

Bonneville Power Administration

Proposed Appropriations Language

Expenditures from the Bonneville Power Administration Fund, established pursuant to Public Law 93-454, are approved for the Kootenai River Native Fish Conservation Aquaculture Program, Lolo Creek Permanent Weir Facility, and Improving Anadromous Fish production on the Warm Springs Reservation, and, in addition, for official reception and representation expenses in an amount not to exceed \$3,000.

During fiscal year 2012, no new direct loan obligations may be made.

Explanation of Changes

The proposed appropriations language restricts new direct loans in FY 2012 as in FY 2011.

Please Note - The FY 2012 Bonneville Power Administration Congressional Budget submission includes FY 2011 budget estimates.

BPA 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 (Pacific Northwest Power Act) (Public Law 96-501) for energy conservation, renewable energy resources, 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 BPA on a permanent, indefinite basis. The amount of U.S. Treasury borrowing outstanding at any time cannot exceed \$7.70 billion. BPA finances its approximate \$4.7 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 sales for similar issues.

This budget has been prepared in accordance with the Budget Enforcement Act (BEA) of 1990. Under the BEA all BPA budget estimates are treated as mandatory and are not subject to the discretionary caps included in the BEA. These estimates support activities which are legally separate from discretionary activities and accounts. Thus, any changes to BPA estimates cannot be used to affect any other budget categories which have their own legal dollar caps. Because BPA operates within existing legislative authority, BPA is not subject to BEA "pay-as-you-go" test regarding its revision of current-law funding estimates.

BPA includes updated operating year budget estimates in each Congressional Budget submission. Updated BPA FY 2011 operating year estimates are included in the FY 2012 Congressional Budget.

Bonneville Power Administration

Overview

Summary by Program

(accrued expenditures in thousands of dollars)						
	FY	2010	FY	2011	FY	2012
Capital Investments						
Power Services		247,108		340,252		363,329
Transmission Services		304,520		360,512		526,682
Capital Equipment & Bond Premium		51,964		51,615		47,185
Total, Capital Investments		603,592		752,379		937,196
Accrued expenditures will require budget obligations of		603,592		752,379		937,196
Operating Expenses		2,927,466		3,115,182		3,195,289
Projects Funded in Advance ^{1/}		158,726		113,224		52,470
Total, Obligations		3,689,784		3,980,785		4,184,955
Capital Transfers (cash)		458,979		386,870		383,181
BPA Total		4,148,763		4,367,655		4,568,136
BPA Net Outlays		526,000		(10,000)		(10,000)
BPA Staffing (FTE)		3,043		3,175		3,064

Outyear Summary

(accrued expenditures in thousands of dollars)						
	FY	2013	FY	2014	FY	2015
CAPITAL INVESTMENTS						
Power Services		384,807		393,625		427,798
Transmission Services		577,020		560,489		423,405
Capital Equipment & Bond Premium		43,904		43,175		54,108
Total, Capital Investments		1,005,731		997,289		905,311
Accrued expenditures will require budget obligations of		1,005,731		997,289		905,311
Operating Expenses		3,376,932		3,462,596		3,618,538
Projects Funded in Advance ^{1/}		53,198		44,057		38,493
Total, Obligations		4,435,861		4,503,942		4,562,342
Capital Transfers (cash)		192,969		102,120		89,780
BPA Total		4,628,830		4,606,062		4,652,122
BPA Net Outlays		(10,000)		(10,000)		(10,000)
BPA Staffing (FTE)		3,175		3,175		3,175

Overview

The accompanying notes are an integral part of this table.

^{1/} PFIA for Transmission Services paid by customers.

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 NW Power Act are also assumed.

The cumulative amount of actual advance amortization payments as of the end of FY 2010 is \$2,574 million.

FTE outyear data are estimates and may change.

Preface

The Bonneville Power Administration (Bonneville or BPA) serves the Pacific Northwest through operating an extensive electricity transmission system and marketing wholesale electrical power at cost from Federal dams and other non-Federal generating units including some wind energy generation facilities.

The organization of Bonneville's FY 2012 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 O&M Costs, and Northwest Power and Conservation Council (Planning Council, Council).

Mission

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:

- An adequate, efficient, economical and reliable power supply;
- An open access transmission system that is adequate for integrating and transmitting power from Federal and non-Federal generating units, providing service to BPA's customers, providing interregional interconnections, and maintaining electrical reliability and stability; and
- Mitigation of the Federal Columbia River Power System (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 business principles and sufficient to ensure the full recovery of all of its costs, including timely repayment of the Federal investment in the system.

As Bonneville sets its long-term strategic direction, shapes programs and plans spending levels to fulfill this mission, these efforts are driven by the agency's vision that encompasses the following four pillars:

- High reliability;
- Low rates consistent with sound business principles;
- Responsible environmental stewardship; and
- Accountability to the region.

BPA endeavors to pursue this vision consistent with its three core values: trustworthy stewardship of the FCRPS, collaborative relationships, and operational excellence.

Benefits

Bonneville provides electric power (about one third of the electricity consumed in the region), transmission (about three-fourths of the region's high voltage transmission capacity), and energy efficiency throughout the Pacific Northwest. The Pacific Northwest is a 300,000 square mile service area that includes 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). Bonneville also acquires non-Federal power, including the power from the Columbia Generating Station (CGS), to meet the needs of its customer utilities. Bonneville owns and operates over 15,000 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 FCRPS.

American Recovery and Reinvestment Act of 2009

In the American Recovery and Reinvestment Act of 2009 (ARRA), Section 401 provides for an increase in the amount of BPA's Treasury bonds that may remain outstanding at any given time under the Federal Columbia River Transmission System Act (Transmission System Act). This \$3.25 billion increase in the limit on BPA's available Treasury bonds gives BPA 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.

BPA has identified up to \$2 billion in major projects for which it will use bonds authorized under ARRA and through FY 2010 has spent \$333 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.

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

Annual Performance Results and Targets

The Department is in the process of updating its strategic plan, and has been actively engaging stakeholders including Congress. The draft strategic plan is being released for public comment concurrent with this budget submission, with the expectation of official publication this spring. The draft plan and FY 2012 Budget are consistent and aligned. Updated measures will be released at a later date and available at the following link <http://www.mbe.doe.gov/budget/12budget/index.htm>.

Program Perspectives

This section provides an introduction to Bonneville operations and statutory authorities followed by a description of ongoing activities.

Introduction

Bonneville is the electric Power Marketing Administration for the FCRPS. Bonneville provides electric power, transmission, and energy efficiency throughout the Pacific Northwest. Created in 1937 to market and transmit the power produced by the Bonneville Dam on the Columbia River, Bonneville, as directed by Congress, sells at wholesale the electrical power produced from 31 operating Federal hydro projects

and acquires non-Federal power and conservation resources sufficient to meet the needs of Bonneville's customer utilities. Bonneville also owns and operates over 15,000 miles of high-voltage transmission lines, transmitting power from the dams and other sources on an open-access non-discriminatory basis. Bonneville serves a 300,000 square mile area including Oregon, Washington, Idaho, Western Montana, and parts of Northern California, Nevada, Utah, and Wyoming.

The Bonneville Project Act of 1937 provided the statutory foundation for Bonneville's utility responsibilities and authorities. In 1974, passage of the Federal Columbia River Transmission System Act (Transmission Act) placed Bonneville under provisions of the Government Corporation Control Act (31 U.S.C. §§ 9101-9110). 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 BPA'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 (Pub. 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 ARRA increased BPA's line of credit with the Treasury by \$3.25 billion to the current authority of \$7.7 billion

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 rates. 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 2010, Bonneville has returned approximately \$26.4 billion to the Treasury for payment of FCRPS O&M and other costs (about \$3.1 billion), interest (about \$13.3 billion), and amortization (about \$10 billion) of appropriations and bonds.

In this FY 2012 Budget, the term BPA "bonds" refers to all bonds issued by BPA to and advances received from the 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 Treasury.

Bonneville and Treasury completed negotiations in April 2008 on an agreement to establish a new, more formal and detailed banking arrangement that meets key aims of each agency. The comprehensive arrangement covers BPA's short- and long-term Federal borrowings and establishes a phased-in approach to a market-based investing program. This adds flexibility for BPA's federal borrowings and provides BPA the ability to borrow for Northwest Power Act-related operating expenses. This ability provides BPA 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 BPA's rate-setting process.

The Interest Offset Credit MOU provides for the phase-out of the interest offset methodology over a 10-year period and establishes the procedures for the phase-in of market-based investing of deposits in the BPA Fund.

Treasury Payments and Budget Overview:

Bonneville made its full planned FY 2010 payment of \$864 million to the Treasury (and included \$38.5 million in advanced amortization as part of BPA's debt optimization program). Total 4(h)(10)(C) credits associated with fish recovery and to be applied toward BPA's Treasury payment, were about \$123 million for FY 2010. For FY 2011, Bonneville plans to pay the Treasury \$779 million: \$387 million to repay investment principal, \$361 million for interest, and \$31 million for Associated Project costs and pension and post-retirement benefits. The FY 2012 Treasury payment is currently estimated at \$812 million. The FYs 2011 and 2012 4(h)(10)(C) credits are estimated at \$89.2 million and \$94.4 million, respectively.

Estimates of interest and amortization levels for outyear Treasury payments are based on estimates from the 2010 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, BPA 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 2010 is about \$2,574 million. Amortization estimates in this FY 2012 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 the Reclamation's Pacific Northwest power O&M costs, and in FY 1999, Bonneville began direct funding the Corps' Pacific Northwest power O&M costs. Bonneville began direct funding the U.S. Fish and Wildlife Service (USFWS) in FY 2001 to pay for O&M costs of the Lower Snake River Compensation Plan facilities. Bonneville's direct funding arrangement includes a portion of power O&M and capital investments. Direct funded capital costs, previously funded through appropriations, are now being paid through BPA borrowing from the Treasury. BPA's total direct funding, including the small capital program, was \$277 million in FY 2010.

This FY 2012 Budget proposes Bonneville accrue expenditures of \$3,195 million for operating expenses, \$52 million for PFIA, \$937 million for capital investments, and \$383 million for capital

transfers in FY 2012. 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 BPA to employ separate repayment studies for its generation and transmission functions to determine the repayment requirements for each.

The estimated spending levels in this budget are still subject to change to accommodate competitive dynamics in the region's energy markets, debt optimization strategies, and the continued restructuring of the electric industry.

Current Financial Status

- BPA 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. BPA utilizes 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, BPA recovered from the financial effects of the 2000-2001 west coast power crisis. Continued cost management efforts helped BPA regain adequate reserve levels despite mostly below-average water years. These gains are helping BPA 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. In 2010, BPA experienced low water conditions and the effects of an economic downturn. BPA did not achieve its modified net revenue target for the year, but the financial reserves BPA established resulted in BPA's still making the annual scheduled Treasury repayment in full.
- Power and transmission rates for FY 2010 and 2011 received final approval from FERC on August 6, 2010.
- Bonneville released its 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 BPA'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 will begin in October 2011. BPA is currently preparing 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.

Infrastructure Investment

- Bonneville is planning 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 would add more than 220 miles of lines to the Northwest transmission grid, improving reliability and allowing BPA to provide service to about 3,881 MWs of requests for BPA transmission, including service for 3,138 MWs of additional green energy. The proposed transmission lines include BPA's recently announced 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 bolster the BPA transmission system to accommodate energy deliveries, including wind power.

- These efforts will help meet the increasing demand for BPA'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, BPA is working with stakeholders to determine its role in the development and use of energy efficiency for the post-2011 period. BPA is continuing to target transmission investments in those areas with reliability needs. BPA conducted the first Network Open Season (NOS) in 2008 and completed the second in May 2009. A third NOS process is now underway. The NOS process is designed to ensure the region will have sufficient transmission infrastructure available for customers seeking capacity on BPA's transmission system network. Many of the customer capacity requests have been for delivery of wind-generated electricity.
- Bonneville has identified a number of actions that it is taking or could take over the next several years to provide additional electric system infrastructure relief. These actions include FCRPS generation efficiencies and additions, additional renewable resource generation and conservation efforts, long-term and short-term power purchases, and construction of transmission projects that reinforce the grid and integrate new generation.
- Bonneville considers other strategies to sustain funding for its infrastructure investment requirements as well. These additional strategies include restructuring of EN debt, reserve financing of some amount of transmission investments, and seeking, when feasible, third party financing sources. See the BP-5 Potential Third Party Financing Transparency table in the budget schedules section of this budget. This FY 2012 Budget assumes \$30 million of annual reserve financing in FY11 and \$15 million for FYs 2012-2016 for transmission infrastructure capital that is included in this budget in Projects Funded In Advance.

Budget Estimates and Planning

- This FY 2012 Budget includes capital and expense estimates based on BPA's Integrated Program Review (IPR) draft decisions. FY 2010 costs are based on BPA's FY 2010 audited actual financial results.
- Capital funding levels reflect BPA'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 2012 Budget reflect executive management decisions from BPA's Capital Allocation Board (CAB) and the associated capital review process. BPA utilizes a

structured capital project selection process requiring submission of a standardized business case for review by BPA. 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 BPA's senior executives at least quarterly.

- The FYs 2011-2016 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 repayment credits offset, among other things, BPA'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.
- The REP 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, BPA and the region's six investor-owned utilities (IOUs) signed agreements that attempted to settle the REP for 10 years and discontinued implementation of a traditional REP. In May 2007, the U.S. Court of Appeals for the Ninth Circuit held that the REP Settlement Agreements reached with IOUs were not consistent with the Northwest Power Act. The WP-07 Supplemental rate case was conducted in 2008 to respond to the court's rulings and revise power rates for FY 2009. The 2007 Supplemental Wholesale Power Rate Case Administrator's Final Record of Decision, studies and documentation for the WP-07 Supplemental rate case determined the amount by which the Preference Customers were overcharged in FYs 2002-2006 as a result of the REP settlements, the PF and PF Exchange rates for FY 2009, as well as the magnitude of the initial amount to be returned to the Preference Customers in FY 2009 for overcharges during FYs 2002-2006. See the BPA/Power Services-Operating Expense section of this FY 2012 Budget for a more complete discussion of REP.
- The Energy Policy Act of 2005 authorized FERC to approve and enforce mandatory electric reliability standards with which users, owners and operators of the bulk power system, including BPA, 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.
- BPA estimates full time equivalent (FTE) to increase somewhat from 3,043 FTE in FY 2010 to 3,175 during the FY 2013 thru FY 2016 time period. BPA continues to consider various authorities, including the use of Voluntary Early Retirement Authority (VERA) to help achieve targeted levels.

Fish and Wildlife Program Overview

- Bonneville is committed to continue funding its share of the region's efforts to protect listed Columbia 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. Sub-basin plans that include prioritized strategies for mitigation actions will help guide project selection to meet both BPA's ESA and Northwest Power Act responsibilities.
- 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 Fish and Wildlife Program (Program) developed pursuant to Section 4(h) of the Northwest Power Act. Through the Program BPA 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 Program.
- BPA, 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 2010.

Overview of Detailed Justifications

Bonneville's Detailed Justification Summaries, included in this FY 2012 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's budget are assumed on the Program and Financing Summary Schedule prepared in accordance with OMB Circular A-11.

The organization of BPA's FY 2012 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 expenses, 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 \$937 million in bonds to be sold to the U.S. Treasury in FY 2012.

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 BPA's standard operating budget process, this FY 2012 Budget includes updated capital funding levels for FY 2011. 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 (better 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 2012, budget expense obligations are estimated at \$3,195 million. The total program requirements of all Bonneville programs include estimated budget obligations of \$4,185 million in FY 2012.

Bonneville Power Administration

Funding Profile by Subprogram ^{1/}

(accrued expenditures in thousands of dollars)

	Fiscal Year				
	2010 Audited Actuals	2011 Original ^{2/}	2011 Adjustments	2011 Revised ^{2/}	2012 Proposed
Capital Investment Obligations					
Associated Project Costs ^{3/}	148,103	N/A	-	170,252	209,329
Fish & Wildlife	41,106	N/A	-	90,000	50,000
Conservation & Energy Efficiency ^{3/}	57,899	N/A	-	80,000	104,000
Subtotal, Power Services ^{4/}	247,108	N/A	-	340,252	363,329
Transmission Services	304,520			360,512	526,682
Capital Equipment & Bond Premium	51,964	N/A	-	51,615	47,185
Total, Capital Obligations ^{3/ 5/}	603,592	758,910	-	752,379	937,196
Operating Expenses and Other Obligations					
Operating Expenses	2,927,466	3,219,466	-	3,115,182	3,195,289
Projects Funded in Advance ^{6/}	158,726	77,179	-	113,224	52,470
Total, Obligations	3,689,784	4,055,555		3,980,785	4,184,955
Capital Transfers (cash) ^{5/}	458,979	386,870	-	386,870	383,181
BPA Total	4,148,763	4,442,425	-	4,367,655	4,568,136
Full-time Equivalents (FTEs)	3,043	3,100	-	3,175	3,064

Public Law Authorizations include:

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

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

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. 96-501

Outyear Funding Profile by Subprogram 1/

(accrued expenditures in thousands of dollars)

	Fiscal Year			
	2013	2014	2015	2016
Capital Investment Obligations				
Associated Project Costs ^{3/}	223,807	226,625	232,798	235,707
Fish & Wildlife	50,000	50,000	50,000	50,000
Conservation & Energy Efficiency ^{3/}	111,000	117,000	145,000	180,000
Subtotal, Power Services ^{4/}	384,807	393,625	427,798	465,707
Transmission Services	577,020	560,489	423,405	356,437
Capital Equipment & Bond Premium	43,904	43,175	54,108	44,160
Total, Capital Obligations ^{3/ 5/}	1,005,731	997,289	905,311	866,304
Operating Expenses and Other Obligations				
Operating Expenses	3,376,932	3,462,596	3,618,538	3,770,632
Projects Funded in Advance ^{6/}	53,198	44,057	38,493	41,460
Total, Obligations	4,435,861	4,503,942	4,562,342	4,678,396
Capital Transfers (cash) ^{5/}	192,969	102,120	89,780	78,285
BPA Total	4,628,830	4,606,062	4,652,122	4,756,681
Full-time Equivalents (FTEs)	3,175	3,175	3,175	3,175

The accompanying notes are an integral part of this table.

- 1/ This budget has been prepared in accordance with the Budget Enforcement Act (BEA) of 1990. Under the BEA all BPA budget estimates are treated as mandatory and are not subject to the discretionary caps included in the BEA. These estimates support activities which are legally separate from discretionary activities and accounts. Thus, any changes to BPA estimates cannot be used to affect any other budget categories which have their own legal dollar caps. Because BPA operates within existing legislative authority, BPA is not subject to BEA "pay-as-you-go" test regarding its revision of current-law funding estimates.
- 2/ Original estimates reflect BPA's FY 2011 Congressional Budget Submission. Revised estimates, consistent with BPA's annual near-term funding review process, provide notification to the Administration and Congress of updated capital and expense funding levels for FY 2011.
- 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.
- 4/ 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.
- 5/ This FY 2012 budget includes capital and expense estimates based on preliminary IPR forecasted data for FYs 2011-2016.
- 6/ PFIA for Transmission Services paid by customers.

The cumulative amount of actual advance amortization payments as of the end of FY 2010 is \$2,574 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.

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.

Power Services - Capital

Funding Schedule by Activity

	(accrued expenditures) (dollars in thousands)		
	FY 2010	FY 2011	FY 2012
Power Services - Capital			
Associated Project Costs	148,103	170,252	209,329
Fish & Wildlife	41,106	90,000	50,000
Conservation & Energy Efficiency	57,899	80,000	104,000
Total, Power Services - Capital	247,108	340,252	363,329

Outyear Funding Schedule

	(accrued expenditures) (dollars in thousands)			
	FY 2013	FY 2014	FY 2015	FY 2016
Total, Power Services - Capital	384,807	393,625	427,798	465,707

Description

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, BPA 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 2012 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 and 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 2011.

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 Columbia Basin Fish and Wildlife Program. Sub-basin plans that include prioritized strategies for mitigation actions will help guide project selection that meets both BPA's ESA and Northwest Power Act responsibilities. In order to address the *in lieu* provision of the Northwest Power Act, which prohibits BPA from funding mitigation that other entities are authorized or required to undertake, BPA 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 Opinions with the broad resource protection, mitigation and enhancement objectives of the Columbia River Basin Fish and Wildlife Program (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 the National Oceanic and Atmospheric Administration Fisheries Service (NOAA) and the 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 is expected 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.

These BiOps collectively require the action agencies (Corps, Bureau, and BPA) 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 Columbia Basin Fish and Wildlife Program pursuant to the Northwest Power Act, are the basis for BPA Environment, 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 Northwest Power and Conservation Council's Power Plan. The Council's 6th Power Plan,

finalized in February 2010, recommended that the region target 1,200 aMW of conservation in 2010 to 2014. Bonneville, in collaboration with its Public Power Customers, is responsible for approximately 40 percent (504 aMW) of that target. Bonneville anticipates that between 200 and 300 aMW of this amount will be acquired under its capital conservation acquisition program. Program performance measurements (\$/aMW) indicate that Bonneville is realizing excellent 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 damage.

Detailed Justification

(dollars in thousands)

FY 2010	FY 2011	FY 2012
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Associated Project Costs

148,103 170,252 209,329

BPA 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, and making small capital reimbursements associated with routine maintenance activities. 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.

Corps of Engineers (known projects to date)

FY 2010: 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.

For Bonneville, completed unwatering pump replacement, gantry crane replacement, Powerhouse 1 rehabilitation, DC and preferred AC upgrades and HVAC upgrade, and continued exciter installation, station service upgrades, main unit breakers, headgate refurbishment/replacements, fire protection upgrades, additional crane and deck refurbishments and elevator replacement.

For John Day, completed exciter replacements, and continued fire protection upgrades, protective relay replacements, bridge crane refurbishment, and elevator rehabilitation.

(dollars in thousands)

FY 2010	FY 2011	FY 2012
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For The Dalles, completed the 230 kV transformer replacement, oil/water separator development and heat pump replacement, and continued governor replacement, station service improvements, generator rewinds, spare 230 kV transformer purchase, fire protection design and upgrades, elevator rehabilitation and powerhouse roof replacement.

For the Willamette plants, completed fire protection upgrades for all projects, except Lost Creek, exciter replacements at Cougar, Green Peter, Foster, and Hills Creek, crane refurbishments at Detroit and Lookout Point, stoplogs at Foster, and spillway bulkhead gates refurbishment at Big Cliff and Dexter. Also, continued remote control upgrades, winding replacements, electric reliability upgrades and emergency engine installation at Detroit. Continued protective relay replacements at Cougar, Green Peter, Foster, Hills Creek, Lookout Point and Dexter, turbine runner replacements at Hills Creek and Lookout Point, penstock roller gate repair at Lookout Point and fire protection upgrades at Lost Creek. Continued transformer oil/water separation at Cougar and bridge crane refurbishment at Hills Creek.

For Albeni Falls, continued governor replacement project, hi-lift pump replacement, auxiliary board upgrades, DC system boards and breaker replacement, and intake and spillway crane modernization.

For Libby, completed several elevator refurbishments and continued exciter replacement, HVAC controls and rehabilitation and selective withdrawal crane refurbishment.

For Chief Joseph, continued 480-V upgrade/SQ0 substation replacement, CO2 system replacement, supervisory control console replacement, exciter replacements, protective relay replacements, automatic synchronizer replacement, DC and preferred AC upgrades and turbine replacements.

For McNary, completed bridge and intake crane refurbishments and drainage pump replacement, and continued governor replacements, generator winding replacements, new transformer installations, protective relay replacements, station service rehabilitation, and heat pump replacement.

For Dworshak, completed fire protection upgrades and powerhouse bridge crane refurbishments, and continued emergency notification upgrade and elevator upgrades.

For Lower Snake plants, completed fire protection upgrades at all 4 plants.

Individually, for Ice Harbor, continued units 2 and 3 runner replacements, T6 transformer replacement, tailrace crane rehabilitation, project storage building, emergency notification upgrade and potable water system replacement.

(dollars in thousands)

FY 2010	FY 2011	FY 2012
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For Little Goose, continued diesel generator replacement, exciter replacements, HVAC control upgrade, emergency notification upgrade and wastewater treatment plant upgrade.

For Lower Granite, continued generator winding replacements, diesel generator replacement, exciter replacements, SQ2 replacement intake crane replacement, emergency notification upgrade, elevator refurbishments and spillway emergency diesel generator switch replacement.

For Lower Monumental, continued diesel generator replacement, exciter replacements, SQ2 replacement, unit 1 linkage repair, bridge crane refurbishment, intake crane refurbishment/replacement and emergency notification upgrade.

In addition, new investments will be pursued per the Asset Plan and repairs to failed units will occur as needed to restore availability.

FY 2011: Continue hydro optimization investigations and equipment installations at selected projects through the power plant efficiency improvements project.

For Bonneville, complete exciter installation, station service upgrades and elevator replacement, and continue main unit breakers, headgate refurbishment/replacements, fire protection upgrades, and additional crane and deck refurbishments. Begin protective relay replacements and governor replacements.

For John Day, continue fire protection upgrades, protective relay replacements, bridge crane refurbishment, and elevator rehabilitation.

For The Dalles, complete station service improvements, generator rewinds, spare 230 kV transformer purchase, elevator rehabilitation and powerhouse roof replacement, and continue governor replacement and fire protection design and upgrades.

For the Willamette plants, complete protective relay replacements at Cougar, Green Peter, Foster, Hills Creek, Lookout Point and Dexter, bridge crane refurbishment at Hills Creek and emergency engine installation at Detroit. Also, continue remote control upgrades, winding replacements and electric reliability upgrades at Detroit. Continue transformer oil/water separation at Cougar and Hills Creek. Continue turbine runner replacements at Hills Creek and Lookout Point, penstock roller gate repair at Lookout Point and fire protection upgrades at Lost Creek.

For Albeni Falls, complete governor replacement project and auxiliary board upgrades and continue hi-lift pump replacement, DC system boards and breaker replacement, and intake and spillway crane modernization.

For Libby, complete HVAC controls and rehabilitation and selective withdrawal crane refurbishments, and continue exciter replacement.

(dollars in thousands)

FY 2010	FY 2011	FY 2012
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For Chief Joseph, continue 480-V upgrade/SQ0 substation replacement, CO2 system replacement, supervisory control console replacement, exciter replacements, protective relay

replacements, automatic synchronizer replacement, DC and preferred AC upgrades and turbine replacements.

For McNary, complete new transformer installations and station service governor replacements, and continue generator winding replacements, protective relay replacements, station service rehabilitation, and heat pump replacement. Start fishway exit crane replacement, potable water upgrade and levee drainage pump station upgrades.

For Dworshak, complete emergency notification upgrade and elevator upgrades.

For Ice Harbor, complete tailrace crane rehabilitation project storage building, emergency notification upgrade and potable water system replacement, and continue units 2 and 3 runner replacements and T6 transformer replacement. Start low voltage switchgear SQ board replacements and DC system upgrade.

For Little Goose, complete HVAC control upgrade, emergency notification upgrade and wastewater treatment plant upgrade, and continue diesel generator replacement and exciter replacements. Start thrust bearing shoes, runner and oil coolers replacement.

For Lower Granite, complete generator winding replacements, emergency notification upgrade and elevator refurbishments, and continue diesel generator replacement, exciter replacements, SQ2 replacement, intake crane replacement, and spillway emergency diesel generator switch replacement.

For Lower Monumental, complete bridge crane refurbishment, and emergency notification upgrade, and continue diesel generator replacement, exciter replacements, SQ2 replacement, unit 1 linkage repair, and intake crane refurbishment/replacement.

In addition, new investments will be pursued as set out in the Asset Plan and repairs to failed units will occur as needed to restore availability.

FY 2012: 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 and fire protection upgrades.

(dollars in thousands)

FY 2010	FY 2011	FY 2012
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For John Day, complete fire protection upgrades, protective relay replacements, bridge crane refurbishment, and elevator rehabilitation.

For The Dalles, complete governor replacement and fire protection design and upgrades.

For the Willamette plants, complete remote control upgrades, winding replacements and electric reliability upgrades at Detroit. Continue transformer oil/water separation at Cougar and Hills Creek. Complete turbine runner replacements at Hills Creek and Lookout Point, penstock roller gate repair at Lookout Point, and continue fire protection upgrades at Lost Creek.

For Albeni Falls, complete hi-lift pump replacement, DC system boards and breaker replacement, and intake and spillway crane modernization.

For Libby, complete exciter replacement.

For Chief Joseph, complete 480 kV upgrade/SQ0 substation replacement, CO2 system replacement, supervisory control console replacement, exciter replacements, protective relay replacements and automatic synchronizer replacement, and continue DC and preferred AC upgrades and turbine replacements.

For McNary, complete protective relay replacements, and continue generator winding replacements, station service rehabilitation, heat pump replacement, fishway exit crane replacement, potable water upgrade and levee drainage pump station upgrades.

For Ice Harbor, complete T6 transformer replacement, and continue units 2 and 3 runner replacements, low voltage switchgear SQ board replacements and DC system upgrade.

For Little Goose, complete diesel generator replacement, exciter replacements and thrust bearing shoes, runner and oil coolers replacement.

For Lower Granite, complete diesel generator replacement, exciter replacements, SQ2 replacement, intake crane replacement, and spillway emergency diesel generator switch replacement.

For Lower Monumental, complete diesel generator replacement, exciter replacements, SQ2 replacement, and intake crane refurbishment/replacement and continue unit 1 linkage repair.

In addition, new investments will be pursued as set out in the Asset Plan and repairs to failed units will occur as needed to restore availability.

Bureau of Reclamation (known projects to date)

FY 2010: For Grand Coulee, completed both powerhouse roof replacements. Continued units 1-18 turbine runner replacements, SCADA replacement, 11.95 kV switchgear replacement, 500 kV switchyard relay replacements, air housing cooler replacements, several transformer

(dollars in thousands)

FY 2010	FY 2011	FY 2012
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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, fixed wheel gate chamber

modification, third power plant elevator rehabilitation, construction of a material storage building, and hydro optimization investigations with related equipment installations.

For Hungry Horse, continued SCADA replacement and main unit breaker replacements, and started powerhouse roof replacement.

For the five Upper Snake River plants, started an area microwave system upgrade.

For Palisades, continued turbine runner replacement.

For Chandler, continued exciter replacement and transformer replacement.

For Roza, completed exciter replacements.

For Green Springs, continued transformer replacement. .

FY 2011: For Grand Coulee, complete units 1-18 turbine runner replacements, 11.95 kV switchgear replacement, and fixed wheel gate chamber modification. Continue 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.

For Hungry Horse, complete main unit breaker replacements and powerhouse roof replacement, and continue SCADA replacement.

For the five Upper Snake River plants, continue an area microwave system upgrade.

For Palisades, continue turbine runner replacement.

For Chandler, complete exciter replacement and continue transformer replacement.

For Green Springs, complete transformer replacement.

In addition, new investments will be pursued as set out in the Asset Plan and repairs to failed units will occur as needed to restore availability.

(dollars in thousands)

FY 2010	FY 2011	FY 2012
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FY 2012: For Grand Coulee, complete 500 kV switchyard relay replacements, K10 transformer replacement, third power plant high voltage cable replacement, purchase of another left and right powerhouse spare winding, third power plant elevator rehabilitation and construction of a

material storage building. Continue SCADA replacement, air housing cooler replacements, third power plant transformer replacement, third power plant exciter replacements, 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. Start right power plant station service upgrades and units 19-24 wear ring replacements.

For Hungry Horse, continue SCADA replacement.

For the five Upper Snake River plants, complete the area microwave system upgrade.

For Palisades, continue turbine runner replacement.

For Chandler, complete transformer replacement.

In addition, new investments will be pursued as set out in the Asset Plan and repairs to failed units will occur as needed to restore availability.

Fish and Wildlife	41,106	90,000	50,000
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BPA continues to build budgets based on the suite of mitigation projects it adopted in FY 2007 on recommendations from the Council. BPA reaffirmed many project-specific commitments in FY 2008 through both Biological Opinions and Fish Accords. These decisions were based upon the management objectives and priorities in the Council's Fish and Wildlife Program as well as an integration of ESA responsibilities as described in the NOAA Fisheries and U.S. Fish and Wildlife Service's FCRPS Biological Opinions. Coordination continues among BPA, Council, Federal resource management agencies, states, tribes and others to plan for additional projects to fill specific gaps in BPA's mitigation portfolio through expansion of existing projects and targeted solicitations.

The following fish facilities have been submitted for Congressional approval for FY 2012 as authorized by the Pacific Northwest Electric Power Planning and Conservation 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)): The Kootenai River Native Fish Conservation Aquaculture Program, Lolo Creek Permanent Weir Facility, and Improving Anadromous Fish production on the Warm Springs Reservation. See Proposed Appropriations Language included earlier in this FY 2012 Budget.

BPA intends to continue implementation of the projects listed below for FYs 2010 - 2012. These facilities are based upon the best available science and are regionally important in that they

(dollars in thousands)

FY 2010	FY 2011	FY 2012
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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 Endangered Species Act, 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

FY 2010-2012 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 3-Step process, which includes development of a Master Plan, environmental compliance, and review by the Independent Science Review Panel, among other analysis.

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 BPA funded hatchery genetic management plans and priorities for sequencing implementation are developed.

Although not subject to the Northwest Power Act's section 4(h)(10)(B), 16 U.S.C. § 839b(h)(10)(B), for capital construction projects, Bonneville may include capitalization of investment in some fish and wildlife habitat acquisitions provided 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 projects as defined by the FY 2009 Power Rate Case 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 the 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

(dollars in thousands)

FY 2010	FY 2011	FY 2012
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wetland and riparian habitat and 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.

Anadromous fish supplementation, production and related facilities, and juvenile and adult passage improvement projects that may require capital funds in FY 2012/2011 include the following:

- 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 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

(dollars in thousands)

FY 2010	FY 2011	FY 2012
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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: This project is located at River Mile 39 on the Willamette River and will allow managers to efficiently separate natural origin Upper Willamette Spring Chinook (UWSC) from hatchery reared Chinook. The natural origin Chinook are listed as an endangered species under the Endangered Species Act. The Willamette Biological Opinion identifies the need to exclude hatchery reared salmon from entering habitat that is being reserved only for natural origin (wild) salmon. This project will ensure that only UWSC fish pass the dam and move into some of the most highly productive salmon habitat available in the Willamette River. Oregon Department of Fish and Wildlife is anticipated to complete its final review of preferred alternatives by January 2011, and in coordination with BPA and NOAA Fisheries, to determine whether the fish sorter will remain the preferred alternative to manage the proportion of hatchery fish allowed to spawn in the wild. If construction of the fish sorter proceeds, the completion date is anticipated for the fall of 2013.

- 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 is expected to be 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

(dollars in thousands)

FY 2010	FY 2011	FY 2012
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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 in 2011 with a goal of receiving a final recommendation to initiate environmental planning and design development in late 2011. Final design and construction approval could follow in late 2011 with possible construction starting in 2012.

- 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 (IDFG) 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: BPA 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

(dollars in thousands)

FY 2010	FY 2011	FY 2012
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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. BPA 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, BPA 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, BPA 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 BPA 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 BPA 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. The work at Castile and Klickitat Hatchery is scheduled for completion fall of 2010, with completion of Lyle Falls construction anticipated in for winter 2011. 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

(dollars in thousands)

FY 2010	FY 2011	FY 2012
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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 FY2011. 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 in FY 2013.

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

(dollars in thousands)

FY 2010	FY 2011	FY 2012
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- 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 and Energy Efficiency **57,899** **80,000** **104,000**

BPA'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.

BPA'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, BPA's conservation targets have increased from about 280 aMW under the Northwest Power and Conservation Council's 5th Power Plan (2005-09) to approximately 504 aMW under its 6th Power Plan (2010-14), the Northwest Power and Conservation Council's 6th Power Plan calls for the region to acquire approximately 1,200 aMW of conservation in 2010 to 2014. 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, will not count towards the target beginning in 2012. The shift away from this particularly low-cost measure increases overall conservation costs. That cost increase is reflected in these budgets.

Total Power Services – Capital

247,108 **340,252** **363,329**

Explanation of Funding Changes

FY 2012 vs. FY 2010 (\$000)

Associated Project Costs

- Reflects a reshaping of funding requirements based on the need to maintain a minimum level of generation each year. +61,226

Fish and Wildlife

- Reflects a reshaping of funding to implement Biological Opinions, Fish Accord commitments, and Columbia Basin Fish and Wildlife Program activities. +8,894

Conservation and Energy Efficiency

- Reflects funding necessary to achieve the higher conservation targets in the Council's 6th Power Plan. +46,101

Total Funding Change, Power Services - Capital

+116,221

Transmission Services – Capital

Funding Schedule by Activity

	(accrued expenditures)		
	(dollars in thousands)		
	FY 2010	FY 2011	FY 2012
Transmission Services - Capital			
Main Grid	113,944	136,846	259,565
Area & Customer Services	18,157	5,094	9,550
Upgrades & Additions	78,548	96,492	123,041
System Replacements	93,871	122,080	134,526
Projects Funded in Advance	158,726	113,224	52,470
Total, Transmission Services - Capital	463,246	473,736	579,152

Outyear Funding Schedule

	(accrued expenditures)			
	(dollars in thousands)			
	FY 2013	FY 2014	FY 2015	FY 2016
Total, Transmission Services - Capital	630,218	604,546	461,897	397,897

Description

Transmission Services (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 BPA transmission system, resulting in reliable service to northwest generators and transmission customers. The BPA 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. BPA 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 BPA 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 BPA transmission grid. In 2007, BPA 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 10,000 MW in additional wind project interconnection requests, many interconnecting in the 2010 through 2015 timeframe. BPA added 837 MW in 2010 and expects 1,370 MW in 2011. BPA plans a major construction phase in 2011-2013, building several new large substations to meet the interconnection requests. Current projections exceed 1,000 additional MW to interconnect in each of the years 2012 through 2015. Also in the interconnection queue is approximately 1,000 MW of natural gas, bio-mass and geothermal fueled generation proposed for connection between 2012 and 2015. 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. Export to California could add another 2,000-3,000 MW during the same time period.

In June 2008, Bonneville's first Network Open Season (NOS) received 153 requests from 28 customers for 6,410 MW of new service, about three-fourths for wind energy integration. 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 already underway and BPA is currently conducting NEPA review of the other three projects. If all four projects are constructed they will provide almost 3,881 MW of new transmission service.

BPA'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. BPA is currently conducting cluster studies for the latest NOS. These requests total 3,759 megawatts, of which 2,993 megawatts is wind.

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. 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 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: arrestor, 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 Transmission Service 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.

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 BPA cost of this relocation is \$48.7 million.

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 BPA's facilities and provide video surveillance and monitoring capabilities.

In order to eliminate leases on multiple, separately located facilities, and meet the evolving needs of Bonneville's Transmission staff, BPA has begun preliminary study and design of a new Transmission Services Facility to be located on BPA'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 BPA’s customers and regional stakeholders.

Detailed Justification

(dollars in thousands)

FY 2010	FY 2011	FY 2012
113,944	136,846	259,565

Main Grid

Bonneville’s strategic objectives for Main Grid projects are to provide voltage support; provide a reliable transmission system for open access, per NERC criteria; provide for relief of transmission system congestion; and assure compliance with the NERC and Western Electricity Coordinating Council (WECC) reliability standards, and with BPA reliability criteria and guidelines. During this budgeting period, projects are planned that will provide voltage support to major load areas that are primarily west of the Cascade Mountains, and transmission reinforcements to load centers in central Oregon, central Washington, and the Willamette Valley, and provide for transmission access for new generation projects to the load center. Reinforcements along the Interstate-5 corridor are also planned.

- FY 2010: (1) Continued environmental analysis and preliminary engineering design for the I-5 Corridor Reinforcement project; (2) Continued construction of the Libby-Troy 115 kV transmission line upgrade; (3) Continued construction of the Olympic Peninsula Reinforcement project; (4) West of McNary Reinforcements Group 1 (WOMR 1)- completed design, procurement of materials, and continued construction; (5) West of McNary Reinforcements Group 2 (WOMR 2)- continued environmental review and preliminary design; (6) Completed the design and began construction for the Redmond 230/115 kV Bank #2; (7) Continued planning studies to identify needed infrastructure additions; (8) Central Ferry- Lower Monumental 500 kV Reinforcement (formerly Little Goose Area Reinforcement)- continued environmental review and preliminary design; (9) Continued planning studies and design to identify projects driven by NERC/ WECC Reliability standards; (10) Continued planning studies to identify system reactive needs to mitigate unacceptable low or high voltage problems and other system additions; (11) Continued planning studies to relieve transmission system congestion and for integrating potential new generation facilities; (12) Continued planning studies and design for projects related to the NOS.

- FY 2011: (1) Continue environmental analysis and continue design for the I-5 Corridor Reinforcement project (2) West of McNary Reinforcements Group 1 (WOMR 1)-continue construction; (3) West of McNary Reinforcements Group 2 (WOMR 2)- complete environmental review and preliminary design; (4) Complete construction for the Redmond 230/115 kV Bank #2; (5) Central Ferry- Lower Monumental 500 kV Reinforcement (formerly Little Goose Area Reinforcement)- complete environmental review and begin preliminary design; (6) Begin the planning and design to add a second 500/230 kV transformer at Ponderosa substation; (7) Continue planning studies to identify needed infrastructure additions; (8) Continue planning studies and design to identify projects driven by NERC/ WECC reliability standards; (9) Continue planning studies to

(dollars in thousands)

FY 2010	FY 2011	FY 2012
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identify system reactive needs to mitigate unacceptable low or high voltage problems and other system additions; (10) Continue planning studies to relieve transmission system congestion and for integrating potential new generation facilities; (11) Continue planning studies and design for projects related to the NOS.

- FY 2012: (1) Continue environmental analysis and continue design for the I-5 Corridor Reinforcement project; (2) West of McNary Reinforcements Group 1 (WOMR 1)- complete construction; (3) West of McNary Reinforcements Group 2 (WOMR 2)- complete the design and begin construction; (4) Central Ferry- Lower Monumental 500 kV Reinforcement (formerly Little Goose Area Reinforcement)- complete design and begin construction; (5) Continue the design of the addition of a 2nd 500/230 kV transformer at Ponderosa substation; (6) Continue planning studies to identify needed infrastructure additions; (7) Continue planning studies and design to identify projects driven by NERC/ WECC reliability standards; (8) Continue planning studies to identify system reactive needs to mitigate unacceptable low or high voltage problems and other system additions; (9) Continue planning studies to relieve transmission system congestion and for integrating potential new generation facilities; (10) Continue planning studies and design for projects related to the NOS.

Area & Customer Services

18,157

5,094

9,550

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

- FY 2010: (1) Completed construction of the Static Vars Compensator at Rogue Substation; (2) Continued the project hold while continuing negotiations and agreements between the parties as well as study of the project scope of Hooper Springs substation; (3) Completed construction on the City of Centralia Reinforcement Project; (4) Continued preliminary engineering and design for miscellaneous facilities required to meet contractual obligations and maintain reliable service for BPA’s service area.
- FY 2011: (1) Finalize the scope and agreements between the parties and begin the design of Hooper Springs substation; (2) Begin design and construction of the Madison Shunt Capacitor Addition; (3) Continue preliminary engineering and design for miscellaneous facilities required to meet contractual obligations and maintain reliable service for BPA’s service area.
- FY 2012: (1) Complete the design and begin the construction of Hooper Springs substation; (2) Complete construction of the Madison Shunt Capacitor Addition; (3) Continue preliminary engineering and design for miscellaneous facilities required to meet contractual obligations and maintain reliable service for BPA’s service area.

(dollars in thousands)

FY 2010	FY 2011	FY 2012
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Upgrades & Additions

78,548

96,492

123,041

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, BPA 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.

- FY 2010: (1) Negotiated and drafted agreement(s) for joint use fiber project from SnoKing to Bellingham; (2) Continued planning for upgrading two miles of fiber between Bonneville Power House and Bonneville Control House; (3) Continued planning, design, material acquisition and construction of special remedial action control schemes required for interconnecting new generation projects and mitigating immediate constrained paths; (4) Continued planning, design, material acquisition and construction of various system additions and upgrades necessary to maintain a reliable system for BPA’s service area; (5) Continued construction of secondary fiber related projects and digital radio system upgrades to improve the operational telecommunication system; (6) Continued design and began material procurement and construction to upgrade the main fiber optic backbone system (#KC and #NC systems); (7) Began planning and preliminary design for VHF Radio System upgrade; (8) Began planning and studies associated with a new Synchrophasor project; (9) Continued planning and technical studies for upgrade of the Pacific DC Intertie from 3100 to 3800 MW.

- FY 2011: (1) Complete joint use fiber project from SnoKing to Bellingham; (2) Begin design of upgrading 2 miles of fiber between Bonneville Power House and Bonneville Control House; (3) Continue planning, design, material acquisition and construction of special remedial action control schemes required for interconnecting new generation projects and mitigating immediate constrained paths; (4) Continue planning, design, material acquisition and construction of various system additions and upgrades necessary to maintain a reliable system for BPA’s service area; (5) Continue construction of secondary fiber related projects and digital radio system upgrades to improve the operational telecommunication system; (6) Continue design and begin material procurement and construction to upgrade the main fiber optic backbone system (#KC and #NC systems); (7) Continue design and construction of the VHF Radio System upgrade; (8) Begin design of Synchrophasor project as well as construction at some of the multiple

(dollars in thousands)

FY 2010	FY 2011	FY 2012
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sites involved (9) Procurement of critical spare transformers; (10) Begin design and equipment acquisition for upgrading the Pacific DC Intertie to 3800 MW; (11) Begin the design for upgrading the Ross-Schultz fiber circuit; (12) Begin the design for upgrading the Bell-Boundary #DC SONET ring; (13) Possibly begin the design of an upgrade to the Celilo DC system depending on the outcome of the replacement/upgrade study being conducted in current replacement efforts.

- FY 2012: (1) Continue upgrading 2 miles of fiber between Bonneville Power House and Bonneville Control House; (2) Continue planning, design, material acquisition and construction of special remedial action control schemes required for interconnecting new generation projects and mitigating immediate constrained paths; (3) Continue planning, design, material acquisition and construction of various system additions and upgrades necessary to maintain a reliable system for BPA's service area; (4) Continue construction of secondary fiber related projects and digital radio system upgrades to improve the operational telecommunication system; (5) Continue material procurement and construction to upgrade the main fiber optic backbone system (#KC and #NC systems); (6) Continue design and construction of the VHF Radio System upgrade; (7) Complete design and continue construction at multiple sites of the Synchrophasor project; (8) Continue procurement and begin construction of the upgrading of the Pacific DC Intertie to 3800 MW project; (9) Continue the design of the Ross-Schultz fiber circuit upgrade and begin material procurement; (10) Continue design and begin material procurement for the Bell-Boundary #DC SONET ring upgrade; (11) Possibly continue design and begin procurement of an upgrade to the Celilo DC system depending on the outcome of the replacement/upgrade study being conducted in current replacement efforts.

System Replacements

93,871

122,080

134,526

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.

Non-Electric Replacements:

- FY 2010: (1) Completed non-electric replacements as necessary; (2) Continued the design, material acquisition, and construction for the Access Road Program capital component; (3) Completed a NEPA review and feasibility study for construction of a Transmission Services Facility; (4) Continued design and construction of capital improvements for identified existing facilities.
- FY 2011: (1) Continue non-electric replacements as necessary; (2) Continue the design,

(dollars in thousands)

FY 2010	FY 2011	FY 2012
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material acquisition, and construction for the Access Road Program capital component; (3) Begin design and construction of the Transmission Services Facility based on results of the review and feasibility study; (4) Continue design and construction of capital improvements for identified existing facilities.

- FY 2012: (1) Continue non-electric replacements as necessary; (2) Continue the design, material acquisition, and construction for the Access Road Program capital component; (3) Continue construction of the Transmission Services Facility; (4) Continue design and construction of capital improvements for identified existing facilities.

Electric Replacements:

- FY 2010: (1) 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 included relays, annunciators, oscillographs, metering and various types of communication related equipment replacing and migrating analog to digital technology and SCADA equipment; (2) Continued replacement of under-rated and high maintenance substation equipment; (3) Continued replacing spacer dampers on various 500 kV lines; (4) Continued replacing critical, operational tools and marketing business systems at the Dittmer and Munro Control Centers; (5) Continued replacing deteriorating wood pole transmission line structures, spacer dampers and insulators with NCI; (6) Studied the replacement of Celilo converter control systems and smoothing reactors versus an upgrade to the DC system.
- FY 2011: (1) 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; (2) Continue replacement of under-rated and high maintenance substation equipment; (3) Continue replacing spacer dampers on various 500 kV lines; (4) Continue replacing critical, operational tools and marketing business systems at the Dittmer and Munro Control Centers; (5) Continue replacing deteriorating wood pole transmission line structures, spacer dampers and insulators with NCI; (6) Continue the study of the replacement of Celilo converter control systems and smoothing reactors versus doing an upgrade to the DC system and begin the design of either the replacement of the converter control systems and smoothing reactors or an upgrade to the DC system. If the decision is to replace, then begin design of the replacement; (7) Initiate replacement of aging and defective converter transformers if the decision is to replace rather than upgrade.
- FY 2012: (1) 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,

(dollars in thousands)

FY 2010	FY 2011	FY 2012
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metering and various types of communication related equipment replacing and migrating analog to digital technology and SCADA equipment; (2) Continue replacement of under-rated and high maintenance substation equipment; (3) Continue replacing spacer dampers on various 500 kV lines; (4) Continue replacing critical, operational tools and marketing business systems at the Dittmer and Munro Control Centers; (5) Continue replacing deteriorating wood pole transmission line structures, spacer dampers and insulators with NCI; (6) Continue replacement of Celilo converter control systems and smoothing reactors; if the decision is to replace rather than upgrade; (7) Continue replacement of aging and defective converter transformers if the decision is to replace rather than upgrade.

Projects Funded in Advance

158,726 113,224 52,470

This category includes those facilities and/or equipment where BPA 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 Commercial Spectrum Enhancement Act (CSEA).

- FY 2010: (1) Continued to integrate various new generation and line/load projects into BPA transmission grid based on requests placed and processed in accordance with transmission tariff; (2) Continued planning studies to identify system impacts and needs regarding proposed new generation projects; (3) Performed environmental work and preliminary engineering for several large wind generation interconnection substations; (4) Completed environmental cleanup and other work necessary for the sale of BPA facilities; (5) Completed other projects as agreed to with customers; (6) Continued the design and construction for various radio replacements at accessible sites associated with the CSEA; (7) Continued construction of the California-Oregon Intertie improvement project.
- FY 2011: (1) Continue to integrate various new generation and line/load projects into BPA transmission grid based on requests placed and processed in accordance with transmission tariff; (2) Continue planning studies to identify system impacts and needs regarding proposed new generation projects; (3) Engineer and begin construction of several large wind generation interconnection substations; (4) Complete environmental cleanup and other work necessary for the sale of BPA facilities; (5) Complete other projects as agreed to with customers; (6) Continue the design and construction for various radio replacements at accessible sites associated with the CSEA; (7) Complete construction of the California-Oregon Intertie improvement project.
- FY 2012: (1) Continue to integrate various new generation and line/load projects into BPA transmission grid based on requests placed and processed in accordance with transmission tariff; (2) Continue planning studies to identify system impacts and needs regarding proposed new generation projects; (3) Engineer and begin construction of

(dollars in thousands)

FY 2010	FY 2011	FY 2012
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several large wind generation interconnection substations; (4) Complete environmental cleanup and other work necessary for the sale of BPA facilities; (5) Complete other projects as agreed to with customers; (6) Continue the design and construction for various radio replacements at accessible sites associated with the CSEA.

Total, Transmission Services – Capital

463,246

473,736

579,152

Explanation of Funding Changes

FY 2012 vs. FY 2010 (\$000)

Main Grid

- Reflects increase to accommodate new projects associated with renewable and other resource integration and NERC compliance. +145,621

Area & Customer Services

- Reflects decrease in the number of anticipated new customer service projects. -8,607

Upgrades & Additions

- Reflects increase on both system wide controls schemes, fiber projects and communications upgrades, improvements and additions to other transmission facilities, and a potential upgrade to the Celilo DC Control System. +44,493

System Replacements

- Reflects continuing focus on BPA's Transmission Asset Management Sustain Program. +40,655

Projects Funded in Advance

- Reflects decrease due to anticipated completion of California-Oregon Intertie project in FY11 and continued focus of customer funded projects related to generation integration, much of which is in support of new wind generation integration. -106,256

Total Funding Change, Transmission Services - Capital +115,906

Capital IT & Equipment/Capitalized Bond Premium

Funding Schedule by Activity

	(accrued expenditures) (dollars in thousands)		
	FY 2010	FY 2011	FY 2012
Capital IT & Equipment/Capitalized Bond Premium			
Capital Information Technologies (IT) & Equipment	51,964	49,615	45,185
Capitalized Bond Premium	0	2,000	2,000
Total, Capital IT & Equipment/Capitalized Bond Premium	51,964	51,615	47,185

Outyear Funding Schedule

	(accrued expenditures) (dollars in thousands)			
	FY 2013	FY 2014	FY 2015	FY 2016
Total, Capital IT & Equipment/Capitalized Bond Premium	43,904	43,175	54,108	44,160

Description

Capital Information Technologies 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 BPA’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 include asset management, emergency management, crisis management and continuity of operations.

BPA continues to move its IT infrastructure to a more efficient architecture. This FY 2012 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 2012 Budget, under Capital Information Technologies and Equipment include all IT functions within the agency except TS grid operations. See the Capital Program – Transmission Services section of this budget for additional discussion of transmission-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 are capitalized. Historically, Bonneville generally has chosen to finance capitalized bond premiums with bonds issued to the Treasury, as was envisioned in the Transmission System Act.

Detailed Justification

(dollars in thousands)

	FY 2010	FY 2011	FY 2012
Capital Information Technology/Equipment	51,964	49,615	45,185

Includes enhancements to Bonneville’s information technology processes to provide cost effective efficiencies for secure, timely and accurate information. Continue 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. Acquire capital office furniture and equipment, capital automated data processing (ADP) based administrative telecommunications equipment, ADP equipment (hardware), and support capital software development for certain Bonneville programs.

Capitalized Bond Premium.	0	2,000	2,000
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- Continue to assess financial market and when cost-effective, refinance available bonds as prudent.

Total, Capital IT & Equipment/Capitalized Bond Premium	51,964	51,615	47,185
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Explanation of Funding Changes

FY 2012 vs. FY 2010 (\$000)

Capital Information Technology & Equipment

- Reflects ongoing emphasis on BPA business resiliency efforts. -6,779

Capitalized Bond Premium

- Reflects possible refinancings of outstanding Federal bonds. +2,000

Total Funding Change, Capital Equipment/Capital Bond Premium	-4,779
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Power Services - Operating Expense

Funding Schedule by Activity

	(accrued expenditures) (dollars in thousands)		
	FY 2010	FY 2011	FY 2012
Power Services - Operating Expenses			
Production	1,418,173	1,508,199	1,491,625
Associated Projects Costs	314,416	334,777	378,400
Fish & Wildlife	199,590	236,000	250,394
Residential Exchange Program	180,453	188,987	188,987
NW Power & Conservation Council	9,305	9,934	10,356
Conservation and Energy Efficiency	76,497	91,989	90,542
Total, Power Services - Operating Expenses	2,198,434	2,369,886	2,410,304

Outyear Funding Schedule

	(accrued expenditures) (dollars in thousands)			
	FY 2013	FY 2014	FY 2015	FY 2016
Total, Power Services - Operating Expense	2,543,265	2,555,980	2,636,849	2,718,680

Description

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, electric utility marketing of power, and oversight of hydro and nuclear projects. BPA develops products and services to meet the needs of Bonneville customers and stakeholders, and acquires resources as needed. This FY 2012 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 FY2010, BPA completed a long-term Resource Program to guide potential future resource acquisitions needed to meet customer loads. In the event that BPA does acquire a resource, BPA will modify its budget to reflect the acquisition.

Bonneville's Power Transacting Risk Management Policy permits the use of power financial instruments to hedge Bonneville's exposure to market price risk and certain index sales contract provisions.

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 Lower Snake River Compensation Plan (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 Fish and Wildlife Program (Program) developed pursuant to Section 4(h) of the Northwest Power Act. Through the Program BPA 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 Program.

Bonneville implements these measures addressed to salmon and steelhead protection required under the ESA as part of the most recent BiOps issued by the USFWS and by NOAA Fisheries:

- 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 is expected in 2011.
- In February 2006, USFWS issued a new BiOp for Libby Dam for the Kootenai River white sturgeon and bulltrout.
- 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.

The BiOps require the FCRPS Action Agencies to implement hydro, habitat, hatchery, and research actions in the Columbia River Basin that address impacts of the Federal hydrosystem on ESA-listed fish to ensure that operation of the FCRPS does not jeopardize the continued existence of listed species or adversely modify their designated critical habitat.

In addition, in 2008, the FCRPS Action Agencies signed agreements, the 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 support the 2008 and 2010 Supplemental BiOp and provide firm commitments to mitigation actions and secure funding for the next 10 years. BPA also signed a Willamette Wildlife Agreement with the State of Oregon in 2010 settling mitigation responsibilities for all wildlife impacts from the Federal dams in the Willamette Basin.

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 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 Fish and Wildlife Program. Sub-basin plans that include prioritized strategies for mitigation actions will help guide project selection that meets both BPA's ESA and Northwest Power Act responsibilities. In order to address the *in lieu* provision of the Northwest Power Act, which prohibits BPA from funding mitigation that other entities are authorized or required to undertake, BPA 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, BPA established a cost sharing 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 BPA on U.S. Forest Service lands. BPA 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 Independent Science 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 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 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. The region's six Investor Owned Utilities have been the most active utilities participating in the REP. Payments made under the REP are based on the difference between BPA'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 Average System Cost Methodology (ASCM) and established in a public process that occurs prior to a rate case. Then, the subsequent rate case uses those ASCs and determines the utility-specific PF Exchange rates. Payments are made monthly based on the actual exchange loads.

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) 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.

BPA 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.

Detailed Justification

	(dollars in thousands)		
	FY 2010	FY 2011	FY 2012
Production	1,418,173	1,508,199	1,491,625

- **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 PS’s 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.
- **Trojan:** Decommissioning activities are complete and the Trojan operating license has been terminated by the NRC. BPA’s 30 percent share of the operation and maintenance costs for the Independent Spent Fuel Storage Installation facility continues.
- **Columbia Generating Station (formerly WNP-2):** Continue to acquire full capability of Columbia Generating Station (CGS). CGS is on a 24-month fuel and outage cycle. A maintenance and refueling outage is planned for the spring of FY 2011.

(dollars in thousands)

FY 2010	FY 2011	FY 2012
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Generation and Oversight:

FY 2010: 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.

FY 2011: 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.

FY 2012: 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.

Associated Project Costs	314,416	334,777	378,400
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- 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 BPA's strategic business objectives.
- Bureau of Reclamation:
FY 2010: Continued direct funding Reclamation O&M power activities.
FY 2011: Continue direct funding Reclamation O&M power activities.
FY 2012: Continue direct funding Reclamation O&M power activities.
- Corps of Engineers:
FY 2010: Continued direct funding Corps O&M power activities.
FY 2011: Continue direct funding Corps O&M power activities.
FY 2012: Continue direct funding Corps O&M power activities.

(dollars in thousands)

FY 2010	FY 2011	FY 2012
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Fish and Wildlife

199,590

236,000

250,394

- Specific project solicitation recommendations were made by the Council in late 2006 followed by BPA review and funding decisions completed in early 2007 for the period FY 2007 through 2009. BPA, in coordination with the Council, reviews all on-going projects and reaffirms project-specific funding commitments annually, including projects under the Biological Opinions, Fish Accords, and Washington Estuary Agreement. Bonneville bases its funding decisions on the management objectives and priorities in the 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 U.S. Fish and Wildlife Service’s Biological Opinions. BPA’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 BPA, Council, Federal resource management agencies, states, tribes and others to plan for additional projects to fill the few specific gaps remaining in BPA’s mitigation portfolio through targeted solicitations.
- 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 Agreement. Prioritize projects that address the factors that limit mitigation success as identified in the Sub-basin Plans and that fulfill BPA’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.
- 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 Program, and the Fish Accords.
- 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 BPA’s Capitalization Policy will be funded under the capital portion of Bonneville’s Fish and Wildlife budget.

(dollars in thousands)

FY 2010	FY 2011	FY 2012
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- **Wildlife:** Use existing Bonneville policies to continue the current effort to mitigate wildlife in a manner consistent with Council's 2009 Fish and Wildlife 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 BPA's Capitalization Policy will be funded under the capital portion of Bonneville's Fish and Wildlife budget and credited according to BPA's crediting policy and applicable mitigation contracts.
- **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. BPA seeks cost effective ways to implement the Program, including the Biological Opinions 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.

Residential Exchange Program	180,453	188,987	188,987
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- Includes forecasted REP costs for FYs 2009-2011.

Northwest Power and Conservation Council	9,305	9,934	10,356
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- 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.

Conservation and Energy Efficiency	76,497	91,989	90,542
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- 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.

Total, Power Services – Operating Expense	2,198,434	2,369,886	2,410,304
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Explanation of Funding Changes

	FY 2012 vs. FY 2010 (\$000)
Production	
■ Primarily reflects increased debt service and decreased power purchases.	+73,452
Associated Project Costs	
■ Reflects changes to security, biological opinion requirements, non-routine extraordinary maintenance, WECC/NERC compliance activities, and improvements, replacements, and minor additions at the projects.	+63,984
Fish and Wildlife	
■ Reflects funding associated with Biological Opinions, Fish Accord commitments and Northwest Power Act activities.	+50,804
Residential Exchange	
■ No change	+8,534
Northwest Power and Conservation Council	
■ Small increase reflects continuing Council program activities.	+1,051
Conservation and Energy Efficiency	
■ Reflects ramp up of Energy Efficiency program.	+14,045
Total Funding Change, Power Services - Operating Expense	+211,870

Transmission Services - Operating Expense

Funding Schedule by Activity

(accrued expenditures)			
(dollars in thousands)			
	FY 2010	FY 2011	FY 2012
Transmission Services - Operating Expense			
Engineering	32,851	57,096	58,585
Operations	136,096	127,668	130,169
Maintenance	164,735	206,502	212,917
Total, Transmission Services - Operating Expense	333,682	391,266	401,671

Outyear Funding Schedule

(accrued expenditures)				
(dollars in thousands)				
	FY 2013	FY 2014	FY 2015	FY 2016
Total, Transmission Services - Operating Expense	410,065	423,307	434,263	444,535

Description

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.

Detailed Justification

(dollars in thousands)			
	FY 2010	FY 2011	FY 2012
Engineering	32,851	57,096	58,585

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.

(dollars in thousands)

FY 2010	FY 2011	FY 2012
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- **Asset Management:** Continue deploying the Asset Management approach to sustain the existing assets and expanding the system to meet Agency objectives. Prepare for certification to Publicly Available Specifications (PAS)-55 over three to five years.
- **R&D:** Conduct research focused on technologies related to business challenges BPA faces including reliability, energy efficiency, and integration of renewable energy resources. Technologies of interest are identified in BPA's Technology Roadmaps. A portfolio of research is selected every year through BPA's Portfolio Decision Framework.
- **Technical Support:** Provide technical support activities, such as transmission system planning and studies to optimize portions of the system. Provide support for non-wires solutions studies and pilot projects.
- **Capital-to-Expense Adjustments:** Conduct annual analysis of Bonneville's outstanding capital work orders to assess whether they should be expensed. As obsolete inventory is identified and disposed of, it is expensed.
- **Regulatory Fees:** Western Electricity Coordinating Council (WECC) dues and loop flow payments, DOE licensing costs for radio frequencies and North American Electric Reliability Corporation (NERC) Critical Infrastructure Protection CIP compliance program costs. Includes membership in Columbia Grid.
- **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 BPA's strategic objectives. Additionally, these activities generally contribute to more efficient or reliable construction of the Federal transmission system or otherwise enhance electric service to the region.
- **Leased and Other Costs:** Includes leases 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 BPA 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).

(dollars in thousands)

FY 2010	FY 2011	FY 2012
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Operations **136,096** **127,668** **130,169**

- FY 2010: Continued to operate within parameters of regional transmission authorities. Supported new compliance activities related to the reliability of the transmission system including cyber security. Developed facilities, policies, procedures and implementing systems to support the integration of high levels of wind generation into the transmission grid. Prepared for increased complexity of power system operations and dispatching including congestion management and outage scheduling as well as increased complexities in transmission scheduling. Addressed succession planning issues across key functions. Continued development and implementation of business systems and tools.
- FY 2011: Continue to operate within parameters of regional transmission authorities. Continue support of increased compliance activities related to the reliability of the transmission system including cyber security. Continue developing facilities, policies, procedures and implementing systems to support the integration of high levels of wind generation into the transmission grid. 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. Continue to address succession planning issues across key functions. Continue development and implementation of business systems and tools.
- FY 2012: Continue to operate within parameters of regional transmission authorities. Continue support of compliance activities related to the reliability of the transmission system including cyber security. Further expand facilities and refine policies and procedures and implementing systems to support the integration of high levels of wind generation into the transmission grid. 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. Continue to address succession planning issues across key functions. Continue development and implementation of business systems and tools.
- 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.

(dollars in thousands)

FY 2010	FY 2011	FY 2012
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- **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 Transmission Services. 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 Transmission Services. Support cost management by effective reporting and analysis of current expenditures. Ensure official budget submittals reflect current management financial strategies and adequately fund transmission programs.
- **Transmission Scheduling:** Provide open access to the BPA 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 BPA transmission tariff. Update practices, policies and systems to accommodate large amounts of wind generation.

Maintenance	164,735	206,502	212,917
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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. In addition BPA 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).

- **FY 2010:** Continued to refine Reliability Centered Maintenance (RCM) practices in all of Bonneville's O&M regions. Implemented processes for monitoring and tracking compliance activities related to the reliability of the transmission system. Continued to improve performance meeting System Average Interruption Frequency Index (SAIFI) and System Average Interruption Duration Index (SAIDI) targets. Continued efforts to

(dollars in thousands)

FY 2010	FY 2011	FY 2012
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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. Continued to improve availability performance by utilizing more efficient and cost-effective maintenance work practices and outage coordination. Used recruitment incentives to ensure succession of the current work force and remain competitive as an employer in the utility industry. Assured a safe work environment through safety awareness and improved work practices. Increased outage scheduling planning to increase customer satisfaction. Continued high levels of vegetation management and increased access road work to provide reliable access to facilities and ensure environmental compliance. Deployed new technologies such as LiDAR to reliably and cost effectively manage vegetation.

- FY 2011: Continue to refine RCM practices and deploy asset management in all of Bonneville's O&M districts. Continue refining processes and procedures for monitoring and tracking compliance activities related to the reliability of the transmission system. Continue to improve performance to meet SAIFI and SAIDI targets as explained above. Continue to improve system availability performance through new maintenance procedures and work practices. Develop work practices and procedures for implementation of a new specialty crew using bare-handing practices for maintenance of high-voltage transmission lines. Continue increased emphasis on replacement of line hardware (life extension programs for insulators, connectors, spacer dampers & fiber optic cable hardware). Continue to prepare for the impact of an expected high attrition rate among Bonneville's aging workforce by recruiting apprentices and replacements for critical minimum crew size workload positions. Increase outage scheduling and coordination planning to increase customer satisfaction and system availability. Increase emphasis on non-electric facilities to compensate for years of deferral. 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. Continue improving environmental stewardship.
- FY 2012: Continue to improve performance to meet SAIFI and SAIDI targets as explained above. Continue refining processes and procedures for monitoring and tracking compliance activities related to the reliability of the transmission system. Continue to improve system availability performance through new maintenance procedures and work practices. Continue to develop and implement work practices and procedures for implementation of a new specialty crew using bare-handing live line practices for maintenance of high-voltage transmission lines. Continue increased emphasis on replacement of line hardware (life extension programs for insulators, connectors, dampers & fiber optic cable hardware). Continue to prepare for the impact of an expected high attrition rate among Bonneville's aging workforce by recruiting apprentices and replacements for critical minimum crew size workload positions. Increase outage-scheduling planning and coordination to increase customer satisfaction and system availability. Maintain vegetation management levels to ensure system reliability. Continue access road work to provide reliable access to facilities and ensure environmental compliance. Continue improving environmental stewardship.
- Transmission Line Maintenance: Maintain and repair 15,238 circuit miles (24,523 km) of high voltage transmission lines, of which over 7,617 km (4,734 circuit miles) are 500 kV

(dollars in thousands)

FY 2010	FY 2011	FY 2012
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transmission EHV (extra-high voltage). Maintenance of EHM 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 cost effectively manage vegetation.
- **Substation Maintenance:** Maintain and repair the transmission system power equipment located in Bonneville’s 259 substations. Work includes inspections, diagnostic testing and predictive and condition based maintenance.
- **System Protection Maintenance:** Maintain relaying metering and remedial action scheme equipment used to control and protect the electrical transmission system and to meter energy transfers for the purpose of revenue billing. Additionally, field-engineering services provide technical advice and assure the correct operation of power system relaying and special control systems used to support interregional energy transmission capabilities.
- **Power System Control Maintenance:** Test, repair, and provide field engineering support of Bonneville’s highly complex equipment, communications, and control systems, including seven major microwave systems, fiber optic systems, and other critical communications and control equipment that support the power system.
- **Non-Electric Plant Maintenance:** Maintain and manage Bonneville’s non-electric facilities. 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.

Total, Transmission Services - Operating Expense	333,682	391,266	401,671
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Explanation of Funding Changes

FY 2012 vs. FY 2010 (\$000)

Engineering

- Reflects emphasis on system reliability improvements, research and development, and an increase in lease payments. +25,734

Operations

- Reflects reshaping of reliability compliance activities, wind integration activities, security, and control center systems support. -5,927

Maintenance

- Primarily reflects implementation of the facilities asset management plans, implementation of a new bare-handing 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. +48,182

Total Funding Change, Transmission Services – Operating Expense

+ 67,989

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

Funding Schedule by Activity

	(accrued expenditures) (dollars in thousands)		
	FY 2010	FY 2011	FY 2012
Interest, Pension and Post-retirement Benefits			
BPA Bond Interest (Net)	106,452	75,952	107,694
BPA Appropriation Interest	34,658	29,215	23,087
Corps of Engineers Appropriation Interest	163,283	158,059	160,729
Lower Snake River Comp Plan Interest	16,520	16,433	16,433
Bureau of Reclamation Appropriation Interest	43,437	43,371	43,371
Subtotal, Interest – Operating Expense	364,350	323,030	351,314
Additional Pension and Post-retirement Benefits	31,000	31,000	32,000
Total, Interest, Pension and Post-retirement Benefits	395,350	354,030	383,314

Outyear Funding Schedule

	(accrued expenditures) (dollars in thousands)			
	FY 2013	FY 2014	FY 2015	FY 2016
Total, Interest, Pension and Post-retirement Benefits	423,602	483,309	547,426	607,417

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 System 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 System 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 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

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

FY 2012 Congressional Budget

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 Bonneville Appropriations Refinancing Act to Treasury for its review and approval. Treasury approved the implementation calculations in July 1997. The 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 has been paying its unfunded liability of the CSRS and potentially the FERS and post-retirement benefits into the General Fund of the Treasury (receipt account 892889) since FY 1998. 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, Reclamation, and USFWS.

Capital Transfers

Funding Schedule by Activity

	(accrued expenditures) (dollars in thousands)		
	FY 2010	FY 2011	FY 2012
Capital Transfers			
BPA Bond Amortization ^{/1}	255,000	275,000	165,000
Reclamation Appropriation Amortization	0	0	0
BPA Appropriation Amortization	74,905	84,707	165,181
Corps Appropriation Amortization	129,074	27,163	53,000
Total, Capital Transfers	458,979	386,870	383,181

Outyear Funding Schedule

	(accrued expenditures) (dollars in thousands)			
	FY 2013	FY 2014	FY 2015	FY 2016
Total, Capital Transfers	192,969	102,120	89,780	78,285

^{/1} BPA "Bond(s)" in this FY 2012 Budget refers to all bonds issued by BPA 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.

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
TOTAL OBLIGATIONS/OUTLAYS**

Current Services
(in millions of dollars)
FISCAL YEAR

FB 11-Feb-11

BP-1 SUMMARY

1,3/

	2010		2011		2012		2013	2014	2015	2016
	Oblig.	Outlays	Oblig.	Outlays	Oblig.	Outlays	Oblig.	Oblig.	Oblig.	Oblig.
1 Residential Exchange Program	180	180	189	189	189	189	189	189	189	189
2 Power Services 2/	1,732	1,732	1,843	1,843	1,870	1,870	1,997	2,008	2,068	2,157
3 Transmission Services	639	639	752	752	929	929	987	983	857	801
4 Conservation & Energy Efficiency	134	134	172	172	195	195	203	211	240	275
5 Fish & Wildlife	241	241	326	326	300	300	304	304	325	317
6 Interest/ Pension 4/	395	395	354	354	383	383	424	483	547	607
7 Associated Project Cost - Capital	148	148	170	170	209	209	224	227	233	236
8 Capital Equipment	52	52	50	50	45	45	42	41	52	42
3 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	159	159	113	113	52	52	53	44	38	41
12 Capitalized Bond Premiums	0	0	2	2	2	2	2	2	2	2
TOTAL OBLIGATIONS/ OUTLAYS 3/	3,689	3,689	3,981	3,981	4,184	4,184	4,436	4,503	4,562	4,678

REVENUES AND REIMBURSEMENTS

Current Services
(in millions of dollars)

FISCAL YEAR

BP-1 SUMMARY

	2010		2011		2012		2013	2014	2015	2016
	Oblig.	Outlays	Oblig.	Outlays	Oblig.	Outlays	Oblig.	Oblig.	Oblig.	Oblig.
13 Revenues 5/	2,842	2,842	3,842	3,842	4,145	4,145	4,395	4,472	4,537	4,468
14 Project Funded in Advance	159	159	113	113	52	52	53	44	38	41
15 TOTAL	3,001	3,001	3,955	3,955	4,197	4,197	4,448	4,516	4,575	4,509
BUDGET AUTHORITY (NET) 6/	641		336		554		813	895	815	787
16 OUTLAYS (NET) 6,7/		526		(10)		(10)	(10)	(10)	(10)	(10)

The accompanying notes are an integral part of this table.

1/ This FY 2012 budget includes capital and expense estimates based on preliminary IPR forecasted data for FYs 2011-2016.

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.

- 2/ 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.
- 3/ This budget has been prepared in accordance with the Budget Enforcement Act (BEA) of 1990. Under the BEA all BPA budget estimates are treated as mandatory and are not subject to the discretionary caps included in the BEA. These estimates support activities which are legally separate from discretionary activities and accounts. Thus, any changes to BPA estimates cannot be used to affect any other budget categories which have their own legal dollar caps. Because BPA operates within existing legislative authority, BPA is not subject to BEA "pay-as-you-go" test regarding its revision of current-law funding estimates.
- 4/ See Interest Expense, Pension and Post-retirement Benefits and Capital Transfers section of this budget for a complete discussion of these cost estimates.
- 5/ Revenues, included in the Net Outlay formulation, are calculated consistent with cash management goals and assume a combination of adjustments. Assumed adjustments include the use of a combination of tools, including upcoming rate adjustment mechanisms, a net revenue risk adjustment, debt service refinancing strategies and/or short-term financial tools to manage net revenues and cash. Some of these potential tools will reduce costs rather than generate revenue, causing the same Net Outlay result. Adjustments for depreciation and 4(h)(10)(C) credits of the NW Power Act are also assumed.
- 6/ 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.
- 7/ Net Outlay estimates are based on current cost savings to date and anticipated cash management goals. They are expected to follow anticipated management decisions throughout the rate period that, along with actual market conditions, will impact revenues and expenses. Actual Net Outlays are volatile and are reported in Report on Budget Execution and Budgetary Resources (SF-133). 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

BP-2

	2010		2011		2012		2013	2014	2015	2016
	Oblig.	Outlays	Oblig.	Outlays	Oblig.	Outlays	Oblig.	Oblig.	Oblig.	Oblig.
1 Residential Exchange Program	180	180	189	189	189	189	189	189	189	189
2 Power Services 2/	1,733	1,733	1,843	1,843	1,870	1,870	1,997	2,008	2,068	2,157
3 Transmission Services	334	334	391	391	402	402	410	423	434	445
4 Conservation & Energy Efficiency	76	76	92	92	91	91	92	94	95	95
5 Fish & Wildlife	200	200	236	236	250	250	254	254	275	267
6 Interest/ Pension 3/	395	395	354	354	383	383	424	483	547	607
7 Planning Council	9	9	10	10	10	10	11	11	11	11
8 TOTAL EXPENSE	2,927	2927	3115	3115	3195	3195	3377	3462	3619	3771
9 Projects Funded in Advance	159	159	113	113	52	52	53	44	38	41

CAPITAL OBLIGATIONS/OUTLAYS

Current Services

(in millions of dollars)

FISCAL YEAR

BP-2 continued

	2010		2011		2012		2013	2014	2015	2016
	Oblig.	Outlays	Oblig.	Outlays	Oblig.	Outlays	Oblig.	Oblig.	Oblig.	Oblig.
10 Conservation & Energy Efficiency	58	58	80	80	104	104	111	117	145	180
11 Transmission Services	305	305	361	361	527	527	577	560	423	356
12 Associated Project Cost	148	148	170	170	209	209	224	227	233	236
13 Fish & Wildlife	41	41	90	90	50	50	50	50	50	50
14 Capital Equipment	52	52	50	50	45	45	42	41	52	42
15 Capitalized Bond Premiums	0	0	2	2	2	2	2	2	2	2
16 TOTAL CAPITAL INVESTMENTS 15	604	604	753	753	937	937	1,006	997	905	866
17 TREASURY BORROWING AUTHORITY TO FINANCE CAPITAL OBLIGATIONS 4/	604		753		937		1,006	997	905	866

The accompanying notes are an integral part of this table.

1/ This FY 2012 budget includes capital and expense estimates based on preliminary IPR forecasted data for FYs 2011-2016.

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.

2/ 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.

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

4/ This budget has been prepared in accordance with the Budget Enforcement Act (BEA) of 1990. Under the BEA all BPA budget estimates are treated as mandatory and are not subject to the discretionary caps included in the BEA. These estimates support activities which are legally separate from discretionary activities and accounts. Thus, any changes to BPA estimates cannot be used to affect any other budget categories which have their own legal dollar caps. Because BPA operates within existing legislative authority, BPA is not subject to BEA "pay-as-you-go" test regarding its revision of current-law funding estimates.

PROGRAM & FINANCING SUMMARY

Current Services
(in millions of dollars)

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

	est.						
	2010	2011	2012	2013	2014	2015	2016
Program by activities:							
Operating expenses:							
0.01 Power Services	1,418	1,509	1,491	1,601	1,609	1,656	1,732
0.02 Residential Exchange Program	180	189	189	189	189	189	189
Associated Project Costs:							
0.05 Bureau of Reclamation	82	96	114	122	119	123	128
0.06 Corps of Engineers	192	192	214	221	231	237	244
0.07 Colville Settlement	17	22	22	22	22	23	23
0.19 U.S. Fish & Wildlife Service	23	24	29	30	27	29	30
0.20 Planning Council	9	10	10	11	11	11	11
0.21 Fish & Wildlife	200	236	250	254	254	275	267
0.23 Transmission Services	334	391	402	410	423	434	445
0.24 Conservation & Energy Efficiency	76	92	91	92	94	95	95
0.25 Interest	364	323	351	391	449	512	572
0.26 Pension and Health Benefits 1/	31	31	32	33	34	35	35
0.91 Total operating expenses 2/	2,926	3,115	3,195	3,376	3,462	3,619	3,771
Capital investment:							
1.01 Power Services	148	170	209	224	227	233	236
1.02 Transmission Services	305	361	527	577	560	423	356
1.03 Conservation & Energy Efficiency	58	80	104	111	117	145	180
1.04 Fish & Wildlife	41	90	50	50	50	50	50
1.05 Capital Equipment	52	50	45	42	41	52	42
1.06 Capitalized Bond Premiums	0	2	2	2	2	2	2
1.07 Total Capital Investment 3/	604	753	937	1,006	997	905	866
2.01 Projects Funded in Advanced	159	113	52	53	44	38	41
10.00 Total obligations 4/	3,689	3,981	4,184	4,435	4,503	4,562	4,678

The accompanying notes are an integral part of this table.

- 1/ See Interest Expense, Pension and Post-retirement Benefits and Capital Transfers section of this budget for a complete discussion of these cost estimates.
- 2/ Assumes expense obligations, not accrued expenses.
Power Services includes Fish & Wildlife, Residential Exchange Program, Planning Council, Conservation & Energy Efficiency and Associated Project Costs which have been shown separately for display purposes.
- 3/ Assumes capital obligations, not capital expenditures.
- 4/ This FY 2012 budget includes capital and expense estimates based on preliminary IPR forecasted data for FYs 2011-2016.

For purposes of this table, this FY 2012 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.

	2010	2011	2012	2013	2014	2015	2016
Financing:							
21.90 Unobligated balance available, start of year. 5/	26	22	11	9	0	0	0
24.40 Unobligated balance available, end of year.5/	22	11	9	0	0	0	0
25.00 Unobligated balance lapsing							
39.00 Budget authority (gross)	3,684	4,289	4,748	5,261	5,411	5,390	5,296
Budget Authority:							
67.10 Permanent Authority: Authority to borrow from Treasury (indefinite) 6/	698	723	937	1,006	997	905	866
Spending authority from off-setting collections	3,001	3,955	4,197	4,448	4,516	4,575	4,509
69.47 Portion applied to debt reduction	(315)	(387)	(383)	(193)	(102)	(90)	(79)
69.90 Spending authority from offsetting collections (adjusted)	1,851	3,568	3,814	4,255	4,414	4,485	4,430
71.00 Total obligations	3,689	3,943	4,184	4,438	4,506	4,565	4,499
87.00 Outlays (gross)	3,527	3,943	4,184	4,438	4,506	4,565	4,499
Adjustments to budget authority and outlays:							
Deductions for offsetting collections:							
88.00 Federal funds	(31)	(90)	(90)	(90)	(90)	(90)	(90)
88.40 Non-Federal sources	(2,969)	(3,863)	(4,104)	(4,358)	(4,426)	(4,485)	(4,419)
88.90 Total, offsetting collections	(3,001)	(3,955)	(4,197)	(4,448)	(4,516)	(4,575)	(4,509)
89.00 Budget authority (net)	641	336	554	813	895	815	787
90.00 Outlays (net) 7/	526	(10)	(10)	(10)	(10)	(10)	(10)

The accompanying notes are an integral part of this table.

5/ Reflects estimated cost for radio spectrum fund.

- 6/ The Permanent Authority: Authority to borrow (indefinite) from Treasury amounts reflect both BPA'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, BPA 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 BPA has authority to incur obligations in excess of Treasury borrowing authority and cash in the BPA fund.
- 7/ Net Outlay estimates are based on current cost savings to date and anticipated cash management goals. They are expected to follow anticipated management decisions throughout the rate period that, along with actual market conditions, will impact revenues and expenses. Actual Net Outlays are volatile and are reported in Report on Budget Execution and Budgetary Resources (SF-133). 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 Budget Enforcement Act (BEA) of 1990. Under the BEA all BPA budget estimates are treated as mandatory and are not subject to the discretionary caps included in the BEA. These estimates support activities which are legally separate from discretionary activities and accounts. Thus, any changes to BPA estimates cannot be used to affect any other budget categories which have their own legal dollar caps. Because BPA operates within existing legislative authority, BPA is not subject to BEA "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							
	2010				2011			
	Net Capital Obs	Net Capital Obs to BA	Net Capital Expend.	Bonds Out- Standing	Net Capital Obs	Net Capital Obs to BA	Net Capital Expend.	Bonds Out- Standing
Start-of-Year: Total	1,526	1,332	2,425	2,513	1,874	1,680	2,773	2,861
Plus: Annual Increase								
Cum.-Annual Treasury Borrowing Treasury Borrowing (Cash)	603	603	603	603	753	753	753	753
Less:								
BPA Bond Amortization	255	255	255	255	275	275	275	275
Net Increase/(Decrease):	348	348	348	348	478	478	478	478
Cum.-End-of-Year: Total	1,874	1,680	2,773	2,861	2,352	2,158	3,251	3,339
Total Remaining Treasury Borrowing Amount				4,839				4,361
Total Legislated Treasury Borrowing Amount				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 interest 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 2012 budget, BPA "bond(s)" refers to all bonds issued by BPA 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.

BPA assumes reserve financing of \$30 million for the current 2-year rate period and \$15 million annually for FYs 2012-2016 as part of TS capital-PFIA.

The cumulative amount of actual advance amortization payments as of the end of FY 2010 is \$2,574 million.

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

BP-4B

	Fiscal Year							
	2012				2013			
	Net Capital		Net Capital		Net Capital		Net Capital	
	Net Capital	Obs Subject	Net Capital	Bonds Out-	Net Capital	Obs Subject	Net Capital	Bonds Out-
	Obs	to BA	Expend.	Standing	Obs	to BA	Expend.	Standing
Start-of-Year: Total	2,352	2,158	3,251	3,339	3,124	2,930	4,023	4,111
Plus: Annual Increase								
Cum.-Annual Treasury Borrowing	937	937	937		1,006	1,006	1,006	
Treasury Borrowing (Cash)				937				1,006
Less:								
Total BPA Bond Amortization	165	165	165	165	123	123	123	123
Net Increase/(Decrease):								
Total	772	772	772	772	883	883	883	883
Cum.-End-of-Year: Total	3,124	2,930	4,023	4,111	4,007	3,813	4,906	4,994
Total Remaining Treasury Borrowing Amount				<u>3,589</u>				<u>2,706</u>
Total Legislated Treasury Borrowing Amount				7,700				7,700

The accompanying notes are an integral part of this table.

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

In this FY 2012 budget, BPA "bond(s)" refers to all bonds issued by BPA 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.

BPA assumes reserve financing of \$30 million for the current 2-year rate period and \$15 million annually for FYs 2012-2016 as part of TS capital-PFIA.

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

BP-4C

	Fiscal Year							
	2014				2015			
	Net Capital		Net		Net		Net	
	Net Capital	Obs Subject	Capital	Bonds Out-	Capital	Obs Subject	Capital	Bonds Out-
	Obs	to BA	Expend.	Standing	Obs	to BA	Expend.	Standing
Start-of-Year: Total	4,007	3,813	4,906	4,994	4,960	4,766	5,859	5,947
Plus: Annual Increase								
Cum.-Annual Treasury Borrowing	997	997	997		905	905	905	
Treasury Borrowing (Cash)				997				905
Less:								
Total BPA Bond Amortization	44	44	44	44	65	65	65	65
Net Increase/(Decrease):								
Total	953	953	953	953	840	840	840	840
Cum.-End-of-Year: Total	4,960	4,766	5,859	5,947	5,800	5,606	6,699	6,787
Total Remaining Treasury Borrowing Amount				<u>1,753</u>				<u>913</u>
Total Legislated Treasury Borrowing Amount				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 interest 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 2012 budget, BPA "bond(s)" refers to all bonds issued by BPA 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.

BPA assumes reserve financing of \$30 million for the current 2-year rate period and \$15 million annually for FYs 2012-2016 as part of TS capital-PFIA.

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

BP-4D

	Fiscal Year			
	2016			
	Net Capital Capital Obs	Obs Subject to BA	Net Capital Expend.	Bonds Out- Standing
Start-of-Year: Total	5,800	5,606	6,699	6,787
Plus: Annual Increase				
Cum.-Annual Treasury Borrowing	866	866	866	
Treasury Borrowing (Cash)				866
Less:				
Total BPA Bond Amortization	31	31	31	31
Net Increase/(Decrease):				
Total	835	835	835	835
Cum.-End-of-Year: Total	6,635	6,441	7,534	7,622
Total Remaining Treasury Borrowing Amount				<u>78</u>
Total Legislated Treasury Borrowing Amount				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 interest 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 2012 budget, BPA "bond(s)" refers to all bonds issued by BPA 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.

BPA assumes reserve financing of \$30 million for the current 2-year rate period and \$15 million annually for FYs 2012-2016 as part of TS capital-PFIA.

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

BP-5

	Fiscal Year						
	2010	2011	2012	2013	2014	2015	2016
Transmission Services - Capital							
Main Grid	114	137	260	307	286	168	102
Area & Customer Services	18	5	10	8	11	17	20
Upgrades & Additions	79	96	123	113	83	58	54
System Replacements	94	122	135	149	181	180	180
Projects Funded in Advance	159	113	52	53	44	38	41
Total, Transmission Services - Capital	464	473	580	630	605	461	397

Federal and Non-Federal Funding

	2010	2011	2012	2013	2014	2015	2016
Projects Funded in Advance	159	113	52	53	44	38	41
Treasury Borrowing Authority	305	360	528	577	561	423	356

Scenario

	2010	2011	2012	2013	2014	2015	2016
Third Party Financing	29	30	27	29	31	23	34
Alternate Treasury Borrowing Authority	NA	330	501	548	530	400	322

The accompanying notes are an integral part of this table.

The table above shows both the potential use of Treasury borrowing authority for transmission capital projects based on this FY 2012 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 2012 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 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.

(in millions of dollars)

	Fiscal Year						
	2010	2011	2012	2013	2014	2015	2016
Start-of-Year: Total Bonds Outstanding	2,513	2,861	3,309	4,054	4,908	5,830	6,647
Plus:							
Treasury Borrowing (Cash)	603	753	937	1,006	997	905	866
Less:							
Potential Third Party Financing	NA	30	27	29	31	23	34
BPA Bond Amortization	255	275	165	123	44	65	31
Net Increase/(Decrease) Bonds Outstanding:	348	448	745	854	922	817	801
Cum.-End-of-Year: Total	2,861	3,309	4,054	4,908	5,830	6,647	7,448
Total Remaining Treasury Borrowing Amount	4,839	4,391	3,646	2,792	1,870	1,053	252
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						
	2010	2011	2012	2013	2014	2015	2016
A. INTEREST ON BONDS & APPROPRIATIONS							
Bonneville Bond Interest							
1 Bonneville Bond Interest (net)	73	76	108	159	213	277	336
2 AFUDC ^{1/}	33	39	45	50	56	54	52
Appropriations Interest							
3 Bonneville	35	29	23	11	6	2	0
4 Corps of Engineers ^{2/}	163	158	161	161	170	174	177
5 Lower Snake River	17	16	16	16	16	16	16
6 Bureau of Reclamation ^{3/}	43	43	43	43	43	43	43
7 Total Bond and Approp. Interest	364	361	396	440	504	566	624
B. ASSOCIATED PROJECT COST							
8 Bureau of Reclamation Irrigation Assistance	0	0	1	59	52	52	61
9 Bureau of Rec. O & M ^{4/}	0	0	0	0	0	0	0
10 Corps of Eng. O & M ^{4/}	9	0	0	0	0	0	0
11 L. Snake River Comp. Plan O & M ^{4/}	0	0	0	0	0	0	0
12 Total Assoc. Project Costs	9	0	1	59	52	52	61
C. CAPITAL TRANSFERS							
Amortization							
13 Bonneville Bonds ^{6/}	255	275	165	123	44	65	31
14 Bureau of Reclamation Appropriations	1	0	0	0	0	0	0
15 Corps of Engineers Appropriations	129	27	53	0	7	0	40
16 Lower Snake River Comp. Plan	0	0	0	0	0	0	0
17 Bonneville Appropriations	75	85	165	70	51	25	8
Total Capital Transfers	460	387	383	193	102	90	79
D. OTHER PAYMENTS							
18 Additional Pension & Post Retirement Benefits ^{5/}	31	31	32	33	34	35	35
21 TOTAL TREASURY PAYMENTS	864	779	812	725	692	743	799

The accompanying notes are an integral part of this table.

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

^{2/} Includes interest on construction funding for Corp of Engineers (Corps) fish bypass facilities at Corps dams in the Columbia River Basin, including Lower Monumental, Ice Harbor, and The Dalles.

^{3/} Includes payments paid by Reclamation to Treasury on behalf of Bonneville.

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

	FISCAL YEAR						
	2010	2011	2012	2013	2014	2015	2016
Bureau of Reclamation	82	96	114	122	119	123	128
Corps of Engineers	192	192	214	221	231	237	244
Subtotal Bureau and Corps	274	288	328	343	350	360	372
Lower Snake River Comp. Plan	23	24	29	30	27	29	30
Total	297	312	357	373	377	389	402

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

^{6/} In this FY 2012 budget, BPA "bond(s)" refers to all bonds issued by BPA 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.

Does not include Treasury bond premiums on refinanced Treasury bonds.

Treasury Repayment Table

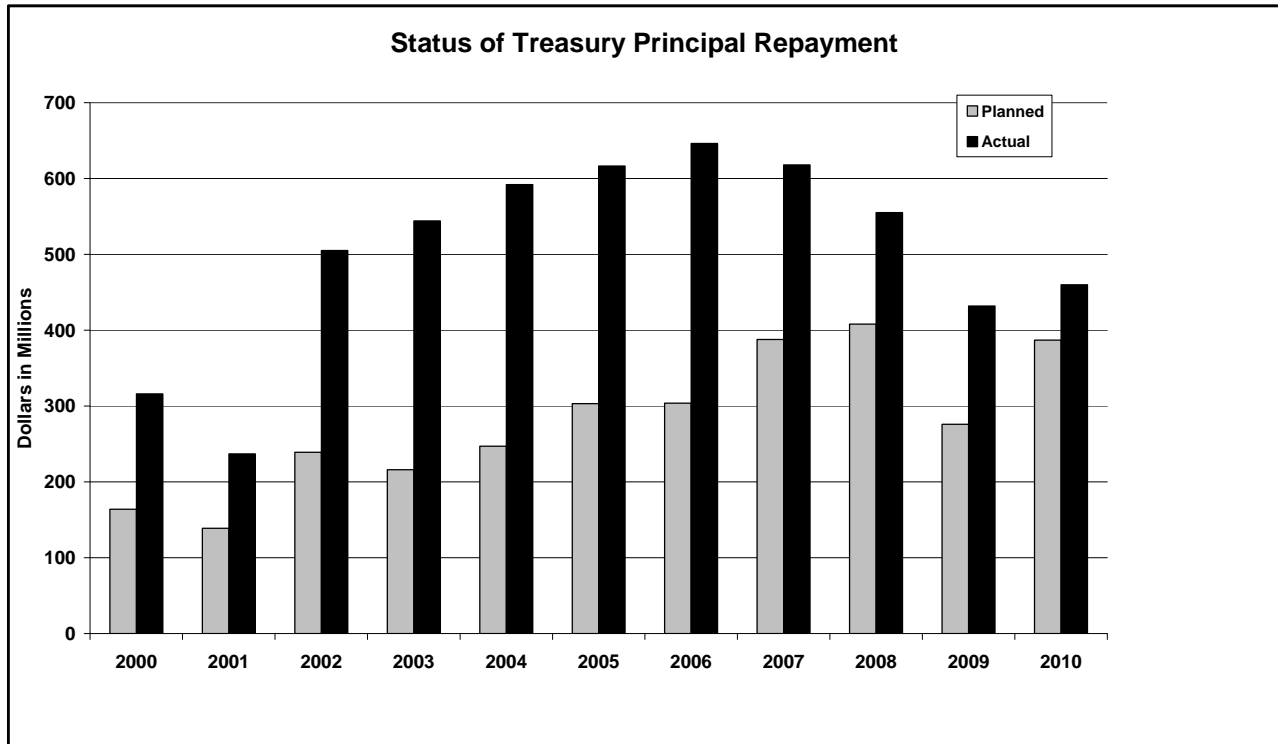


Chart Notes

- ^{1/} This chart displays principal repayment only.
- ^{2/} 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 2010 payment responsibility to the Treasury. Bonneville's aggregate Treasury payment was \$864 million, comprised of \$460 million in amortization (of which \$38.5 million was unscheduled advanced amortization), \$364 million in interest, and \$40 million of unfunded CSRS liabilities and other costs.
- ^{3/} FYs 2000 - 2010 payments include portions of future planned amortization amounts consistent with BPA's capital strategy plan and the BPA/Energy Northwest debt optimization program.
- ^{4/} Advance amortization due to sale of low-voltage transmission facilities includes \$13 million and \$5.3 million in FYs 2003 and 2006, respectively.
- ^{5/} 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 BPA's debt optimization program, which involved restructuring Energy Northwest (EN) debt, the cost of which BPA is obligated to pay.

OBJECT CLASSIFICATION STATEMENT
(in millions of dollars) 1/

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

ESTIMATES

	2010	2011	2012
11.1 Full-time permanent	122	132	135
11.3 Other than full-time permanent	55	59	61
11.5 Other personnel compensation	11	11	12
11.9 Total personnel compensation	188	202	208
12.1 Civilian personnel benefits	55	59	60
13.0 Benefits for former personnel	26	29	29
21.0 Travel and transportation of persons	15	16	16
22.0 Transportation of things	1	2	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	393	424	430
25.2 Other Services	2,388	2,576	2,639
25.3 Purchases from Government Accounts	0	0	0
25.4 O&M of Facilities	0	0	0
25.5 R & D Contracts	9	9	12
26.0 Supplies and materials	273	295	390
31.0 Equipment	0	0	0
32.0 Lands and structures	53	57	59
41.0 Grants, subsidies, contributions	49	53	51
43.0 Interest and dividends	230	249	278
99.0 Total obligations	3,689	3,981	4,184

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						
	2010	2011	2012	2013	2014	2015	2016
Reclamation Interest	43	43	43	43	43	43	43
Reclamation Amortization	0	0	0	0	0	0	0
Reclamation O&M	0	0	0	0	0	0	0
Reclamation Irrig. Assist.	0	0	1	59	52	52	61
Revenues Collected by Reclamation Distributed in Treasury Account (credit)	-9	-7	-7	-7	-7	-7	-7
Colville Settlement (credit)	-5	-5	-5	-5	-5	-5	-5
Total 1/ Reclamation Fund	29	31	32	90	83	83	92
Corps O&M CSRS	31	31	32	33	34	35	34
Total 2/ Repayments on misc.costs	31	31	32	33	34	35	34

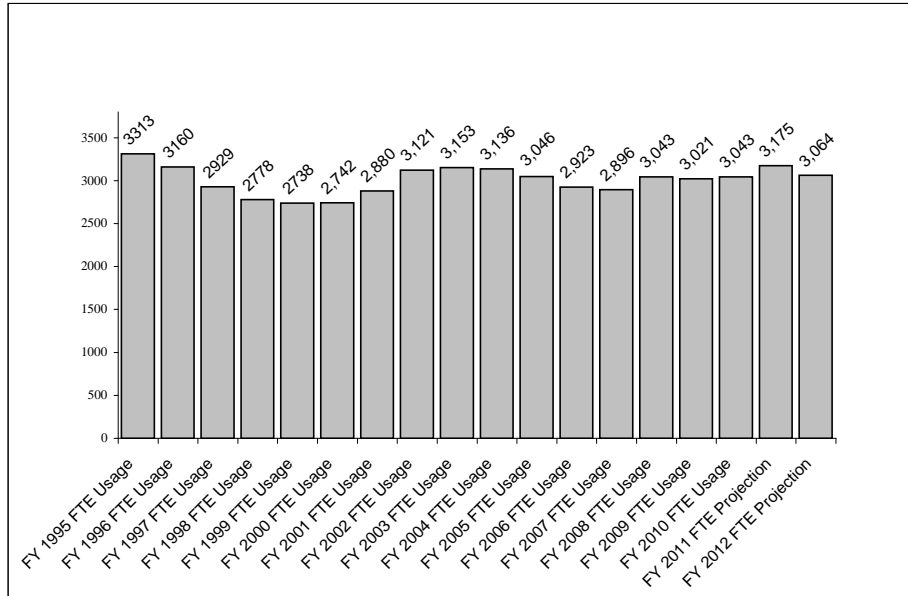
1/ Includes amortization of appropriations and irrigation assistance, and interest costs for Reclamation. The cost of power O&M for Reclamation is no longer included in Proprietary Receipts due to Direct Funding by Bonneville. Represents transfer to Account #895000.26

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)

	2010	2011	2012	2013	2014	2015	2016
Bureau of Reclamation	82	96	114	122	119	123	128
Corps of Engineers	192	192	214	221	231	237	244
Lower Snake River Comp. Plan	23	24	29	30	27	29	30

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

BONNEVILLE FTE
(revised January 2011)



BPA has utilized the following number of VSIPs: 190 in FY 1994, 240 in FY 1995, 137 in FY 1996, 135 in FY 1997, 121 in FY 1998, 81 in FY 1999, 43 in FY 2000, 12 in FY 2001, 0 in FY 2002, 80 in FY 2003, 0 in FY 2004, 98 in 2005, 35 in FY 2006, 37 in FY 2007, and 31 in FY 2008.

BPA continues to assume various authorities, including the use of VSIPs and VERA to help achieve BPA planning levels.

Actual FTE data is consistent with DOE personnel reports.

FTE outyear data are estimates and may change.

Total Cost of BPA Fish & Wildlife Actions

COST ELEMENT	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
CAPITAL INVESTMENTS ^{1/}										
BPA FISH AND WILDLIFE	16.5	6.1	11.6	8.5	12.2	35.4	35.2	25.5	27.4	39.9
BPA SOFTWARE DEVELOPMENT COSTS	-	-	-	-	-	0.9	1.0	1.3	0.6	1.2
ASSOCIATED PROJECTS (FEDERAL HYDRO)	6.2	8.8	68.4	75.9	53.8	360.0	60.4	37.3	135.7	56.4
TOTAL CAPITAL INVESTMENTS	22.7	14.9	80.0	84.4	66.0	396.3	96.6	64.2	163.7	97.5
PROGRAM EXPENSES										
BPA DIRECT FISH AND WILDLIFE PROGRAM	101.1	137.1	140.7	137.9	135.8	137.9	139.5	148.9	177.9	199.6
SUPPLEMENTAL MITIGATION PROGRAM EXPENSES ^{2/}	2.9	7.1	6.5	7.8	0.0	0.0	0.0	0.0	0.0	0.0
REIMBURSABLE/DIRECT-FUNDED PROJECTS ^{3/}										
O & M LOWER SNAKE RIVER HATCHERIES	12.7	14.9	15.1	17.3	17.2	20.1	19.3	19.4	20.8	23.3
O & M CORPS OF ENGINEERS	23.1	28.2	30.3	32.3	32.5	31.8	32.9	34.4	34.3	36.5
O & M BUREAU OF RECLAMATION	3.0	3.8	3.1	3.9	3.9	4.5	3.9	4.3	4.5	5.2
OTHER (NW POWER AND CONSERVATION COUNCIL)	3.7	4.0	4.0	3.7	4.3	4.3	4.2	4.1	4.7	4.7
SUBTOTAL (REIMB/DIRECT-FUNDED)	42.5	50.9	52.6	57.2	57.9	60.7	60.3	62.2	64.3	69.7
TOTAL OPERATING EXPENSES	146.5	195.1	199.8	202.9	193.7	198.6	199.7	211.1	242.1	269.3
PROGRAM RELATED FIXED EXPENSES ^{4/}										
INTEREST EXPENSE	49.1	48.5	49.9	53.3	56.4	53.4	76.0	76.9	78.7	80.5
AMORTIZATION EXPENSE	16.8	17.2	17.4	17.5	17.4	17.4	22.9	24.4	24.6	25.0
DEPRECIATION EXPENSE	12.3	12.5	13.2	14.6	15.9	16.7	14.0	14.9	16.7	18.0
TOTAL FIXED EXPENSES	78.2	78.2	80.5	85.4	89.7	87.5	112.9	116.2	120.0	123.5
GRAND TOTAL PROGRAM EXPENSES	224.7	273.3	280.3	288.3	283.4	286.1	312.7	327.3	362.1	392.8
FORGONE REVENUES AND POWER PURCHASES										
FOREGONE REVENUES	115.9	12.6	79.2	21.7	182.1	397.4	282.6	273.5	142.8	99.4
BPA POWER PURCH. FOR FISH ENHANCEMENT	1,389.6	147.8	171.1	191.0	110.8	168.2	120.7	274.9	240.3	310.1
TOTAL FOREGONE REVENUES AND POWER PURCHASES	1,505.5	160.4	250.3	212.7	292.9	565.6	403.3	548.5	383.1	409.5
TOTAL PROGRAM EXPENSES, FOREGONE REVENUES, & POWER PURCHASES	1,730.2	433.7	530.6	501.0	576.3	851.7	716.0	875.8	745.3	802.3
CREDITS										
4(h)(10)(C)	(336.6)	(66.4)	(73.6)	(77.0)	(57.7)	(76.4)	(66.1)	(100.5)	(99.5)	(123.1)
FISH COST CONTINGENCY FUND	(246.5)	-	(78.7)	-	-	-	-	-	-	-
TOTAL CREDITS	(583.1)	(66.4)	(152.3)	(77.0)	(57.7)	(76.4)	(66.1)	(100.5)	(99.5)	(123.1)

This information has been made publicly available by BPA on 1/7/2010. The figures shown are consistent with audited actuals that contain Agency approved financial information, except for forgone revenues and power purchases which are estimates and do not contain Agency approved financial information

1/ Capital Investments include both BPA's direct Fish and Wildlife Program capital investments, funds issued by BPA to Treasury, 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.