

## **Bonneville Power Administration**

### **Proposed Appropriations Language**

Expenditures from the Bonneville Power Administration Fund, established pursuant to Public Law 93-454, are approved for construction of, or participating in the construction of, a high voltage line from Bonneville's high voltage system to the service areas of requirements customers located within Bonneville's service area in southern Idaho, southern Montana and western Wyoming; and such line may extend to, and interconnect in, the Pacific Northwest with lines between the Pacific Northwest and the Pacific Southwest, and for John Day Reprogramming and Construction, the Columbia River Basin White Sturgeon Hatchery, and Kelt Reconditioning and Reproductive Success Evaluation Research and, in addition, for official reception and representation expenses in an amount not to exceed \$5,000. Provided, that during fiscal year 2013, no new direct loan obligations may be made.

### **Explanation of Changes**

The proposed appropriations language restricts new direct loans in FY 2013 as in FY 2012. This bill language is drafted consistent with the Credit Reform Act of 1990.

**Please Note - The FY 2013 Bonneville Power Administration Congressional Budget submission includes FY 2012 budget estimates.**

Bonneville finances its operations with a business-type budget under the Government Corporation Control Act, 31 U.S.C 9101-10, on the basis of the self-financing authority provided by the Federal Columbia River Transmission Act of 1974 (Transmission Act) (Public Law 93-454) and the U.S. Treasury borrowing authority provided by the Transmission Act, the Pacific Northwest Electric Power Planning and Conservation Act of 1980 (Pacific Northwest Power Act) (Public Law 96-501) for energy conservation, renewable energy resources, investment in capital fish facilities, and other purposes, the American Recovery and Reinvestment Act of 2009 (Public Law 111-5), and other legislation. Authority to borrow from the U.S. Treasury is available to the Bonneville on a permanent, indefinite basis. The amount of U.S. Treasury borrowing outstanding<sup>1/</sup> at any time cannot exceed \$7.70 billion. Bonneville finances its approximate \$4.5 billion annual cost of operations and investments primarily using power and transmission revenues and borrowing from the U.S. Treasury at rates comparable to borrowings at open market rates for similar issues.

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 which are legally 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 legal dollar caps. Because Bonneville operates within existing legislative authority, Bonneville is not subject to a "pay-as-you-go" test regarding its revision of current-law funding estimates.

<sup>1/</sup> Amount of total bonds outstanding can be found on table BP-4 in the Additional Tables section

**Bonneville Power Administration**

**Funding Profile by Subprogram <sup>1/</sup>**

(Accrued Expenditures in Thousands of Dollars)

	Fiscal Year			
	2011 (EOY Actuals)	2012 Original <sup>2/</sup>	2012 Revised <sup>2/</sup>	2013 Proposed
Capital Investment Obligations				
Associated Project Costs <sup>3/</sup>	201,436	N/A	233,368	250,029
Fish & Wildlife	90,817	N/A	59,785	67,145
Conservation & Energy Efficiency <sup>3/</sup>	161,754	N/A	88,637	94,547
Subtotal, Power Services	454,007	N/A	381,789	411,721
Main Grid	123,093	N/A	235,851	299,552
Area & Customer Service	10,196	N/A	19,767	10,975
Upgrades & Additions	72,590	N/A	166,709	271,112
System Replacements	94,967	N/A	172,459	200,626
Transmission Services Total	300,845	N/A	594,785	782,265
Capital Equipment & Bond Premium	44,161	N/A	64,252	52,512
Total, Capital Obligations <sup>3/</sup>	799,012	937,196	1,040,827	1,246,498
Expensed and Other Obligations				
Expensed	2,655,281	2,464,963	2,790,637	2,946,314
Projects Funded in Advance	213,527	94,989	91,532	101,297
Total, Obligations	3,667,820	3,497,148	3,922,995	4,294,109
Capital Transfers (cash)	409,528	877,573	393,110	179,174
Bonneville Total	4,077,349	4,374,721	4,316,105	4,473,283
Bonneville Net Outlays	468,000		(9,000)	(7,000)
Full-time Equivalent (FTEs)	3,058	3,064	3,117	3,117

**Public Law Authorizations include:**

Bonneville Project Act of 1937, Public Law No. 75-329, H.R. 7642

Federal Columbia River Transmission Act of 1974, Public Law No. 93-454 S. 3362

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

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

**Outyear Funding Profile by Subprogram <sup>1/</sup>**

(Accrued Expenditures in Thousands of Dollars)

Fiscal Year

	2014	2015	2016	2017
Capital Investment Obligations				
Associated Project Costs <sup>3/</sup>	268,624	269,329	291,175	297,809
Fish & Wildlife	60,275	41,807	36,650	30,795
Conservation & Energy Efficiency <sup>3/</sup>	100,490	129,234	159,972	168,890
Subtotal, Power Services	429,389	440,370	487,797	497,493
Main Grid	316,115	201,764	127,255	96,573
Area & Customer Service	11,963	14,492	14,321	22,241
Upgrades & Additions	234,999	163,514	132,196	60,704
System Replacements	211,741	200,303	207,402	224,223
Transmission Services	774,818	580,073	481,173	403,742
Capital Equipment & Bond Premium	47,791	48,389	49,623	51,285
Total, Capital Obligations <sup>3/</sup>	1,251,999	1,068,832	1,018,592	952,520
Expensed and Other Obligations				
Expensed	3,095,097	3,220,160	3,301,760	3,451,141
Projects Funded in Advance	38,878	26,598	27,902	31,375
Total, Obligations	4,385,974	4,315,590	4,348,254	4,435,036
Capital Transfers (cash)	128,094	134,882	73,189	45,350
BPA Total	4,514,067	4,450,472	4,421,443	4,480,386
Bonneville Net Outlays	(10,000)	(10,000)	(10,000)	(10,000)
Full-time Equivalent (FTEs)	3,175	3,175	3,175	3,175

**These notes are an integral part of the preceding tables.**

- 1/ 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 which are legally 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 legal dollar caps. Because Bonneville operates within existing legislative authority, Bonneville is not subject to a "pay-as-you-go" test regarding its revision of current-law funding estimates.
- 2/ Original estimates reflect BPA's FY 2013 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 2012.
- 3/ Includes infrastructure investments designed to address the long-term needs of the Northwest and to reflect significant changes affecting BPA's power and transmission markets.

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.

The cumulative amount of actual advance amortization payments as of the end of FY 2011 is \$2,672 million.

Refer to 16 USC Chapters 12B, 12G, 12H, and BPA's other organic laws, including P.L. 100-371, Title III, Sec. 300, 102 Stat. 869, July 18, 1988 regarding BPA'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 competitive 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). Estimated Net Outlays could change due to changing market conditions, streamflow variability, and continuing restructuring of the electric industry.

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.

FTE outyear data are estimates and may change.

#### Major Outyear Considerations

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

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

## **Overview and Accomplishments**

Bonneville provides electric power, transmission, and energy efficiency throughout the Pacific Northwest. Bonneville serves a 300,000 square mile area including Oregon, Washington, Idaho, Western Montana, and parts of Northern California, Nevada, Utah, and Wyoming with a population of about 12.3 million people. Bonneville markets the electric power produced from 31 operating Federal hydro projects in the Pacific Northwest owned by the U.S. Army Corps of Engineers (Corps) and the U.S. Department of Interior, Bureau of Reclamation (Reclamation) – known as Associated Projects. Bonneville also acquires non-Federal power, including the power from the nuclear power plant, Columbia Generating Station (CGS), to meet the needs of its customer utilities. Bonneville maintains and operates 15,215 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 leases for certain transmission facilities. Bonneville also supports the protection and enhancement of fish and wildlife, and provides leadership in conservation and renewables development, as part of its efforts to preserve and balance the economic and environmental benefits of the Federal Columbia River Power System (FCRPS).

The organization of Bonneville's FY 2013 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 include Power Services (PS) and Transmission Services (TS) with administrative costs included. The PS includes line items for Fish and Wildlife, Conservation and Energy Efficiency, Residential Exchange Program (REP), Associated Projects Operations & Maintenance (O&M) Costs, and Northwest Power and Conservation Council (Planning Council or Council).

The mission of Bonneville as a public service organization is to create and deliver the best value for its customers and constituents as it acts in concert with others to assure the Pacific Northwest, (1) An adequate, efficient, economical and reliable power supply; (2) An open access transmission system that is adequate for integrating and transmitting power from Federal and non-Federal generating units, providing service to Bonneville's customers, providing interregional interconnections, and maintaining electrical reliability and stability; and (3) Mitigation of the FCRPS impacts on fish and wildlife. Bonneville is legally obligated to provide cost-based rates and public and regional preference in its marketing of power. Bonneville will set its rates as low as possible consistent with sound

## **Bonneville Power Administration**

### **Overview**

business principles and sufficient to ensure the full recovery of all of its costs, including timely repayment of the Federal investment in the system. Bonneville's vision is to provide (1) High reliability; (2) Low rates consistent with sound business principles; (3) Responsible environmental stewardship; and (4) Accountability to the region. Bonneville pursues this vision consistent with its three core values of trustworthy stewardship of the FCRPS, collaborative relationships, and operational excellence.

## **Alignment to Strategic Plan**

Bonneville contributes to the Administration's clean energy goals and aligns to Goal 1 of Department of Energy's (DOE) Strategic Plan to "Transform our Energy Systems: Catalyze the timely, material, and efficient transformation of the nation's energy system and secure U.S. leadership in clean energy technologies." As part of its responsibilities, BPA also promotes energy efficiency, renewable resources and new technologies.

To validate and verify program performance, Bonneville conducts various internal and external reviews and audits. Bonneville conducts extensive review within the region of both capital and expense programs. In addition, Bonneville's programmatic activities are subject to review by Congress, the U.S. Government Accountability Office (GAO), the DOE's Inspector General, and other governmental entities. Bonneville's financial statements are audited annually by an independent external auditor. Bonneville has received an unqualified audit opinion since the mid-1980s and no material weaknesses have been identified in controls over financial reporting.

## **Legislative History**

The Bonneville Project Act of 1937 provides the statutory foundation for Bonneville's utility 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 legislation provided Bonneville with "self-financing" authority, established the Bonneville Fund (a permanent, indefinite appropriation) allowing Bonneville to use its revenues from electric power and transmission ratepayers to directly fund all programs, and authorized Bonneville to sell bonds to the Treasury to finance the region's high-voltage electric transmission system requirements.

In 1980, enactment of the Pacific Northwest Electric Power Planning and Conservation Act (Northwest Power Act) expanded Bonneville's obligations and

responsibilities to: encourage electric energy conservation to meet regional electric power loads placed on Bonneville; develop renewable energy resources; and protect, mitigate and enhance the fish and wildlife of the Columbia River and its tributaries. In support of these responsibilities, Bonneville's Treasury borrowing authority was expanded to allow the sale of bonds to finance conservation and other resources and to carry out fish and wildlife related capital improvements.

By 2002, Bonneville's cumulative authority in bonds outstanding to the Treasury was \$3.75 billion. Bonneville received an additional \$700 million in available Treasury financing through the Consolidated Appropriations Act, 2003 (P.L. 108-7, title VII, Section 701; 117 Stat. 551, 2003) to help assure a sufficient level of infrastructure planning. The FY 2003 Appropriations Act increased to \$4.45 billion the aggregate amount of bonds Bonneville was authorized by statute to sell to the Treasury and have outstanding at any one time. In 2009, the American Recovery and Reinvestment Act (ARRA) increased Bonneville's line of credit with the Treasury by \$3.25 billion to the current authority of \$7.7 billion.

#### **ARRA**

In the ARRA, Section 401 provided for an increase in the amount of Bonneville's Treasury bonds that may remain outstanding at any given time under the Transmission System Act. This \$3.25 billion increase in the limit on Bonneville's available Treasury bonds gave Bonneville the certainty of sufficient access to capital to proceed with planned new projects and ensures that existing capital projects will be able to proceed as planned.

Bonneville has identified up to \$2 billion in major projects for which it will use bonds authorized under ARRA and through FY 2011 has spent \$810 million on these projects. The projects will enhance transmission and hydro system infrastructure, create hundreds of new jobs, implement energy efficiency and construct fish hatcheries. The projects identified for ARRA financing are being developed now or are scheduled to be initiated or undergo environmental review in the next two years.

Bonneville is committed to assuring that its actions contribute to and support the Administration's goals under ARRA. Integration of renewable energy sources onto the electrical grid helps the economic recovery efforts through clean, secure and affordable energy sources. See the DOE Recovery website (<http://www.energy.gov/recovery/index.htm>) as a source for up-to-date information.

#### **Bonneville Power Administration Overview**

#### **The Columbia River Treaty**

The Columbia River Treaty (CRT) is a marvel of international cooperation enabling a wide range of related benefits that affect British Columbia and the Pacific Northwest. Signed in 1961 and ratified in 1964, the CRT is known throughout the world as one of the best and most successful examples of a transboundary water treaty. The CRT includes a unilateral right for either country to terminate beginning in 2024 with 10 years' notice provided. The U.S. Entity for the CRT, consisting of Bonneville and the Corps, has initiated the process to discuss with the region's state governments and tribes, as well as non-governmental entities, issues related to the continuation of the CRT. The CRT was designed to provide flood control and hydropower benefits in both countries, but we understand that values in the region have changed in the last 50 years and issues need to be considered that were not part of the debate 50 years ago. Flood control benefits were paid through 2024 but not beyond. The U.S. Entity is establishing management structures to engage fellow Federal agencies, regional sovereigns and non-sovereign stakeholders in order to develop a recommendation to be provided to the State Department in the Fall of calendar year 2013.

#### **Judicial and Regulatory Activity**

The Residential Exchange Program was created by the Northwest Power Act to extend the benefits of low-cost Federal power to the residential and small farm customers of Pacific Northwest electric utilities that meet certain conditions. In 2000, Bonneville and the region's six investor-owned utilities (IOUs) signed settlement agreements (2000 REP Settlements) that attempted to replace the traditional method for determining REP benefits with a negotiated formula for a period of 10 years. These agreements were challenged in court. In May 2007, the U.S. Court of Appeals for the Ninth Circuit (Ninth Circuit) held that the 2000 REP Settlements were not consistent with the Northwest Power Act.

Bonneville responded to the Ninth Circuit's decisions by initiating a special rate proceeding, the WP-07 Supplemental rate case (WP-07S rate case), to revise power rates for FY 2009 and reestablish the traditional method for calculating REP payments to regional IOUs. Bonneville also determined in the WP-07S rate case the amount by which the region's IOUs received overpayments in REP benefits due to the unlawful 2000 REP Settlements, and the method and manner of returning those overpayments to Bonneville's other customers as refunds. Following the WP-07S rate case, Bonneville initiated the WP-10 rate case to establish rates and REP benefit payments for FY's 2010 and 2011.

#### **FY 2013 Congressional Budget**

Many parties filed challenges in the Ninth Circuit seeking review of Bonneville's refund determinations and REP implementation decisions established in the WP-07S and WP-10 rate cases. Throughout 2010, the litigants met to participate in a region-wide mediation of the REP-related litigation. As a result of the mediation, most of the litigants reached a settlement on the outstanding REP-related litigation and presented such settlement (referred to as the 2012 REP Settlement) to the Bonneville Administrator in December of 2010. The Administrator agreed to review the 2012 REP Settlement in a special rate proceeding, the REP-12 proceeding. At the conclusion of the REP-12 proceeding, the Bonneville Administrator decided to sign the 2012 REP Settlement in a Record of Decision issued on July 26, 2011.

Bonneville believes that the 2012 REP Settlement should resolve all outstanding litigation related to the REP as implemented in the WP-07S and WP-10 rate cases. However, one Bonneville customer and a group of retail end-user consumers of Bonneville's utilities' customers have challenged the 2012 REP Settlement and oppose Bonneville's and the settling litigants' efforts to dismiss the pending REP litigation. Consequently, whether the 2012 REP Settlement will result in complete dismissal of all outstanding REP litigation is uncertain at this time.

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 power system, including Bonneville, are required to comply. These standards became enforceable on June 18, 2007, and compliance is monitored by NERC and the regional reliability organizations. DOE has taken the position that financial penalties may not be imposed on federal agencies for violations of electric reliability standards.

#### **Fish and Wildlife Program Overview**

Bonneville is committed to continue funding its share of the region's efforts to protect listed Columbia River Basin fish and wildlife. To the extent possible, Bonneville is integrating the actions implemented in response to the FCRPS Biological Opinions (BiOps), including the National Oceanic and Atmospheric Administration (NOAA) Willamette River BiOp and the United States Fish and Wildlife Service's (USFWS) 2006 Libby Dam BiOp, with projects implemented under the Council's Fish and Wildlife Program (Council's Program). Sub-basin plans that include prioritized strategies for mitigation actions will help guide project selection to meet both BPA's Endangered Species Act (ESA) and Northwest Power Act responsibilities.

#### **Bonneville Power Administration Overview**

Bonneville's Fish and Wildlife program provides for extensive protection, mitigation, and enhancement of Columbia River Basin fish and wildlife adversely affected by the development and operation of Federal hydroelectric projects on the Columbia River and its tributaries from which Bonneville markets power. Bonneville satisfies a major portion of its fish and wildlife responsibilities by funding projects and activities consistent with the Council's Program developed pursuant to Section 4(h) of the Northwest Power Act. Through the Program Bonneville also implements measures addressed to the protection of fish in the Columbia River and its tributaries, listed as threatened or endangered under the ESA. Bonneville pursues a comprehensive approach to integrate the ESA requirements of the FCRPS BiOps with the broad resource protection, mitigation and enhancement objectives of the Council's Program.

Bonneville, the Corps and Reclamation signed historic 10-year agreements, known as the Columbia Basin Fish Accords, with five Columbia Basin Indian tribes and two states in 2008. In 2009, an agreement was signed with the state of Washington and federal agencies (the state of Washington Estuary agreement). These agreements provide specific hydro, habitat, hatchery and other measures that will address protection needs and provide measurable biological benefits for fish. The agreements set a course of action for protection of salmon and steelhead listed for protection under the ESA and other important non-listed populations.

Included with the budget schedules section of this budget document is the current tabulation of Bonneville's fish and wildlife costs from FY 2000 through FY 2011.

#### **Infrastructure Investment**

Bonneville is moving forward with infrastructure investments in the Pacific Northwest to meet Northwest transmission needs that will also continue to support a competitive wholesale market in the Western Interconnection, which encompasses 14 western states, two Canadian provinces and one Mexican State. Construction of the 79 mile McNary-John Day line and three additional proposed transmission lines will add more than 220 miles of lines to the Northwest transmission grid, improving reliability and allowing Bonneville to provide service to about 3,881 MWs of requests for Bonneville transmission, including service for 3,138 MWs of additional green energy. The proposed transmission lines include Bonneville's I-5 Corridor Reinforcement Project, which is currently undergoing



environmental review. If built, that project would meet growing local and regional energy demands and help address the Bonneville transmission system critical regional reliability issues.

These efforts will help meet the increasing demand for Bonneville's service to meet regional greenhouse gas reduction and environmental goals of western states. In support of these goals and as part of the Regional Dialogue implementation, Bonneville is working with stakeholders to determine its role in the development and use of energy efficiency for the post-2012 period. Bonneville is continuing to target transmission investments in those areas with reliability needs. Bonneville conducted the first Network Open Season (NOS) in 2008 and completed the second NOS in May 2009. A third NOS process occurred in 2010. The NOS process is designed to ensure the region will have sufficient transmission infrastructure available for customers seeking capacity on Bonneville's transmission system network. Many of the customer capacity requests have been for delivery of wind-generated electricity.

Bonneville has recently experienced significant growth within its balancing area of installed variable renewable generation, primarily in the form of wind generation. Since 2001, installed wind generation has grown from 115 MW to 3,800 MW as of December 2011. Bonneville estimates as much as 6,200 MW could be in place by 2013. This substantial increase in variable renewable generation has resulted in additional uncertainties in the balance between load and generation required for maintaining a reliable grid. While wind generation is a sustainable resource that has zero emissions and zero fuel costs, it is a variable resource that is a non-dispatchable source of energy, meaning it cannot be relied upon for capacity. As a result Bonneville has initiated studies of mature and developing technologies that have the potential to provide tools for integrating this variable generation. Pumped storage is one such mature technology, and BPA has capability in this area with an existing pumped storage project located within the Bonneville balancing area, Reclamation's John W Keys III Pump-Generating Plant (Keys PGP) at the Grand Coulee Project. Bonneville is currently studying the feasibility of further developing pump storage capabilities at the Keys PGP.

Bonneville considers other strategies to sustain funding for its infrastructure investment requirements as well. These additional strategies include reserve financing of some amount of transmission investments, and seeking, when feasible, third party financing sources. See the **BP-Bonneville Power Administration Overview**

5 Potential Third Party Financing Transparency table in the budget schedules section of this budget. This FY 2013 Budget assumes \$15 million of annual reserve financing in FYs 2012-2017 for transmission infrastructure capital that is included in this budget in Projects Funded In Advance.

### **Financial Mechanisms**

Bonneville's program is treated as mandatory and nondiscretionary. Bonneville is "self-financed" by the ratepayers of the Pacific Northwest and is not annually appropriated by 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 primarily in response to market prices for fuels and stream flow variations in the Columbia River System due to weather conditions and fish recovery needs. Through FY 2011, Bonneville has returned approximately \$27.2 billion to the Treasury of which about \$3.1 billion was for payment of FCRPS O&M and other costs, \$13.3 billion for interest, and \$10.3 billion for amortization of appropriations and bonds.

In this FY 2013 Budget, the term Bonneville "bonds" refers to the debt instruments under which Bonneville receives advances of funds from the Treasury. This reference is consistent with section 13(a) of the Transmission Act (P.L. Law 93-454), which defines Bonneville bonds as all bonds, notes, and other evidences of indebtedness issued and sold to the Treasury.

Bonneville and Treasury have a comprehensive banking arrangement that covers Bonneville's short- and long-term Federal borrowings and establishes a phased-in approach to a market-based investing program. This provides Bonneville with the ability to borrow to finance assets 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 borrowing authority has been incorporated into and relied upon in Bonneville's rate-setting process.

### **Treasury Payments and Budget Overview**

Bonneville made its full planned FY 2011 payment of \$830 million to the Treasury (and included \$70 million in advanced amortization as part of Bonneville debt optimization program). Total 4(h)(10)(C) credits associated with fish recovery and applied toward Bonneville's Treasury payment, were about \$85.3 million for FY 2011. For FY 2012, Bonneville plans to pay the

Treasury \$805 million: \$393 million to repay investment principal, \$376 million for interest, and \$35 million for Associated Project costs and pension and post-retirement benefits, plus \$346 million in advanced amortization. The FYs 2013 and 2014 Treasury payments are currently estimated at \$692 million and \$705 million, respectively. The FYs 2012-2014 4(h)(10)(C) credits are estimated at \$91 million, \$96 million, and \$101 million, respectively.

Estimates of interest and amortization levels for outyear Treasury payments are based on estimates from the 2012 final transmission and power rate case proposals. 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 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 amount of advance amortization payments as of the end of FY 2011 is about \$2,672 million. Amortization estimates in this FY 2013 Budget include planned amortization in advance of scheduled amortization (due to earlier EN debt optimization refinancing) in FYs 2011 and 2012 of \$70 million and \$53 million, respectively, consistent with rate case documentation.

Starting in FY 1997, Bonneville began direct funding Reclamation's Pacific Northwest power costs, and in FY 1999, Bonneville began direct funding the Corps' Pacific Northwest power costs. Bonneville began direct funding the USFWS in FY 2001 to pay for O&M costs of the Lower Snake River Compensation Plan (LSRCP) facilities. Bonneville's direct funding arrangement with the Corps and Reclamation includes the power related portion of O&M and capital investments. Direct funded capital costs, previously funded through appropriations, are now being paid through Bonneville borrowing from the Treasury. Bonneville's total direct funding was \$438 million in FY 2010.

This FY 2013 Budget proposes Bonneville accrue expenditures of \$2,946 million for operating expenses, \$101 million for Projects Funded in Advance (PFIA), \$1,246 million for capital investments, and \$179 million for capital transfers in FY 2013. The budget has been prepared on the basis of Bonneville's major areas of activity, power and transmission. This reporting structure arose as a response to FERC Orders requiring Bonneville to employ separate repayment studies for its generation and transmission functions to determine the repayment requirements for each.

#### **Bonneville Power Administration Overview**

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, and the continued restructuring of the electric industry.

#### **Current Financial Status**

Bonneville is striving to enhance its competitive, cost-effective delivery of utility products and services and continued delivery of the public benefits of its operations, while ensuring its ability to make its payments to the Treasury on time and in full. Bonneville employs a strategic planning process using the balanced scorecard model to align all business units around specific goals and align resources to achieve these goals. Results from these efforts include continued efficiency gains, performance integration improvements, and a high assurance for repayment of Treasury borrowing.

After many years of sustained effort, Bonneville recovered from the financial effects of the 2000-2001 West Coast power crisis. Continued cost management efforts helped Bonneville regain adequate financial reserve levels despite mostly below-average water years. These gains are helping Bonneville continue its efforts to assure full recovery of its costs and to assure long-term financial stability while meeting its overall responsibilities to the Pacific Northwest and the U.S. taxpayer.

Rate proposals for FY 2012-2013 Power and Transmission rates were filed with FERC Aug 1, 2011 and reflect Bonneville's Long-Term Regional Dialogue Policy and Record of Decision (Regional Dialogue Policy) in July 2007. The Regional Dialogue Policy helped define how Bonneville will market its wholesale power after FY 2011 and to ensure it does so in a way that meets key regional and national energy goals and ensures Bonneville's ability to meet its Treasury obligations.

Bonneville and 135 of its Northwest utility customers signed new power sales contracts in 2008 under which power deliveries began in October 2011. Bonneville has proposed a Resource Program to identify any gaps in its power supply and suggest types and amounts of resources to fill those gaps, as guided by the Council's Northwest Power Plan.

#### **Budget Estimates and Planning**

This FY 2013 Budget includes capital and expense estimates based on Bonneville's Integrated Program Review (IPR) final report. FY 2011 costs are based on Bonneville's FY 2011 audited actual financial results.

Capital funding levels reflect Bonneville's capital asset management process and external factors such as the significant 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.

Capital investment levels in this FY 2013 Budget reflect executive management decisions from Bonneville's Capital Allocation Board (CAB) and the associated capital review process. Bonneville utilizes a structured capital project selection process requiring submission of a standardized business case for review by Bonneville. 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 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.

The FYs 2012-2017 revenue estimates in this budget, included in the Net Outlay formulation, are calculated consistent with cash management goals. The revenue estimates reflect assumed adjustments, which include the use of a combination of tools; for example, upcoming rate adjustment mechanisms, reduced cost estimates, a net revenue risk adjustment, debt management strategies, and/or short-term financial tools to manage net revenues and cash. The revenue estimates also include depreciation and Treasury repayment credit assumptions. These Treasury repayment credits offset, among other things, Bonneville's fish and wildlife program costs allocable to the non-power project purposes of the FCRPS, consistent with the Northwest Power Act. Net Outlay estimates reflect current cost saving actions taken to date and anticipated cash management goals. Net Outlay estimates are expected to reflect anticipated management decisions throughout the rate period that, along with actual market conditions, will impact revenues and expenses.

#### **Overview of Detailed Justifications**

Bonneville's Detailed Justification Summaries, included in this FY 2013 Budget, follow present budget requirements for budget line items on the basis of accrued expenditures. Accrued expenditure is the basis of presenting Bonneville's program funding levels in the power and transmission rate making 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 Power Administration Overview**

Bonneville's budget are assumed on the Program and Financing Summary Schedule prepared in accordance with OMB Circular A-11.

The organization of Bonneville's FY 2013 Budget and these performance summaries reflect Bonneville's business services basis for utility enterprise activities. Bonneville's major areas of activity on a consolidated budget and accounting basis include power and transmission with administrative costs included. PS includes line items for Fish and Wildlife, Conservation and Energy Efficiency, REP, Associated Projects O&M Costs, and the Council. Environmental activities are shown in the relevant PS and TS sections, as are reimbursable costs. Bonneville's interest expense, pension and post-retirement benefits and capital transfers to the 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, conservation and energy efficiency services, fish and wildlife, and capital equipment. These capital investments will require budget obligations and expected use of \$1,246 million in bonds to be sold to the U.S. Treasury in FY 2013.

The near-term forecast capital funding levels have undergone an extensive internal review as a result of the capital asset management strategy. These capital reviews encompass project cost management initiatives, capital investment assessments, and categorization of capital projects to be funded based on risk and other factors. Consistent with BPA's near-term capital funding review process and Bonneville's standard operating budget process, this FY 2013 Budget includes updated capital funding levels for FY 2012. Utilizing this review process helps Bonneville in its efforts to compete in the deregulated wholesale energy market. Bonneville will continue to work with the Corps and Reclamation to optimize the best mix of projects.

In addition to its extensive internal management assessment of capital investments, Bonneville has developed and implemented an associated external capital investment review process that provides significant benefits to Bonneville. The combined internal and external processes add value by both improving direction on what the FCRPS invests in (tying investments more closely to agency strategy) and by improving how those investments are made (more detailed analysis and review of capital investments and their alternatives).

Bonneville's second section of the performance summaries, entitled Annual Operating Expenses, includes accrued expenditures for services and program activities financed by power sales revenues, transmission services revenues and projects funded in advance. For FY 2013,

budget expense obligations are estimated at \$2,946 million. The total program requirements of all Bonneville programs include estimated budget obligations of \$4,294 million in FY 2013.

**Strategic Plan and Performance Measures - BPA**

STRATEGIC GOAL: Transforming our Energy Systems		
OBJECTIVE: Deploy the Technologies We Have		
<p><b>Annual Measure #1:</b> Attain average North American Electric Reliability Corporation (NERC) compliance ratings for the following NERC Control Performance Standards (CPS) measuring the balance between power generation and load, including support for system frequency: (1) CPS1, which measures generation/load balance on one-minute intervals (rating &gt; or =100); and (2) CPS2, which limits any imbalance magnitude to acceptable levels (rating &gt; or =90). Note: As a participant in the Western Electricity Coordinating Council (WECC) field trial of NERC's Reliability Based Control (RBC) draft standard beginning in FY 2010, BPA will not report CPS-2 because the RBC and CPS-2 standards are mutually exclusive (only one of these standards can be in effect at the same time). The use of CPS-2 will be reevaluated after the RBC field trial.</p>		
	Target	Actual/ Met or Not Met
Budget Year (2013)	CPS1>100, CPS2>90	---- N/A
Current Year (2012)	CPS1>100, CPS2>90	---- N/A
Prior Year (2011)	CPS1>100, CPS2>90	Met (Actual: CPS-1, 137.9%)
Analysis	Meeting this target demonstrates BPA's ongoing commitment and ability to provide reliable transmission for the region.	
<p><b>Annual Measure #2:</b> Meet planned annual repayment of principal on Federal power investments.</p>		
	Target	Actual/ Met or Not Met
Budget Year (2013)	Meet 100% of planned annual repayment of principal on Federal power investments	---- N/A
Current Year (2012)	\$393 million	---- N/A
Prior Year (2011)	\$367 million	Met (Actual: \$410 million)
Analysis	BPA met this performance target for the 28th straight year, demonstrating BPA's ongoing commitment to meeting its obligations to U.S. taxpayers. BPA made a total annual payment of \$830 million, of which \$410 million was principal amortization.	
<p><b>Annual Measure #3 :</b> Achieve &gt; or = 97.5% Heavy-Load-Hour Availability (HLHA) through efficient performance of Federal hydro-system processes and assets, including joint efforts of BPA, Army Corps of Engineers, and Bureau of Reclamation. HLHA is actual machine capacity available during heavy-load hours (0700-2200 Monday-Saturday), divided by planned available capacity during heavy-load hours.</p>		
	Target	Actual/ Met or Not Met
Budget Year (2013)	>=97.5%	---- N/A
Current Year (2012)	>=97.5%	---- N/A
Prior Year (2011)	>=97.5%	Met (Actual: 100.6%)
Analysis	Meeting this target demonstrates BPA's commitment and ability to provide reliable power to the region. By optimizing planned maintenance and taking into consideration expected forced outages, BPA's heavy load hour performance ensured that BPA had the system capacity to serve its system load.	

**Power Services - Capital  
Funding Schedule by Activity**

	(Accrued Expenditures) (Dollars in Thousands)		
	FY 2011	FY 2012	FY 2013
Power Services - Capital			
Associated Project Costs	200,436	233,386	250,029
Fish & Wildlife	90,817	59,785	67,145
Conservation & Energy Efficiency	161,754	88,637	94,547
<b>Total, Power Services - Capital</b>	<b>453,007</b>	<b>381,789</b>	<b>411,721</b>

**Outyear Funding Schedule**

	(Accrued Expenditures) (Dollars in Thousands)			
	FY 2014	FY 2015	FY 2016	FY 2017
Total, Power Services - Capital	429,389	440,370	487,797	497,493

**Program Overview**

Associated Project Costs provide for direct funding of additions, improvements and replacements of existing Reclamation and Corps hydroelectric projects in the Pacific Northwest that provide for increased performance and availability of generating units. The FCRPS hydro projects produce 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, reliable and low-cost power system. The FCRPS represents about 80 percent of Bonneville’s firm power supply and is comprised of 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 Treasury borrowing authority to make investments needed to restore generation availability and improve efficiency, reducing demand on Corps and Reclamation appropriations for power-related investments.

Since the beginning of direct funding, Bonneville, along with these joint operating partners, has improved system performance. In 1999, at the direction of Congress, Bonneville issued a report that it soon began to implement called the “Asset Management Strategy for the FCRPS.” Bonneville concluded in this report that it needed to invest nearly \$1 billion in the projects over the ensuing 12-15 years. Without these investments, which are focused on restoring and maintaining the reliability of

the system, history indicates that unit availability may initially decline at a rate of about 1.5 percent per year. Supplementary analyses and experience with the system have revealed additional investment needs above and beyond the levels originally planned under the Asset Management Strategy for this and the next several rate periods. In late 2008, Bonneville completed a System Asset Plan that effectively updated the 1999 Asset Management Strategy and refined the long-term capital investment needs to preserve the performance of the system.

These planned investments, included in the FY 2013 Budget estimates, will maintain the generation performance of the FCRPS. Moving forward with the cost-effective opportunities to expand the generation and to preserve and enhance the capability of the Federal system is a smart economic and environmental decision when compared to purchasing power from the market to serve growing Pacific Northwest electricity needs.

Bonneville’s fish and wildlife capital program is directed at activities that increase numbers of Columbia River Basin fish and wildlife resources, including projects designed to increase juvenile and adult fish passage in tributaries and at mainstem dams; to increase fish production and survival through construction of hatchery and acclimation facilities; land acquisitions for resident fish and wildlife that follow Bonneville’s Capital Policy; and fish monitoring facilities. Capital project funding will focus on integrating ESA-related priorities with the region’s Columbia River Basin Fish and Wildlife Program in order to efficiently meet the regional costs of both

salmon and steelhead recovery and the mitigation of hydrosystem impacts to other Columbia River Basin fish and wildlife.

The 1996 Energy and Water Appropriations Act added section 4(h)(10)(D) to the Northwest Power Act, directing the Council to appoint an Independent Scientific Review Panel (ISRP) “to review a sufficient number of projects” proposed to be funded through Bonneville’s fish and wildlife budget “to adequately ensure that the list of prioritized projects recommended is consistent with the Council’s program.” The Northwest Power Act further states that “. . . in making its recommendations to Bonneville, the Planning 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 Council recommendation process. The Council has shifted to a multi-year project review cycle during which the ISRP will review categories of projects grouped together; e.g., all terrestrial wildlife projects were recently reviewed. The Council plans to continue this review cycle in 2013.

Under the Northwest Power Act, the Council must develop a fish and wildlife program that protects, mitigates and enhances Columbia River Basin fish and wildlife affected by any hydroelectric project in the basin. To the extent possible, Bonneville is integrating the actions implemented in response to the FCRPS BiOps with projects implemented under the Council’s Program. Sub-basin plans that include prioritized strategies for mitigation actions will help guide project selection that meets both Bonneville’s ESA and Northwest Power Act responsibilities. In order to address the *in lieu* provision of the Northwest Power Act, which prohibits Bonneville from funding mitigation that other entities are authorized or required to undertake, 16 U.S.C. § 839b(h)(10)(A), Bonneville continues its ongoing work with the Council and the regional fish and wildlife managers, customers, and tribes to review projects to ensure ratepayers fund appropriate mitigation.

Fish and Wildlife Program costs provide funding to implement measures to aid in the recovery of fish in the Columbia River and its tributaries that are listed as threatened or endangered under the ESA and the protection, mitigation, and enhancement, of fish and wildlife impacted by the development and operation of the FCRPS, from which Bonneville markets power.

Bonneville continues a comprehensive approach to integrate the ESA requirements of the FCRPS Biological  
**Bonneville Power Administration**  
**Power Services - Capital**

Opinions with the broad resource protection, mitigation and enhancement objectives of the Council’s Program, adopted by the Council pursuant to the Northwest Power Act. Bonneville satisfies a major portion of its fish and wildlife responsibilities by funding projects and activities that implement the Program. This includes a number of wildlife mitigation settlements for dam impacts, most recently a 2010 agreement addressing the Willamette Basin in Oregon. It includes the construction and operation of hatcheries to offset fish lost from the development and operation of the FCRPS. Bonneville also implements measures addressed to avoid jeopardizing listed salmon and steelhead as required under the ESA.

The ESA measures are part of the most recent BiOps issued by NOAA and USFWS.

- In February 2006, USFWS issued a new BiOp for Libby Dam for the Kootenai River white sturgeon and bulltrout.
- In May 2008, NOAA issued a new FCRPS BiOp for salmon and steelhead, augmented in a 2010 Supplemental BiOp and Adaptive Management Implementation Plan, which continue to be challenged in Oregon District Court. A court decision occurred in 2011.
- In July 2008, USFWS and NOAA issued Willamette River BiOps to address impacts from 13 federal dams on salmon, steelhead, Oregon chub, and bull trout.
- On August 2, 2011 Federal District Judge Redden issued an opinion and order rejecting the 2008/2010 BiOp because it failed to identify specific and verifiable mitigation plans beyond 2013. But he left the BiOp in place through 2013 while ordering a new supplemental BiOp by January 1, 2014.

These BiOps collectively require the action agencies (Corps, Reclamation, and Bonneville) to implement hydro, habitat, and hatchery actions throughout the Columbia River Basin to address impacts stemming from the operation of the Federally operated hydro-dams on ESA-listed fish, and to ensure that operations of the federal dams do not jeopardize the continued existence of the listed species or adversely modify their designated critical habitat.

In addition to the 2008 NOAA FCRPS BiOp, the action agencies also signed the 2008 Columbia Basin Fish Accords (Fish 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).

The Fish Accords supplement the activities encompassed within the 2008 BiOp and the Council's Program by providing firm commitments to mitigation actions and securing funding for the next 10 years. As a result of the new BiOp and the Accords, as discussed below, expenditures above and beyond those planned in FY 2009 are required in FY 2011 and beyond.

These BiOps and Fish Accord commitments, and other projects undertaken to implement the Council's Program pursuant to the Northwest Power Act, are the basis for the Bonneville Fish and Wildlife Division's planned capital investment.

Conservation is an important part of Bonneville's diverse portfolio of resources that provides a reliable approach to meeting Bonneville's load obligations. When acquiring resources to meet planned future loads, the Northwest Power Act requires the Administrator to first consider and acquire cost-effective conservation that the Administrator determines is consistent with the Council's Power Plan. The Council's 6<sup>th</sup> Power Plan, finalized in February 2010, recommended that the region target 1,200 aMW of conservation in 2010 through 2014. Bonneville, in collaboration with its Public Power Customers, is responsible for approximately 40 percent (504 aMW) of that target. Bonneville anticipates that between 175 and 300 aMW of this amount will be acquired under its capital conservation acquisition program. Beginning in FY 2012 at least 70% of this conservation budget will be allocated to utilities to fund conservation incentives with the remainder going to support regional programs and completion of a utility conservation reporting system (EE Central). Program performance measurements (\$/aMW) indicate that Bonneville is realizing value for these investments as benchmarked against other utilities across the nation.

Long-term investments in energy efficiency help buffer the FCRPS against future resource uncertainties. During periods of price volatility, conservation also helps reduce financial risk associated with relying on the market for energy purchases in the future. The demand for more energy efficiency is driven by potential climate change initiatives, the high cost of new generation, and citizens and businesses wanting to reduce costs and to avoid environmental impact.

#### **Accomplishments**

- Filed final rate proposal for FYs 2012-2013 with FERC
- Achieved over 100 aMW Energy Efficiency in FY 2011

**Bonneville Power Administration  
Power Services - Capital**

- Facilitated integration of over 3,800 MW of wind generation to date
- Completed transformer installations at McNary and The Dalles
- Completed governor replacement at Albeni Falls
- Completed generator winding replacements at Lower Granite
- Completed units 1-18 turbine runner replacements at Grand Coulee and continue the pre-overhaul capital work in the Grand Coulee Third Power Plant
- The returns of adult salmon and steelhead to Bonneville dam between 2009-2011 vary by species, but many stocks (e.g., Snake River fall Chinook, and Snake River sockeye) have enjoyed returns that have been among the highest seen in recent years. These returns are a combination of wild and hatchery fish. The survival of juvenile salmon and steelhead migrating through the Snake and Columbia Rivers is also much improved over recent years.
- Conducted analysis and demonstrations of Demand Response on a cost share basis with our utility customers.

#### **Explanation of changes**

Bonneville's budget includes \$411 million in Fiscal Year 2013 for Power Services capital which is a 7.8% increase over the FY 2012 forecasted level. The FY 2013 level reflects a continuing need for investment in the hydro electric system assets including a ramp up of the pre-overhaul capital work in the Grand Coulee Third Power Plant, funding necessary to implement the BiOp, Fish Accords, Columbia Basin Fish and Wildlife activities, and a focus on energy conservation initiatives within the region.

The FY13 budget increases the levels for Associated Projects (+\$ 16 million), Conservation & Energy Efficiency (+ \$ 5.9 million) Fish & Wildlife (+\$ 7.4million).

#### **Strategic Management**

Bonneville provides electric power while supporting the achievement of its vital responsibilities for fish and wildlife, energy conservation, renewable resources and low-cost power in the Pacific Northwest. 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

**FY 2013 Congressional Budget**



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 optimization of hydro facility operation.
3. Bonneville is committed to continue funding efforts to protect listed fish and wildlife species in the Columbia Basin under the ESA and to work closely with the Council, regional fisheries managers, and other Federal agencies to prioritize and manage fish and wildlife program projects.
4. Private and public sector partners have been and continue to be an important part of

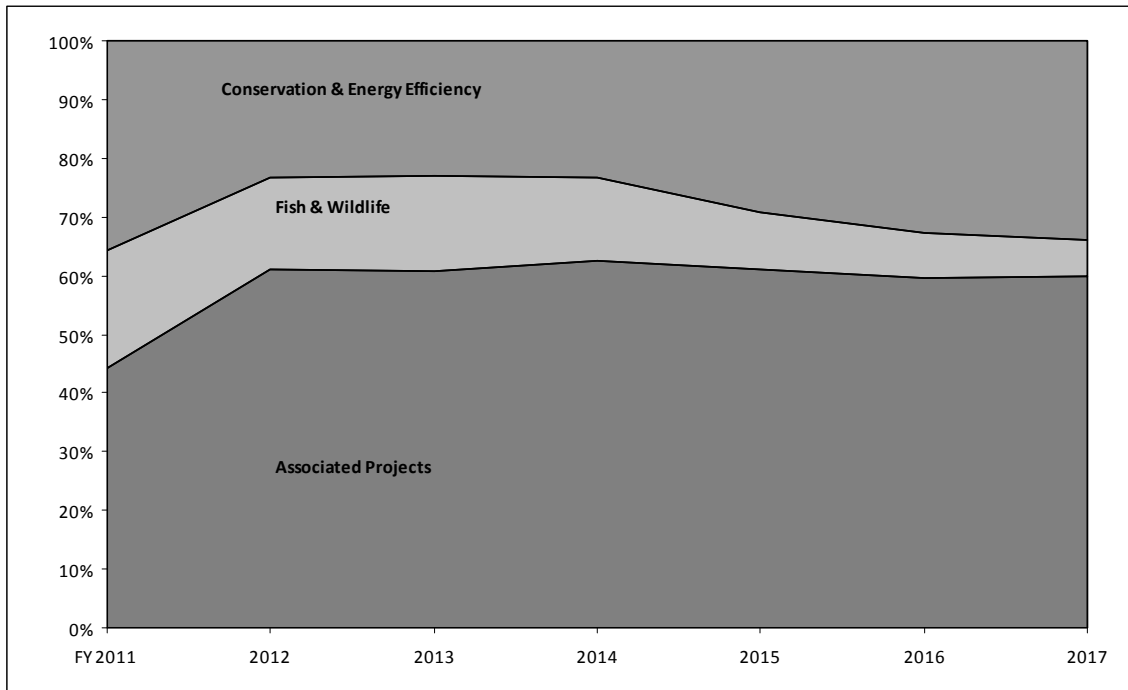
Bonneville's collaborative efforts to promote and foster efficient use of energy.

5. Bonneville has partnered and assisted with a DOE Wind Power crosscutting initiative to strengthen energy security by adding alternative sources of renewable energy.

The following external factors present the strongest impact to overall achievement of the program's strategic goal:

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

**Relative Outyear Funding Priorities in Power Services Capital**



**Explanation of Funding AND/OR Program Changes**

(Dollars in Thousands)

FY 2012	FY 2013	FY 2013 vs FY 2012
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**Associated Projects**

The increase from \$233,368,000 to \$250,029,000 reflects the continuing need for investment in the hydro electric system assets.

233,368	250,029	+16,661
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**Fish & Wildlife**

The increase from \$59,785,000 to \$67,145,295 reflects a reshaping of funding necessary to implement the BiOp, Fish Accords, Columbia River Basin Fish and Wildlife activities.

59,785	67,145	+7,360
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**Conservation & Energy Efficiency**

The increase from \$88,637,000 to \$94,547,000 reflects a continuing focus on energy conservation initiatives within the region.

88,637	94,547	+5,910
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**TOTAL Funding Change, Power Services Capital**

387,789	411,174	+29,932
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**Associated Projects  
Overview**

Bonneville will work with both the Corps and Reclamation to reach mutual agreement on those capital improvement projects that need to be budgeted and scheduled, 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, 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.

**Funding and Activity Schedule**

**Corps of Engineers (known projects to date)**

Fiscal Year	Activity	Funding (Dollars in Thousands)
FY 2011	<ul style="list-style-type: none"> <li>• Continued hydro optimization investigations and equipment installations at selected projects through the power plant efficiency improvements project and continued pursuing governor design and replacement at multiple plants.</li> <li>• For Bonneville, completed HVAC upgrade, exciter installation, gantry crane replacement, Powerhouse Unit 1 rehabilitation, DC and preferred AC upgrades, and continued protective relay replacement, station service upgrades, main unit breakers, headgate refurbishment/replacements, fire protection upgrades, additional crane and deck refurbishments, and elevator replacement.</li> <li>• For John Day, completed exciter replacements and oil/water separator, and continued fire protection upgrades, governor replacements, protective relay replacements, bridge crane refurbishment, Powerhouse Unit 11 repair, and elevator rehabilitation.</li> <li>• For The Dalles, completed the transformer T2 replacement, oil/water separator development, and station service improvements, and heat pump replacement, and continued governor replacement, spare 230 kV transformer purchase, DC system upgrades, fire protection design and upgrades, elevator rehabilitation, and powerhouse roof replacement.</li> <li>• For the Willamette plants, completed fire protection upgrades at Lost Creek, protective relay replacements at Cougar, Hills Creek, Lookout Point, and Dexter. Also, completed remote control upgrades, winding replacements, and emergency engine installation at Detroit. Continued protective relay replacements at Green Peter and Foster, electric reliability upgrades at Detroit, turbine runner replacements at Hills Creek and Lookout Point, penstock roller gate repair at Lookout Point and spillway tainter gate repair at Dexter and Big Cliff. Continued transformer oil/water separation at Cougar and Hills Creek, and bridge crane refurbishment at Hills Creek. Begin governor replacements at Foster, Green Peter, Hills Creek, and Lost Creek.</li> <li>• For Albeni Falls, completed governor replacement project, continued hi-lift pump replacement, auxiliary board upgrades, DC system boards and breaker replacement, and intake and spillway crane modernization.</li> <li>• For Libby, completed several elevator refurbishments and, HVAC controls and rehabilitation, spare transformer, and selective withdrawal crane refurbishment and continued exciter replacement.</li> <li>• For Chief Joseph, completed generator cooling system upgrades, and continued 480-V upgrade/SQ0 substation replacement, CO2 system replacement, exciter replacements, protective relay replacements, automatic synchronizer replacement, DC and preferred AC upgrades and turbine replacements.</li> </ul>	127,899

Fiscal Year	Activity	Funding (Dollars in Thousands)
	<ul style="list-style-type: none"> <li>• For McNary, completed T1, T2, T4 and T5 transformer installations. Continued station service governor replacements, generator winding replacements, protective relay replacements, station service rehabilitation, levee drainage pump station upgrades and heat pump replacement. Start fishway exit cranes replacements, turbine design and replacement, and potable water system upgrade.</li> <li>• For Dworshak, completed powerhouse bridge crane refurbishments, emergency notification upgrade and elevator upgrades. Begin unit 3 standby generator guide bearing and oil cooler assemblies and powerhouse HVAC upgrade.</li> <li>• For Ice Harbor, completed emergency notification upgrade, potable water system replacement, and project storage building. Continued units 2 and 3 runner replacements, T6 transformer replacement, and tailrace crane rehabilitation. Start low voltage switchgear SQ board upgrades and DC system upgrade.</li> <li>• For Little Goose, completed HVAC control upgrade, emergency notification upgrade, and wastewater treatment plant upgrade. Continued diesel generator replacement, exciter replacements, thrust bearing shoes, thrust runner, and oil assemblies. Start powerhouse bridge crane rehabilitation and intake crane replacement.</li> <li>• For Lower Granite, completed generator winding replacements, emergency notification upgrade, and elevator refurbishments. Continued diesel generator replacement, exciter replacements, SQ2 replacement, intake crane replacement, emergency notification upgrade, and spillway emergency diesel generator switch replacement. Start powerhouse bridge crane rehabilitation, HVAC upgrade, and sewage treatment plant upgrade.</li> <li>• For Lower Monumental, complete bridge crane refurbishment, and emergency notification upgrade. Continue diesel generator replacement, exciter replacements, SQ2 replacement, unit 1 linkage repair, and intake crane refurbishment/replacement.</li> <li>• In addition, new investments will be pursued per the Asset Plan and replacements of failed units will occur as needed to restore availability.</li> </ul>	
FY 2012	<ul style="list-style-type: none"> <li>• Continue hydro optimization investigations and equipment installations at selected projects through the power plant efficiency improvements project.</li> <li>• For Bonneville, complete elevator replacement, and continue main unit breakers, station service upgrades, headgate refurbishment/replacements, fire protection upgrades, protective relay replacements, and additional crane and deck refurbishments. Begin governor replacements.</li> <li>• For John Day, complete powerhouse unit 11 repair, continue fire protection upgrades, protective relay replacements, bridge crane refurbishment, governor replacements, and elevator rehabilitation.</li> <li>• For The Dalles, complete spare 230 kV transformer purchase, DC system upgrades, and elevator rehabilitation and continue powerhouse roof replacement governor replacement and fire protection upgrades.</li> <li>• For the Willamette plants, complete protective relay replacements at Green Peter and Foster, bridge crane refurbishment at Hills Creek and fire protection upgrades at Lost Creek. Also, complete remote control upgrades, winding replacements and electric reliability upgrades at Detroit. Continue transformer oil/water separation at Cougar and Hills Creek. Continue governor replacement at Foster, Hills Creek, Green Peter, and Lost Creek. Continue turbine runner replacements at Hills Creek and Lookout Point, penstock roller gate repair at Lookout Point and spillway tainter gate repair at Dexter and Big Cliff fire protection upgrades at Lost Creek. Begin governor replacements at Big Cliff, Cougar, Detroit, and Dexter.</li> <li>• For Albeni Falls, complete auxiliary board upgrades and hi-lift pump replacement, continue DC system boards and breaker replacement, and intake and spillway crane</li> </ul>	132,768

Fiscal Year	Activity	Funding (Dollars in Thousands)
	<p>modernization.</p> <ul style="list-style-type: none"> <li>• For Libby, complete exciter replacement and continue governor replacement design.</li> <li>• For Chief Joseph, continue 480-V upgrade/SQ0 substation replacement, CO2 system replacement, exciter replacements, protective relay replacements, automatic synchronizer replacement, DC and preferred AC upgrades and turbine replacements.</li> <li>• For McNary, complete protective relay replacements and station service governor replacements. Continue generator winding replacements, station service rehabilitation, and heat pump replacement. Continue fishway exit cranes replacement, potable water system upgrade, turbine design and replacement, and levee drainage pump station upgrades.</li> <li>• For Dworshak, complete unit 3 standby generator guide bearing and oil cooler assemblies and continue powerhouse HVAC upgrade. .</li> <li>• For Ice Harbor, complete tailrace crane rehabilitation, and continue units 2 and 3 runner replacements and T6 transformer replacement. Continue low voltage switchgear SQ board replacements and DC system upgrade. Start main unit 4-6 governor installation and drainage and dewatering pump upgrade.</li> <li>• For Little Goose, complete thrust bearing shoes, runner and oil coolers replacement and diesel generator replacement. Continue exciter replacements, powerhouse bridge crane rehabilitation, and intake crane replacement.</li> <li>• For Lower Granite, complete SQ2 replacement, and continue diesel generator replacement, exciter replacements, intake crane replacement, and powerhouse bridge crane refurbishment, powerhouse HVAC upgrade, and sewage treatment plant upgrade.</li> <li>• For Lower Monumental, complete intake crane refurbishment/replacement, SQ2 replacement, diesel generator replacement, and exciter replacements. Continue unit 1 linkage repair.</li> <li>• In addition, new investments will be pursued as set out in the Asset Plan and replacements of failed units will occur as needed to restore availability.</li> </ul>	
FY 2013	<ul style="list-style-type: none"> <li>• Continue hydro optimization investigations and equipment installations at selected projects through the power plant efficiency improvements project. For Bonneville, complete protective relay replacements, governor replacements, headgate refurbishment/replacements and additional crane and deck refurbishments, and continue main unit breakers, gantry crane rehabilitation, and fire protection upgrades.</li> <li>• For John Day, complete protective relay replacements, bridge crane refurbishment, and elevator rehabilitation and continue governor replacements and fire protection upgrades.</li> <li>• For The Dalles, complete fire protection design and upgrades and powerhouse roof replacement, and continue governor replacements.</li> <li>• For the Willamette plants, complete penstock roller gate repair at Lookout Point and transformer oil/water separation at Cougar and Hills Creek. Continue turbine runner replacements at Hills Creek and Lookout Point, continue spillway tainter gate repair at Big Cliff and Dexter. Continue governor replacements at Big Cliff, Cougar, Dexter, Detroit, Foster, Green Peter, Hills Creek, and Lost Creek. Begin governor replacement at Lookout Point.</li> <li>• For Albeni Falls, complete DC system boards and breaker replacement, and spillway crane modernization, and continue intake crane modernization.</li> <li>• For Libby, continue governor replacement design.</li> </ul>	144,471

Fiscal Year	Activity	Funding (Dollars in Thousands)
	<ul style="list-style-type: none"> <li>• For Chief Joseph, complete 480 kV upgrade/SQ0 substation replacement, auto synchronizer replacement and DC and preferred AC upgrades, and continue CO2 system replacement, exciter replacements, protective relay replacements and turbine replacements.</li> <li>• For McNary, complete fishway exit cranes replacement, .continue generator winding replacements, station service rehabilitation, heat pump replacement, turbine design and replacement, potable water upgrade and levee drainage pump station upgrades.</li> <li>• For Dworshak, continue powerhouse HVAC upgrade.</li> <li>• For Ice Harbor, complete T6 transformer replacement, low voltage switchgear SQ board replacements and DC system upgrade.</li> <li>• Continue units 2 and 3 runner replacements and main units 4-6 governor installation.</li> <li>• For Little Goose, complete exciter replacements and continue intake crane replacement and powerhouse bridge crane rehabilitation.</li> <li>• For Lower Granite, complete diesel generator replacement, exciter replacements, and intake crane replacement. Continue powerhouse bridge crane refurbishment, powerhouse HVAC upgrade, and sewage treatment plant upgrade.</li> <li>• For Lower Monumental, continue unit 1 linkage repair.</li> <li>• In addition, new investments will be pursued as set out in the Asset Plan and replacement of failed units will occur as needed to restore availability.</li> </ul>	
FY 2014-2017	<ul style="list-style-type: none"> <li>• Continue planned investment in FCRPS infrastructure</li> </ul>	647,156

**Bureau of Reclamation (known projects to date)**

Fiscal Year	Activity	Funding (Dollars in Thousands)
FY 2011	<ul style="list-style-type: none"> <li>• For Grand Coulee, completed units 1-18 turbine runner replacements, 11.95 kV switchgear replacement, and fixed wheel gate chamber modifications. Continued SCADA replacement, 500 kV switchyard relay replacements, air housing cooler replacements, several transformer replacements, third power plant exciter replacements, third power plant governor replacement, left power plant spare transformer purchases, third power plant high voltage cable replacement, units 19-20 upgrades including winding replacements, purchase of another left and right powerhouse spare winding, third power plant crane rehabilitation, third power plant elevator rehabilitation, construction of a material storage building, and hydro optimization investigations with related equipment installations.</li> <li>• For Hungry Horse, completed main unit breaker replacements. Continued SCADA replacement and powerhouse roof replacement. Started main transformer fire protection system replacement and SS and MCC upgrades.</li> <li>• For the five Upper Snake River plants continued an area microwave system upgrade.</li> <li>• For Palisades, continued turbine runner replacement.</li> <li>• For Chandler, completed exciter replacement and continued transformer replacement.</li> <li>• For Green Springs, continued transformer replacement.</li> <li>• For Black Canyon, continued additional unit, and started units 1 and 2 upgrades and install trash rake system.</li> </ul>	72,537

Fiscal Year	Activity	Funding (Dollars in Thousands)
FY 2012	<ul style="list-style-type: none"> <li>• For Keys PGP, started plant modernization and upgrades.</li> <li>• For Grand Coulee, complete air housing cooler replacements, K10 transformer replacement, and material storage building. Continue SCADA replacement, 500 kV switchyard relay replacements, , several transformer replacements, third power plant exciter replacements, third power plant governor replacement, left power plant spare transformer purchases, third power plant high voltage cable replacement, units 19-20 upgrades including winding replacements, purchase of another left and right powerhouse spare winding, third power plant crane rehabilitation, third power plant elevator rehabilitation, and hydro optimization investigations with related equipment installations. Start units 19-24 wear ring replacements.</li> <li>• For Hungry Horse, complete powerhouse roof replacement, and continue SCADA replacement, main unit transformer fire protection system replacement, and SS and MCC upgrades.</li> <li>• For the five Upper Snake River plants, completed an area microwave system upgrade.</li> <li>• For Palisades, continue turbine runner replacement.</li> <li>• For Chandler, continue transformer replacement.</li> <li>• For Green Springs, complete transformer replacement.</li> <li>• For Black Canyon, continued additional unit, units 1 and 2 upgrades, and install trash rake system.</li> <li>• For Keys PGP, continued plant modernization and upgrades.</li> <li>• In addition, new investments will be pursued as set out in the Asset Plan and replacements of failed units will occur as needed to restore availability.</li> </ul>	100,600
FY 2013	<ul style="list-style-type: none"> <li>• For Grand Coulee, complete 500 kV switchyard relay replacements, third power plant high voltage cable replacement, purchase of another left and right powerhouse spare winding, third power plant elevator rehabilitation and third powerplant exciter replacements.</li> <li>• Continue SCADA replacement, third power plant transformer replacement, third power plant governor replacements, left power plant spare transformer purchases, units 19-20 upgrades including winding replacements, third power plant crane rehabilitation, and hydro optimization investigations with related equipment installations.</li> <li>• For Hungry Horse, continue SCADA replacement, main unit transformer fire protection system replacement, and SS and MCC upgrades.</li> <li>• For Palisades, continue turbine runner replacement.</li> <li>• For Chandler, complete transformer replacement.</li> <li>• For Black Canyon, continued additional unit, units 1 and 2 upgrades, and install trash rake system.</li> <li>• For Keys PGP, continued plant modernization and upgrades.</li> <li>• In addition, new investments will be pursued as set out in the Asset Plan and replacement of failed units will occur as needed to restore availability.</li> </ul>	105,558
FY 2014-2017	<ul style="list-style-type: none"> <li>• Continue planned investment in FCRPS infrastructure.</li> </ul>	479,781

## **Fish & Wildlife Overview**

Bonneville continues to build budgets based on the suite of mitigation projects it adopted in FY 2007 on recommendations from the Council. Bonneville reaffirmed many project-specific commitments in FY 2008 through both BiOp and Fish Accords. These decisions were based upon the management objectives and priorities in the Council's Program as well as an integration of ESA responsibilities as described in the NOAA Fisheries and USFWS's FCRPS BiOp. Coordination continues among Bonneville, Council, Federal resource management agencies, states, tribes and others to plan for additional projects to fill specific gaps in Bonneville's mitigation portfolio through expansion of existing projects and targeted solicitations.

The following fish facilities have been submitted for Congressional approval for FY 2013 as authorized by the Northwest Power Act for new fish and wildlife facilities of at least \$1 million and an economic life greater than 15 years (PL 96-501, sec.4(h)(10)(B)): John Day Reprogramming and Construction, Columbia River Basin White Sturgeon Hatchery, and Kelt Reconditioning and Reproductive Success Evaluation Research. See Proposed Appropriations Language included earlier in this FY 2013 budget.

Bonneville intends to continue implementation of the projects listed below. These facilities are based upon the best available science and are regionally important in that they provide high priority mitigation and recovery actions for fish and wildlife populations as affected by the construction and operation of the FCRPS power facilities, under the auspices of the Northwest Power Act and the ESA, and other laws. 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 Northwest Power and Conservation Council, state, Federal and tribal fish and wildlife resource managers, local governments, watershed and environmental groups and other interested parties.

Bonneville's efforts include continued implementation of the Council's Program in an integrated fashion, in particular proceeding with high priority ESA-related projects and activities associated with the currently operative NOAA and USFWS BiOps and Fish Accords. These capital facilities are typically planned in the Council's three-step process, which includes development of a Master Plan, environmental compliance, and review by the Independent Science Review Panel, among other analyses.

Implementation of reforms to FCRPS hatchery programs that help reduce impacts upon ESA-listed populations will be done following ESA consultations with NOAA and after information on the types of changes to these facilities are established through the Bonneville funded hatchery genetic management plans and priorities are developed for sequencing implementation.

Bonneville also may capitalize the investment in some fish and wildlife habitat acquisitions provide such investment provides a creditable and quantifiable benefit against a defined obligation for Bonneville and follows Bonneville's Capitalization Policy.

The five types of capital are as follows:

- 1) Tributary passage -- Activities that enhance fish passage to tributary rivers. For the purpose of this policy, a tributary is defined by the Council designated sub-basin of the tributary. Functionally interdependent work elements could contain the following: wells, ladders, screens, pumping, culverts, diversion (irrigation) consolidation, piping to reduce water loss, irrigation efficiencies (drip irrigation), lining of ditches (seepage reduction), removal of damming objects or pushup dams in conjunction with related construction, and construction related habitat restoration.
- 2) Gas abatement -- Projects that reduce or eliminate the super-saturation of gaseous nitrogen in water beneath dam spillways.
- 3) Hatchery facility construction -- Projects and activities relating to the construction of fish hatcheries, including related satellite facilities (acclimation ponds and collection weirs). This may also include construction-related habitat restoration.
- 4) Mainstem passage -- Projects and activities which benefit fish passage in the mainstem of Columbia River or Snake River. Capital projects include: ladders, removable spillway weirs, collection facilities, PIT tag facilities, etc.
- 5) Land acquisition -- Land acquisition projects protect, enhance, and maintain instream wetland and riparian habitat and

**Bonneville Power Administration**

**Fish & Wildlife – Capital**

**FY 2013 Congressional Budget**



provide credit to Bonneville, such as habitat units (HUs) 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 power facilities.

**Funding and Activity Schedule**

Fiscal Year	Activity	Funding (Dollars in Thousands)
FY 2011	See Detailed Description Below	90,817
FY 2012	See Detailed Description Below	59,785
FY 2013	See Detailed Description Below	67,145
FY 2014- 2017	See Detailed Description Below	169,527

**Detailed Justification**

Anadromous fish supplementation, production and related facilities that may require capital funds in FY 2013 include the following:

Requesting Expenditure Authority Bill Language

- John Day Reprogramming and Construction: This project is being proposed by the Columbia River Inter-Tribal Fish Commission (CRITFC) to work on the appropriate balance between upriver and down river salmon hatchery production mitigating for John Day and The Dalles Dams. Final reprogramming facilities and locations are still being analyzed. The project area encompasses the mainstem Columbia River from the base of McNary Dam downstream to The Dalles Dam. Capital dollars from this project will help fund designing and constructing additions to existing FCRPS hatchery facilities to accommodate the reprogramming of hatchery fish. Final design and construction is expected to begin Fiscal Year 2014 and be completed by Fiscal Year 2017.

- Columbia River Basin White Sturgeon Hatchery: The Columbia River Basin White Sturgeon Hatchery, proposed by the Columbia River Intertribal Fisheries Commission (CRITFC), will mitigate for white sturgeon population declines due to consistent poor recruitment upstream of Bonneville Dam. Expected production at a new or existing facility will be 15,000 - 20,000 yearling white sturgeon per year. The final project may include broodstock collection and holding, rearing juveniles, and acclimating juveniles prior to release. A location for the facility has not yet been determined, but it will likely be located within 60 miles of the confluence of the Columbia and Snake Rivers. Construction of the facility could start as early as July, 2013.

- Kelt Reconditioning and Reproductive Success Evaluation Research: The Columbia River Inter-Tribal Fish Commission (CRITFC) is proposing a relatively small holding tank facility to recondition female steelhead (kelts) after they have spawned. The capital portion of the project is expected to be constructed in the Snake River Basin, most likely at Lower Granite Dam. Bonneville will implement the kelt reconditioning plan to improve the productivity of Snake River basin B-run steelhead populations which 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 increase the number of returning Snake River B-run steelhead spawners to Lower Granite Dam by about 6%. The expected start date is October 2013 and the completion date is September 2014.

Ongoing Projects

- Kootenai River Native Fish Conservation Aquaculture Program: The Kootenai Tribe of Idaho is proposing to construct a new hatchery on Tribal owned land at the confluence of the Moyie and Kootenai rivers. A new facility at this location will address current physical space limitations that make expansion of the existing Tribal Sturgeon Hatchery infeasible. The Twin Rivers site offers high quality ground and surface water needed to support the program’s aquaculture objectives for Kootenai River white sturgeon and burbot. This location may also help to extend the river reaches where Kootenai sturgeon imprint and ultimately return to reproduce.

Proposed facilities include dual water supplies and filtration, incubation rooms, juvenile rearing tanks and ponds, spawning channels, administrative/ biological support facilities and staff housing. The Tribe is also proposing the experimental use of

**Bonneville Power Administration**

**Fish & Wildlife – Capital**

**FY 2013 Congressional Budget**

remote streamside incubation and early rearing facilities to imprint Kootenai sturgeon upstream of the new hatchery site. The improvements the Tribe is proposing for the existing Tribal Sturgeon Hatchery near Bonners Ferry would enhance sturgeon handling and rearing capabilities. A new spawning room would eliminate the need to relocate large fish from one building to another. A safer means to transport large adults to and from the river would be provided, in addition to a number of measures to improve fish culture practices and program efficiency and success.

- Lolo Creek Permanent Weir Facility: To be constructed on Lolo Creek, tributary to the Clearwater River in north-central Idaho. The weir will be used as a monitoring and evaluation tool to collect adult return information on steelhead and Chinook salmon as well as the collection of Chinook salmon hatchery broodstock for the Nez Perce Tribal Hatchery spring Chinook salmon supplementation program.

- Improving anadromous fish production on the Warm Springs Reservation: The Warm Springs River Watershed, located on the Confederated Tribes of the Warm Springs Reservation, supports the majority of natural production of spring Chinook in the Deschutes River Basin. Wild spring Chinook adult returns to the Warm Springs River have been variable over the past three decades, but generally have exhibited a declining trend. This declining trend has decreased harvest opportunities for Warm Springs tribal members. The project would: 1) analyze existing environmental and biological data to identify factors limiting natural production throughout the life cycle of Warm Springs River spring Chinook; 2) calculate current and potential juvenile and adult carrying capacity for the Warm Springs River and its tributaries; and 3) build a facility to enhance natural production to meet the long term goal of supplying the tribal membership with sustainable, harvestable populations of wild spring Chinook in the Deschutes River Basin in perpetuity.

- Okanogan Basin Locally Adapted Steelhead Supplementation Program: This project will expand Cassimer Bar Hatchery to meet the estimated production level of 200,000 summer steelhead smolts to supplement natural production within the Okanogan River Basin. The goal is to increase abundance and accelerate recovery of endangered steelhead in the Basin. The Colville Tribes will operate the hatchery program using locally-adapted broodstock collected at weirs. This Accord project will require development, review and approval of a Master Plan and completion of the other steps of the Council's 3-Step Review Process.

- Leaburg Dam Fish Sorter Project: The upper Willamette Spring Chinook of the McKenzie basin are listed as a threatened species under the Endangered Species Act. The Willamette Biological Opinion identifies the need to minimize the spawning of hatchery-reared salmon in habitat that is reserved for natural-origin (wild) salmon. This project is located at River Mile 39 on the McKenzie River, and its purpose is to minimize the straying and spawning of McKenzie hatchery-reared Chinook in the natural spawning areas of the McKenzie Basin. The project will help ensure that greater than 90% of the natural spawning population in the upper McKenzie River basin is comprised of wild spring Chinook. The NOAA Fisheries, Action Agencies (US Army Corps of Engineers and Bonneville Power Administration) and Oregon Department of Fish and Wildlife completed a final review of preferred alternatives by late Fall 2011, and determine whether a fish sorter alternative (one of three alternatives) will remain the preferred alternative to manage the proportion (< 0.10) of hatchery-reared fish that spawn in the wild. The three alternatives under consideration are: (1) collection/sorter at Leaburg Dam, (2) enhanced attraction/homing of hatchery fish to McKenzie Hatchery, and (3) reprogramming-reduction of non-mitigation spring Chinook releases from McKenzie Hatchery. The completion of a preferred alternative or combination of alternatives is anticipated in late winter of 2014.

- Crystal Springs Hatchery Facilities: This project may develop facilities for rearing and out-planting resident and anadromous fish in central and southern Idaho. The facility is located near the American Falls Reservoir in Idaho. Resident fish that may be produced include Yellowstone Cutthroat. The anadromous fish may include Snake River spring Chinook salmon Snake River steelhead, and Snake River sockeye. The facility is sponsored by the Shoshone-Bannock Tribes under their Accord, who are expected to operate and manage the facility once it is complete. The project will require development, review and approval of a Master Plan, completion of environmental analysis (including possibly a full EIS) and completion of other steps of the Council's 3-Step Review Process, including review by the ISRP.

- Yakima River Spring Chinook Supplementation Facility (Located in Cle Elum, Washington): The central facilities for this project in Cle Elum are complete. The remaining work under this project is for final design and construction of a monitoring

and evaluation building at the Nelson Springs site near Yakima, Washington, for on-going fisheries research and data analysis. The Nelson Springs M&E facilities construction was completed in FY 2011.

- Snake River Spring Chinook Salmon artificial propagation facilities (known as the Northeast Oregon Hatchery or NEOH): to be located on the Upper Grande Ronde River near La Grande, Oregon, on Catherine Creek near Union, Oregon, and on Lostine River near Enterprise, Oregon. While design has been ongoing for this project for several years, the decision to proceed with construction is pending ESA consultations and approval by NOAA Fisheries of a Hatchery and Genetic Management Plan for the facility. This project, as a measure in the Council's Fish & Wildlife Program, would also identify and develop artificial propagation facilities to protect and enhance salmon and steelhead native to the Imnaha and Grande Ronde River Basins.

- Kootenai River Hatchery: The Kootenai River sturgeon hatchery, in Bonners Ferry, Idaho, is in need of hatchery upgrades and expansion to improve temperature control and rearing conditions that will result in the increased overall survival of ESA-listed Kootenai River white sturgeon after release from this facility. In addition this may also include development of a burbot production facility to offset the loss of natural production below Libby Dam.

- Nez Perce Tribal Hatchery: Additional rearing and acclimation facilities are requested as part of the existing Nez Perce Tribal Hatchery in Clearwater County, Idaho, for reintroduction of up to 700,000 Coho smolts into the Clearwater River in Idaho. The Clearwater Coho Restoration Project is designed to address the absence of Coho in the Clearwater subbasin where, historically, Coho salmon were one of the species making up a complex multi-species anadromous ecosystem. The project goal is to restore Coho salmon to the Clearwater sub-basin measured by 14,000 adults at Lower Granite Dam annually. Plans are to develop an integrated management plan to optimize the use of hatchery fish to meet recovery and harvest objectives. The sponsor, the Nez Perce Tribe, intends to seek an additional round of review for the Master Plan by the Council with a goal of receiving a final recommendation to initiate environmental planning and design development.

- Redfish Lake Sockeye Salmon Captive Broodstock expansion: This project continues to expand the sockeye salmon captive broodstock program by constructing new or increasing the capacity of existing facilities at Eagle Hatchery in Eagle, Idaho, Burley Creek Fish Hatchery in Kitsap County Washington, and at Oxbow Hatchery in Multnomah County, Oregon, to meet the interim goal of increasing production to 150,000 sockeye salmon smolts per year. An additional site has been acquired in Idaho to bring production annually to between 500,000 and 1,000,000 smolts as called for in the 2008 FCRPS BiOp. Precipitous declines of Snake River sockeye salmon led to their Federal listing as endangered in 1991 (56 FR 58619). In that same year, the Idaho Department of Fish and Game initiated a Captive Broodstock Program for Snake River sockeye salmon to prevent species extinction. The ultimate program goal is to reestablish sockeye salmon runs to Stanley Basin waters and to provide for sport and treaty harvest opportunities. The program's near-term goal is to prevent species extinction, slow the loss of critical population genetic diversity and heterozygosity, and increase the number of individuals in the population.

- Chief Joseph Dam Hatchery: Bonneville is funding the construction of Chief Joseph Dam Hatchery Program, primarily a comprehensive management program for supplementing Chinook salmon to increase the abundance, productivity, distribution, and diversity of naturally spawning populations of summer/fall Chinook in the Okanogan River and in the Columbia River below Chief Joseph Dam, Washington (between the confluence of the Okanogan River and Chief Joseph Dam). Project includes a new hatchery facility (at the base of the Chief Joseph Dam). In addition, the Colville Tribes as sponsor will use the facility to reintroduce extirpated spring Chinook back into the Okanogan Subbasin. This Accord project includes a new hatchery facility (at the base of the Chief Joseph Dam) and acclimation ponds (throughout the Okanogan River sub-basin), broodstock collection, egg incubation, rearing, release, and selective broodstock collection method development. Planned production levels are 2 million summer/fall chinook and 0.9 million spring chinook smolts. Bonneville has entered into an agreement with one public utility where that utility will pay a portion of the capital and operation and maintenance costs associated with this hatchery. In addition, Bonneville has agreed in principle with two other public utilities to pay a portion of the operation and maintenance costs. Construction on the hatchery facility was initiated in 2010.

Additionally, Bonneville is considering the efficacy of a weir on the lower Okanogan River. The weir would ensure cost-effective collection of hatchery broodstock, as well as provide significant benefits to management and conservation of

steelhead and other salmon species in the Okanogan River by managing the proportion of hatchery fish allowed to spawn in the wild.

- Klickitat Production Expansion: The Klickitat River Master Plan was completed by the Yakama Nation, reviewed by the ISRP, recommended by the Council, and approved by Bonneville in 2008. The plan's goal is to protect and increase naturally producing populations of spring chinook and steelhead that support harvest while protecting the biological integrity and the genetic diversity of indigenous fish stocks in the sub-basin. The Klickitat Master Plan includes three main elements: Lyle Falls Fishway replacement, Castile Falls passage improvements, and upgrades to the Klickitat hatchery with the potential for also and constructing a new facility to accommodate the ongoing production of Coho and fall Chinook. In early 2009 Bonneville completed the Lyle Falls Environmental Impact Statement (EIS) and ROD. In 2009, final designs for construction of the Lyle and Castile Falls passage improvements, the enumeration and collection facilities at Lyle and Castile, as well as certain Klickitat hatchery upgrades necessary for maintenance of existing program activities and hatchery safety concerns were completed. Limited hatchery upgrades started in late 2009, and construction at Lyle and Castile Falls began in the spring of 2010. A new Klickitat Hatchery EIS was initiated in July 2009 that will examine options for the development and operation of new supplementation facilities and acclimation alternatives, and additional upgrades to the existing hatchery facility.

- Hood River Production Facility: This project includes expansion of existing Parkdale fish facility to accommodate spring chinook rearing, construction of new Hood River adult salmonid trapping facilities, and development of alternative adult trapping sites. The Powerdale Dam Fish Trap has provided the foundation for many of the activities associated with implementation of the Hood River Production Program. These include: monitoring escapement, collecting life history characteristics, and broodstock acquisition. Powerdale Dam, which is owned and operated by PacifiCorp, began to be decommissioned during the summer of 2010. The dam formed an integral part of the Powerdale Dam Fish Trap, as fish are shunted into the fish trap as they ascend the fish ladder at the facility. Removal of the dam will also remove the fish trapping facility. In order to continue implementing the production program, alternative trapping sites will need to be developed. The Hood River Production Program has four primary goals: 1) re-establish naturally sustaining runs of spring chinook in the Hood River; 2) re-build naturally sustaining runs of summer and winter steelhead in the Hood River; 3) maintain genetic characteristics of Hood River fish populations; and 4) provide fish for sustainable harvest by both sport and tribal fishers.

- Mid Columbia Coho Restoration: Indigenous natural Coho salmon no longer occupy the mid-Columbia river basins. Columbia Coho salmon populations were decimated by the early 1900s. For several reasons, including the construction and operation of mainstem Columbia River hydropower projects, habitat degradation, release locations, harvest management, and hatchery practices and genetic guidelines, self-sustaining Coho populations have not been re-established in mid-Columbia basins. This Yakama Accord project's vision is to re-establish naturally reproducing Coho salmon populations in the Wenatchee and Methow sub-basins at biologically sustainable levels which provide significant harvest in most years. This program will construct a facility (anticipated on the Wenatchee River) for holding and spawning broodstock, incubating eggs, and rearing juveniles. Additional semi-natural ponds may also be constructed in the Wenatchee and Methow subbasins for acclimating smolts prior to their release. The phased approach, including associated facilities, incorporates development of a mid-Columbia hatchery broodstock, local adaptation to tributaries in the Wenatchee and Methow Basins, and habitat restoration that will benefit Coho as well as ESA-listed spring chinook, steelhead, and bull trout.

- Walla Walla Hatchery: Hatchery planning and design, based on the Hatchery Master Plan, is near completion. The next phase of the project, pre-design and permitting (environmental compliance) is underway. Construction for the proposed facility is scheduled to begin in FY2013. When complete, the facility will hold, spawn, incubate and rear spring Chinook on the South Fork Walla Walla River near Milton-Freewater, Oregon.

- Yakama Coho restoration: The goal of this restoration project, including associated facilities, is to restore extirpated Coho salmon to the Yakima River basin at biologically sustainable levels. Before the ocean and lower Columbia exploitation of salmon and steelhead in the late 19th century and early 20th century, and before the Yakima River valley was developed with extensive agricultural irrigation systems, the Yakima Sub-basin supported large runs of spring, summer and fall Chinook, summer steelhead, Coho and sockeye. Historical returns of Coho to the Yakima River Basin have been estimated in the range of 44,000 to more than 100,000 fish annually. Cumulative effects from the disruption of the Yakima Sub-basin

ecosystem functions and processes, out of sub-basin impacts, and harvest of salmon have resulted in a significant decline of fish and wildlife abundance from historic levels. Construction of proposed Coho facilities may begin as early as FY 2013.

Potential non-construction capital Wildlife and Resident Fish Habitat Acquisitions (including Conservation Easements) eligible for capitalization:

- Grand Coulee and Chief Joseph Wildlife Habitat Acquisitions
- Albeni Falls Wildlife Mitigation
- Palisades and Minidoka Wildlife Habitat Acquisitions
- Black Canyon, Boise Diversion, Anderson Ranch Wildlife Habitat Acquisitions
- Willamette Wildlife Habitat Acquisitions
- Libby and Hungry Horse Reservoirs Resident Fish Acquisition

## Conservation & Energy Efficiency Overview

Bonneville’s conservation acquisition program offers several ways for customers to participate in regional conservation. Program components include: (1) utility standard offer and custom programs, which result in customer proposals to conserve energy through residential weatherization, commercial lighting, Heating, Ventilation, and Air Conditioning (HVAC), industrial processes and lighting, and irrigated agriculture; (2) third party delivery programs, such as residential compact fluorescent lighting, the Energy Smart Grocer, Energy Smart Industrial, and Green Motors programs; (3) programs to help Federal installations in the region reduce energy use, which includes the Federal Hatcheries program and work at various dams to help the Corps and Reclamation in their efforts to reduce energy use; and (4) other initiatives still in the design stage.

Bonneville’s conservation budgets reflect a ramp-up in regional conservation goals and the increasing cost of the conservation measures that must be implemented to achieve the targets. Specifically, Bonneville’s conservation targets have increased from about 280 aMW under the Council’s 5<sup>th</sup> Power Plan (2005-09) to approximately 504 aMW under its 6<sup>th</sup> Power Plan (2010-14). The Council’s 6<sup>th</sup> Power Plan calls for the region to acquire approximately 1,200 aMW of conservation in 2010 through 2014. Bonneville established a five-year target to meet these goals. In FY 2011 Bonneville acquired significantly more conservation than had originally been planned for in that year. In order to maintain the five-year budget to meet the Council’s power planning goals, Bonneville currently anticipates spending its planned level for FY 2012 but less than indicated in the budget for FY 2013 and FY 2014 while still meeting the target. While Bonneville is maintaining the same five-year budget levels, the amounts acquired in FY 2011 were at a lower cost than originally planned so Bonneville will likely exceed the original aMW target. The cost of conservation is also increasing as the cost-effectiveness threshold increases and as market penetration is reached for some low-cost measures. Due to anticipated changes in federal lighting standards, for example, standard twister compact fluorescent lamps (CFLs), which were the largest single contributor to past savings, begin phasing out of the program beginning in 2012. The shift away from this particularly low-cost measure increases overall conservation costs. That cost increase is reflected in these budgets. The front-loaded shape of these budgets reflects a push to acquire as much low-cost conservation as possible before the change in lighting and other standards. In meeting its conservation goals Bonneville may employ resource acquisition agreements, authorized by Northwest Power Act section 6, to obtain non-federal funding.

### Funding and Activity Schedule

Fiscal Year	Activity	Funding (Dollars in Thousands)
FY 2011	Continued to support utility incentive programs. Continued to support regional conservation programs. Began update of a regional conservation reporting system.	161,754
FY 2012	Continue to support utility incentive programs. Continue to support regional conservation programs. Complete regional conservation reporting system. Begin supporting conservation at direct serve federal agencies.	88,637
FY 2013	Continue to support utility incentive programs. Continue to support regional conservation programs. Continue supporting conservation at direct serve federal agencies.	94,547
FY 2014- 2017	Continue to support utility incentive programs. Continue to support regional conservation programs. Continue supporting conservation at direct serve federal agencies.	558,585

**Transmission Services – Capital  
Funding Schedule by Activity**

	(Accrued Expenditures) (Dollars in Thousands)		
	FY 2011	FY 2012	FY 2013
Transmission Services - Capital			
Main Grid	123,093	235,851	299,552
Area & Customer Services	10,196	19,767	10,975
Upgrades & Additions	72,590	166,709	271,112
System Replacements	94,967	172,459	200,626
Projects Funded in Advance	213,527	91,532	101,297
<b>Total, Transmission Services - Capital</b>	<b>514,372</b>	<b>686,317</b>	<b>883,562</b>

**Outyear Funding Schedule**

	(Accrued Expenditures) (Dollars in Thousands)			
	FY 2014	FY 2015	FY 2016	FY 2017
Total, Transmission Services - Capital	813,696	606,672	509,075	435,117

**Overview**

TS is responsible for about 75 percent of the Pacific Northwest’s high-voltage transmission. TS provides funding for all additions, upgrades and replacements to the Bonneville transmission system, resulting in reliable service to northwest generators and transmission customers. The Bonneville transmission system also facilitates the sale and exchange of power to and from the region.

The eastern blackout on August 14, 2003, alerted the nation to the lack of investment in utility transmission infrastructure. Bonneville has been working on infrastructure investments and operational practices to improve the transmission grid since the West Coast disturbance on August 10, 1996. TS continues to make significant infrastructure improvements and additions to the system to assure reliable transmission in the Northwest. These improvements and additions will help the Bonneville transmission system continue to comply with national reliability standards, replace aging equipment, allow for interconnection of needed new generation, and remove constraints that limit economic trade or the ability to maintain the system. Prior to beginning the infrastructure improvements, TS had built no major transmission projects since 1987. Only incremental additions were added to the system over the years.

Bonneville’s completed infrastructure investments in the last decade that further strengthen the network consist of the following projects: Puget Sound Area Additions, North of Hanford/ North of John Day, Celilo Modernization, Eastern Washington Reinforcement, Coulee-Bell, Kangley–Echo Lake, Shultz-Wautoma, and Portland Area Additions.

In 2005, with the Congressional approval of wind tax credits, a number of potential wind generation companies made requests for interconnection to the Bonneville transmission grid. By 2007, Bonneville built facilities to connect up to 2,500 MW of wind generation and connected 650 MW. In 2008, 659 MW was connected and in 2009, 795 MW was connected to the FCRPS grid. Bonneville has more than 16,000 MW in additional wind project interconnection requests, many interconnecting in the 2011 through 2016 timeframe. Bonneville integrated a total installed wind capability of 3,800 MW as of the end of calendar year 2011. In 2010, Bonneville began construction of several new large substations to meet these interconnection requests. Current projections are 6,200 MW by 2013 interconnected and possibly 8,000 MW total by 2016. Also in the interconnection queue is approximately 800 MW of natural gas, solar, bio-mass and geothermal fueled generation proposed for connection between 2012 and 2016. Much of the wind generation demand is a result of the Renewable Portfolio standards enacted by

Oregon and Washington that require an estimated 5,000 MW of renewable generation by 2015. Exports to California could add another 2,000-3,000 MW during the same time period.

In June 2008, Bonneville's first NOS received 153 requests from 28 customers for 6,410 MW of new service, about three-fourths for wind energy integration. BPA 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 will pursue Big Eddy Knight and Central Ferry – Lower Monumental projects if environmental and economic analysis warrants. The I-5 Corridor project is in the planning stage. If all four projects are constructed they will provide almost 6,000 MW of new transmission service.

Bonneville's second NOS window for new transmission service requests in 2009 resulted in 82 service requests resulting in 34 contracts totaling 1,553 megawatts. Of that, approximately 923 megawatts represent wind project interconnection requests. Bonneville has completed cluster studies for NOS 2010. These requests total 3,759 megawatts, of which 2,993 megawatts is wind. Several projects are being reviewed as a result of these studies including Colstrip West, Colstrip East and the Northern Intertie project. Bonneville elected to not hold a NOS in 2011.

As noted, Bonneville's capital program for Transmission Services includes a wide variety of specific investments that are determined after internal review and, in some cases, external review. In 2009, Bonneville's Transmission Services organization began implementing Asset Management based upon PAS 55, an Asset Management framework that provides a standardized structure and approach to Asset Management. As a result, Transmission Services Asset Strategies, which are derived from Agency Strategies, drive our Asset Plans which determine our capital and expense needs. On occasion, capital investments must be made on short notice because of unexpected needs, because of the identification of obsolete, worn out, failed, failing, or at risk systems and facilities, because of system reliability

**Bonneville Power Administration**

**Transmission Services – Capital**

requirements, and because near-term opportunities to install or construct facilities arise as outages occur or as schedules for outages change. For these and other reasons, Transmission Services capital program is fluid and subject to change. Thus, Bonneville is unable to predict with specificity many of the new capital investments in the transmission system. Nonetheless the types of investments can be identified in general. These items may include but are not limited to: arrester, bus and bus pedestal, circuit breaker, circuit switcher, communication tower, concrete pole, control center mapboard and video wall displays, control house, converter grading capacitors, converter harmonic filters, converter smoothing reactors, converter transformers, current limiting reactor, current limiting resistor, current transformer, digital fault locator, digital cross-connect system (DCS), disconnect switch, engine generator, engineered steel pole, fiber optic cable, fiber terminal, fuel dispensing facility, grounding system, grounding transformer, microwave multiplex transmitter, network management system (NMS), overhead conductor, overhead ground wire, power transformer, radio multiples transmitter, relay, revenue meter, series capacitor, shunt capacitor, shunt reactor, station service transformer, station service inverter, substation dead end tower, substation perimeter fence, switchyard lighting, thyristor, transfer switch, transmission steel tower, voltage regulator, voltage transformer, water/sewer system, wood pole and cross-arm, and other similar items consistent with Bonneville's capitalization policy determinations (such as spacer damper replacements).

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

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

**FY 2013 Congressional Budget**



In December 2004, the 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 to affected agencies of relocation costs. The Federal Communications Commission has auctioned licenses for reallocated Federal spectrum, which will facilitate the provision of Advanced Wireless Services 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 is \$48.7 million. This project is approximately 75% complete.

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 access control to Bonneville's facilities and provide video surveillance and monitoring capabilities.

In order to centralize staff and reduce reliance on leasing a multiplicity of commercial office and related space, and to meet the evolving staff needs of Bonneville's Transmission Services, Bonneville has begun preliminary study and design of a new Transmission Services Facility to be located on Bonneville's Ross Campus. Although the future costs of this building are mentioned in the budget narrative, this building will be the subject to continuing conversations with Bonneville's customers and regional stakeholders.

#### **Accomplishments**

- Filed final rate proposal for 2012-2013 with FERC
- McNary -John Day project will be completed under budget and ahead of schedule.
- Integrated over 3,800 MW of wind to date on Bonneville's transmission system

Implementation of Asset Management Strategies for Sustain and Expand Programs

#### **Explanation of Changes**

Bonneville's budget includes \$884 million in Fiscal Year 2013 for TS (including non-borrowing authority capital) which is a 28.7% increase over the FY12 forecasted level. The increase reflects investment in Main Grid and Upgrades and Additions necessary to incorporate and deliver new generation throughout the Northwest as well as increases in System Replacements to address numerous issues with aging electric and telecom infrastructure.

The FY13 budget increases the levels for Main Grid (+\$ 64M), Upgrades & Additions (+\$ 104M), System Replacements (+\$ 28M), and PFIA (+\$ 9.7M). The budget decreases levels for Area & Customer Services (-\$ 8.7M).

#### **Strategic Management**

Bonneville provides transmission and energy services while supporting integration of renewable resources and low-cost transmission in the Pacific Northwest.

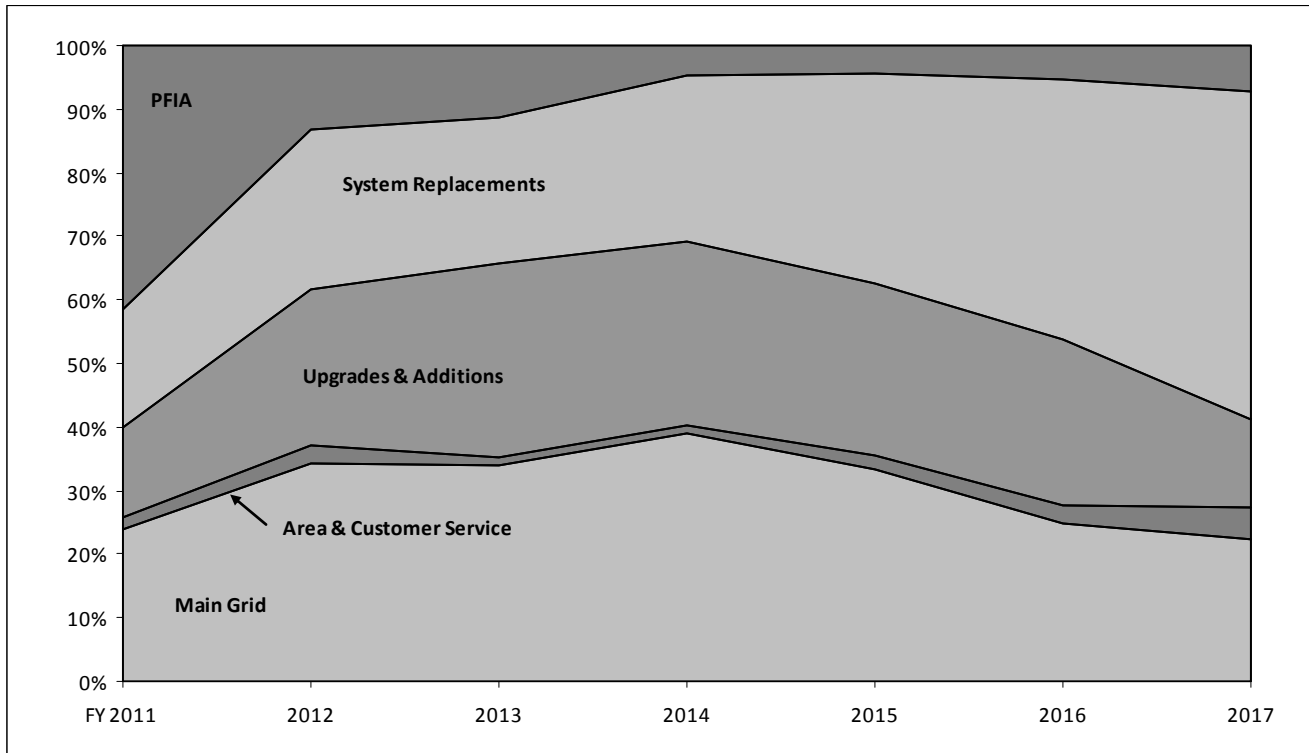
Bonneville will continue to implement the following strategies to serve the region

1. To improve system adequacy, reliability and availability, Bonneville has embarked on major transmission infrastructure projects. The projects shore up the region's transmission system and help deliver the region's future power needs. These projects address multiple challenges, such as integration of renewable energy, the need to relieve a number of congested transmission paths, the pressure to keep up with growing energy demands and the need to meet Bonneville's open access policy in support of competitive markets.
2. Bonneville will continue to replace aging assets that are vital the reliability of the existing transmission system

The following external factors present the strongest impact to overall achievement of the program's strategic goal

1. Continually changing economic and institutional conditions
2. Competitive dynamics
3. Ongoing changes in the electric industry
4. Different siting issues

**Relative Outyear Funding Priorities in Transmission Services Capital**



**Explanation of Funding AND/OR Program Changes**

(Dollars in Thousands)

	FY 2012	FY 2013	FY 2013 vs FY 2012
<b>Main Grid</b> The increase from \$235,851,000 to \$299,552,000 reflects increased level of funding to support Central Oregon Capacity expansion for Data Centers and NOS projects.	235,851	299,552	+63,701
<b>Area &amp; Customer Services</b> The decrease from \$19,767,000 to \$10,975,000 reflects a decrease in the number of customer required projects.	19,767	10,975	-8,791
<b>Upgrades &amp; Additions</b> The increase from \$166,709,000 to \$271,112,000 reflects the need to improve power flows to the south through the Pacific Direct Current Line (PDCI).	166,709	271,112	+104,403
<b>System Replacements</b> The Increase from \$172,459,000 to \$200,626,000 reflects the need to address aging infrastructure, especially telecom facilities.	172,459	200,626	+28,167
<b>PFIA</b> The increase from \$91,532,000 to \$101,297,000 reflects an increase funded by customers to interconnect new Wind and Solar Generation projects.	91,532	101,297	+9,766
<b>TOTAL Funding Change, TS Capital</b>	<b>686,317</b>	<b>883,562</b>	<b>+197,245</b>

**Main Grid  
Overview**

Bonneville’s strategic objectives for Main Grid projects are to assure compliance with the NERC planning standards and Western Electricity Coordinating Council (WECC) reliability criteria, provide voltage support, provide a reliable transmission system for open access, per FERC requirements, 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. In addition, transmission reinforcements are planned for load centers in central Oregon, central Washington, the Willamette Valley, and along the I-5 Corridor, as well as projects to provide transmission access for new generation projects.

**Funding and Activity Schedule**

Fiscal Year	Activity	Funding (Dollars in Thousands)
FY 2011	<ul style="list-style-type: none"> <li>• Continued environmental analysis and design for the I-5 Corridor Reinforcement project.</li> <li>• McNary-John Day (West of McNary Reinforcements Group 1)-continued construction;</li> <li>• Big Eddy-Knight (West of McNary Reinforcements Group 2)-completed environmental review and design.</li> <li>• Completed construction for the Redmond 230/115 kV Bank #2.</li> <li>• Central Ferry-Lower Monumental 500 kV Reinforcement (formerly Little Goose Area Reinforcement)-completed environmental review and design.</li> <li>• Began the planning and design to add a second 500/230 kV transformer at Ponderosa substation.</li> <li>• Continued planning studies to identify needed infrastructure additions.</li> <li>• Continued planning studies to identify projects driven by NERC planning standards and WECC reliability criteria.</li> <li>• Continued planning studies to identify system reactive needs to mitigate unacceptable low or high voltage problems and other system additions.</li> <li>• Continued planning studies to relieve transmission system congestion and for integrating potential new generation facilities.</li> <li>• Continued planning studies and design for projects related to NOS.</li> </ul>	123,093
FY 2012	<ul style="list-style-type: none"> <li>• Continue environmental analysis and continue design for the I-5 Corridor Reinforcement project.</li> <li>• McNary-John Day (West of McNary Reinforcements Group 1)-complete construction;</li> <li>• Big Eddy-Knight (West of McNary Reinforcements Group 2)-complete the design and begin construction.</li> <li>• Central Ferry-Lower Monumental 500 kV Reinforcement (formerly Little Goose Area Reinforcement)-complete design and begin construction.</li> <li>• Complete design for the addition of a 2nd 500/230 kV transformer at Ponderosa substation.</li> <li>• Continue planning studies to identify needed infrastructure additions.</li> <li>• Continue planning studies to identify projects driven by NERC planning standards and WECC reliability criteria.</li> <li>• Continue planning studies to identify system reactive needs to mitigate unacceptable low or high voltage problems and other system additions.</li> <li>• Continue planning studies to relieve transmission system congestion and for integrating potential new generation facilities.</li> <li>• Continue planning studies and design for projects related to the NOS.</li> </ul>	235,851

Fiscal Year	Activity	Funding (Dollars in Thousands)
FY 2013	<ul style="list-style-type: none"> <li>• Complete design and issue the Record of Decision (ROD) for the I-5 Corridor Reinforcement project.</li> <li>• Big Eddy-Knight (West of McNary Reinforcements Group 2)-complete construction</li> <li>• Central Ferry-Lower Monumental 500 kV Reinforcement (formerly Little Goose Area Reinforcement)-complete construction.</li> <li>• Continue construction of the addition of a 2nd 500/230 kV transformer at Ponderosa substation.</li> <li>• Continue planning studies to identify needed infrastructure additions.</li> <li>• Continue planning studies to identify projects driven by NERC planning standards and WECC reliability criteria.</li> <li>• Continue planning studies to identify system reactive needs to mitigate unacceptable low or high voltage problems and other system additions.</li> <li>• Continue planning studies to relieve transmission system congestion and for integrating potential new generation facilities.</li> <li>• Continue planning studies and design for projects related to the NOS.</li> </ul>	299,552
FY 2014-2017	<ul style="list-style-type: none"> <li>• Continue investment in Main Grid assets.</li> </ul>	741,707

**Area & Customer Service  
Overview**

Bonneville’s strategic objective for Area and Customer Service projects is to assure that Bonneville meets any reliability standards and our contractual obligations.

**Funding and Activity Schedule**

Fiscal Year	Activity	Funding (Dollars in Thousands)
FY 2011	<ul style="list-style-type: none"> <li>• Finalized the scope and agreements between the parties and begin the design of Hooper Springs substation.</li> <li>• Began design and construction of the Madison Shunt Capacitor Addition.</li> <li>• Continued preliminary engineering and design for miscellaneous facilities required to meet contractual obligations and maintain reliable service for Bonneville’s service area.</li> </ul>	10,196
FY 2012	<ul style="list-style-type: none"> <li>• Complete the design and begin the construction of Hooper Springs substation.</li> <li>• Complete construction of the Madison Shunt Capacitor Addition.</li> <li>• Continue preliminary engineering and design for miscellaneous facilities required to meet contractual obligations and maintain reliable service for Bonneville’s service area.</li> </ul>	19,767
FY 2013	<ul style="list-style-type: none"> <li>• Continue preliminary engineering and design for miscellaneous facilities required to meet contractual obligations and maintain reliable service to Bonneville’s service area.</li> </ul>	10,975
FY2014-2017	<ul style="list-style-type: none"> <li>• Continue investment in Area &amp; Customer Service assets.</li> </ul>	63,017

## Upgrades & Additions Overview

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

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

### Funding and Activity Schedule

Fiscal Year	Activity	Funding (Dollars in Thousands)
FY 2011	<ul style="list-style-type: none"> <li>• Completed joint use fiber project from SnoKing to Bellingham.</li> <li>• Began design of upgrading 2 miles of fiber between Bonneville Power House and Bonneville Control House.</li> <li>• Continued planning, design, material acquisition and construction of special remedial action control schemes required for interconnecting new generation projects and mitigating immediate constrained paths.</li> <li>• Continued planning, design, material acquisition and construction of various system additions and upgrades necessary to maintain a reliable system for Bonneville’s service area.</li> <li>• Continued construction of secondary fiber related projects and digital radio system upgrades to improve the operational telecommunication system.</li> <li>• Continued design and begin material procurement and construction to upgrade the main fiber optic backbone system (#KC and #NC systems).</li> <li>• Continued design of the VHF Radio System upgrade.</li> <li>• Began design of Synchrophasor project as well as construction at some of the multiple sites involved.</li> <li>• Procurement of critical spare transformers.</li> <li>• Began studies for upgrading the Pacific DC Intertie to 3,800 MW.</li> <li>• Began the design for upgrading the Ross-Schultz fiber circuit.</li> <li>• Began the design for upgrading the Bell-Boundary #DC SONET ring.</li> </ul>	72,590
FY 2012	<ul style="list-style-type: none"> <li>• Continue upgrading 2 miles of fiber between Bonneville Power House and Bonneville Control House.</li> <li>• Continue planning, design, material acquisition and construction of special remedial action control schemes required for interconnecting new generation projects and mitigating immediate constrained paths.</li> <li>• Continue planning, design, material acquisition and construction of various system additions and upgrades necessary to maintain a reliable system for Bonneville’s service area.</li> <li>• Continue construction of secondary fiber related projects and digital radio system upgrades to improve the operational telecommunication system.</li> <li>• Continue material procurement and construction to upgrade the main fiber optic backbone system (#KC and #NC systems).</li> <li>• Continue design and begin construction of the VHF Radio System upgrade.</li> <li>• Complete design and continue construction at multiple sites of the Synchrophasor</li> </ul>	166,709

Fiscal Year	Activity	Funding (Dollars in Thousands)
	project. <ul style="list-style-type: none"> <li>• Complete studies and begin design for the upgrading of the Pacific DC Intertie to 3,800 MW project.</li> <li>• Continue the design of the Ross-Schultz fiber circuit upgrade and begin material procurement.</li> <li>• Continue design and begin material procurement for the Bell-Boundary #DC SONET ring upgrade.</li> </ul>	
FY 2013	<ul style="list-style-type: none"> <li>• Continue upgrading 2 miles of fiber between Bonneville Power House and Bonneville Control House.</li> <li>• Continue planning, design, material acquisition and construction of special remedial action control schemes required for interconnecting new generation projects and mitigating immediate constrained paths.</li> <li>• Continue planning, design, material acquisition and construction of various system additions and upgrades necessary to maintain a reliable system for Bonneville's service area.</li> <li>• Continue construction of secondary fiber related projects and digital radio system upgrades to improve the operational telecommunication system.</li> <li>• Continue material procurement and construction to upgrade the main fiber optic backbone system (#KC and #NC systems).</li> <li>• Continue construction of the VHF Radio System upgrade.</li> <li>• Complete design and continue construction at multiple sites of the Synchrophasor project.</li> <li>• Complete design and begin construction for the upgrading of the Pacific DC Intertie to 3,800 MW project.</li> <li>• Begin construction of the Ross-Schultz fiber circuit upgrade and begin material procurement.</li> <li>• Begin construction of the Bell-Boundary #DC SONET ring upgrade.</li> </ul>	271,112
FY2014-2017	<ul style="list-style-type: none"> <li>• Continue investment in Upgrades &amp; Additions assets.</li> </ul>	623,775

**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, and includes 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.

**Funding and Activity Schedule**

Fiscal Year	Activity	Funding (Dollars in Thousands)
FY 2011	<p>Non-Electric Replacements:</p> <ul style="list-style-type: none"> <li>• Continued non-electric replacements as necessary.</li> <li>• Continued 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.</li> <li>• Began design of the Transmission Services Facility based on the results of the review and feasibility study.</li> <li>• Continued design and construction of capital improvements for identified existing facilities.</li> </ul> <p>Electric Replacements:</p> <ul style="list-style-type: none"> <li>• Continued 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.</li> <li>• Continued replacement of under-rated and high maintenance substation equipment.</li> <li>• Continued replacing spacer dampers on various 500 kV lines.</li> <li>• Continued replacing critical, operational tools and marketing business systems at the Dittmer and Munro Control Centers.</li> <li>• Continued replacing deteriorating wood pole transmission line structures, spacer dampers and insulators with NCI.</li> </ul>	94,967
FY 2012	<p>Non-Electric Replacements:</p> <ul style="list-style-type: none"> <li>• Continue non-electric replacements as necessary.</li> <li>• 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.</li> <li>• Continue design of the Transmission Services Facility.</li> <li>• Continue design and construction of capital improvements for identified existing facilities.</li> </ul> <p>Electric Replacements:</p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• Continue replacement of under-rated and high maintenance substation equipment.</li> </ul>	172,459



	<ul style="list-style-type: none"> <li>• Continue replacing spacer dampers on various 500 kV lines.</li> <li>• Continue replacing critical, operational tools and marketing business systems at the Dittmer and Munro Control Centers.</li> <li>• Continue replacing deteriorating wood pole transmission line structures, spacer dampers and insulators with NCI.</li> </ul>	
FY 2013	<p>Non-Electric Replacements:</p> <ul style="list-style-type: none"> <li>• Continue non-electric replacements as necessary.</li> <li>• 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.</li> <li>• Begin construction of the Transmission Services Facility.</li> <li>• Continue design and construction of capital improvements for identified existing facilities.</li> </ul> <p>Electric Replacements:</p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• Continue replacement of under-rated and high maintenance substation equipment.</li> <li>• Continue replacing spacer dampers on various 500 kV lines.</li> <li>• Continue replacing critical, operational tools and marketing business systems at the Dittmer and Munro Control Centers.</li> <li>• Continue replacing deteriorating wood pole transmission line structures, spacer dampers and insulators with NCI.</li> <li>• Continue replacement of aging and defective converter transformers if the decision is to replace rather than upgrade.</li> </ul>	200,626
FY 2014-2017	<p>Non-Electric Replacements:</p> <ul style="list-style-type: none"> <li>• Continue non-electric replacements as necessary.</li> <li>• Continued 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.</li> <li>• Continue construction of the Transmission Services Facility.</li> <li>• Continue design and construction of capital improvements for identified existing facilities.</li> </ul> <p>Electric Replacements:</p> <ul style="list-style-type: none"> <li>• 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.</li> <li>• Continue replacement of under-rated and high maintenance substation equipment.</li> <li>• Continue replacing spacer dampers on various 500 kV lines.</li> <li>• Continue replacing critical, operational tools and marketing business systems at the Dittmer and Munro Control Centers.</li> <li>• Continue replacing deteriorating wood pole transmission line structures, spacer dampers and insulators with NCI.</li> <li>• Continue replacement of aging and defective converter transformers if the decision is to replace rather than upgrade.</li> </ul>	843,669

**Projects Funded in Advance  
Overview**

This category includes those facilities and/or equipment where Bonneville retains control or ownership but which are funded or financed by a third party or with revenues, either in total or in part. This program also includes investments associated with the CSEA.

**Funding and Activity Schedule**

Fiscal Year	Activity	Funding (Dollars in Thousands)
FY 2011	<ul style="list-style-type: none"> <li>• Continued to integrate various new generation and line/load projects into Bonneville transmission grid based on requests placed and processed in accordance with transmission tariff.</li> <li>• Continued planning studies to identify system impacts and needs regarding proposed new generation projects.</li> <li>• Engineered and began construction of several large wind generation interconnection substations.</li> <li>• Completed environmental cleanup and other work necessary for the sale of Bonneville facilities.</li> <li>• Continued the design and construction for various radio replacements at accessible sites associated with the CSEA.</li> <li>• Completed construction of the California-Oregon Intertie improvement project.</li> <li>• Central Ferry Substation– Design.</li> </ul>	213,527
FY 2012	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Continue planning studies to identify system impacts and needs regarding proposed new generation projects.</li> <li>• Engineer and begin construction of several large wind generation interconnection substations.</li> <li>• Complete environmental cleanup and other work necessary for the sale of Bonneville facilities.</li> <li>• Complete other projects as agreed to with customers.</li> <li>• Continue the design and construction for various radio replacements at accessible sites associated with the CSEA.</li> <li>• Central Ferry Substation– Continue design.</li> </ul>	91,532
FY 2013	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Continue planning studies to identify system impacts and needs regarding proposed new generation projects.</li> <li>• Engineer and begin construction of several large wind generation interconnection substations.</li> <li>• Complete environmental cleanup and other work necessary for the sale of Bonneville facilities.</li> <li>• Complete other projects as agreed to with customers.</li> <li>• Continue the design and construction for various radio replacements at accessible sites associated with the CSEA.</li> <li>• Central Ferry Substation– Begin construction.</li> </ul>	101,297
FY2014-2017	<ul style="list-style-type: none"> <li>• Continue PFIA program to help Bonneville meet its infrastructure investment needs.</li> </ul>	124,753

**Capital Information Technology & Equipment/Capitalized Bond Premium  
Funding Schedule by Activity**

	(Accrued Expenditures) (Dollars in Thousands)		
	FY 2011	FY 2012	FY 2013
Capital Information Technology (IT) & Equipment/Capitalized Bond Premium			
Capital IT & Equipment	44,161	62,252	50,512
Capitalized Bond Premium	0	2,000	2,000
<b>Total, Capital IT &amp; Equipment/Capitalized Bond Premium</b>	<b>44,161</b>	<b>64,252</b>	<b>52,512</b>

**Outyear Funding Schedule**

	(Accrued Expenditures) (Dollars in Thousands)			
	FY 2014	FY 2015	FY 2016	FY 2017
Total, Capital IT & Equipment/Capitalized Bond Premium	47,791	48,389	49,623	51,285

**Overview**

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

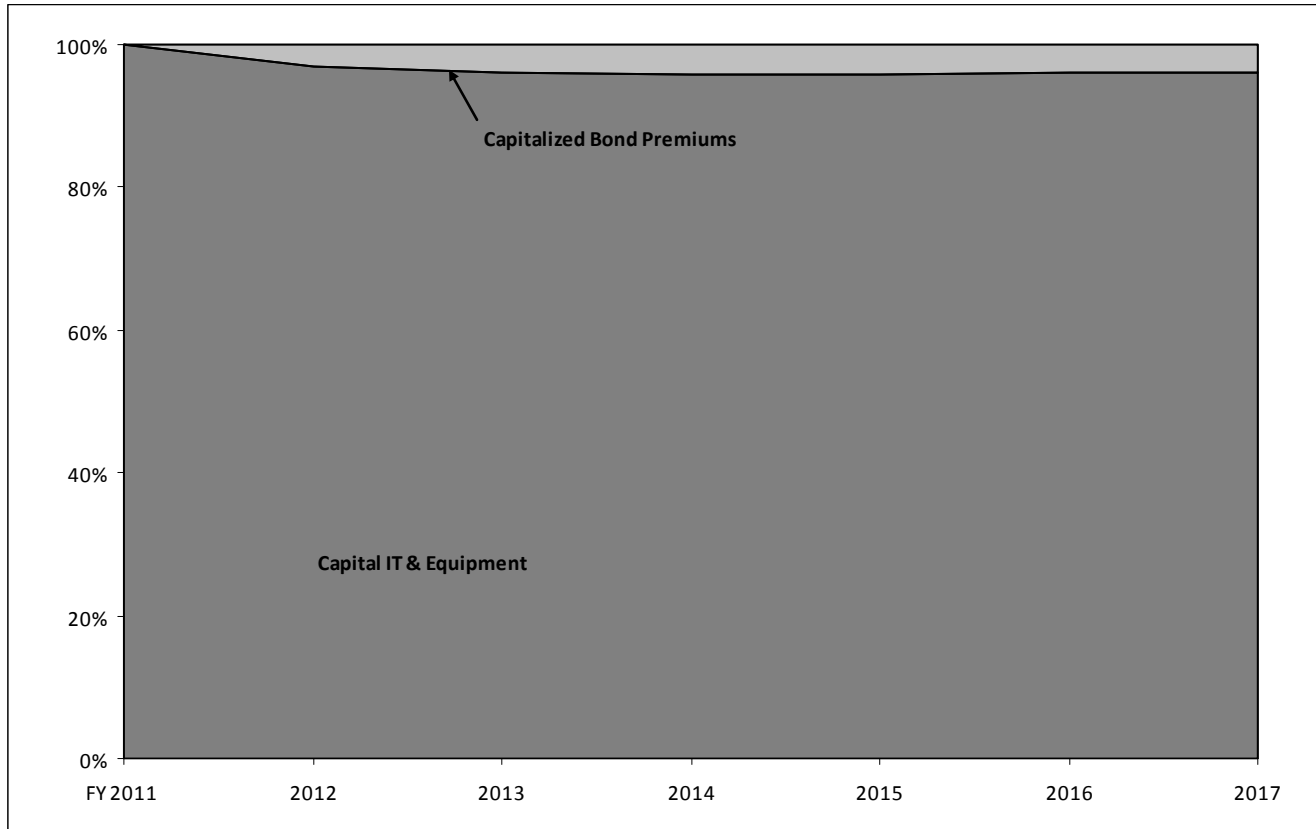
Bonneville continues to move its IT infrastructure to a more efficient architecture. This FY 2013 Budget supports this effort. IT continues to eliminate redundancies in tools and applications, establish an agency-wide IT architecture with standardized IT purchasing criteria, standardize software licensing processes and minimize agency liabilities through

stronger contracts, apply continuous improvement practices to IT project management, and implement an agency IT portfolio cost management strategy. The IT estimates in this FY 2013 Budget, under Capital IT and Equipment include all IT functions within the agency except TS grid operations. See the Capital Program – TS section of this budget for additional discussion of grid operations-related IT requirements acquisitions.

Capital equipment provides for the acquisition of general and some dedicated special purchases of capital office furniture and equipment.

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

**Relative Outyear Funding Priorities in Capital IT & Equipment/Capitalized Bond Premium**



**Explanation of Funding AND/OR Program Changes**

(Dollars in Thousands)

	FY 2012	FY 2013	FY 2013 vs FY 2012
Capital IT & Equipment			
The decrease from \$62,252,000 to \$50,512,000 reflects ongoing emphasis on business resiliency efforts.	62,252	50,512	-11,740
Capitalized Bond Premiums			
Reflects possible refinancings of outstanding Federal bonds.	2,000	2,000	+0
<b>TOTAL Funding Change, Capital IT &amp; Equipment Services/Bond Premiums</b>	<b>64,252</b>	<b>52,512</b>	<b>-11,740</b>

### Capital IT & Equipment Overview

This category includes enhancements to Bonneville’s information technology processes to provide cost effective efficiencies for secure, timely and accurate information. Investments will enable continued enhancements to Bonneville’s Enterprise systems that are designed to link key information systems throughout Bonneville and improve business processes. Current efforts include continued functional process improvements in areas not included in the initial development phase. Other investments include acquisition of capital office furniture and equipment, capital automated data processing (ADP) based administrative telecommunications equipment, ADP equipment (hardware), and support of capital software development for certain Bonneville programs.

#### **Funding and Activity Schedule**

Fiscal Year	Activity	Funding (Dollars in Thousands)
FY 2011	Capital system developments in support of: <ul style="list-style-type: none"> <li>• Corporate IT Projects</li> <li>• IT Infrastructure Projects</li> <li>• Power IT Projects</li> <li>• Transmission Services IT Projects</li> </ul>	44,161
FY 2012	Capital system developments in support of: <ul style="list-style-type: none"> <li>• Corporate IT Projects</li> <li>• IT Infrastructure Projects</li> <li>• Power IT Projects</li> <li>• Transmission Services IT Projects</li> </ul>	62,252
FY 2013	Capital system developments in support of: <ul style="list-style-type: none"> <li>• Corporate IT Projects</li> <li>• IT Infrastructure Projects</li> <li>• Power IT Projects</li> <li>• Transmission Services IT Projects</li> </ul>	50,512
FY 2014- 2017	Capital system developments in support of: <ul style="list-style-type: none"> <li>• Corporate IT Projects</li> <li>• IT Infrastructure Projects</li> <li>• Power IT Projects</li> <li>• Transmission Services IT Projects</li> </ul>	189,088

### Capitalized Bond Premium Overview

Continue to assess financial market and when cost-effective, refinance available bonds as prudent.

#### **Funding and Activity Schedule**

Fiscal Year	Activity	Funding (Dollars in Thousands)
FY 2011	Possible refinancings of outstanding Federal bonds	0
FY 2012	Possible refinancings of outstanding Federal bonds	2,000
FY 2013	Possible refinancings of outstanding Federal bonds	2,000
FY 2014- 2017	Possible refinancings of outstanding Federal bonds	8,000

**Power Services - Operating Expense  
Funding Schedule by Activity**

Power Services - Operating Expenses	(Accrued Expenditures) (Dollars in Thousands)		
	FY 2011	FY 2012	FY 2013
Production	1,240,994	1,202,742	1,287,118
Associated Projects Costs	318,358	371,400	387,639
Fish & Wildlife	221,048	237,394	241,384
Residential Exchange Program	184,764	201,561	201,838
NW Power & Conservation Council	8,930	10,114	10,355
Energy Conservation & Renewable Resources	98,003	84,620	85,992
<b>Total, Power Services - Operating Expenses</b>	<b>2,072,098</b>	<b>2,107,831</b>	<b>2,214,325</b>

**Outyear Funding Schedule**

Total, Power Services - Operating Expense	(Accrued Expenditures) (Dollars in Thousands)			
	FY 2014	FY 2015	FY 2016	FY 2017
	2,274,720	2,320,674	2,319,068	2,399,388

**Overview**

Production includes all Bonneville non-Federal debt service (including Energy Northwest debt service), O&M costs for power system generation resources, including a large nuclear plant, business operations, short- and long-term power purchases (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 Power Transacting Risk Management Policy), electric utility marketing of power, and oversight of hydro and nuclear projects. Bonneville develops products and services to meet the needs of Bonneville customers and stakeholders, and acquires resources as needed. This FY 2013 Budget includes anticipated expenses for new long-term power purchases to meet the needs of Bonneville customers, that may include no more than 30 MW of waste energy recovery power acquired through a demonstration project testing the effectiveness of a "standard offer" approach to acquiring certified Clean Energy projects as defined in the Energy Independence and Security Act of 2007 (Public Law 110-140 December 19, 2007).

In FY 2010, Bonneville completed a long-term Resource Program to guide potential future resource acquisitions needed to meet customer loads. In the event that Bonneville does acquire a resource, Bonneville will modify its budget to reflect the acquisition.

Associated Projects represents funding for operation and maintenance costs for the FCRPS, minor additions, improvements and replacements, and liabilities of the 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 provides funding for the operations and maintenance costs that are part of the LSRCP hatcheries. Bonneville is responsible for annual payments to the Confederated Tribes of the Colville Reservation for their claims concerning their contribution to the production of hydropower by the Grand Coulee Dam in accordance with the Settlement Agreement between the United States and the Tribes (April 1994).

Bonneville's Fish and Wildlife program provides for extensive protection, enhancement, and mitigation of Columbia River Basin fish and wildlife adversely affected by the development and operation of Federal hydroelectric projects on the Columbia River and its tributaries from which Bonneville markets power. Bonneville satisfies a major portion of its fish and wildlife responsibilities by funding projects and activities

designed to be consistent with the Council's Program developed pursuant to Section 4(h) of the Northwest Power Act. Through the Council's Program Bonneville also implements measures to aid in the protection of fish in the Columbia River and its tributaries, listed as threatened or endangered under the ESA. Bonneville pursues a comprehensive approach to integrate the ESA requirements of the FCRPS biological opinions with the broad resource protection, mitigation and enhancement objectives of the Council's Program (see ESA discussion in the Power Capital Overview section).

Bonneville's mitigation and recovery expenditures will focus on activities that benefit Columbia River Basin fish and wildlife resources, following priorities established through ESA consultations and the Council's Program, including:

- increase survival of ESA-listed and non-listed fish at FCRPS dams and reservoirs;
- increase survival of ESA-listed and non-listed fish throughout their life cycle by protecting and enhancing important habitat areas;
- reform hatchery practices that affect ESA-listed populations and use hatcheries to contribute to conservation and recovery of ESA-listed and non-listed fish;
- provide for offsite mitigation projects for habitat, passage, and other improvements that address limiting factors for target species;
- reduce harvest-related mortality on ESA-listed and non-listed fish and support sustainable fisheries; and
- support a focused and well-coordinated research, monitoring, and evaluation program.

To the extent possible, Bonneville is integrating the actions implemented in response to the FCRPS BiOps with projects implemented under the Council's Program. Sub-basin plans that include prioritized strategies for mitigation actions will help guide project selection that meets both Bonneville's ESA and Northwest Power Act responsibilities. In order to address 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 continues its ongoing work with the Council and the regional fish and wildlife managers, customers, and Tribes to review projects to ensure ratepayers fund appropriate mitigation. For example, Bonneville established a cost sharing Memorandum of Understanding (MOU) with the U.S. Forest Service in 2005 that requires a programmatic 30 percent cost share for FYs 2007-2009 for fish mitigation projects funded by Bonneville on U.S. Forest Service lands. Bonneville

#### **Bonneville Power Administration Power Services - Operating Expense**

continues to operate in a cooperative manner with the U.S. Forest Service.

The Energy and Water Development Appropriations Act of 1996 added section 4(h)(10)(D) to the Northwest Power Act, directing the Council to appoint an ISRP "to review a sufficient number of projects" proposed to be funded through Bonneville's fish and wildlife budget "to adequately ensure that the list of prioritized projects recommended is consistent with the Council's 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 Council recommendation process. The Council has shifted to a multi-year project review cycle during which the ISRP will review categories of projects grouped together; e.g., all terrestrial wildlife projects were recently reviewed.

The Council'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 energy conservation program – known as the Power Plan) and a Columbia River Basin Fish and Wildlife Program of loss mitigation and resource enhancement actions. The Northwest Power Act directs that expenses of the Council, subject to certain limits based on forecasted Bonneville power sales, shall be included in Bonneville's annual budget to Congress. Funding for the Council is provided by Bonneville and is recovered through Bonneville power rates.

Bonneville will acquire conservation resources consistent with the Council's Power Plan and act as a catalyst for energy efficiency. Such action will: 1) meet conservation 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 conservation. Bonneville is also exploring how best to integrate demand-side management, distributed generation, and other leading edge technologies (i.e., Energy Web and Smart Grid applications) into its generation and transmission planning processes.

The REP was created through the Northwest Power Act to extend the benefits of low-cost Federal power to the residential and small farm customers of Pacific Northwest electric utilities that meet certain conditions.

#### **FY 2013 Congressional Budget**

Currently, the region's six investor-owned utilities and two of the region's consumer-owned utilities are actively participating in the REP. Payments made under the REP are based on the difference between Bonneville's utility-specific PF Exchange rates and each utility's average system cost (ASC), times the utility's residential and small farm loads. The process and calculation of ASCs are governed by the 2008 Average System Cost Methodology (ASCM). Participating utility ASCs are established in a public process that occurs prior to and during Bonneville's power rate case. Then, the rate case uses those ASCs and determines the utility-specific Priority Firm Exchange rates. Payments are made monthly based on the invoiced exchange loads.

On July 26, 2011 Bonneville adopted a landmark settlement of the REP. The settlement reduces a significant element of litigation uncertainty and risk from Bonneville's power rates for the vast majority of utilities in the region. Under the settlement, the Region's six investor-owned utilities will receive about \$4.1 billion in 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. The parties supporting the

settlement include all six regional investor-owned utilities, three state utility commissions, several consumer-owned utility groups, a retail ratepayer advocacy group and consumer-owned utilities representing 88 percent of those receiving power from Bonneville. Together supporters of the settlement provide about 93 percent of power consumed in the Pacific Northwest. In addition to this settlement, Bonneville has reached related settlements with the two participating consumer-owned utilities.

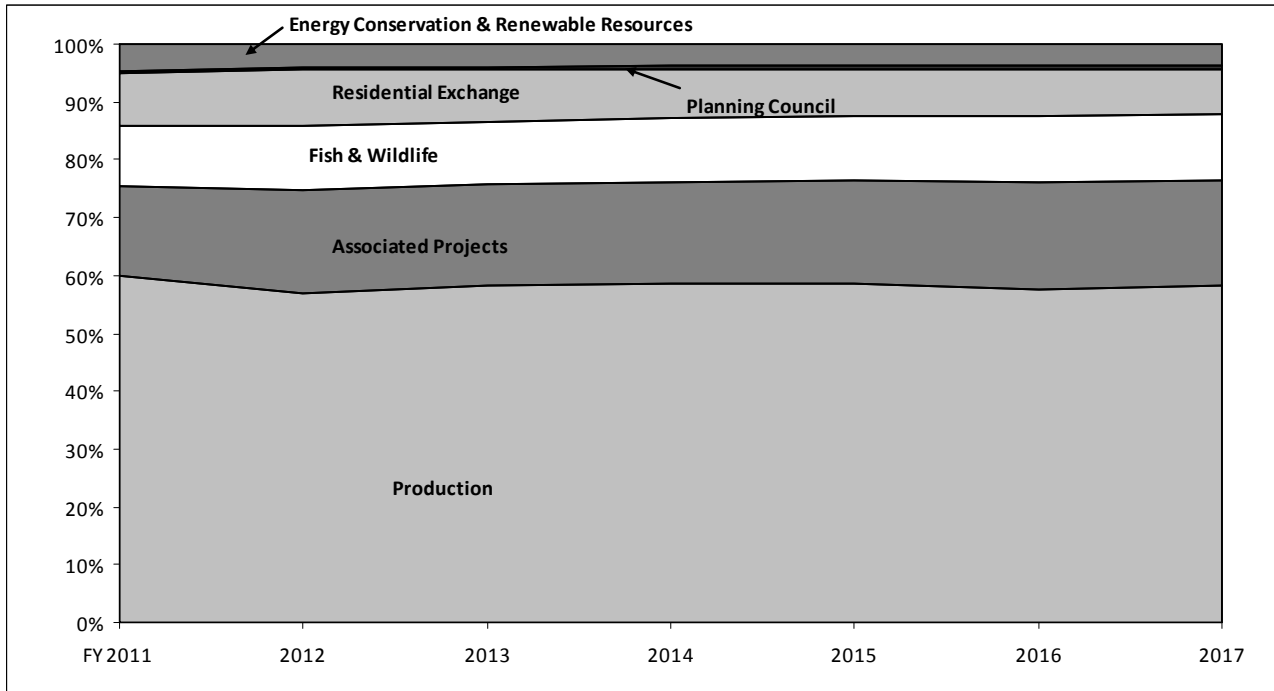
#### **Explanation of Changes**

Bonneville's budget includes \$2,214 million in Fiscal Year 2013 for PS expense, which is a 5.1% increase over the FY12 forecasted level. The increase reflects continuing emphasis on operation and maintenance of hydro generation projects on the FCRPS.

The FY13 budget increases the levels for Production (+ \$ 84 million), Associated Projects (+\$ 16 million), Fish & Wildlife (+\$ 4 million), Residential Exchange (+\$ 877 thousand), Planning Council (+\$ 241 thousand), and Energy Conservation & Renewable Resources (+\$ 1.3 million).



**Relative Outyear Funding Priorities in Power Services Expense**



**Explanation of Funding AND/OR Program Changes**

(Dollars in Thousands)

	FY 2012	FY 2013	FY 2013 vs FY 2012
<b>Production</b> The increase from \$1,202,742,000 to \$1,287,118 reflects increased debt service and decreased power purchases.	1,202,742	1,287,118	+84,377
<b>Associated Projects</b> The increase from \$371,400,000 to \$387,639,000 reflects changes to security, biological opinion requirements, non-routine extraordinary maintenance, Western Electric Coordinating Council (WECC)/North American Energy Reliability Corporation (NERC) compliance activities, and improvements, replacements, and minor additions at the projects.	371,400	387,639	+16,238
<b>Fish &amp; Wildlife</b> The increase from \$237,394,000 to \$241,384,000 reflects funding associated with Biological Opinions, Fish Accord commitments and Northwest Power Act activities.	237,394	241,384	+3,990
<b>Residential Exchange</b> The increase from \$201,561,000 to \$201,838,000 reflects the 2012 REP settlements and settlements with two participating consumer owned utilities.	201,561	201,838	+277
<b>Planning Council</b> The increase from \$10,114,000 to \$10,355,000 reflects continuing Council program activities.	10,114	10,355	+241
<b>Energy Conservation &amp; Renewable Resources</b> The increase from \$84,620,000 to \$85,992,000 reflects the ending of the conservation rate credit.	84,620	85,992	+1,372
<b>TOTAL Funding Change, PS Expense</b>	<b>2,107,831</b>	<b>2,214,325</b>	<b>+106,494</b>
<b>Bonneville Power Administration</b>			
<b>Power Services - Operating Expense</b>			
			<b>FY 2013 Congressional Budget</b>

## Production Overview

Power Purchases: Includes purchased power to cover power supply obligations as well as balancing the hydro system. These purchases can be made in the form of long-term purchases to meet supply obligations based on long-term planning requirements or they can be made within the year due to the monthly shape of the loads and the monthly shape of the hydro electric generation. Also, purchases can be made within the month and within the day to fill shortages due to fluctuations in the hydro system and load changes.

Power Scheduling/Marketing: Schedule and market (buy/sell) electric energy with Bonneville 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 in accordance with FERC, implementation of electronic scheduling and the Columbia Grid as it evolves.

Columbia Generating Station (formerly WNP-2): Continue to acquire full capability of CGS. CGS is on a 24-month fuel and outage cycle. A maintenance and refueling outage is planned for the Spring and Summer of FY 2013.

### Funding and Activity Schedule

Generation and Oversight:

Fiscal Year	Activity	Funding (Dollars in Thousands)
FY 2011	<ul style="list-style-type: none"> <li>• Provided oversight of all signed contracts including oversight of large thermal generating plants from which Bonneville purchases capability to ensure that all Bonneville approval rights are protected; coordinated, communicated, and administered agreements, issues, and programs between Bonneville and the project owners. Continued to provide wind resource integration services for customer wind generation.</li> <li>• Power Purchases</li> <li>• Power Scheduling/Marketing</li> </ul>	1,240,994
FY 2012	<ul style="list-style-type: none"> <li>• Continue to provide oversight of all contracts signed to date. Pursue cost-effective means to mitigate capacity demands associated with interconnecting large amounts of wind into the BPA system. Pursue acquisition of additional cost-effective renewable generation to meet load growth. Continue to provide oversight on the wind resource integration services currently purchased by public power customers and offer additional renewable resource shaping services to such customers using wind generation to serve their load.</li> <li>• Power Purchases</li> <li>• Power Scheduling/Marketing</li> </ul>	1,202,742
FY 2013	<ul style="list-style-type: none"> <li>• Continue to provide oversight of all contracts signed to date. Pursue cost-effective means to mitigate capacity demands associated with interconnecting large amounts of wind into the BPA system. Pursue acquisition of additional cost-effective renewable generation to meet load growth. Continue to provide oversight on the wind resource integration services currently purchased by public power customers and offer additional renewable resource shaping services to such customers using wind generation to serve their load.</li> <li>• Power Purchases</li> <li>• Power Scheduling/Marketing</li> </ul>	1,287,118

FY 2014-2017	<ul style="list-style-type: none"> <li>• Continue to provide oversight of all contracts signed to date. Pursue cost-effective means to mitigate capacity demands associated with interconnecting large amounts of wind into the BPA system. Pursue acquisition of additional cost-effective renewable generation to meet load growth. Continue to provide oversight on the wind resource integration services currently purchased by public power customers and offer additional renewable resource shaping services to such customers using wind generation to serve their load.</li> <li>• Power Purchases</li> <li>• Power Scheduling/Marketing</li> </ul>	5,430,218
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**Associated Projects  
Overview**

Support FCRPS project costs and work to strengthen interagency and regional relationships to improve project performance, 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.

**Funding and Activity Schedule**

Fiscal Year	Activity	Funding (Dollars in Thousands)
FY 2011	Bureau of Reclamation: <ul style="list-style-type: none"> <li>• Continued direct funding Reclamation O&amp;M power activities.</li> </ul> Corps of Engineers: <ul style="list-style-type: none"> <li>• Continued direct funding Corps O&amp;M power activities.</li> </ul>	318,358
FY 2012	Bureau of Reclamation: <ul style="list-style-type: none"> <li>• Continue direct funding Reclamation O&amp;M power activities.</li> </ul> Corps of Engineers: <ul style="list-style-type: none"> <li>• Continue direct funding Corps O&amp;M power activities.</li> </ul>	371,400
FY 2013	Bureau of Reclamation: <ul style="list-style-type: none"> <li>• Continue direct funding Reclamation O&amp;M power activities.</li> </ul> Corps of Engineers: <ul style="list-style-type: none"> <li>• Continue direct funding Corps O&amp;M power activities.</li> </ul>	387,639
FY 2014- 2017	Bureau of Reclamation: <ul style="list-style-type: none"> <li>• Continue direct funding Reclamation O&amp;M power activities.</li> </ul> Corps of Engineers: <ul style="list-style-type: none"> <li>• Continue direct funding Corps O&amp;M power activities.</li> </ul>	1,671,884

**Fish & Wildlife  
Overview**

Specific project solicitation recommendations were made by the Council in late 2006 followed by Bonneville review and funding decisions completed in early 2007 for the period FY 2007 through 2009. Bonneville, in coordination with the Council, reviews all on-going projects and reaffirms project-specific funding commitments annually, including projects under the BiOp, Fish Accords, and Washington Estuary Agreement. Bonneville bases its funding decisions on the management objectives and priorities in the Council’s Program, Sub-basin Plans, and the Accords as it integrates their implementation with actions necessary to fulfill ESA responsibilities as described in the NOAA Fisheries and USFWS BiOp. Bonneville’s fish and wildlife activities have been selected to help fulfill the Northwest Power Act purpose stated in section 2(6) to “protect, mitigate and enhance fish and wildlife including related spawning grounds and habitat on the Columbia River and its tributaries.” 16 U.S.C. § 839(6). Coordination continues among Bonneville, Council, Federal resource management agencies, states, tribes and others to plan for additional projects to fill the few specific gaps remaining in Bonneville’s mitigation portfolio through targeted solicitations.

**Funding and Activity Schedule**

Fiscal Year	Activity	Funding (Dollars in Thousands)
FY 2011	<p>Anadromous Fish: Continue implementing both ongoing and new projects that support ESA-listed species and other measures called for under the 2008 and 2010 FCRPS BiOps, the Fish Accords, the Washington Estuary Agreement, and the Willamette Fish Agreement. Prioritize projects that address the factors that limit mitigation success as identified in the Sub-basin Plans and that fulfill Bonneville’s responsibility for mitigating the impacts from the FCRPS power facilities. Implement and develop activities that protect and enhance tributary and estuary habitat; improve mainstream habitat on an experimental basis; reduce potentially harmful hatchery practices on ESA-listed populations; and contribute to sustainable fisheries.</p> <p>Resident Fish: Implement activities to determine the impacts of the FCRPS on lamprey and bull trout and mitigate for those impacts, and promote the reproduction and recruitment of Kootenai River white sturgeon. These activities have been selected in response to the 2006 BiOp, the Council’s Program, and the Fish Accords.</p> <p>Continue mitigation using resident fish to offset anadromous fish losses (substitution); mitigate for reservoir power operation impacts to resident fish; and continue to refine, quantify, and delineate the difference between the two. Those resident fish habitat acquisition projects that meet Bonneville’s Capitalization Policy will be funded under the capital portion of Bonneville’s Fish and Wildlife budget.</p> <p>Wildlife: Use existing Bonneville policies to continue the current effort to mitigate wildlife in a manner consistent with Council’s Program and fulfill commitments in wildlife agreements such as the Willamette Wildlife Agreement. These activities have been selected in response to the Northwest Power Act requirement to protect, mitigate and enhance fish and wildlife including related spawning grounds and habitat on the Columbia River and its tributaries. Those wildlife projects that meet Bonneville’s Capitalization Policy will be funded under the capital portion of Bonneville’s Fish and Wildlife budget and credited according to Bonneville’s crediting policy and applicable mitigation contracts.</p> <p>Habitat Protection and Enhancement: Continue to protect and enhance habitat for fish and wildlife using fee acquisition, conservation easements, habitat improvement projects, and other techniques in a manner consistent with the Program. Bonneville seeks cost effective ways to implement the Program, including the BiOp and Accords, and tries to emphasize planning and management in each habitat project to reasonably integrate the mitigation needs for anadromous fish, resident fish, and wildlife.</p>	221,048
FY 2012		237,394
FY 2013		241,384
FY 2014-2017		501,774

**Residential Exchange, Northwest Power and Conservation Council, and Energy Conservation & Renewable Resources  
Overview**

**Residential Exchange Program**

- Includes forecasted REP benefits based on the 2011 REP Settlement.

**Northwest Power and Conservation Council**

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

**Energy Conservation & Renewable Resources**

- Continue close-out of the legacy conservation resource acquisition contracts, which support Bonneville’s contractual obligation to serve customer load growth.
  
- Provide credible, unbiased information, and technical and financial support to conservation purposes. As an agency with independent responsibilities based on its authorizing legislation, Bonneville has a statutory responsibility to encourage and support the development of conservation in the Pacific Northwest. Bonneville is participating with other regional entities to support market transformation and development activities that meet the needs of Bonneville customers and create business opportunities for the private sector in the Pacific Northwest. Toward that end, BPA has been helping create a delivery infrastructure to ensure conservation savings are installed efficiently and effectively throughout the region.

**Funding and Activity Schedule**

Fiscal Year	Activity	Funding (Dollars in Thousands)
FY 2011	Residential Exchange: 184,764 Northwest Power and Conservation Council: 8,930 Energy Conservation & Renewable Resources: 98,003	291,697
FY 2012	Residential Exchange: 201,561 Northwest Power and Conservation Council: 10,114 Energy Conservation & Renewable Resources: 84,620	296,295
FY 2013	Residential Exchange: 201,838 Northwest Power and Conservation Council: 10,355 Energy Conservation & Renewable Resources: 84,620	298,185
FY 2014- 2017	Residential Exchange: 755,948 Northwest Power and Conservation Council: 44,520 Energy Conservation & Renewable Resources: 356,369	1,156,837

## Transmission Services - Operating Expense

### Funding Schedule by Activity

	(Accrued Expenditures) (Dollars in Thousands)		
	FY 2011	FY 2012	FY 2013
Transmission Services - Operating Expense			
Engineering	30,895	31,800	32,803
Operations	114,694	130,049	133,590
Maintenance	128,937	146,713	150,831
<b>Total, Transmission Services - Operating Expense</b>	<b>274,526</b>	<b>308,562</b>	<b>317,224</b>

### Outyear Funding Schedule

	(Accrued Expenditures) (Dollars in Thousands)			
	FY 2014	FY 2015	FY 2016	FY 2017
Total, Transmission Services - Operating Expense	337,278	346,048	354,681	364,203

### Overview

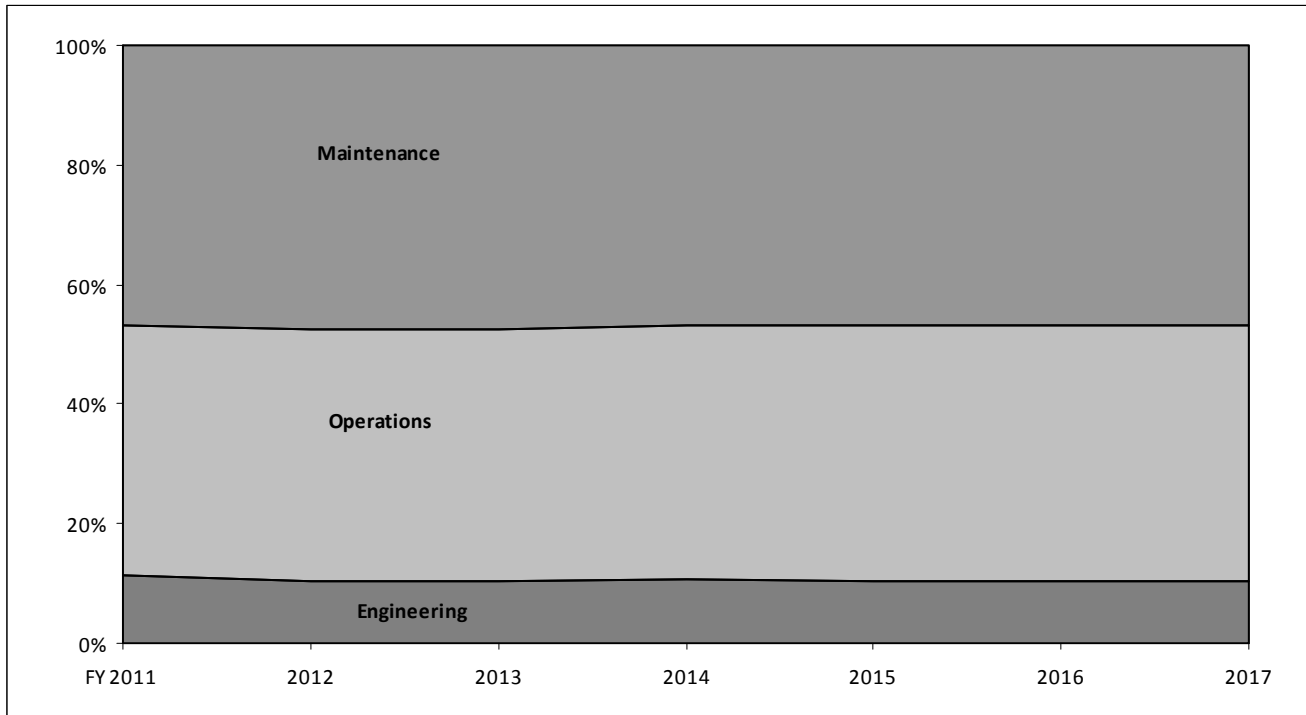
This activity provides for the transmission system services of engineering, operations, and maintenance for Bonneville's electric transmission system, consisting of over 15,238 circuit miles (24,523 circuit kilometers) of lines, 259 substations, and the associated power system control and communication facilities, with an invested cost of more than \$6.0 billion. Primary strategies 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 and nondiscriminatory transmission access; and 5) improve Bonneville's cost effectiveness.

### Explanation of Changes

Bonneville's budget includes \$317 million in Fiscal Year 2013 for TS expense which is a 2.8% increase over the FY12 forecasted level. The increase reflects continuing operation and maintenance of the Bonneville's transmission assets.

The FY13 budget increases the levels for Engineering (+\$ 1 million), Operation (+\$ 3.5 million), and Maintenance (+\$ 4.1 million)

**Relative Outyear Funding Priorities in Transmission Services Expense**



**Explanation of Funding AND/OR Program Changes**

(Dollars in Thousands)

	FY 2012	FY 2013	FY 2013 vs FY 2012
<b>Engineering</b>			
The increase from \$31,800,000 to \$32,803,000 reflects emphasis on system reliability improvements and research and development.	31,800	32,803	+1,003
<b>Operation</b>			
The increase from \$130,050,000 to \$133,590,000 reflects continued emphasis on reliability compliance activities, wind integration activities, security, and control center systems support.	130,050	133,590	+3,540
<b>Maintenance</b>			
The increase from \$146,713,000 to \$150,831,000 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.	146,713	150,831	+4,118
<b>TOTAL Funding Change, Transmission Services Expense</b>	<b>308,563</b>	<b>317,224</b>	<b>+8,661</b>



## Engineering

Continue efforts to identify best methods for improving system reliability and maintenance practices, and continue cost reduction efforts by identifying opportunities for low-cost reinforcement and voltage support of the existing transmission system.

### Funding and Activity Schedule

Fiscal Year	Activity	Funding (Dollars in Thousands)
FY 2011	<p>Asset Management: Continue deploying the Asset Management approach to sustain the existing assets and expanding the system to meet Agency objectives. Asset Plans are informed by Publicly Available Specifications (PAS)-55 over three to five years</p>	30,895
FY 2012		31,800
FY 2013		32,803
FY 2014-2017	<p>R&amp;D: Conduct research focused on technologies related to business challenges Bonneville faces including reliability, energy efficiency, and integration of renewable energy resources. Technologies of interest are identified in Bonneville's Technology Roadmaps. A portfolio of research is selected every year through Bonneville's Portfolio Decision Framework.</p> <p>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.</p> <p>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.</p> <p>Regulatory Fees: WECC dues and loop flow payments, DOC/NTIA licensing costs for radio frequencies and NERC Critical Infrastructure Protection CIP compliance program costs. Includes membership in ColumbiaGrid.</p> <p>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.</p> <p>Leased and Other Costs: Includes leases and other costs of financing transmission, delivery and voltage support facilities when such arrangements are operationally feasible and cost effective to deliver power. Capitalized leases 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).</p>	146,647

## Operations

**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, and inspecting equipment, reading meters, etc

**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) power system control centers.

**Marketing and Sales:** Provide management and direction of transmission rates, and provide business strategy in marketing of transmission and ancillary products and services of TS. Involve customers and constituents in the process of product and rate development. Maintain accurate and complete historical records of current and past 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 TS. 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 open access to the Bonneville transmission system consistent with the transmission tariff. Schedule and market transmission capacity to eligible Bonneville customers, including the Pacific Northwest's interconnected utilities. Manage the reservations and scheduling of all transmission services associated with the Bonneville transmission tariff. Update practices, policies and systems to accommodate large amounts of wind generation.

### Funding and Activity Schedule

Fiscal Year	Activity	Funding (Dollars in Thousands)
FY 2011	<ul style="list-style-type: none"> <li>• Continued to operate within parameters of NERC and WECC.</li> <li>• Continued support of increased compliance activities related to the reliability of the transmission system including cyber security.</li> <li>• Continued developing facilities, policies, procedures and implementing systems to support the integration of high levels of wind generation into the transmission grid.</li> <li>• Continued preparation for increased complexity of power system operations and dispatching including congestion management and outage scheduling as well as increased complexities in transmission scheduling.</li> <li>• Continued to address succession planning issues across key functions.</li> <li>• Continued development and implementation of business systems and tools.</li> </ul>	114,694
FY 2012	<ul style="list-style-type: none"> <li>• Continue to operate within parameters of NERC and WECC.</li> <li>• Continue support of increased compliance activities related to the reliability of the transmission system including cyber security.</li> <li>• Continue developing facilities, policies, procedures and implementing systems to support the integration of high levels of wind generation into the transmission grid.</li> <li>• Continue preparation for increased complexity of power system operations and</li> </ul>	130,050

	<p>dispatching including congestion management and outage scheduling as well as increased complexities in transmission scheduling.</p> <ul style="list-style-type: none"> <li>• Continue to address succession planning issues across key functions.</li> <li>• Continue development and implementation of business systems and tools.</li> </ul>	
FY 2013	<ul style="list-style-type: none"> <li>• Continue to operate within parameters of NERC and WECC.</li> <li>• Continue support of increased compliance activities related to the reliability of the transmission system including cyber security.</li> <li>• Continue developing facilities, policies, procedures and implementing systems to support the integration of high levels of wind generation into the transmission grid.</li> <li>• Continue preparation for increased complexity of power system operations and dispatching including congestion management and outage scheduling as well as increased complexities in transmission scheduling.</li> <li>• Continue to address succession planning issues across key functions.</li> <li>• Continue development and implementation of business systems and tools.</li> </ul>	133,590
FY 2014-2017	<ul style="list-style-type: none"> <li>• Continue to operate within parameters of NERC and WECC.</li> <li>• Continue support of increased compliance activities related to the reliability of the transmission system including cyber security.</li> <li>• Continue developing facilities, policies, procedures and implementing systems to support the integration of high levels of wind generation into the transmission grid.</li> <li>• Continue preparation for increased complexity of power system operations and dispatching including congestion management and outage scheduling as well as increased complexities in transmission scheduling.</li> <li>• Continue to address succession planning issues across key functions.</li> <li>• Continue development and implementation of business systems and tools.</li> </ul>	599,820

## Maintenance

In all aspects of maintenance, Bonneville is continuing the use of Reliability Centered Maintenance (RCM) practices. The use of RCM practices is focused on improving system reliability, increasing availability and meeting new and existing compliance regulations at lowest lifecycle costs. In addition Bonneville is deploying Asset Management to optimize maintain/replace decision making. Maintenance costs are expected to increase as Bonneville addresses the aging transmission system, meeting Reliability Standards including Vegetation Management, and environmental constraints associated with construction, enhancement, and maintenance of the system. The Bonneville transmission system encompasses 15,238 circuit miles on over 8,500 right-of-way miles (many of these miles are through rugged, inaccessible terrain).

Fiscal Year	Activity	Funding (Dollars in Thousands)
FY 2011	<ul style="list-style-type: none"> <li>• Continued to refine RCM practices in all of Bonneville’s O&amp;M regions. Implemented processes for monitoring and tracking compliance activities related to the reliability of the transmission system.</li> <li>• Continued to improve performance meeting System Average Interruption Frequency Index (SAIFI) and System Average Interruption Duration Index (SAIDI) targets.</li> <li>• Continued efforts to achieve the SAIFI and SAIDI targets of no control chart violations for circuit importance categories 1-2 (highest importance), and not more than one violation for category 4. Control charts are statistically based graphs that illustrate variability in performance.</li> <li>• Continued to improve availability performance by utilizing more efficient and cost-effective maintenance work practices and outage coordination.</li> <li>• Used recruitment incentives to ensure succession of the current work force and remain competitive as an employer in the utility industry.</li> <li>• Assured a safe work environment through safety awareness and improved work practices. Increased outage scheduling planning to increase customer satisfaction.</li> <li>• Continued high levels of vegetation management and increased access road work to provide reliable access to facilities and ensure environmental compliance.</li> <li>• Deployed new technologies such as LiDAR to reliably and cost effectively manage vegetation.</li> </ul>	128,937
FY 2012	<ul style="list-style-type: none"> <li>• Continue to refine RCM practices and deploy asset management in all of Bonneville’s O&amp;M districts.</li> <li>• Continue refining processes and procedures for monitoring and tracking compliance activities related to the reliability of the transmission system.</li> <li>• Continue to improve performance to meet SAIFI and SAIDI targets as explained above.</li> <li>• Continue to improve system availability performance through new maintenance procedures and work practices.</li> <li>• Develop work practices and procedures for implementation of a new specialty crew using bare-handing practices for maintenance of high-voltage transmission lines.</li> <li>• Continue increased emphasis on replacement of line hardware (life extension programs for insulators, connectors, spacer dampers &amp; fiber optic cable hardware).</li> <li>• Continue to prepare for the impact of an expected high attrition rate among Bonneville’s aging workforce by recruiting apprentices and replacements for</li> </ul>	146,713

	<p>critical minimum crew size workload positions.</p> <ul style="list-style-type: none"> <li>• Increase outage scheduling and coordination planning to increase customer satisfaction and system availability.</li> <li>• Increase emphasis on non-electric facilities to compensate for years of deferral.</li> <li>• Continue high emphasis of vegetation management, implementation of an aggressive access road management plan to maintain roads at a level that minimizes response time, increases reliability, and ensures environmental compliance.</li> <li>• Continue improving environmental stewardship.</li> </ul>	
FY 2013	<ul style="list-style-type: none"> <li>• Continue to improve performance to meet SAIFI and SAIDI targets as explained above.</li> <li>• Continue refining processes and procedures for monitoring and tracking compliance activities related to the reliability of the transmission system.</li> <li>• Continue to improve system availability performance through new maintenance procedures and work practices.</li> <li>• Continue to develop and implement work practices and procedures for implementation of a new specialty crew using bare-handing live line practices for maintenance of high-voltage transmission lines.</li> <li>• Continue increased emphasis on replacement of line hardware (life extension programs for insulators, connectors, dampers &amp; fiber optic cable hardware).</li> <li>• 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.</li> <li>• Increase outage-scheduling planning and coordination to increase customer satisfaction and system availability.</li> <li>• Maintain vegetation management levels to ensure system reliability.</li> <li>• Continue access road work to provide reliable access to facilities and ensure environmental compliance.</li> <li>• Continue improving environmental stewardship.</li> </ul>	150,831
FY 2014-2017	<ul style="list-style-type: none"> <li>• Continue to improve performance to meet SAIFI and SAIDI targets as explained above.</li> <li>• Continue refining processes and procedures for monitoring and tracking compliance activities related to the reliability of the transmission system.</li> <li>• Continue to improve system availability performance through new maintenance procedures and work practices.</li> <li>• Continue to develop and implement work practices and procedures for implementation of a new specialty crew using bare-handing live line practices for maintenance of high-voltage transmission lines.</li> <li>• Continue increased emphasis on replacement of line hardware (life extension programs for insulators, connectors, dampers &amp; fiber optic cable hardware).</li> <li>• 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.</li> <li>• Increase outage-scheduling planning and coordination to increase customer satisfaction and system availability.</li> <li>• Maintain vegetation management levels to ensure system reliability.</li> <li>• Continue access road work to provide reliable access to facilities and ensure environmental compliance.</li> <li>• Continue improving environmental stewardship.</li> </ul>	655,742

**Transmission Line Maintenance:** Maintain and repair 15,238 circuit miles (24,523 km) of high voltage transmission lines, of which over 7,617 km (4,734 circuit miles) are 500 kV transmission extra-high voltage (EVH). 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 and manage vegetation from over 8,500 of Bonneville's right-of-way miles. 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 to reliably and costs 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. 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.

**Interest, Pension and Post-retirement Benefits -  
Operating Expense and Capital Transfers**

**Funding Schedule by Activity**

	(Accrued Expenditures) (Dollars in Thousands)		
	FY 2011	FY 2012	FY 2013
Interest, Pension and Post-retirement Benefits			
BPA Bond Interest (Net)	61,603	94,805	146,013
BPA Appropriation Interest	29,217	23,086	10,396
Corps of Engineers Appropriation Interest	155,900	161,907	162,756
Lower Snake River Comp Plan Interest	16,521	16,521	16,521
Bureau of Reclamation Appropriation Interest	43,437	43,437	43,437
Subtotal, Interest – Operating Expense	306,678	339,757	379,124
Additional Pension and Post-retirement Benefits	31,157	34,486	35,641
Total, Interest, Pension and Post-retirement Benefits	337,835	374,243	414,765

**Outyear Funding Schedule**

	(Accrued Expenditures) (Dollars in Thousands)			
	FY 2014	FY 2015	FY 2016	FY 2017
Total, Interest, Pension and Post-retirement Benefits	483,099	553,438	628,012	687,550

**Operating Expense**

**Description**

Interest expense provides for the payment of interest due on Federal debt. This consists of 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 Treasury. Bonneville repays Federal debt through its power sales and transmission services revenues.

Since receiving Treasury borrowing authority in 1974 under the Transmission Act, all Bonneville 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 resetting (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 Treasury for these obligations in the absence of the legislation, plus \$100 million. The new principal amounts were assigned prevailing market interest rates as of October 1, 1996. Bonneville's outstanding repayment obligations on appropriations at the end of FY 1996 were \$6.6 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 was available. As called for in the legislation, Bonneville submitted its calculations and interest rate assignments implementing the Refinancing Act to Treasury for its review and approval.

**Bonneville Power Administration  
Interest, Pension, and Post-Retirement Benefits –  
Operating Expense & Capital Transfers**

**FY 2013 Congressional Budget**

Treasury approved the implementation calculations in July 1997. The Refinancing Act also calls for all future FCRPS appropriations to be assigned prevailing Treasury yield curve interest rates.

Interest estimates are a direct function of costs of 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.

Bonneville makes additional annual contributions to the General Fund of the U.S. Treasury (receipt account 892889) in order to ensure that all Federal post-retirement benefit programs provided to employees associated with the operation of the FCRPS are fully funded. These payments are consistent with the FY 2001 Administration’s budget which assumed Bonneville would prospectively cover the full unfunded liability that accrues in fiscal years after FY 1997 of the Civil Service Retirement and Disability Fund (Disability Fund), the Employees Health Benefits Fund (Health Fund), and the Employees Life Insurance Fund (Insurance Fund) that it had not covered prior to FY 1998. Cost estimates include pension and post-retirement benefits for Bonneville and the power-related portion of the Corps and Reclamation.

**Capital Transfers**

**Funding Schedule by Activity**

	(Accrued Expenditures) (Dollars in Thousands)		
	FY 2011	FY 2012	FY 2013
Capital Transfers			
BPA Bond Amortization <sup>1/</sup>	370,000	275,000	165,000
Reclamation Appropriation Amortization	0	0	0
BPA Appropriation Amortization	34,865	175,110	56,374
Corps Appropriation Amortization	4,663	53,000	0
<b>Total, Capital Transfers</b>	<b>409,528</b>	<b>503,110</b>	<b>221,374</b>

**Outyear Funding Schedule**

	(Accrued Expenditures) (Dollars in Thousands)			
	FY 2014	FY 2015	FY 2016	FY 2017
Total, Capital Transfers	255,181	187,591	131,305	164,123

<sup>1/</sup> Bonneville "Bond(s)" in this FY 2013 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 indebtednesses issued and sold to the U.S. Treasury.

**Description**

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

**Bonneville Power Administration  
Interest, Pension, and Post-Retirement Benefits –  
Operating Expense & Capital Transfers**

**FY 2013 Congressional Budget**



**Additional Tables**

**BONNEVILLE POWER ADMINISTRATION  
TOTAL OBLIGATIONS/OUTLAYS**

Current Services  
(in millions of dollars)  
FISCAL YEAR

BP-1 SUMMARY<sup>1/3/</sup>

	2011		2012		2013		2014	2015	2016	2017
	Oblig.	Outlays	Oblig.	Outlays	Oblig.	Outlays	Oblig.	Oblig.	Oblig.	Oblig.
1 Residential Exchange Program	185	185	202	202	202	202	189	189	189	189
2 Power Services <sup>2/</sup>	1,511	1,511	1,577	1,577	1,675	1,675	1,733	1,772	1,762	1,835
3 Transmission Services	575	575	903	903	1,099	1,099	1,112	926	836	768
4 Conservation & Energy Efficiency	260	260	173	173	181	181	189	218	250	259
5 Fish & Wildlife	312	312	297	297	309	309	314	302	304	305
6 Interest/ Pension <sup>4/</sup>	398	398	374	374	415	415	483	553	628	688
7 Associated Project Cost - Capital	200	200	233	233	250	250	269	269	291	298
8 Capital Equipment	44	44	62	62	51	51	46	46	48	49
9 Planning Council	9	9	10	10	10	10	11	11	11	11
10 Misc. Accounting Adjs.	0	0	0	0	0	0	0	0	0	0
11 Projects Funded in Advance	214	214	92	92	101	101	39	27	28	31
12 Capitalized Bond Premiums	0	0	2	2	2	2	2	2	2	2
13 Misc. Accounting Adjs.	0									
<b>TOTAL OBLIGATIONS/ OUTLAYS<sup>3/</sup></b>	<b>3,708</b>	<b>3,708</b>	<b>3,926</b>	<b>3,926</b>	<b>4,294</b>	<b>4,294</b>	<b>4,386</b>	<b>4,316</b>	<b>4,348</b>	<b>4,435</b>

**REVENUES AND REIMBURSEMENTS**

Current Services  
(in millions of dollars)

BP-1 SUMMARY

	2011		2012		2013		2014	2015	2016	2017
	Oblig.	Outlays	Oblig.	Outlays	Oblig.	Outlays	Oblig.	Oblig.	Oblig.	Oblig.
14 Revenues <sup>5/</sup>	3,010	3,010	3,842	3,842	4,203	4,203	4,357	4,297	4,331	4,414
15 Project Funded in Advance	214	214	92	92	101	101	39	27	28	31
16 <b>TOTAL</b>	<b>3,224</b>	<b>3,224</b>	<b>3,934</b>	<b>3,934</b>	<b>4,304</b>	<b>4,304</b>	<b>4,396</b>	<b>4,324</b>	<b>4,359</b>	<b>4,445</b>
<b>BUDGET AUTHORITY (NET) <sup>6/</sup></b>	<b>471</b>		<b>648</b>		<b>1,067</b>		<b>1,124</b>	<b>934</b>	<b>946</b>	<b>908</b>
17 <b>OUTLAYS (NET) <sup>6/7/</sup></b>		<b>468</b>		<b>(9)</b>		<b>(7)</b>	<b>(10)</b>	<b>(10)</b>	<b>(10)</b>	<b>(10)</b>

The accompanying notes are an integral part of this table.

<sup>1/</sup> This FY 2013 budget includes capital and expense estimates based on preliminary IPR forecasted data for FYs 2011-2017.

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 competitive electric utility industry.

<sup>2/</sup> Power Services includes Fish & Wildlife, Residential Exchange Program, Planning Council, Conservation & Energy Efficiency and Associated Project Costs which have been shown separately for display purposes.

<sup>3/</sup> 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 which are legally 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 legal dollar caps. Because Bonneville operates within existing legislative authority, Bonneville is not subject to a "pay-as-you-go" test regarding its revision of current-law funding estimates.

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

<sup>5/</sup> 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 NW Power Act are also assumed.

<sup>6/</sup> BPA received \$49 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 subsequent years, per the assumed expenditures developed as part of BPA's work plans, outlays for the work performed are assumed.

<sup>7/</sup> 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). Estimated Net Outlays could change due to changing market conditions, streamflow variability, and continuing restructuring of the electric industry.

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

	2011		2012		2013		2014	2015	2016	2017
	Oblig.	Outlays	Oblig.	Outlays	Oblig.	Outlays	Oblig.	Oblig.	Oblig.	Oblig.
1 Residential Exchange Program	185	185	202	202	202	202	189	189	189	189
2 Power Services <sup>2/</sup>	1,511	1,511	1,577	1,577	1,675	1,675	1,733	1,772	1,762	1,835
3 Transmission Services	275	275	309	309	317	317	337	346	355	364
4 Conservation & Energy Efficiency	98	98	85	85	86	86	88	88	90	90
5 Fish & Wildlife	221	221	237	237	241	241	254	260	267	274
6 Interest/ Pension <sup>3/</sup>	398	398	374	374	415	415	483	553	628	688
7 Planning Council	9	9	10	10	10	10	11	11	11	11
8 TOTAL EXPENSE	2,697	2,697	2,794	2,794	2,946	2,946	3,095	3,220	3,302	3,451
9 Projects Funded in Advance	214	214	92	92	101	101	39	27	28	31

**CAPITAL OBLIGATIONS/OUTLAYS**

Current Services

(in millions of dollars)

**FISCAL YEAR**

BP-2 continued

	2011		2012		2013		2014	2015	2016	2017
	Oblig.	Outlays	Oblig.	Outlays	Oblig.	Outlays	Oblig.	Oblig.	Oblig.	Oblig.
Conservation & Energy Efficiency	162	162	89	89	95	95	100	129	160	169
10 Transmission Services	301	301	595	595	782	782	775	580	481	404
11 Associated Project Cost	200	200	233	233	250	250	269	269	291	298
12 Fish & Wildlife	91	91	60	60	67	67	60	42	37	31
13 Capital Equipment	44	44	62	62	51	51	46	46	48	49
14 Capitalized Bond Premiums	0	0	2	2	2	2	2	2	2	2
15 TOTAL CAPITAL INVESTMENTS <sup>15</sup>	798	798	1,041	1,041	1,246	1,246	1,252	1,069	1,019	953
16 TREASURY BORROWING AUTHORITY TO										
17 FINANCE CAPITAL OBLIGATIONS <sup>4/</sup>	798		1,041		1,246		1,252	1,069	1,019	953

**The accompanying notes are an integral part of this table.**

<sup>1/</sup> This FY 2013 budget includes capital and expense estimates based on preliminary IPR forecasted data for FYs 2011-2017.

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 competitive electric utility industry.

<sup>2/</sup> Power Services includes Fish & Wildlife, Residential Exchange Program, Planning Council, Conservation & Energy Efficiency and Associated Project Costs which have been shown separately for display purposes.

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

<sup>4/</sup> 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 which are legally 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 legal dollar caps. Because Bonneville operates within existing legislative authority, Bonneville is not subject to a "pay-as-you-go" test regarding its revision of current-law funding estimates.

**CURRENT SERVICES**  
(in millions of dollars)

**CAPITAL TRANSFERS**

	FISCAL YEAR						
	2011 Pymts	2012 Pymts	2013 Pymts	2014 Pymts	2015 Pymts	2016 Pymts	2017 Pymts
Amortization:							
18 BPA Bonds	370	165	123	44	113	73	45
19 Reclamation Appropriations	0	0	0	0	0	0	0
20 BPA Appropriations	35	175	56	66	22	0	0
21 Corps Appropriations	5	53	0	18	0	0	0
22 TOTAL CAPITAL TRANSFERS	410	393	179	128	135	73	45

	STAFFING						
	2011 Pymts	2012 Pymts	2013 Pymts	2014 Pymts	2015 Pymts	2016 Pymts	2017 Pymts
23 FULL-TIME EQUIVALENT (FTE)	3,058	3,117	3,117	3,175	3,175	3,175	3,175

The accompanying notes are an integral part of this table.

The cumulative amount of actual advance amortization payments as of the end of FY 2011 is \$2,672 million.

**PROGRAM & FINANCING SUMMARY**

Current Services

(in millions of dollars)

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

	est.						
	2011	2012	2013	2014	2015	2016	2017
Program by activities:							
Operating expenses:							
0.01 Power Services	1,192	1,206	1,287	1,332	1,362	1,338	1,398
0.02 Residential Exchange Program	185	202	202	189	189	189	189
Associated Project Costs:							
0.05 Bureau of Reclamation	85	112	120	119	123	128	132
0.06 Corps of Engineers	191	209	216	231	237	244	251
0.07 Colville Settlement	18	22	22	22	23	23	23
0.19 U.S. Fish & Wildlife Service	24	29	30	27	29	30	31
0.20 Planning Council	9	10	10	11	11	11	11
0.21 Fish & Wildlife	221	237	241	254	260	267	274
0.23 Transmission Services	275	309	317	337	346	355	364
0.24 Conservation & Energy Efficiency	98	85	86	88	88	90	90
0.25 Interest	367	340	379	446	516	590	648
0.26 Pension and Health Benefits <sup>1/</sup>	31	34	36	37	38	38	39
0.91 <b>Total operating expenses</b> <sup>2/</sup>	<b>2,696</b>	<b>2,794</b>	<b>2,946</b>	<b>3,094</b>	<b>3,221</b>	<b>3,302</b>	<b>3,451</b>
Capital investment:							
1.01 Power Services	201	233	250	269	269	291	298
1.02 Transmission Services	301	595	782	775	580	481	404
1.03 Conservation & Energy Efficiency	162	89	95	100	129	160	169
1.04 Fish & Wildlife	91	60	67	60	42	37	31
1.05 Capital Equipment	44	62	51	46	46	48	49
1.06 Capitalized Bond Premiums	0	2	2	2	2	2	2
1.07 <b>Total Capital Investment</b> <sup>3/</sup>	<b>799</b>	<b>1,041</b>	<b>1,246</b>	<b>1,252</b>	<b>1,069</b>	<b>1,019</b>	<b>953</b>
2.01 Projects Funded in Advanced	214	92	101	39	27	28	31
10.00 <b>Total obligations</b> <sup>4/</sup>	<b>3,708</b>	<b>3,926</b>	<b>4,294</b>	<b>4,385</b>	<b>4,317</b>	<b>4,348</b>	<b>4,435</b>

**The accompanying notes are an integral part of this table.**

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

<sup>2/</sup> Assumes expense obligations, not accrued expenses.

Power Services includes Fish & Wildlife, Residential Exchange Program, Planning Council, Conservation & Energy Efficiency and Associated Project Costs which have been shown separately for display purposes.

<sup>3/</sup> Assumes capital obligations, not capital expenditures.

<sup>4/</sup> This FY 2013 budget includes capital and expense estimates based on preliminary IPR forecasted data for FYs 2011-2017.

For purposes of this table, this FY 2013 budget reflects, for FY 2010, actual 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 competitive electric utility industry.

Refer to 16 USC Chapters 12B, 12G, 12H, and BPA's other organic laws, including P.L. 100-371, Title III, Sec. 300, 102 Stat. 869, July 18, 1988 regarding BPA's ability to obligate funds.

**Program and Financing (continued)**

Current Services  
(in millions of dollars)

	est.						
	2011	2012	2013	2014	2015	2016	2017
Financing:							
21.90 Unobligated balance available, start of year. <sup>5/</sup>	21	15	6	0	0	0	0
24.40 Unobligated balance available, end of year. <sup>5/</sup>	15	6	1	0	0	0	0
<b>39.00 Budget authority (gross)</b>	<b>3,723</b>	<b>4,582</b>	<b>5,372</b>	<b>5,520</b>	<b>5,257</b>	<b>5,305</b>	<b>5,353</b>
Budget Authority:							
67.10 Permanent Authority: Authority to borrow from Treasury (indefinite) <sup>6/</sup>	910	1,041	1,246	1,252	1,069	1,019	953
Spending authority from off-setting collections	3,224	3,934	4,304	4,396	4,324	4,359	4,445
67.25 Spending authority from off-setting collections applied to contract authority	(1,153)						
69.47 Portion applied to debt reduction	(480)	(393)	(179)	(128)	(135)	(73)	(45)
<b>69.90 Spending authority from offsetting collections (adjusted)</b>	<b>3,504</b>	<b>3,541</b>	<b>4,125</b>	<b>4,268</b>	<b>4,189</b>	<b>4,286</b>	<b>4,400</b>
71.00 Total obligations	3,708	3,926	4,294	4,385	4,317	4,348	4,435
87.00 Outlays (gross)	3,708	3,926	4,294	4,385	4,317	4,348	4,435
Adjustments to budget authority and outlays:							
Deductions for offsetting collections:							
88.00 Federal funds	(32)	(90)	(90)	(90)	(90)	(90)	(90)
88.20 Interest on Federal Securities	(4)	(3)	(3)				
88.40 Non-Federal sources	(3,188)	(3,841)	(4,214)	(4,306)	(4,234)	(4,269)	(4,355)
88.90 Total, offsetting collections	(3,224)	(3,934)	(4,304)	(4,396)	(4,324)	(4,359)	(4,445)
<b>89.00 Budget authority (net)</b>	<b>471</b>	<b>648</b>	<b>1,067</b>	<b>1,124</b>	<b>934</b>	<b>946</b>	<b>908</b>
<b>90.00 Outlays (net)<sup>7/</sup></b>	<b>468</b>	<b>(9)</b>	<b>(7)</b>	<b>(10)</b>	<b>(10)</b>	<b>(10)</b>	<b>(10)</b>

**The accompanying notes are an integral part of this table.**

<sup>5/</sup> Reflects estimated cost for radio spectrum fund.

<sup>6/</sup> The Permanent Authority: Authority to borrow (indefinite) from 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 from 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 Of 7/19/88) clarified that Bonneville has authority to incur obligations in excess of Treasury borrowing authority and cash in the has authority to incur obligations in excess of Treasury borrowing authority and cash in the BPA fund. fund.

<sup>7/</sup> 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). Estimated Net Outlays could change due to changing market conditions, streamflow variability, and continuing restructuring of the electric industry.

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 NW Power Act are also assumed.

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 which are legally 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 legal dollar caps. Because Bonneville operates within existing legislative authority, Bonneville is not subject to a "pay-as-you-go" test regarding its revision of current-law funding estimates.



**BONNEVILLE POWER ADMINISTRATION**  
**BPA STATUS of TREASURY BORROWING**  
**CURRENT SERVICES**  
(in millions of dollars)

BP-4A

Fiscal Year

	2011				2012			
	Net Capital Capital Obs	Net Capital Obs Subject to BA	Net Capital Expend.	Bonds Out- Standing	Net Capital Capital Obs	Net Capital Obs Subject to BA	Net Capital Expend.	Bonds Out- Standing
<b>Start-of-Year: Total</b>	1,874	1,332	2,773	2,513	2,303	1,761	3,202	2,943
<b>Plus: Annual Increase</b>								
Cum.-Annual Treasury Borrowing	799	799	799		1,042	1,042	1,042	
Treasury Borrowing (Cash)				800				1,042
<b>Less:</b>								
BPA Bond Amortization	370	370	370	370	165	165	165	165
<b>Net Increase/(Decrease):</b>	429	429	429	430	877	877	877	877
Cum.-End-of-Year: Total	2,303	1,761	3,202	2,943	3,180	2,638	4,079	3,820
<b>Total Remaining Treasury Borrowing Amount</b>				4,757				3,880
<b>Total Legislated Treasury Borrowing Amount</b>				7,700				7,700

**The accompanying notes are an integral part of this table.**

In any given year, BPA may issue less debt than forecast depending on net revenues, Treasury interests rates, and other cash management factors. In such cases, BPA 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 2013 budget, BPA "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 (PL Law 93-454), which defines BPA bonds as all bonds, notes, and other evidences of indebtednesses issued and sold to the U.S. Treasury.

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

Bonneville reserve financing of \$15 million annually is assumed as part of TS capital-PFIA for FYs 2011-2017.

The cumulative amount of actual advance amortization payments as of the end of FY 2011 is \$2,672 million.

**BONNEVILLE POWER ADMINISTRATION**  
**BPA STATUS of TREASURY BORROWING**  
**CURRENT SERVICES**  
(in millions of dollars)

BP-4B

	Fiscal Year							
	2013				2014			
	Net Capital Obs	Net Capital Subject to BA Obs	Net Capital Expend.	Bonds Out- Standing	Net Capital Obs	Net Capital Subject to BA Obs	Net Capital Expend.	Bonds Out- Standing
<b>Start-of-Year: Total</b>	3,180	2,638	4,079	3,820	4,304	3,762	5,203	4,944
<b>Plus: Annual Increase</b>								
Cum.-Annual Treasury Borrowing	1,246	1,246	1,246		1,252	1,252	1,252	
Treasury Borrowing (Cash)				1,246				1,252
<b>Less:</b>								
Total BPA Bond Amortization	123	123	123	123	44	44	44	44
<b>Net Increase/(Decrease):</b>								
Total	1,124	1,124	1,124	1,124	1,208	1,208	1,208	1,208
Cum.-End-of-Year: Total	4,304	3,762	5,203	4,944	5,512	4,970	6,411	6,152
<b>Total Remaining Treasury Borrowing Amount</b>				<u>2,756</u>				<u>1,548</u>
<b>Total Legislated Treasury Borrowing Amount</b>				7,700				7,700

**The accompanying notes are an integral part of this table.**

In any given year, BPA may issue less debt than forecast depending on net revenues, Treasury interests rates, and other cash management factors. In such cases, BPA 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 2013 budget, BPA "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 (PL Law 93-454), which defines BPA bonds as all bonds, notes, and other evidences of indebtedness issued and sold to the U.S. Treasury.

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

Bonneville reserve financing of \$15 million annually is assumed as part of TS capital-PFIA for FYs 2011-2017.

**BONNEVILLE POWER ADMINISTRATION  
BPA STATUS of TREASURY BORROWING  
CURRENT SERVICES  
(in millions of dollars)**

BP-4C

	Fiscal Year							
	2015				2016			
	Net Capital Obs	Net Capital Subject to BA Obs	Net Capital Expend.	Bonds Out- Standing	Net Capital Obs	Net Capital Subject to BA Obs	Net Capital Expend.	Bonds Out- Standing
<b>Start-of-Year: Total</b>	5,512	4,970	6,411	6,152	6,466	5,924	7,365	7,106
<b>Plus: Annual Increase</b>								
Cum.-Annual Treasury Borrowing	1,068	1,068	1,068		1,018	1,018	1,018	
Treasury Borrowing (Cash)				1,068				1,018
<b>Less:</b>								
Total BPA Bond Amortization	113	113	113	113	73	73	73	73
<b>Net Increase/(Decrease):</b>								
Total	955	955	955	955	944	944	944	944
Cum.-End-of-Year: Total	6,466	5,924	7,365	7,106	7,411	6,869	8,310	8,050
<b>Total Remaining Treasury Borrowing Amount</b>				594				(350)
<b>Total Legislated Treasury Borrowing Amount</b>				7,700				7,700

**The accompanying notes are an integral part of this table.**

In any given year, BPA may issue less debt than forecast depending on net revenues, Treasury interests rates, and other cash management factors. In such cases, BPA 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 2013 budget, BPA "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 (PL Law 93-454), which defines BPA bonds as all bonds, notes, and other evidences of indebtedness issued and sold to the U.S. Treasury.

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

Bonneville reserve financing of \$15 million annually is assumed as part of TS capital-PFIA for FYs 2011-2017.

**BONNEVILLE POWER ADMINISTRATION  
BPA STATUS of TREASURY BORROWING  
CURRENT SERVICES**

(in millions of dollars)

BP-4D

	Fiscal Year			
	2017			
	Net Capital Obs	Net Capital Subject to BA	Net Capital Expend.	Bonds Out- Standing
<b>Start-of-Year: Total</b>	7,411	6,869	8,310	8,050
<b>Plus: Annual Increase</b>				
Cum.-Annual Treasury Borrowing	952	952	952	
Treasury Borrowing (Cash)				952
<b>Less:</b>				
Total BPA Bond Amortization	45	45	45	45
<b>Net Increase/(Decrease):</b>				
Total	906	906	906	906
Cum.-End-of-Year: Total	8,317	7,775	9,216	8,957
<b>Total Remaining Treasury Borrowing Amount</b>				<u>(1,257)</u>
<b>Total Legislated Treasury Borrowing Amount</b>				7,700

**The accompanying notes are an integral part of this table.**

In any given year, BPA may issue less debt than forecast depending on net revenues, Treasury interests rates, and other cash management factors. In such cases, BPA 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 2013 budget, BPA "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 (PL Law 93-454), which defines BPA bonds as all bonds, notes, and other evidences of indebtednesses issued and sold to the U.S. Treasury.

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

Bonneville reserve financing of \$15 million annually is assumed as part of TS capital-PFIA for FYs 2011-2017.

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

BP-5

	Fiscal Year						
	2011	2012	2013	2014	2015	2016	2017
<b>Transmission Services - Capital</b>							
Requirements							
Main Grid	123	236	300	316	202	127	97
Area & Customer Services	10	20	11	12	14	14	22
Upgrades & Additions	73	167	271	235	164	132	61
System Replacements	95	172	201	212	200	207	224
Projects Funded in Advance	214	92	101	39	27	28	31
<b>Total, Transmission Services - Capital</b>	<b>514</b>	<b>686</b>	<b>884</b>	<b>814</b>	<b>607</b>	<b>509</b>	<b>435</b>

**Federal and Non-Federal Funding**

	2011	2012	2013	2014	2015	2016	2017
Sources							
Projects Funded in Advance	214	92	101	39	27	28	31
Treasury Borrowing Authority	301	595	782	775	580	481	404

**Scenario**

	2011	2012	2013	2014	2015	2016	2017
Scenario							
Projects Funded in Advance <sup>1/</sup>			100	100	100	100	100
Third Party Financing	60	93	104	125	88	70	53
Alternate Treasury Borrowing Authority	NA	502	578	550	392	311	251

The accompanying notes are an integral part of this table.

<sup>1/</sup> In this scenario the Projects Funded in Advance represents potential prepayment of Power customers' bills reimbursed by future credits and third party non-federal financing for Conservation initiatives

The table above shows both the potential use of Treasury borrowing authority for transmission capital projects based on this FY 2013 budget and the use adjusted for potential third-party financing to fund appropriate capital expenditures when feasible in lieu of Treasury borrowing. Estimates included in this FY 2013 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 Treasury borrowing and do not reflect the actual notional third party financing commitment BPA may enter into in that particular year. The difference of reduction in use of Treasury borrowing and the actual notional third party financing commitment is primarily due to the difference in the timing of financing transactions between 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 leases that enable BPA to acquire the use of transmission facilities over time. BPA also undertakes the construction and installation of facilities from funds that customers advance to BPA for construction of BPA-owned facilities that assist the customers in obtaining necessary transmission service from BPA. These customers receive monetary payment credits in bills for transmission services from BPA up to the amount of funds advanced to BPA, plus interest.

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

**BPA Status of Treasury Borrowing with Potential Third Party Financing & PFIA Scenario**

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

	Fiscal Year						
	2011	2012	2013	2014	2015	2016	2017
Start-of-Year: Total Bonds Outstanding	2,513	2,942	3,726	4,646	5,629	6,395	7,170
Plus:							
Treasury Borrowing (Cash)	799	1,042	1,246	1,252	1,068	1,018	952
Less:							
Potential Third Party Financing & PFIA	NA	93	204	225	188	170	153
BPA Bond Amortization	370	165	123	44	113	73	45
Net Increase/(Decrease) Bonds Outstanding:	429	784	920	983	767	774	753
Cum.-End-of-Year: Total	2,942	3,726	4,646	5,629	6,395	7,170	7,923
<b>Total Remaining Treasury Borrowing Amount</b>	<b>4,758</b>	<b>3,974</b>	<b>3,054</b>	<b>2,071</b>	<b>1,305</b>	<b>530</b>	<b>(223)</b>
Total Legislated Treasury Borrowing Amount	7,700	7,700	7,700	7,700	7,700	7,700	7,700

## TREASURY PAYMENTS

(in millions of dollars)

	FISCAL YEAR						
	2011	2012	2013	2014	2015	2016	2017
<b>A. INTEREST ON BONDS &amp; APPROPRIATIONS</b>							
<b>Bonneville Bond Interest</b>							
1 Bonneville Bond Interest (net)	80	95	146	211	284	351	400
2 AFUDC <sup>1/</sup>	42	36	39	41	38	35	42
<b>Appropriations Interest</b>							
3 Bonneville	29	23	10	6	2	0	0
4 Corps of Engineers <sup>2/</sup>	156	162	163	169	170	179	188
5 Lower Snake River Comp.	17	17	17	17	17	17	17
6 Bureau of Reclamation <sup>3/</sup>	43	43	43	43	43	43	43
Bond Premium paid	15						
<b>7 Total Bond and Approp. Interest</b>	<b>383</b>	<b>376</b>	<b>418</b>	<b>487</b>	<b>554</b>	<b>625</b>	<b>691</b>
<b>B. ASSOCIATED PROJECT COST</b>							
8 Bureau of Reclamation Irrigation Assistance	0	1	59	52	52	61	51
9 Bureau of Rec. O & M <sup>4/</sup>	0	0	0	0	0	0	0
10 Corps of Eng. O & M <sup>4/</sup>	4	0	0	0	0	0	0
11 L. Snake River Comp. Plan O & M <sup>4/</sup>	2	0	0	0	0	0	0
<b>12 Total Assoc. Project Costs</b>	<b>7</b>	<b>1</b>	<b>59</b>	<b>52</b>	<b>52</b>	<b>61</b>	<b>51</b>
<b>C. CAPITAL TRANSFERS</b>							
<b>Amortization</b>							
13 Bonneville Bonds <sup>6/</sup>	370	165	123	44	113	73	45
14 Bureau of Reclamation Appropriations	0	0	0	0	0	0	0
15 Corps of Engineers Appropriations	5	53	0	18	0	0	0
16 Lower Snake River Comp. Plan	0	0	0	0	0	0	0
17 Bonneville Appropriations	35	175	56	66	22	0	0
<b>Total Capital Transfers</b>	<b>410</b>	<b>393</b>	<b>179</b>	<b>128</b>	<b>135</b>	<b>73</b>	<b>45</b>
<b>D. OTHER PAYMENTS</b>							
18 Unfunded CSRS Liability <sup>5/</sup>	31	34	36	37	38	38	39
<b>21 TOTAL TREASURY PAYMENTS</b>	<b>830</b>	<b>805</b>	<b>692</b>	<b>705</b>	<b>778</b>	<b>797</b>	<b>827</b>

The accompanying notes are an integral part of this table.

- <sup>1/</sup> 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.
- <sup>2/</sup> 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.
- <sup>3/</sup> Includes payments paid by Reclamation to Treasury on behalf of Bonneville.
- <sup>4/</sup> Costs for power O&M is funded directly by Bonneville as follows (in millions):

	2011	2012	2013	2014	2015	2016	2017
Bureau of Reclamation	85	112	120	119	123	128	132
Corps of Engineers	191	209	216	231	237	244	251
Subtotal Bureau and Corps	276	321	336	350	361	372	383
Lower Snake River Comp. Plan	24	29	30	27	29	30	31
Total	301	349	365	378	389	401	413

- <sup>5/</sup> See Interest Expense, Pension and Post-retirement Benefits and Capital Transfers section of this budget for a complete discussion of these cost estimates.
- <sup>6/</sup> In this FY 2013 budget, BPA "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 (PL Law 93-454), which defines BPA bonds as all bonds, notes, and other evidences of indebtedness issued and sold to the U.S. Treasury.

Does not include Treasury bond premiums on refinanced Treasury bonds.

## Treasury Repayment Table

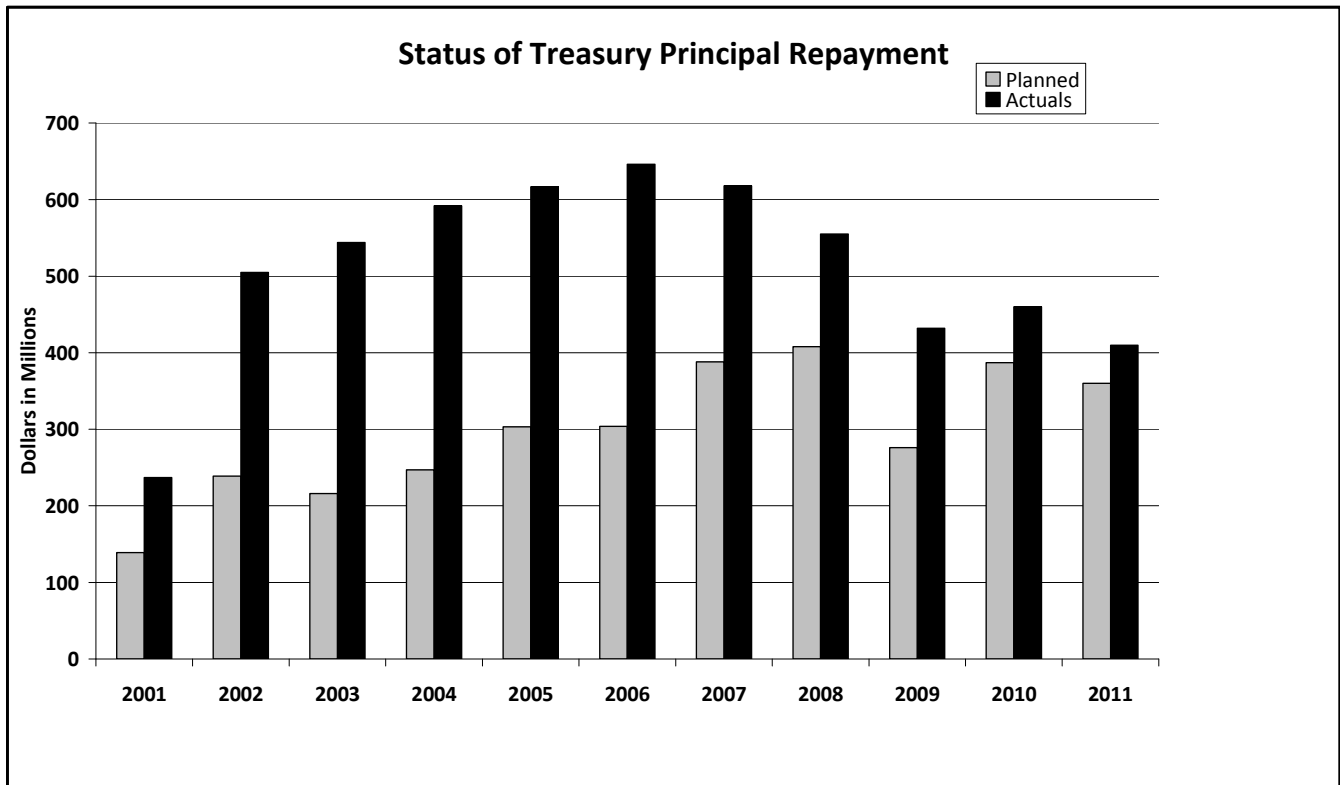


Chart Notes

<sup>1/</sup> This chart displays principal repayment only.

<sup>2/</sup> Treasury payment outyear estimates for planned amortization of principal are based on rate case estimates when available and planned amortization for future rate case periods. These estimates may change due to revised capital investment plans, actual Treasury borrowing, and advanced amortization payments. Bonneville made its full scheduled FY 2011 payment responsibility to the Treasury. Bonneville’s aggregate Treasury payment was \$830 million, comprised of \$410 million in amortization (of which \$70 million was unscheduled advanced amortization), \$382 million in interest, and \$38 million of unfunded CSRS liabilities and other costs.

<sup>3/</sup> FYs 2000 - 2011 payments include portions of future planned amortization amounts consistent with Bonneville's capital strategy plan and the Bonneville /Energy Northwest debt optimization program.

<sup>4/</sup> Advance amortization due to sale of low-voltage transmission facilities includes \$13 million and \$5.3 million in FYs 2003 and 2006, respectively.

<sup>5/</sup> For FYs 2007 - 2009, the planned repayment of principal of Federal power investment reflects the amounts calculated in Bonneville’s 2007 Power Rate Case and 2006 and 2008 Transmission Rate Cases that were scheduled to be the lowest level of amortization satisfying the repayment requirements. The rate case projections also included some amount of advanced repayment of principal to the U.S. Treasury that resulted from Bonneville’s debt optimization program, which involved restructuring Energy Northwest (EN) debt, the cost of which Bonneville is obligated to pay.

**OBJECT CLASSIFICATION STATEMENT**  
(in millions of dollars) 1/

IDENTIFICATION CODE: 89-4045-0-3-271  
DIRECT OBLIGATIONS

**ESTIMATES**

	<b>2011</b>	<b>2012</b>	<b>2013</b>
11.1 Full-time permanent	123	130	138
11.3 Other than full-time permanent	55	59	62
11.5 Other personnel compensation	11	11	12
<b>11.9 Total personnel compensation</b>	<b>189</b>	<b>200</b>	<b>212</b>
12.1 Civilian personnel benefits	55	58	62
13.0 Benefits for former personnel	27	28	30
21.0 Travel and transportation of persons	15	15	16
22.0 Transportation of things	1	1	2
23.1 Rental payments to GSA	0	0	0
23.2 Rents, other	0	0	0
23.3 Communication, utilities & misc. charges	9	10	10
25.1 Consulting Services	395	419	442
25.2 Other Services	2,409	2,551	2,721
25.3 Purchases from Government Accounts	0	0	0
25.4 O&M of Facilities	0	0	0
25.5 R & D Contracts	0	0	0
26.0 Supplies and materials	275	291	401
31.0 Equipment	0	0	0
32.0 Lands and structures	53	56	61
41.0 Grants, subsidies, contributions	49	52	52
43.0 Interest and dividends	232	245	285
<b>99.0 Total obligations</b>	<b>3,708</b>	<b>3,926</b>	<b>4,294</b>

Includes object classifications developed from updated GL accounting codes consistent with implementation of BPA's business enterprise system of accounts. The object classifications are subject to change as BPA's GL accounting codes continue to evolve to more effectively meet management information needs, and meet FERC and Federal reporting requirements.



**Estimate of Receipts**  
(in millions of dollars)

	Fiscal Year						
	2011	2012	2013	2014	2015	2016	2017
Reclamation Interest	43	43	43	43	43	43	43
Reclamation Amortization	0	0	0	0	0	0	0
Reclamation O&M	1	0	0	0	0	0	0
Reclamation Irrig. Assist.	0	1	59	52	52	61	51
Revenues Collected by Reclamation Distributed in Treasury Account (credit)	-12	-7	-7	-7	-7	-7	-7
Colville Settlement (credit)	-9	-5	-5	-5	-5	-5	-5
<b>Total 1/ Reclamation Fund</b>	<b>23</b>	<b>33</b>	<b>90</b>	<b>84</b>	<b>83</b>	<b>92</b>	<b>83</b>
Corps O&M	2						
CSRS	31	34	36	37	38	38	38
<b>Total 2/ Repayments on misc.costs</b>	<b>33</b>	<b>34</b>	<b>36</b>	<b>37</b>	<b>38</b>	<b>38</b>	<b>38</b>

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 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)

	2011	2012	2013	2014	2015	2016	2017
Bureau of Reclamation	85	112	120	119	123	128	132
Corps of Engineers	191	209	216	231	237	244	251
Lower Snake River Comp. Plan	24	29	30	27	29	30	31

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

**Total Cost of BPA Fish & Wildlife Actions**

COST ELEMENT	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011
<b>CAPITAL INVESTMENTS <sup>1/</sup></b>										
BPA FISH AND WILDLIFE	6.1	11.6	8.5	12.2	35.4	35.2	25.5	27.4	39.9	90.2
BPA SOFTWARE DEVELOPMENT COSTS	-	-	-	-	0.9	1.0	1.3	0.6	1.2	0.8
ASSOCIATED PROJECTS (FEDERAL HYDRO)	8.8	68.4	75.9	53.8	360.0	60.4	37.3	135.7	56.4	103.0
<b>TOTAL CAPITAL INVESTMENTS</b>	<b>14.9</b>	<b>80.0</b>	<b>84.4</b>	<b>66.0</b>	<b>396.3</b>	<b>96.6</b>	<b>64.2</b>	<b>163.7</b>	<b>97.5</b>	<b>193.9</b>
<b>PROGRAM EXPENSES</b>										
<b>BPA DIRECT FISH AND WILDLIFE PROGRAM</b>	137.1	140.7	137.9	135.8	137.9	139.5	148.9	177.9	199.6	221.1
SUPPLEMENTAL MITIGATION PROGRAM EXPENSES <sup>2/</sup>	7.1	6.5	7.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
<b>REIMBURSABLE/DIRECT-FUNDED PROJECTS <sup>3/</sup></b>										
O & M LOWER SNAKE RIVER HATCHERIES	14.9	15.1	17.3	17.2	20.1	19.3	19.4	20.8	23.3	24.5
O & M CORPS OF ENGINEERS	28.2	30.3	32.3	32.5	31.8	32.9	34.4	34.3	36.5	40.3
O & M BUREAU OF RECLAMATION	3.8	3.1	3.9	3.9	4.5	3.9	4.3	4.5	5.2	5.0
OTHER (NW POWER AND CONSERVATION COUNCIL)	4.0	4.0	3.7	4.3	4.3	4.2	4.1	4.7	4.7	4.5
SUBTOTAL (REIMB/DIRECT-FUNDED)	50.9	52.6	57.2	57.9	60.7	60.3	62.2	64.3	69.7	74.3
<b>TOTAL OPERATING EXPENSES</b>	<b>195.1</b>	<b>199.8</b>	<b>202.9</b>	<b>193.7</b>	<b>198.6</b>	<b>199.7</b>	<b>211.1</b>	<b>242.1</b>	<b>269.3</b>	<b>295.3</b>
<b>PROGRAM RELATED FIXED EXPENSES <sup>4/</sup></b>										
INTEREST EXPENSE	48.5	49.9	53.3	56.4	53.4	76.0	76.9	78.7	80.5	79.2
AMORTIZATION EXPENSE	17.2	17.4	17.5	17.4	17.4	22.9	24.4	24.6	25.0	28.3
DEPRECIATION EXPENSE	12.5	13.2	14.6	15.9	16.7	14.0	14.9	16.7	18.0	19.6
<b>TOTAL FIXED EXPENSES</b>	<b>78.2</b>	<b>80.5</b>	<b>85.4</b>	<b>89.7</b>	<b>87.5</b>	<b>112.9</b>	<b>116.2</b>	<b>120.0</b>	<b>123.5</b>	<b>127.2</b>
<b>GRAND TOTAL PROGRAM EXPENSES</b>	<b>273.3</b>	<b>280.3</b>	<b>288.3</b>	<b>283.4</b>	<b>286.1</b>	<b>312.7</b>	<b>327.3</b>	<b>362.1</b>	<b>392.8</b>	<b>422.5</b>
<b>FOREGONE REVENUES AND POWER PURCHASES</b>										
FOREGONE REVENUES	12.6	79.2	21.7	182.1	397.4	282.6	273.5	142.8	99.4	156.7
BPA POWER PURCH. FOR FISH ENHANCEMENT	147.8	171.1	191.0	110.8	168.2	120.7	274.9	240.3	310.1	70.7
<b>TOTAL FOREGONE REVENUES AND POWER PURCHASES</b>	<b>160.4</b>	<b>250.3</b>	<b>212.7</b>	<b>292.9</b>	<b>565.6</b>	<b>403.3</b>	<b>548.5</b>	<b>383.1</b>	<b>409.5</b>	<b>227.4</b>
<b>TOTAL PROGRAM EXPENSES, FOREGONE REVENUES, &amp; POWER PURCHASES</b>	<b>433.7</b>	<b>530.6</b>	<b>501.0</b>	<b>576.3</b>	<b>851.7</b>	<b>716.0</b>	<b>875.8</b>	<b>745.3</b>	<b>802.3</b>	<b>649.9</b>
<b>CREDITS</b>										
4(h)(10)(C)	(66.4)	(73.6)	(77.0)	(57.7)	(76.4)	(66.1)	(100.5)	(99.5)	(123.1)	(85.3)
FISH COST CONTINGENCY FUND	-	(78.7)	-	-	-	-	-	-	-	-
<b>TOTAL CREDITS</b>	<b>(66.4)</b>	<b>(152.3)</b>	<b>(77.0)</b>	<b>(57.7)</b>	<b>(76.4)</b>	<b>(66.1)</b>	<b>(100.5)</b>	<b>(99.5)</b>	<b>(123.1)</b>	<b>(85.3)</b>

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.