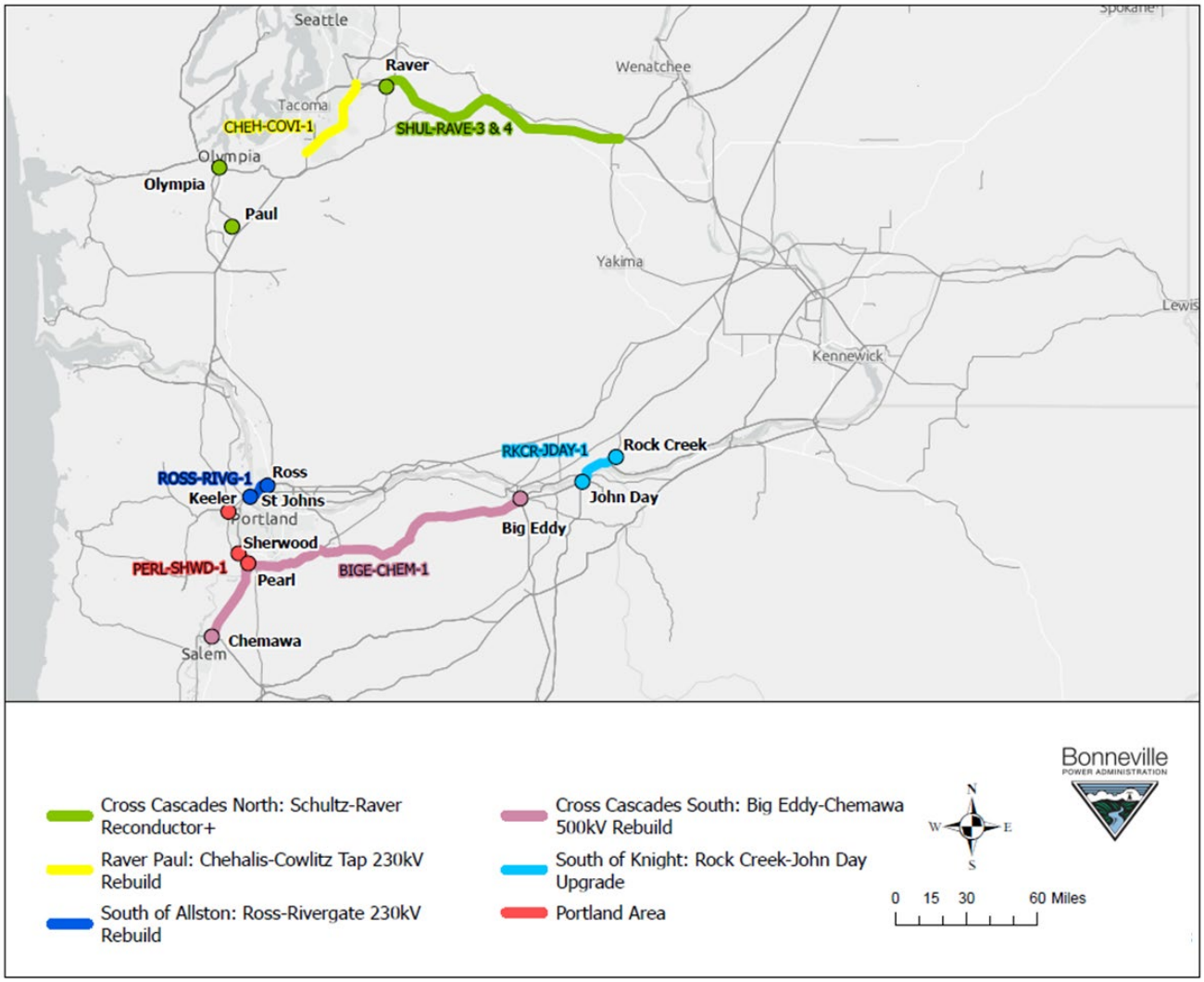
South of Allston: Ross – Rivergate 230kV Rebuild P05471

- FY 2023. No planned projects.

- FY 2024. Begin scoping.
- FY 2025. Complete scoping and begin design.

Portland Area P01322/P04974/P05449

- FY 2023. Continued scoping.
- FY 2024. Begin design.
- FY 2025. Complete design and begin construction.



Buckley Rebuild P03999

- FY 2023. Constructed emergency bypass and began design.
- FY 2024. Activate emergency bypass, complete design, and begin construction.
- FY 2025. Continue construction.

La Pine – Bonaza P05971

- FY 2023. Began scoping.
- FY 2024. Complete scoping and begin design.
- FY 2025. Complete design and begin construction.

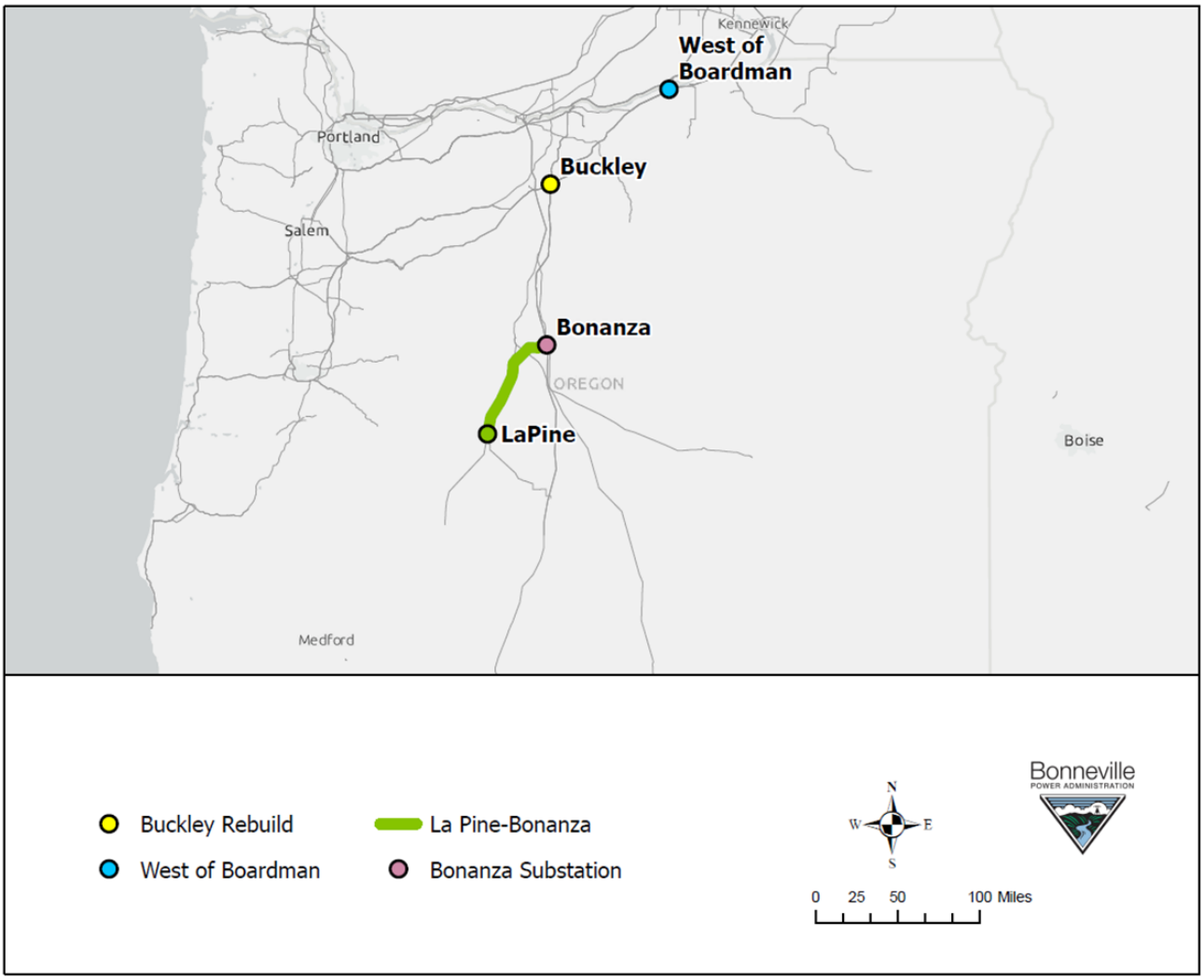
West of Boardman P02574

- FY 2023. Continued Scoping.
- FY 2024. Complete scoping and begin design.

- FY 2025. Complete design.

Bonanza Substation P05847

- FY 2023. Began scoping.
- FY 2024. Complete scoping and begin design.
- FY 2025. Complete design and begin construction.



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

FY 2024 Estimate	FY 2025 Estimate	Explanation of Changes FY 2025 vs FY 2024 Estimate
Transmission Services – Capital $696,700	**$808,504**	**$111,804/16.0%**
Main Grid $38,527	**$38,747**	$**221/0.6%**
Milestones: Continue construction of Schultz-Wautoma 500KV series capacitors. Begin design of TSEP Montana-to-Washington Project.	Milestones: Complete construction of Schultz-Wautoma 500kv series capacitors. Complete design and begin construction TSEP Montana-to-Washington Project.	The increase reflects additional funding needs for investment in the transmission system assets.
Area & Customer Service $38,527	**$44,282**	**$5,756/14.9%**
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. Finish design of south Tri-Cities reinforcement project and begin construction.	Milestones: Begin scoping and design of Big Eddy breaker additions project. Continue construction of Midway-Ashe double circuit 230kV line. Begin construction of south Tri-Cities reinforcement. Complete numerous customer service projects Begin construction of Bonanza substation.	The increase in the costs reflects a reshaping of funding needs for investment in the transmission system assets.
Upgrades & Additions $152,027	**$147,362**	**$-4,665/-3.1%**
Milestones: Complete design and complete demolition of North Ampere building. Complete Wendson project Finish construction of Ross Station Service upgrade.	Milestones: Begin construction of Vancouver Control Center. Complete construction of Ross Station service upgrade.	The decrease in the costs reflects a reshaping of funding needs for investment in the transmission system assets.
Systems Replacements $365,387	**$350,759**	**$-14,628/-4.0%**
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.	Milestones: Continue replacement of under-rated and high maintenance substation equipment. Continue replacing insulators and refurbishing foundations on 500 kV Lines.	The decrease in the costs reflects a reshaping of funding needs for investment in the transmission system assets.

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

FY 2024 Estimate	FY 2025 Estimate	Explanation of Changes FY 2025 vs FY 2024 Estimate
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.	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.	
Projects Funded in Advanced $46,232	**$55,353**	**$9,121/19.7%**
Milestone: Finish design of Quenett Creek 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. Begin design of Invenergy Crider Valley wind project.	Milestones: Begin construction of Quenett Creek load service project. Complete construction of Midway-Ashe line project. Begin construction of Morrow solar project. Begin construction of Badger Canyon 1 project. Begin construction of Invenergy Crider Valley wind project.	The increase in the costs reflects a reshaping of funding needs for investment in the transmission system assets.

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

FY 2024 Estimate	FY 2025 Estimate	Explanation of Changes FY 2025 vs FY 2024 Estimate
Begin construction of Boyd Ridge Substation.	Continue construction of Boyd Ridge Substation. Begin construction of Bonanza-LaPine line.	
Evolving Grid Projects $56,000	**$172,000**	**$116,000/207.1%**
Milestone: Begin design on Cross Cascades North: Schultz – Raver Reconductor P05470. Complete scoping and begin design on Cross Cascades South: Big Eddy – Chemawa 500kV Rebuild P05468. Continue scoping on Raver Paul: Chehalis – Cowlitz Tap 230kV Rebuild P01277. Begin scoping on South of Knight: Rock Creek – John Day Upgrade P05472. Begin scoping on South of Allston: Ross – Rivergate 230kV Rebuild P05471. Begin scoping on Portland Area P01322/P04974/P05449. Activate emergency bypass, complete design, and begin construction on Buckley Rebuild P03999. Complete scoping and design on La Pine – Bonaza P05971. Complete scoping and design on West of Boardman P02574. Complete scoping and design on Bonanza Substation P05847.	Milestone: Complete design and begin construction on Cross Cascades North: Schultz – Raver Reconductor P05470. Complete design and begin construction on Cross Cascades South: Big Eddy – Chemawa 500kV Rebuild P05468. Begin design on Raver Paul: Chehalis – Cowlitz Tap 230kV Rebuild P01277. Begin scoping on South of Knight: Rock Creek – John Day Upgrade P05472. Complete scoping and begin design on South of Allston: Ross – Rivergate 230kV Rebuild P05471. Complete scoping and begin design on Portland Area P01322/P04974/P05449. Continue construction on Buckley Rebuild P03999. Complete design and begin construction on La Pine – Bonaza P05971. Complete design on West of Boardman P02574. Complete design and begin construction on Bonanza Substation P05847.	The increase in the costs reflects a reshaping of funding needs for investment in the transmission system assets.

Capital Expenditures

Funding Schedule by Activity

Funding ($K)

Capital Expenditures	FY 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate	FY 2025 vs FY 2024 $	FY 2025 vs FY 2024 %
Transmission Services Revenue/Reserves Financing	$ 40,000	$ 55,000	$ 55,000	$ -	0.0%
Power Services Revenue/Reserves Financing	$ -	$ 33,740	$ 34,290	$ 550	1.6%
Total, Capital Expenditures	**$ 40,000**	**$ 88,740**	**$ 89,290**	$ 550	0.6%

Outyears ($K)

Capital Expenditures	FY 2025 Estimate	FY 2026 Estimate	FY 2027 Estimate	FY 2028 Estimate	FY 2029 Estimate
Transmission Services Revenue/Reserves Financing	$ 55,000	$ 70,000	$ 70,000	$ 85,000	$ 85,000
Power Services Revenue/Reserves Financing	$ 34,290	$ 33,690	$ 33,000	$ 33,560	$ 34,240
Total, Capital Expenditures	**$ 89,290**	**$ 103,690**	**$ 103,000**	**$ 118,560**	**$ 119,240**

Capital Expenditures

Overview

Capital Expenditures provide revenue and reserves financing to Bonneville, which includes in its rates funds to be raised to finance a portion of its capital investments, known as revenue financing. Prior to the BP-24 rate case, revenue financing had been included intermittently. In FY 2022, Bonneville adopted the Sustainable Capital Financing Policy which requires each business unit to raise sufficient funds through rates to pay for 10% of its annual capital spending with the objective of achieving at least a 60% debt to asset ratio by FY 2040. If a business unit is not on track to achieve this target, the amount of revenue financing may be raised to 20% of its capital spending.

The funds raised for revenue financing are not tied to a specific capital project. Instead, they are available to pay for any of BPA's capital investments. These funds may be redirected to support Bonneville's financial liquidity needs if a rate surcharge or cost recovery adjustment clause (CRAC) rate adjustment is triggered within a rate period.

Transmission Services Revenue/Reserves Financing
($K)

FY 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate
$40,000	$55,000	$55,000

Power Services Revenue/Reserves Financing
($K)

FY 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate
$0	$33,740	$34,290

Capital Information Technology & Equipment

Funding Schedule by Activity

Funding ($K)

Capital Information Technology (IT) & Equipment	FY 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate	FY 2025 vs FY 2024 $	FY 2025 vs FY 2024 %
Capital IT & Equipment	$ 15,514	23,100	$ 22,384	$ (716)	-3.1%
Total, Capital IT & Equipment	**$ 15,514**	**23,100**	**$ 22,384**	**$ (716)**	**-3.1%**

Outyears ($K)

Capital Information Technology (IT) & Equipment	FY 2025 Estimate	FY 2026 Estimate	FY 2027 Estimate	FY 2028 Estimate	FY 2029 Estimate
Capital IT & Equipment	$ 22,384	$ 24,400	$ 22,500	$ 23,200	$ 23,665
Total, Capital IT & Equipment	**$ 22,384**	**$ 24,400**	**$ 22,500**	**$ 23,200**	**$ 23,665**

Capital Information Technology & Equipment

Overview

Capital Information Technology (IT) & Equipment provides for the acquisition of both general and 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 operate as 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 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate
$15,514	$23,100	$22,384

Bonneville continues to move its IT infrastructure to a more efficient and resilient architecture. This FY 2025 Budget supports this effort. IT continues to practice active cost management by eliminating redundancies in tools and applications, establishing an agency-wide IT enterprise architecture supported by a standardized technical architecture, standardizing IT purchasing criteria, minimizing agency liabilities through stronger licensing processes and contracts, leveraging continuous improvement practices for IT project management, and maintaining an agency IT portfolio cost management strategy. Other planned investments include capital automated data processing (ADP) equipment (hardware and software) in support of asset life cycle replacement, support of capital software procurement and configuration for certain Bonneville programs, and consolidation and modernization of our primary data centers.

The IT estimates in this FY 2025 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 2024 Estimate	FY 2025 Estimate	Explanation of Changes FY 2025 vs FY 2024 Estimate
Capital Information Technology & Equipment $23,100	**$22,830**	**$-726/-3.1%**
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 decrease in the costs reflects a reshaping of funding needs for investment in Capital Information Technology & Equipment.

Power Services – Operating Expense

Funding Schedule by Activity

Funding ($K)

Power Services - Operating Expenses	FY 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate	FY 2025 vs FY 2024 $	FY 2025 vs FY 2024 %
Production	$ 2,076,450	$ 940,553	$ 1,009,725	$ 69,172	7.4%
Associated Projects	$ 486,492	$ 474,769	$ 487,375	$ 12,606	2.7%
Fish & Wildlife	$ 245,469	$ 268,620	$ 268,250	$ (369)	-0.1%
Residential Exchange Program	$ 267,350	$ 266,663	$ 266,696	$ 33	0.0%
Northwest Power & Conservation Council	$ 11,762	$ 11,942	$ 11,942	$ (0)	0.0%
Energy Efficiency & Renewable Resources	$ 136,938	$ 151,233	$ 152,096	$ 862	0.6%
Total, Power Services - Operating Expenses	**$ 3,224,462**	**$ 2,113,780**	**$ 2,196,083**	**$ 82,303**	**3.9%**

Outyears ($K)

Power Services - Operating Expenses	FY 2025 Estimate	FY 2026 Estimate	FY 2027 Estimate	FY 2028 Estimate	FY 2029 Estimate
Production	$ 1,009,725	$ 1,037,948	$ 1,065,140	$ 1,091,451	$ 1,120,620
Associated Projects	$ 487,375	$ 498,097	$ 509,770	$ 521,394	$ 532,921
Fish & Wildlife	$ 268,250	$ 274,922	$ 281,565	$ 288,177	$ 294,733
Residential Exchange Program	$ 266,696	$ 273,123	$ 279,524	$ 285,898	$ 292,219
Northwest Power & Conservation Council	$ 11,942	$ 12,230	$ 12,516	$ 12,802	$ 13,085
Energy Efficiency & Renewable Resources	$ 152,096	$ 155,761	$ 159,411	$ 163,047	$ 166,651
Total, Power Services - Operating Expenses	**$ 2,196,083**	**$ 2,252,081**	**$ 2,307,926**	**$ 2,362,768**	**$ 2,420,230**

[1] Residential Exchange Program Settlement expires by its own terms in FY 2028, currently there is no forecast for FY 2029.

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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.

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.

Background: Long-Term Resource Program and Payments to Tribes

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.

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;

[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.

- 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.

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 (see background in sidebar) 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.

Background: REP Settlements and ISRP Reviews

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 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 **Northwest Power and Conservation Council** (NPCC) budget subcategory provides continued support of NPCC activities, as directed under the Northwest Power Act. 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 customers use 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 provides research, evaluation, contract support, NEEA support, and emerging technology development. Additionally, customers perform self-funded conservation.

Explanation of Changes

Bonneville's budget includes $2,196 million in FY 2025 for Power Services operating expenses, which is an increase of 3.9 percent over the FY 2024 forecasted level.

The FY 2025 budget decreases the level for Fish & Wildlife ($369 thousand), but increases the level for Production ($69.2 million), Associated Projects costs ($12.6 million), Residential Exchange ($33 thousand), and Energy Efficiency & Renewable Resources ($862 thousand). NPCC stays at the same level.

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 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate
$2,076,450	$940,553	$1,009,725

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.

FY 2023 results for Power Purchases is higher than the BP-22 rate case driven by higher prices and low stream flows. The low stream flows are a big component of the higher FY23 results due to the impact of increased loads and dry winter conditions leading to increased purchases (notably December through March).

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 and another refueling occurred in May 2023.

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 variable resource 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 variable resource 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 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate
$486,492	$474,769	$487,375

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 in the Fish & Wildlife Projects – Capital Section 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 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate
$245,469	$268,620	$268,250

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 in the Activities, Milestones, and Explanation of Changes Section on the following pages.

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

FY 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate
$416,050	$429,838	$430,733

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 2024 Estimate	FY 2025 Estimate	Explanation of Changes FY 2025 vs FY 2024 Estimate
Power Services - Operating Expense $2,113,780	**$2,196,083**	**$82,303/3.9%**
Production $940,553	**$1,009,725**	**$69,172/7.4%**
Milestones: Continue to provide oversight of all signed contracts. Continue to provide wind resource integration services for customer wind generation.	Milestones: Continue to provide oversight of all signed contracts. Continue to provide wind resource integration services for customer wind generation.	The increase is due to higher CGS and support costs.
Associated Project Costs $474,769	**$487,375**	**$12,606/2.7%**
Milestones: Continue direct funding of Corps and Reclamation O&M power activities.	Milestones: Continue direct funding of Corps and Reclamation O&M power activities.	The increase addresses inflation and the rise in labor costs.
Fish & Wildlife Costs $268,620	**$268,250**	**$-369/-0.1%**
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.	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.	The decrease in the costs reflect funding associated with the BiOps, 2018 Fish Accord extension commitments, and Northwest Power Act activities. in the costs reflect funding associated with the BiOps, 2018 Fish Accord extension commitments, and Northwest Power Act activities.

FY 2024 Estimate	FY 2025 Estimate	Explanation of Changes FY 2025 vs FY 2024 Estimate
Residential Exchange Program $266,663	**$266,696**	**$33/0.0%**
Milestones: Continue to provide REP benefits.	Milestones: Continue to provide REP benefits.	No change in scheduled amount of REP payments payable to IOUs prescribed by REP.
NW Power & Conservation Council $11,942	**$11,942**	**$0/0.0%**
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.	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.	No change in the scheduled amount of the NPCC.
Energy Efficiency & Renewable Resources $151,233	**$152,096**	**$862/0.6%**
Milestones: Continue close-out of the legacy conservation resource acquisition contracts, which support Bonneville's contractual obligation to serve customer loads. Continue to support utility incentive programs. Continue to support regional energy efficiency programs. Continue supporting energy efficiency at direct serve Federal agencies.	Milestones: Continue close-out of the legacy conservation resource acquisition contracts, which support Bonneville's contractual obligation to serve customer loads. Continue to support utility incentive programs. Continue to support regional energy efficiency programs. Continue supporting energy efficiency at direct serve Federal agencies.	**$-489/-3.9%** The increase reflects higher funding while continuing emphasis on the energy efficiency program consistent with the Power Plan. The increase reflects higher funding while continuing emphasis on the energy efficiency program consistent with the Power Plan.

Transmission Services – Operating Expense

Funding Schedule by Activity

Funding ($K)

Transmission Services - Operating Expenses	FY 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate	FY 2025 vs FY 2024 $	FY 2025 vs FY 2024 %
Engineering	$ 119,538	$ 90,663	$ 92,115	$ 1,452	1.6%
Operations	$ 232,130	$ 242,749	$ 251,486	$ 8,738	3.6%
Maintenance	$ 213,858	$ 243,473	$ 251,102	$ 7,629	3.1%
Total, Transmission Services - Operating Expenses	**$ 565,525**	**$ 576,885**	**$ 594,704**	**$ 17,819**	**3.1%**
Evolving Grid Projects	$ 359	$ 988	$ 1,615	$ 627	63.4%
Total, Transmission Services - Operating Expenses + EGP	**$ 565,884**	**$ 577,873**	**$ 596,319**	**$ 18,446**	**3.2%**

Outyears ($K)

Transmission Services - Operating Expenses	FY 2025 Estimate	FY 2026 Estimate	FY 2027 Estimate	FY 2028 Estimate	FY 2029 Estimate
Engineering	92,115	97,736	100,376	103,000	105,604
Operations	251,486	257,716	266,134	274,479	282,755
Maintenance	251,102	258,481	266,529	274,513	282,433
Total, Transmission Services - Operating Expenses	**594,704**	**613,933**	**633,039**	**651,992**	**670,792**
Evolving Grid Projects	$ 1,615	$ 1,710	$ 1,779	$ 1,949	$ 2,027
Total, Transmission Services - Operating Expenses + EGP	**$ 596,319**	**$ 615,643**	**$ 634,818**	**$ 653,941**	**$ 672,819**

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Transmission Services – Operating Expense

Overview

Under the Transmission Services – Operating Expense category are four subcategories: the transmission system services of **Engineering, Operations, Maintenance, and Evolving Grid Projects** 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 $596.3 million in FY 2025 for Transmission Services operating expense, which is a 3.2 percent increase over the FY 2024 forecasted level. The increase continues the operation and maintenance of Bonneville's transmission assets.

The FY 2025 budget increases the levels for Engineering ($1.5 million), Operations ($8.7 million), Maintenance ($7.6 million), and Evolving Grid Projects ($627 thousand). 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 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate
$119,538	$90,663	$92,115

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 that 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 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate
$232,130	$242,749	$251,486

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 cyber security.
- 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, meets reliability standards, including vegetation management, and adheres to environmental constraints associated with construction, enhancement, and maintenance of the system. The Bonneville transmission system encompasses 15,179 circuit miles on over 11,860 rights-of-way miles (many of these miles are through rugged, inaccessible terrain).

Maintenance
($K)

FY 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate
$213,858	$243,473	$251,102

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 15,179 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 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 259 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. This 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.

Evolving Grid Projects

Overview

The Evolving Grid Projects are a group of 10 strategic capital projects needed across our service territory to eliminate chokepoints on BPA's transmission system and enable renewable generation projects access to our Transmission system and neighboring states utilities to market their production.

Evolving Grid Projects
($K)

FY 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate
$359	$988	$1,615

Continued investments into Evolving Grid assets require hiring additional personnel to support the work. These costs represent the additional cost of personnel above what was estimated in the BP-22 and BP-24 IPR processes.

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

FY 2024 Estimate	FY 2025 Estimate	Explanation of Changes FY 2025 vs FY 2024 Estimate
Transmission Services - Operating Expense $577,873	**$596,319**	**$18,446/3.2%**
Engineering $90,663	**$92,115**	**$1,452/1.6%**
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 $242,749	**$251,486**	**$8,738/3.6%**
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 cyber security.	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 cyber security.	The increase reflects continued emphasis on reliability compliance activities, resource integration activities, key strategic initiative, security, and control center systems support.
Maintenance $243,473	**$251,102**	**$7,629/3.1%**
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.
Evolving Grid Projects $988	**$1,615**	**$627/63.4%**

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Interest, Pension, and Post-retirement Benefits Operating Expense

Funding ($K)

Interest, Pension, & Post-Retirement Benefits	FY 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate	FY 2025 vs FY 2024 $	FY 2025 vs FY 2024 %
BPA Bond Interest (Net)	$ 182,140	$ 125,375	$ 143,203	$ 17,828	14.2%
BPA Appropriation Interest	$ -	$ -	$ -	$ -	0.0%
Corps of Engineers Appropriation Interest	$ 39,574	$ 32,802	$ 21,911	$ (10,890)	-33.2%
Lower Snake River Comp Plan Interest	$ 186	$ 169	$ 93	$ (76)	-45.1%
Bureau of Reclamation Appropriation Interest	$ 1,265	$ 1,264	$ 1,200	$ (65)	-5.1%
Bond Premiums Paid/Discounts (not capitalized)	$ (4,984)	$ 11,649	$ 1,164	$ (10,485)	-90.0%
Subtotal, Interest - Operating Expense	**$ 218,181**	**$ 171,259**	**$ 167,570**	**$ (3,689)**	**-2.2%**
Additional Pension and Post-Retirement Benefits	$ 39,103	$ 37,780	$ 38,314	$ 534	1.4%
Total, Interest, Pension, & Post-Retirement Benefits	**$ 257,284**	**$ 209,039**	**$ 205,884**	**$ (3,155)**	**-1.5%**

Outyears ($K)

Interest, Pension, & Post-Retirement Benefits	FY 2025 Estimate	FY 2026 Estimate	FY 2027 Estimate	FY 2028 Estimate	FY 2029 Estimate
BPA Bond Interest (Net)	$ 143,203	$ 164,210	$ 169,202	$ 174,166	$ 178,336
BPA Appropriation Interest	$ -	$ -	$ -	$ -	$ -
Corps of Engineers Appropriation Interest	$ 21,911	$ 14,878	$ 16,597	$ 15,039	$ 10,819
Lower Snake River Comp Plan Interest	$ 93	$ 88	$ 88	$ 88	$ 88
Bureau of Reclamation Appropriation Interest	$ 1,200	$ 1,200	$ 1,200	$ 1,200	$ 408
Bond Premiums Paid/Discounts (not capitalized)	$ 1,164	$ 2,966	$ 8,284	$ 25,733	$ 17,860
Subtotal, Interest - Operating Expense	**$ 167,570**	**$ 183,342**	**$ 195,371**	**$ 216,226**	**$ 207,511**
Additional Pension and Post-Retirement Benefits	$ 38,314	$ 39,237	$ 40,157	$ 41,072	$ 41,980
Total, Interest, Pension, & Post-Retirement Benefits	**$ 205,884**	**$ 222,579**	**$ 235,527**	**$ 257,299**	**$ 249,492**

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.

Background: Interest, Pension and Post-retirement Benefits Operating Expense

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

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.

Funding ($K)

Capital Transfers	FY 2023 Actuals	FY 2024 Estimate	FY 2025 Estimate	FY 2025 vs FY 2024 $	FY 2025 vs FY 2024 %
BPA Bond Amortization [1]	$ 616,900	$ 386,212	$ 424,301	$ 38,089	9.9%
Bureau of Reclamation Appropriation Amortization	$ 5,441	$ 1,723	$ -	$ (1,723)	-100.0%
BPA Appropriation Amortization	$ -	$ -	$ -	$ -	0.0%
Corps of Engineers Appropriation Amortization	$ 117,940	$ 275,310	$ 209,015	$ (66,294)	-24.1%
Lower Snake River Comp Plan Amortization	$ 378	$ 1,767	$ 122	$ (1,646)	-93.1%
Total, Capital Transfers	**$ 740,659**	**$ 665,012**	**$ 633,438**	**$ (31,574)**	**-4.7%**

Outyears ($K)

Capital Transfers	FY 2025 Estimate	FY 2026 Estimate	FY 2027 Estimate	FY 2028 Estimate	FY 2029 Estimate
BPA Bond Amortization [1]	$ 424,301	$ 676,532	$ 614,879	$ 721,208	$ 824,390
Bureau of Reclamation Appropriation Amortization	$ -	$ -	$ -	$ 24,557	$ 0
BPA Appropriation Amortization	$ -	$ -	$ -	$ -	$ -
Corps of Engineers Appropriation Amortization	$ 209,015	$ -	$ 51,524	$ 136,902	$ 20,688
Lower Snake River Comp Plan Amortization	$ 122	$ -	$ -	$ -	$ -
Total, Capital Transfers	**$ 633,438**	**$ 676,532**	**$ 666,403**	**$ 882,667**	**$ 845,079**

[1] Bonneville "Bond(s)" in this FY 2025 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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Additional Tables

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

BP-1 SUMMARY[1/3/]	FISCAL YEAR 2023		2024		2025		2026	2027	2028	2029
	Oblig.	Outlays	Oblig.	Outlays	Oblig.	Outlays	Oblig.	Oblig.	Oblig.	Oblig.
1 Residential Exchange Program[9/]	267	267	267	267	267	267	273	280	286	292
2 Power Services[2/]	2,834	2,834	1,416	1,416	1,498	1,498	1,536	1,575	1,613	1,654
3 Transmission Services	1,189	1,189	1,228	1,228	1,349	1,349	1,532	1,670	1,657	1,416
4 Conservation & Energy Efficiency	137	137	151	151	152	152	156	159	163	167
5 Fish & Wildlife	260	260	310	310	310	310	304	297	303	310
6 Interest/ Pension[4/]	257	257	209	209	206	206	223	236	257	249
7 Associated Project Cost - Capital	207	207	270	270	276	276	282	288	295	302
8 Capital Equipment	16	16	23	23	22	22	24	23	23	24
9 Planning Council	12	12	12	12	12	12	12	13	13	13
10 Projects Funded in Advance	25	25	46	46	55	55	56	57	57	57
11 Capitalized Bond Premiums	0	0	0	0	0	0	0	0	0	0
12 Power and Transmission Services Financed by Revenues/Reserves	40	40	89	89	89	89	104	103	119	119
13 **TOTAL OBLIGATIONS/OUTLAYS**[3/]	**5,244**	**5,244**	**4,022**	**4,022**	**4,236**	**4,236**	**4,502**	**4,699**	**4,785**	**4,602**

REVENUES AND REIMBURSEMENTS
Current Services
(in millions of dollars)

BP-1 SUMMARY	FISCAL YEAR 2023		2024		2025		2026	2027	2028	2029
	Oblig.	Outlays	Oblig.	Outlays	Oblig.	Outlays	Oblig.	Oblig.	Oblig.	Oblig.
14 Revenues[5/]	4,000	4,000	4,064	4,064	4,234	4,234	4,265	4,296	4,328	4,354
15 Project Funded in Advance	25	25	46	46	55	55	56	57	57	57
16 Power and Transmission Services Financed by Revenues/Reserves	40	40	89	89	89	89	104	103	119	119
17 **TOTAL**	**4,065**	**4,065**	**4,199**	**4,199**	**4,379**	**4,379**	**4,425**	**4,456**	**4,503**	**4,530**
18 **BUDGET AUTHORITY (NET)**[6/]	**991**		**320**		**459**		**575**	**695**	**453**	**238**
19 **OUTLAYS (NET)**[6/7/8]		**522**		**(177)**		**(142)**	**77**	**243**	**282**	**72**

These notes are an integral part of this table.

1/ This FY 2025 budget includes capital and expense estimates based on final spending proposals from Bonneville's BP-24 IPR process and the increased expenditures for Transmission Evolving Grid Projects.

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 2023 Net Outlays are calculated using Bonneville's FY 2023 Actuals. FY 2024 is based off of rate case and FY 2025 to 2029 Net Outlays are based on BP-24 IPR assumptions, an escalation factor from using the FY 2023 Whitebook Loads and Resources Report, and the increased expenditures for Transmission Evolving Grid Projects.

9/ REP benefits were fixed through Sept. 30, 2028, pursuant to a settlement. This value is a placeholder and does not reflect an estimate of the REP benefits BPA may be required to pay under federal law. Actual REP benefits for this year may be higher or lower depending upon the outcome of settlement negotiations and applicable legal processes.

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

BP-2	2023		2024		2025		2026	2027	2028	2029
	Oblig.	Outlays	Oblig.	Outlays	Oblig.	Outlays	Oblig.	Oblig.	Oblig.	Oblig.
1 Residential Exchange Program	267	267	267	267	267	267	273	280	286	292
2 Power Services [2/]	2,834	2,834	1,416	1,416	1,498	1,498	1,536	1,575	1,613	1,654
3 Transmission Services	566	566	578	578	596	596	616	635	654	673
4 Conservation & Energy Efficiency	137	137	151	151	152	152	156	159	163	167
5 Fish & Wildlife	245	245	269	269	268	268	275	282	288	295
6 Interest/ Pension [3/]	257	257	209	209	206	206	223	236	257	249
7 Planning Council	12	12	12	12	12	12	12	13	13	13
8 TOTAL EXPENSE	4,319	4,319	2,902	2,902	2,999	2,999	3,090	3,178	3,274	3,343
9 Projects Funded in Advance	25	25	46	46	55	55	56	57	57	57
10 Power and Transmission Services Financed by Revenues/Reserves	40	40	89	89	89	89	104	103	119	119

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

BP-2 continued	2023		2024		2025		2026	2027	2028	2029
	Oblig.	Outlays	Oblig.	Outlays	Oblig.	Outlays	Oblig.	Oblig.	Oblig.	Oblig.
11 Transmission Services	623	623	650	650	753	753	916	1,035	1,003	743
12 Associated Project Cost	207	207	270	270	276	276	282	288	295	302
13 Fish & Wildlife	15	15	41	41	41	41	29	16	15	15
14 Capital Equipment	16	16	23	23	22	22	24	23	23	24
15 Capitalized Bond Premiums		0	0	0	0	0	0	0	0	0
16 **TOTAL CAPITAL INVESTMENTS**	**861**	**861**	**985**	**985**	**1,093**	**1,093**	**1,251**	**1,361**	**1,336**	**1,083**
17 **TREASURY BORROWING AUTHORITY TO**										
18 **FINANCE CAPITAL OBLIGATIONS [4/]**	**861**		**985**		**1,093**		**1,251**	**1,361**	**1,336**	**1,083**

These notes are an integral part of this table.

[1/] This FY 2025 budget includes capital and expense estimates based on final spending proposals from Bonneville's BP-24 IPR process and the increased expenditures for Transmission Evolving Grid Projects.

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.

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

PROGRAM & FINANCING SUMMARY

Current Services

(in millions of dollars)

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

		2023	2024	est. 2025	2026	2027	2028	2029
Program by activities:								
	Operating expenses:							
0.01	Power Services	2,347	941	1,010	1,038	1,065	1,091	1,121
0.02	Residential Exchange Program [10/]	267	267	267	273	280	286	292
	Associated Project Costs:							
0.05	Bureau of Reclamation	162	154	157	161	165	169	172
0.06	Corps of Engineers	261	260	270	276	282	289	295
0.07	Colville Settlement	26	22	22	23	23	24	24
0.08	Spokane Settlement	6	6	6	6	6	6	6
0.19	U.S. Fish & Wildlife Service	31	33	33	33	34	35	35
0.20	Planning Council	12	12	12	12	13	13	13
0.21	Fish & Wildlife	245	269	268	275	282	288	295
0.23	Transmission Services	566	578	596	616	635	654	673
0.24	Conservation & Energy Efficiency	137	151	152	156	159	163	167
0.25	Interest	218	171	168	183	195	216	208
0.26	Pension and Health Benefits [1/]	39	38	38	39	40	41	42
0.91	**Total operating expenses [2/]**	**4,319**	**2,901**	**2,998**	**3,090**	**3,178**	**3,274**	**3,343**
	Capital investment:							
1.01	Power Services	207	270	276	282	288	295	302
1.02	Transmission Services	623	650	753	916	1,035	1,003	743
1.04	Fish & Wildlife	15	41	41	29	16	15	15
1.05	Capital Equipment	16	23	22	24	23	23	24
1.06	Capitalized Bond Premiums	0	0	0	0	0	0	0
1.07	**Total Capital Investment [3/]**	**861**	**985**	**1,093**	**1,251**	**1,361**	**1,336**	**1,083**
2.01	Projects Funded in Advance	25	46	55	56	57	57	57
2.02	Power and Transmission Services Financed by Revenues/Reserves	40	89	89	104	103	119	119
10.00	**Total obligations [4/]**	**5,244**	**4,021**	**4,235**	**4,502**	**4,699**	**4,785**	**4,602**

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

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

[4/] This FY 2025 budget includes capital and expense estimates based on final spending proposals from Bonneville's BP-24 IPR process and the increased expenditures for Transmission Evolving Grid Projects.

For purposes of this table, this FY 2025 budget reflects, for FY 2023, 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)

		2023 est.	2024	2025	2026	2027	2028	2029
Financing:								
1000	Unobligated balance available, start of year. [5/]	9	8	8	0	0	0	0
1050	Unobligated balance available, end of year.[5/]	8	8	8	0	0	0	0
1200	Appropriation[6/]							
1236	Appropriations applied to repay debt[6/]							
1900	**Budget authority (gross)**	**5,243**	**4,519**	**4,838**	**5,000**	**5,151**	**4,956**	**4,769**
Budget Authority:								
1400	Permanent Authority: Authority to borrow from Treasury (indefinite)[7/]	722	985	1,093	1,251	1,361	1,336	1,083
1600	Contract Authority	1,933						
1800	Spending authority from off-setting collections	4,385	4,199	4,379	4,425	4,456	4,503	4,530
1825	Portion applied to debt reduction	(394)	(665)	(633)	(677)	(666)	(883)	(845)
1850	**Spending authority from offsetting collections (adjusted)**	**2,588**	**3,534**	**3,745**	**3,748**	**3,789**	**3,621**	**3,685**
900	Total obligations	5,244	4,022	4,236	4,502	4,699	4,785	4,602
4110	Outlays (gross)	5,244	4,022	4,236	4,502	4,699	4,785	4,602
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	(69)	(90)	0				
4123	Non-Federal sources	(4,260)	(4,109)	(4,289)	(4,335)	(4,366)	(4,413)	(4,440)
4130	Total, offsetting collections	(4,385)	(4,199)	(4,379)	(4,425)	(4,456)	(4,503)	(4,530)
4160	**Budget authority (net)**	**991**	**320**	**459**	**575**	**695**	**453**	**238**
4170	**Outlays (net)[8/9/]**	**522**	**(177)**	**(142)**	**77**	**243**	**282**	**72**

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 2023 Net Outlays are calculated using Bonneville's FY 2023 Actuals. FY 2024 is based off of rate case and FY 2025 to 2029 Net Outlays are based on BP-24 IPR assumptions, an escalation factor from using the FY 2023 Whitebook Loads and Resources Report, and the increased expenditures for Transmission Evolving Grid Projects.

[10/] REP benefits were fixed through Sept. 30, 2028, pursuant to a settlement. This value is a placeholder and does not reflect an estimate of the REP benefits BPA may be required to pay under federal law. Actual REP benefits for this year may be higher or lower depending upon the outcome of settlement negotiations and applicable legal processes.

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

BP-4A

	Fiscal Year							
	2023				**2024**			
	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	4,119	3,577	5,018	7,672	4,363	3,821	5,262	7,916
Plus: Annual Increase								
Cum.-Annual Treasury Borrowing	861	861	861	861	985	985	985	985
Treasury Borrowing (Cash)								
Less:								
BPA Bond Amortization	617	617	617	617	386	386	386	386
Net Increase/(Decrease):	244	244	244	244	599	599	599	599
Cum. - End-of-Year: 1974 Act	**4,363**		**5,262**		**4,962**		**5,861**	
End-of-Year: 1980 Act	**0**		**0**		**0**		**0**	
End-of-Year: ARRA	**0**		**0**		**0**		**0**	
Cum.-End-of-Year: Total	4,363	3,821	5,262	7,916	4,962	4,420	5,861	8,515
Total Remaining Treasury Borrowing Amount				5,784				5,185
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 2025 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 2023 are $7 Billion.

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

	2025				2026			
	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	4,962	4,420	5,861	8,515	5,630	5,088	6,529	9,183
Plus: Annual Increase								
Cum.-Annual Treasury Borrowing	1,093	1,093	1,093	1,093	1,251	1,251	1,251	1,251
Treasury Borrowing (Cash)								
Less:								
Total BPA Bond Amortization	424	424	424	424	677	677	677	677
Net Increase/(Decrease):								
Total	668	668	668	668	575	575	575	575
Cum. - End-of-Year: 1974 Act	**5,630**		**6,529**		**6,205**		**7,104**	
End-of-Year: 1980 Act	**0**		**0**		**0**		**0**	
End-of-Year: ARRA	**0**		**0**		**0**		**0**	
Cum.-End-of-Year: Total	5,630	5,088	6,529	9,183	6,205	5,663	7,104	9,758
Total Remaining Treasury Borrowing Amount				4,517				3,942
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 2025 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 2023 are $7 Billion.

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.

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

BP-4C Fiscal Year

	2027				2028			
	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	6,205	5,663	7,104	9,758	6,951	6,409	7,850	10,504
Plus: Annual Increase								
Cum.-Annual Treasury Borrowing	1,361	1,361	1,361	1,361	1,336	1,336	1,336	1,336
Treasury Borrowing (Cash)								
Less:								
Total BPA Bond Amortization	615	615	615	615	721	721	721	721
Net Increase/(Decrease):								
Total	746	746	746	746	615	615	615	615
Cum. - End-of-Year: 1974 Act	**6,951**		**7,850**		**7,566**		**8,465**	
End-of-Year: 1980 Act	**0**		**0**		**0**		**0**	
End-of-Year: ARRA	**0**		**0**		**0**		**0**	
Cum.-End-of-Year: Total	6,951	6,409	7,850	10,504	7,566	7,024	8,465	11,119
Total Remaining Treasury Borrowing Amount				3,196				6,581
Total Legislated Treasury Borrowing Amount				13,700				17,700

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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.

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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 2023 are $7 Billion.

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 2029			
	Net Capital Obs	Net Capital Obs Subject to BA	Net Capital Expend.	Bonds Out-Standing
Start-of-Year: Total	7,566	7,024	8,465	11,119
Plus: Annual Increase				
Cum.-Annual Treasury Borrowing	1,083	1,083	1,083	1,083
Treasury Borrowing (Cash)				
Less:				
Total BPA Bond Amortization	824	824	824	824
Net Increase/(Decrease):				
Total	259	259	259	259
Cum. - End-of-Year: 1974 Act	**7,825**		**8,724**	
End-of-Year: 1980 Act	**0**		**0**	
End-of-Year: ARRA	**0**		**0**	
Cum.-End-of-Year: Total	7,825	7,283	8,724	11,378
Total Remaining Treasury Borrowing Amount				6,322
Total Legislated Treasury Borrowing Amount				17,700

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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 2025 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 2023 are $7 Billion.

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		**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**
Main Grid	Requirements	51	39	39	45	40	28	23
Area & Customer Services		59	39	44	39	45	52	49
Upgrades & Additions		73	152	147	100	42	47	58
System Replacements		441	365	351	369	408	417	404
Projects Funded in Advance		25	46	55	56	57	57	57
Revenue Financing		40	55	55	70	70	85	85
Total, Transmission Services - Capital		688	696	692	680	662	687	676
Associated Project Costs - Capital								
Associated Project Costs	Requirements	207	270	276	282	288	295	302
Projects Funded in Advance[1/]		0	0	0	0	0	0	0
Revenue Financing		0	34	34	34	33	34	34
Total, Associated Project Costs - Capital		207	304	310	315	321	328	336
Federal and Non-Federal Funding								
Projects Funded in Advance	Sources	25	46	55	56	57	57	57
U.S. Treasury Borrowing Authority		871	953	946	939	926	958	955
Scenario								
Projects Funded in Advance[1/]	Scenario	0	0	0	0	0	0	0
Third Party Financing		156	149	145	138	134	136	133
Alternate Treasury Borrowing Authority		715	805	801	800	792	822	821

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 2025 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 2025 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						
	2023	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**
Start-of-Year: Total Bonds Outstanding	7,672	7,916	8,366	8,889	9,326	9,938	10,417
Plus:							
U.S. Treasury Borrowing (Cash)	861	985	1,093	1,251	1,361	1,336	1,083
Less:							
Potential Third Party Financing & PFIA	156	149	145	138	134	136	133
BPA Bond Amortization	617	386	424	677	615	721	824
Net Increase/(Decrease) Bonds Outstanding:	244	450	523	437	613	478	125
Cum.-End-of-Year: Total	7,916	8,366	8,889	9,326	9,938	10,417	10,542
Total Remaining U.S. Treasury Borrowing Amount	5,784	5,334	4,811	4,374	3,762	7,283	7,158
Total Legislated U.S.Treasury Borrowing Amount	13,700	13,700	13,700	13,700	13,700	17,700	17,700

U.S. TREASURY PAYMENTS

(in millions of dollars)

		FISCAL YEAR						
		2023	2024	2025	2026	2027	2028	2029
A.	**INTEREST ON BONDS & APPROPRIATIONS**							
	Bonneville Bond Interest							
1	Bonneville Bond Interest (net)	182	125	143	164	169	174	178
2	AFUDC [1/]	-	33	32	31	29	27	25
	Appropriations Interest							
3	Bonneville	-	-	-	-	-	-	-
4	Corps of Engineers [2/]	40	33	22	15	17	15	11
5	Lower Snake River Comp. Plan	0	0	0	0	0	0	0
6	Bureau of Reclamation [3/]	1	1	1	1	1	1	0
7	Bond Premiums paid/Discounts (not capitalized)	(5)	12	1	3	8	26	18
8	**Total Bond and Approp. Interest**	**218**	**204**	**200**	**214**	**224**	**243**	**233**
B.	**ASSOCIATED PROJECT COST**							
9	Bureau of Reclamation Irrigation Assistance	13	8	14	20	6	11	4
10	Bureau of Rec. O & M [4/]	-	-	-	-	-	-	-
11	Corps of Eng. O & M [4/]	5	-	-	-	-	-	-
12	L. Snake River Comp. Plan O & M [4/]	-	-	-	-	-	-	-
13	COE Approp CRFM Studis Expense	5						
14	**Total Assoc. Project Costs**	**23**	**8**	**14**	**20**	**6**	**11**	**4**
C.	**CAPITAL TRANSFERS**							
	Amortization							
15	Bonneville Bonds [6/]	617	386	424	677	615	721	824
16	Bureau of Reclamation Appropriations	5	2	-	-	-	25	0
17	Corps of Engineers Appropriations	118	275	209	-	52	137	21
18	Lower Snake River Comp. Plan	0	2	0	-	-	-	-
19	Bonneville Appropriations	-	-	-	-	-	-	-
20	**Total Capital Transfers [/8]**	**741**	**665**	**633**	**677**	**666**	**883**	**845**
D.	**OTHER PAYMENTS**							
21	Unfunded Post-Retirement Liability [5/]	39	38	38	39	40	41	42
22	**TOTAL TREASURY PAYMENTS**	**1,021**	**915**	**885**	**950**	**937**	**1,179**	**1,124**

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 Corp of Engineers (Corps) fish bypass facilities at Corps dams in the Columbia River Basin, including Lower Monumental, Ice Harbor, and The Dalles.

3/ Includes payments paid by Reclamation to the U.S. Treasury on behalf of Bonneville.

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

FISCAL YEAR	2023	2024	2025	2026	2027	2028	2029
Bureau of Reclamation	162	154	157	161	165	169	172
Corps of Engineers	261	260	270	276	282	289	295
Subtotal Bureau and Corps	423	414	427	437	447	457	467
Lower Snake River Comp. Plan	31	33	33	33	34	35	35
Total	454	447	460	470	481	492	503

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 2025 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 2023 data reflects BPA's FY 2023 Actuals.

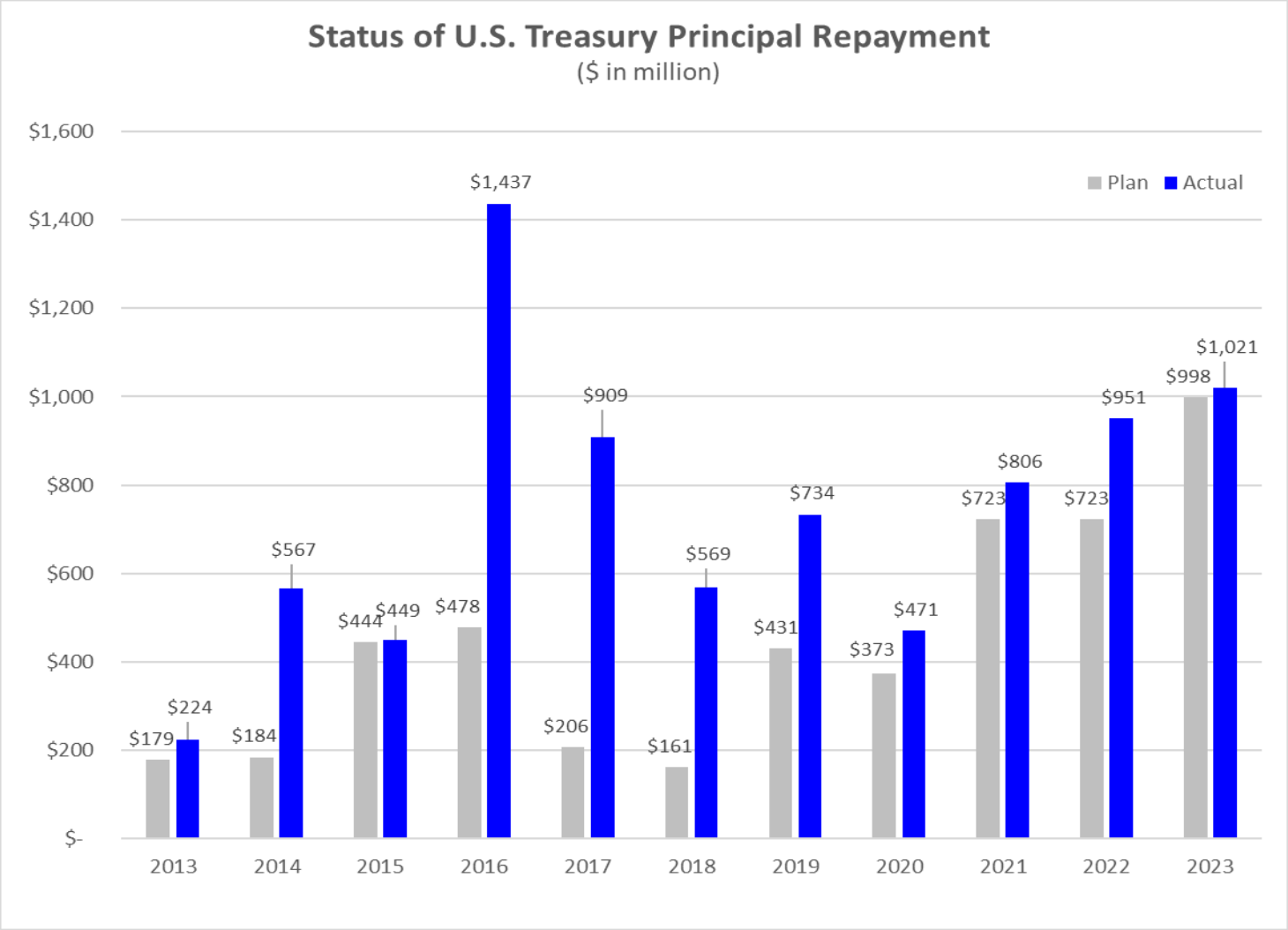


Chart Notes

[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 2023 payment to the U.S. Treasury was approximately $1.021 billion. This was the 40th consecutive year that Bonneville made its scheduled payments to the U.S. Treasury on time and in full. The payment included $741 million in principle, which included $426 million in early retirement of higher interest rate U.S. Treasury debt, $218 million for interest, $13 million in irrigation assistance payments, and $39 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 2023 was in excess of $7 billion.

[6/] FYs 2014-2023 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

		2023		2024		2025
11.1	Full-time permanent	350		268		282
11.3	Other than full-time permanent	5		4		4
11.5	Other personnel compensation	131		100		106
11.9	**Total personnel compensation**	**486**		**372**		**392**
12.1	Civilian personnel benefits	207		159		167
13.0	Benefits for former personnel	-		-		-
21.0	Travel and transportation of persons	13		10		10
22.0	Transportation of things	1		1		1
23.1	Rental payments to GSA	0		0		0
23.2	Rents, other	39		30		31
23.3	Communication, utilities & misc. charges	13		10		10
25.1	Consulting Services	175		134		141
25.2	Other Services	3,753		2,876		3,029
25.5	R & D Contracts	3		4		4
26.0	Supplies and materials	45		34		36
31.0	Equipment	103		79		83
32.0	Lands and structures	59		45		48
41.0	Grants, subsidies, contributions	61		47		49
43.0	Interest and dividends	289		221		233
99.0	**Total obligations**	**5,244**		**4,022**		**4,236**

Estimate of Receipts
(in millions of dollars)

	Fiscal Year						
	2023	2024	2025	2026	2027	2028	2029
Reclamation Interest	1	1	1	1	1	1	0
Reclamation Amortization	5	2	0	0	0	25	0
Reclamation O&M	0	0	0	0	0	0	0
Reclamation Irrig. Assist.	13	8	14	20	6	11	4
Revenues Collected by Reclamation	-14	-5	-7	-7	-1	-7	2
Distributed in Treasury Account (credit)							
Colville Settlement (credit)	-5	-5	-5	-5	-5	-5	-5
Total 1/ Reclamation Fund	**1**	**1**	**3**	**10**	**1**	**25**	**1**
Corps O&M	5						
COE Approp CRFM Studies Expense	5						
CSRS	39	38	38	39	40	41	42
Total 2/ Repayments on miscellaneous costs	**49**	**38**	**38**	**39**	**40**	**41**	**42**

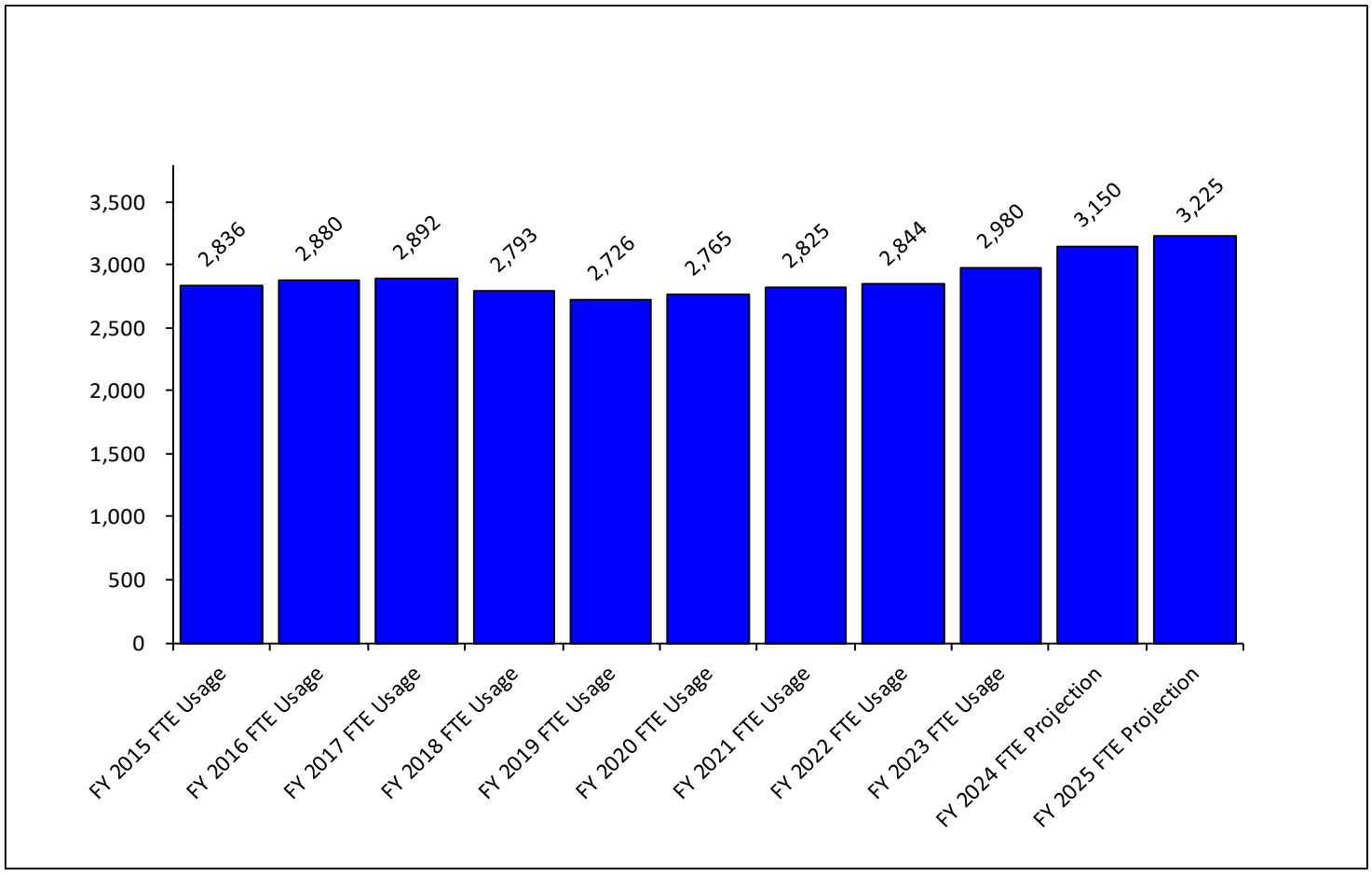
1/ Includes amortization of appropriations and irrigation assistance, and interest costs for Reclamation. The cost of power O&M for Reclamation is no longer included in Proprietary Receipts due to Direct Funding by Bonneville. Represents transfer to Account #895000.26

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).

	2023	2024	2025	2026	2027	2028	2029
Bureau of Reclamation	162	154	157	161	165	169	172
Corps of Engineers	261	260	270	276	282	289	295
Lower Snake River Comp. Plan	31	33	33	33	34	35	35
Total	**454**	**447**	**460**	**470**	**481**	**492**	**503**

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, and it is important to 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 9/30/2023, DOE HR staff has reported FY 2023 BPA's FTE projection at 2,980.

Total Cost of BPA Fish & Wildlife Actions

COST ELEMENT	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
CAPITAL INVESTMENTS [1/]												
BPA FISH AND WILDLIFE	57.5	52.1	37.4	21.4	16.0	5.4	30.7	22.3	40.2	41.9	16.1	14.6
BPA SOFTWARE DEVELOPMENT COSTS	0.4	0.0	0.1	1.4	1.2	1.4	0.8	0.0	0.0	0.0	0.0	0.0
ASSOCIATED PROJECTS (FEDERAL HYDRO)	114.5	103.6	101.7	81.4	34.1	58.9	51.8	55.5	106.6	66.7	10.4	4.7
TOTAL CAPITAL INVESTMENTS	**172.3**	**155.7**	**139.2**	**104.1**	**51.4**	**65.7**	**83.2**	**77.9**	**146.7**	**108.6**	**26.5**	**19.3**
PROGRAM EXPENSES												
BPA DIRECT FISH AND WILDLIFE PROGRAM	248.9	239.0	231.8	258.2	258.1	254.7	258.7	240.4	238.1	253.6	249.4	260.9
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	1.0
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	0.0	
REIMBURSABLE/DIRECT-FUNDED PROJECTS [3/]												
O & M LOWER SNAKE RIVER HATCHERIES	22.0	28.7	31.0	30.9	28.6	26.0	31.4	26.7	31.9	30.7	33.0	34.9
O & M CORPS OF ENGINEERS	41.1	39.2	47.8	46.4	48.2	46.8	47.5	48.9	46.3	48.3	47.4	46.0
O & M BUREAU OF RECLAMATION	5.3	5.6	6.6	2.6	6.0	7.0	5.5	8.7	5.8	6.5	7.2	6.5
NW POWER AND CONSERVATION COUNCIL ALLOCATED @ 50%	4.6	5.0	4.9	4.9	5.4	5.4	5.5	5.6	5.6	5.5	6.0	5.9
SUBTOTAL (REIMB/DIRECT-FUNDED)	73.0	78.5	90.3	84.9	88.2	85.2	89.9	89.9	89.6	91.0	93.6	93.3
TOTAL OPERATING EXPENSES	**321.9**	**317.70**	**322.40**	**343.17**	**346.34**	**339.90**	**348.65**	**330.30**	**327.66**	**344.60**	**343.23**	**355.20**
PROGRAM RELATED FIXED EXPENSES [4/]												
INTEREST EXPENSE	80.6	89.1	83.4	89.2	85.6	58.6	41.0	39.7	32.5	29.3	29.4	30.3
AMORTIZATION EXPENSE	30.2	35.7	38.7	41.3	42.5	42.5	43.4	45.1	46.7	47.4	56.0	54.9
DEPRECIATION EXPENSE	20.7	18.6	19.2	20.1	20.1	20.3	20.8	21.0	21.1	22.0	22.0	22.1
TOTAL FIXED EXPENSES	**131.5**	**143.4**	**141.3**	**150.6**	**148.2**	**121.4**	**105.1**	**105.8**	**100.3**	**98.7**	**107.4**	**107.3**
GRAND TOTAL PROGRAM EXPENSES	**453.4**	**461.1**	**463.7**	**493.7**	**494.6**	**461.3**	**453.7**	**436.1**	**428.0**	**443.3**	**450.6**	**462.5**
FORGONE REVENUES AND POWER PURCHASES												
FOREGONE REVENUES	152.2	135.5	122.7	195.8	76.6	9.6	2.9	174.4	33.4	190.6	251.9	89.3
BPA POWER PURCH. FOR FISH ENHANCEMENT	38.5	85.8	196.2	67.5	50.3	(20.5)	24.3	177.6	150.0	110.6	237.9	879.3
TOTAL FOREGONE REVENUES AND POWER PURCHASES	**190.7**	**221.3**	**318.9**	**263.3**	**126.9**	**(10.9)**	**27.2**	**352.0**	**183.4**	**301.2**	**489.8**	**968.6**
TOTAL PROGRAM EXPENSES, FOREGONE REVENUES, & POWER PURCHASES	**644.1**	**682.4**	**782.6**	**757.0**	**621.5**	**450.4**	**480.9**	**788.1**	**611.5**	**744.5**	**940.5**	**1431.1**
CREDITS												
4(h)(10)(C)	(77.0)	(84.1)	(103.9)	(77.7)	(72.6)	(53.7)	(70.1)	(98.2)	(95.5)	(90.6)	(112.3)	(257.7)
FISH COST CONTINGENCY FUND	-	-	-	-	-	-	-	-	-			-
TOTAL CREDITS	**(77.0)**	**(84.1)**	**(103.9)**	**(77.7)**	**(72.6)**	**(53.7)**	**(70.1)**	**(98.2)**	**(95.5)**	**(90.6)**	**(112.3)**	**(257.7)**

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.

BONNEVILLE POWER ADMINISTRATION
DOE/BP • February 2024