

FY 2010 Budget Submission

for Congress

May 2009



**DEPARTMENT OF ENERGY
BONNEVILLE POWER ADMINISTRATION**

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Bonneville Power Administration

Proposed Appropriations Language

Expenditures from the Bonneville Power Administration Fund, established pursuant to Public Law 93-454, are approved for *the Leaburg Fish Sorter, the Okanogan Basin Locally Adapted Steelhead Supplementation Program, the Crystal Springs Hatchery Facilities, and, in addition, for official reception and representation expenses in an amount not to exceed \$1,500.*

During fiscal year [2009]2010, no new direct loan obligations may be made.

Explanation of Changes

Proposed FY 2010 appropriation language provides expenditure authority for construction of facilities as required by the Pacific Northwest Electric Power Planning and Conservation Act for new fish and wildlife facilities of \$1 million and an economic life greater than 15 years (PL 96-501, sec. 4(h)(10)(B)).

The proposed appropriations language restricts new direct loans in FY 2010 as in FY 2009.

Bonneville Power Administration

Overview

Summary by Program

(accrued expenditures in thousands of dollars)						
	FY	2008	FY	2009	FY	2010
Capital Investments						
Power Services		139,602		240,650		312,900
Transmission Services		129,205		322,379		490,028
Capital Equipment & Bond Premium		21,526		29,916		42,638
Total, Capital Investments		290,333		592,945		845,566
Accrued expenditures will require budget obligations of		290,333		592,945		845,566
Operating Expenses		2,331,246		2,891,259		3,029,504
Projects Funded in Advance		98,682		99,428		105,164
Capital Transfers (cash)		555,439		275,724		419,996
BPA Net Outlays		(372,000)		(10,000)		(10,000)
BPA Staffing (FTE)		2,924		3,064		3,061

Outyear Summary

(accrued expenditures in thousands of dollars)								
	FY	2011	FY	2012	FY	2013	FY	2014
CAPITAL INVESTMENTS								
Power Services		318,900		317,900		329,900		331,900
Transmission Services		559,255		475,747		450,867		439,497
Capital Equipment & Bond Premium		51,413		51,620		51,751		52,209
Total, Capital Investments		929,568		845,267		832,518		823,606
Accrued expenditures will require budget obligations of		929,568		845,267		832,518		823,606
Operating Expenses		3,302,804		3,328,453		3,500,221		3,545,349
Projects Funded in Advance		117,286		98,904		87,742		89,070
Capital Transfers (cash)		422,381		318,641		199,105		204,020
BPA Net Outlays		(10,000)		(10,000)		(10,000)		(10,000)
BPA Staffing (FTE)		3,060		3,060		3,060		3,060

Overview

The accompanying notes are an integral part of this table.

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 2008 is \$2,302 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 2010 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 strategic 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;
- A transmission system that is adequate to the task of 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.

As BPA shapes programs and plans spending levels, it is driven by its strategic vision that encompasses the following four pillars:

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

Bonneville is committed to 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 the full recovery of all of its costs, including timely repayment of the Federal investment in the system.

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, a 300,000 square mile service area that includes a population of about 12.1 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), and 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 also leases certain transmission facilities from others on a capitalized basis. 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.

Bonneville’s strategic direction establishes the agency’s most important long-term objectives and the actions that will help it manage to these objectives. The strategic direction is advanced by BPA consistent with its three core values: trustworthy stewardship of the FCRPS, collaborative relationships, and operational excellence.

American Recovery and Reinvestment Act of 2009 (ARRA)

The American Recovery and Reinvestment Act of 2009, Section 401, provides BPA a new increment of Treasury borrowing authority under the Federal Columbia River Transmission System Act (Transmission System Act) in addition to its existing authority. This new increment of Treasury borrowing authority 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 is committed to assuring that BPA’s actions contribute to and support the Administration’s goals under the ARRA. See the Department of Energy (DOE) Recovery website (<http://www.energy.gov/recovery/index.htm>) as a source for up to date information.

Strategic Themes, Goals and the Secretary’s Initiatives

A new strategic plan has not yet been established and approved by the Secretary of Energy. The Secretary has established major priorities and initiatives.

The following chart aligns the current Strategic Plan with the Secretary’s priorities:

Strategic Theme	Strategic Goal Title	Secretary’s Priorities	GPRPA Unit Program Number	GPRPA Unit Program Title	Office
1. Energy Security	3. Energy Infrastructure	Economic Prosperity	18	Bonneville Power Administration	BPA

Contribution to the Secretary’s Priorities

DOE’s five Secretarial priorities are Science and Discovery, Clean Energy, Economic Prosperity, National Security and Legacy, and Lower Green House Gas Emissions. Bonneville’s Government and Results Performance Act (GRPA) Unit Program Goal, to Market and Deliver Federal Power, supports DOE’s Economic Prosperity priority.

GRPA Unit Program Goal 01.03.18.00: Bonneville Power Administration. Market and Deliver Federal Power: Ensure Federal hydropower is marketed and delivered while passing the North American Electric Reliability Corporation's (NERC) Control Compliance Ratings, meeting planned repayment targets, and achieving targeted hydropower generation efficiency performance.

Contribution to GRPA Unit Program Goal 01.03.18.00: BPA. Market and Deliver Federal Power

Bonneville contributes to this strategic goal through its strategic vision to advance a Northwest power system that is a national leader in providing reliability, low rates consistent with sound business principles, environmental stewardship, and accountability to the region. For FY 2009, BPA is continuing its emphasis on performance with 29 Key Agency Targets designed to measure progress toward achieving its business objectives. These objectives are focused within four interrelated perspectives: stakeholder value, financial performance, internal operations, and people and culture. Bonneville's infrastructure investments in the Pacific Northwest to meet power and transmission needs continue to support DOE's strategic goal on energy infrastructure.

Bonneville's strategic direction has helped to identify a number of key long-term issues. These issues center on providing Bonneville customers with certainty over load service obligations and enabling customers and the market to respond with the necessary electric industry infrastructure investments. Other key strategic interests include general market stability, BPA risk management, and long-term assurance of funding to repay the U.S. Treasury (Treasury) investment in infrastructure.

Basic and Applied R&D Coordination

BPA's Technology and Innovation office leads the long-term strategy development and management for research, development, demonstration and deployment of new technology by BPA. BPA works with its customer utilities to identify a shared research and development agenda that delivers value to the Pacific Northwest electric system. BPA is continuing to forge partnerships with utilities, universities, and collaborative research organizations within the Pacific Northwest and throughout North America.

BPA uses technology road-mapping as a form of technology planning to inform and guide its research and development agenda. It has created technology roadmaps for physical security, energy efficiency, renewable energy, and transmission operations, construction, and design, with a strong current focus on wind integration. Future roadmaps will address climate change and hydro-generation.

Climate Change Technology Program Benefits

BPA established in 2008 its first strategic business objective specifically addressing climate change: "BPA encourages and implements integrated, cost-effective policies which lead to greenhouse gas emission reductions". In support of this target, BPA developed a Climate Change Initial Roadmap. The roadmap describes BPA's existing efforts and will serve as a baseline for discussions with the region on how best to reflect climate change concerns in BPA business practices and initiatives. BPA's baseline work includes efforts to integrate greenhouse gas considerations into agency decision making, complete a greenhouse gas inventory, and to support energy efficiency, renewable development and climate-friendly business practices.

Internally, BPA will focus on the core staff competencies necessary to prepare the agency for the physical, economic and policy changes that stem from climate change developments. Externally, BPA is examining its regional role in a number of specific areas such as the interconnection of additional wind resources, the development of smart grid, and climate change technology innovation.

Annual Performance Results and Targets

FY 2005 Results	FY 2006 Results	FY 2007 Results	FY 2008 Results	FY 2009 Targets	FY 2010 Targets
Infrastructure GRPA Unit Program Goal 1.3.1: Bonneville Power Administration					
System Reliability Performance: Met Goal Actual: CPS1: 196.6% CPS2: 93.9%	System Reliability Performance: Met Goal Actual: CPS1: 193.3% CPS2: 96.1%	System Reliability Performance: Met Goal Actual: CPS1: 193.9% CPS2: 96.01%	System Reliability Performance: Met Goal Actual: CPS1: 191.4% CPS2: 95.0%	System Reliability Performance: Attain average North American Reliability Corporation (NERC) compliance ratings for the following NERC Control Performance Standards (CPS) measuring the balance between power generation and load, including support for system frequency: (1) CPS1, which measures generation/load balance on one-minute intervals (rating > or =100); and (2) CPS2, which limits any imbalance magnitude to acceptable levels (rating > or =90).	System Reliability Performance: Attain average North American Reliability Corporation (NERC) compliance ratings for the following NERC Control Performance Standards (CPS) measuring the balance between power generation and load, including support for system frequency: (1) CPS1, which measures generation/load balance on one-minute intervals (rating > or =100); and (2) CPS2, which limits any imbalance magnitude to acceptable levels (rating > or =90).
Repayment of Federal Power Investment Performance: Met Goal (\$303 million) Actual: \$618 million	Repayment of Federal Power Investment Performance: Met Goal (\$304 million) Actual: \$646 million	Repayment of Federal Power Investment Performance: Met Goal (\$387 million) Actual: \$618 million	Repayment of Federal Power Investment Performance: Met Goal (\$409 million) Actual: \$555 million	Repayment of Federal Power Investment Performance: Meet planned annual repayment of principal on Federal power investments.	Repayment of Federal Power Investment Performance: Meet planned annual repayment of principal on Federal power investments.
<u>Hydropower Generation</u> Efficiency Performance: Met Goal (97%) Actual: 100% (EOY)	<u>Hydropower Generation</u> Efficiency Performance: Met Goal (97%) Actual: 100% (EOY)	<u>Hydropower Generation</u> Efficiency Performance: Met Goal (97%) Actual: 99.6% (cumulative for the four quarters of FY 2007)	<u>Hydropower Generation</u> Efficiency Performance: Met Goal (97.5%) Actual: 98.8% (cumulative for the four quarters of FY 2008).	<u>Hydropower Generation</u> Efficiency Performance: Achieve > or = 97.5% Heavy- Load-Hour Availability (HLHA) through efficient performance of Federal hydro- system processes and assets, including joint efforts of BPA, Army Corps of Engineers, and Bureau of Reclamation. HLHA is actual machine capacity available during heavy-load hours (0700-2200 Monday-Saturday), divided by planned available capacity during heavy-load hours.	<u>Hydropower Generation</u> Efficiency Performance: Achieve > or = 97.5% Heavy- Load-Hour Availability (HLHA) through efficient performance of Federal hydro- system processes and assets, including joint efforts of BPA, Army Corps of Engineers, and Bureau of Reclamation. HLHA is actual machine capacity available during heavy-load hours (0700-2200 Monday-Saturday), divided by planned available capacity during heavy-load hours.

Annual Outyear Performance Targets

FY 2011 Targets	FY 2012 Targets	FY 2013 Targets	FY 2014 Targets
System Reliability Performance: Attain average NERC compliance ratings for the NERC CPS measuring the balance between power generation and load, including support for system frequency.	System Reliability Performance: Attain average NERC compliance ratings for the NERC CPS measuring the balance between power generation and load, including support for system frequency.	System Reliability Performance: Attain average NERC compliance ratings for the NERC CPS measuring the balance between power generation and load, including support for system frequency.	System Reliability Performance: Attain average NERC compliance ratings for the NERC CPS measuring the balance between power generation and load, including support for system frequency.
Repayment of Federal Power Investment Performance: Meet planned annual repayment of principal on Federal power investments.	Repayment of Federal Power Investment Performance: Meet planned annual repayment of principal on Federal power investments.	Repayment of Federal Power Investment Performance: Meet planned annual repayment of principal on Federal power investments.	Repayment of Federal Power Investment Performance: Meet planned annual repayment of principal on Federal power investments.
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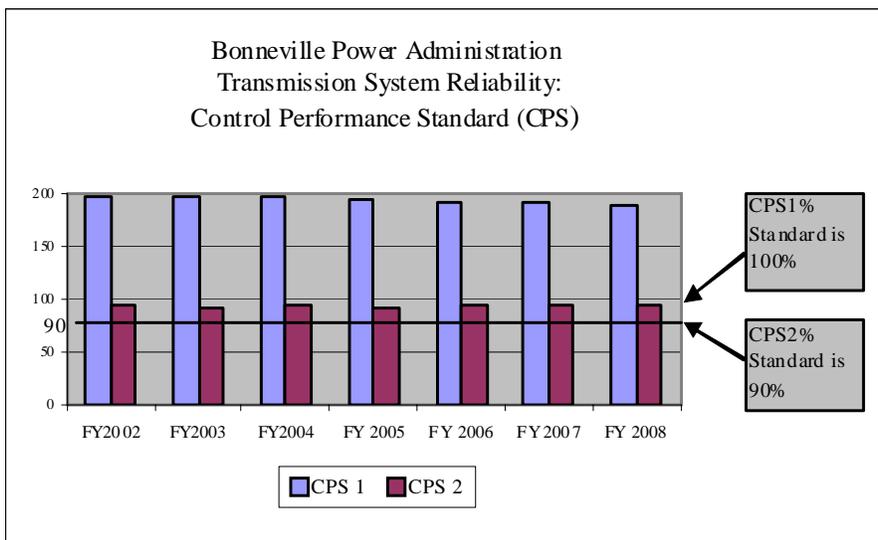
BPA is continuing to assess target measures that achieve the best alignment with its strategic objectives.

Transmission System Reliability Performance Indicator

This indicator defines a standard of minimum monthly control performance as established by the NERC. Each control area within the system is to operate above minimum monthly control compliance ratings that can be achieved within the bounds of reasonable economic and physical limitations. Each control area is to monitor its control performance continuously against two standards, CPS 1 and 2.

The CPS-1 and CPS-2 performance indicators are industry standards that U.S. and Canadian electric utilities use in conjunction with NERC to help assure the reliability of the North American high voltage distribution system, and thereby to benefit the public. These measures are intended to indicate whether or not electric utility systems are being operated within acceptable operating parameters. Any deviation from the minimum standards must be reported to NERC. CPS-1 helps assure generation and load balance. CPS-2 helps limit the magnitude of any imbalance to acceptable levels, and provides a frequency sensitive evaluation of how well a control area meets its demand requirements.

Transmission System Reliability Target in FY 2010: Attain average NERC compliance ratings for the following NERC CPS measuring the balance between power generation and load, including support for system frequency: (1) CPS-1, which measures generation/load balance on one-minute intervals (rating ≥ 100); and (2) CPS-2, which limits any imbalance magnitude to acceptable levels (rating ≥ 90).



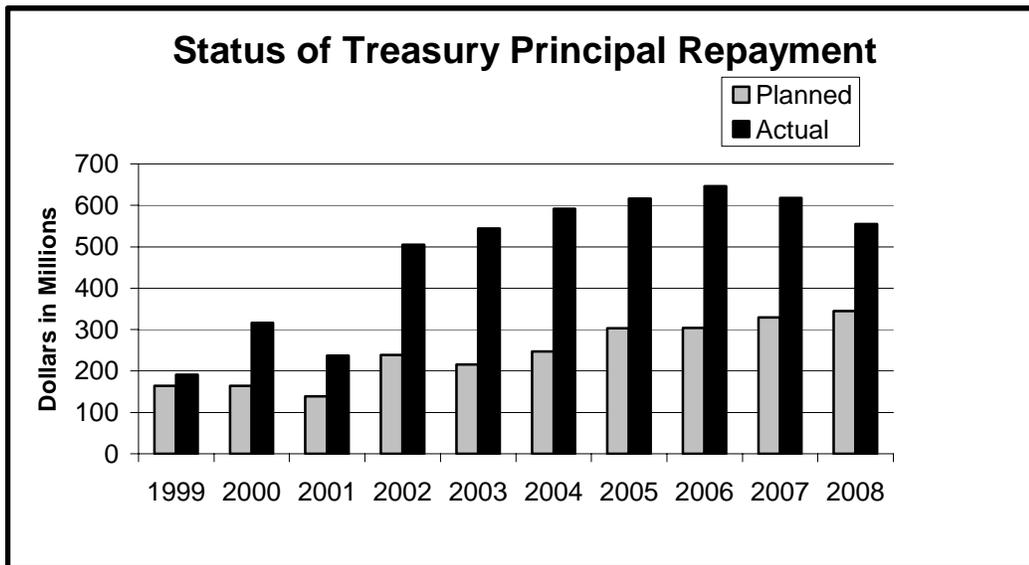
Repayment of Federal Power Investment Performance Indicator

This indicator measures the variance of actual from planned principal payments to the Treasury.

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. In recent years, BPA has made amortization payments in excess of those scheduled in its Federal Energy Regulatory Commission (FERC)-approved rate filings, resulting in a balance of advance repayment. Bonneville made its full FY 2008 payment of \$963 million to the Treasury comprised of \$555 million in amortization that includes \$211 million in advanced amortization, \$384 million in interest, and \$24 million of unfunded CSRS liabilities and other costs.

Repayment target in FY 2010 – Meet planned repayment of principal on Federal power investments in FY 2010.

The following chart displays principal repayment only.



Notes:

FYs 1999 -2008 payments include portions of future planned amortization amounts consistent with BPA's capital strategy plan and debt optimization.

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

FY 1999 payment includes a \$26 million bond rollover.

For FYs 2007 and 2008, the planned repayment of principal of Federal power investment reflects the amount calculated in the FY 2007 Supplemental Power Rate Case that was scheduled to be the lowest level of amortization satisfying the repayment requirements. This display of planned repayment of principal is consistent with all prior years shown on the table. The FY 2007 Supplemental Power Rate Case also included some amount of advanced repayment of principal to the U.S. Treasury that resulted

from the way BPA’s debt optimization program was designed to repay a relatively small portion of Energy Northwest (EN) debt.

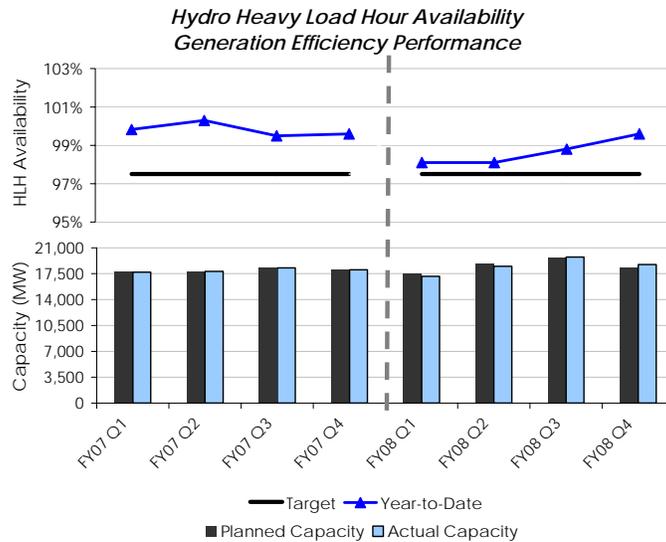
Hydropower Generation Efficiency Performance Indicator

The fundamental programmatic role of Bonneville within the FCRPS is the marketing of electricity generated at the multi-purpose hydro projects in the Pacific Northwest owned and operated by the Corps and Reclamation. Heavy Load Hour Availability (HLHA) concerns the actual effective performance of the hydro system, reflecting joint work between BPA, the Corps, and Reclamation to improve performance of these generating projects when they are needed most for commercial power operation. It is important from a reliability and economic standpoint to have power generation available when loads are high.

HLHA is the ratio of actual available machine capacity during heavy load hours, divided by planned available capacity during heavy load hours, expressed as a percent.

Actual available machine capacity is measured directly from data supplied from the hydro plants. Planned available capacity is established annually through the Annual Outage planning process, then updated quarterly based on changes in load and water forecasts. The resulting outage plans are stored in BPA’s Outage Database.

Hydropower Generation Efficiency target: Achieve actual efficiency results at or above planned availability target levels for hydropower generation efficiency.



As represented above, FCRPS hydro performance tracked very closely to the HLHA targets for all of FY 2008, meeting the targets in all four quarters.

Means and Strategies

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

BPA's strategic direction and balanced scorecard establish a key objective of meeting electricity availability, adequacy, reliability, and cost-effectiveness standards through power and transmission performance and expansion of the transmission system. The strategic direction and balanced scorecard efforts include a long-term vision of Bonneville's future and an assessment of critical environment factors and key objectives. The vision and assessment help direct Bonneville activities needed to meet its mission over the long-term. The objectives are supported by multi-year targets to lay out the long-term course for achieving the objectives.

To improve system adequacy, reliability and availability, BPA has embarked on major transmission infrastructure projects. The projects shore up the region's transmission system and help deliver the region's future power needs. These projects address multiple challenges, such as the need to relieve a number of congested transmission paths, the pressure to keep up with growing energy demands, and the need to meet FERC's open access policy in support of competitive markets.

For FY 2010 BPA's total transmission capital budget includes a total of \$595 million for main grid additions, upgrades and additions, system replacements, area and customer services, and projects funded in advance (PFIA). These investments, repaid entirely by revenues from BPA's transmission customers or benefiting third parties, are fundamental to BPA's transmission performance.

As part of BPA's strategic direction, Bonneville is also working to improve efficiency and initiate further cost reductions. Bonneville coordinates its power operational activities with the Corps, Reclamation, NERC, regional electric reliability councils, its customers, and other stakeholders to provide the most efficient use of Federal assets. Ongoing work with the Corps and Reclamation is focused on improving the reliability of the FCRPS, increasing its generation efficiency and optimization of hydro facility operation.

In addition, Bonneville is committed to continue funding efforts to recover listed fish and wildlife species in the Columbia Basin under the Endangered Species Act (ESA) and to work closely with the Council, regional fisheries managers, and other Federal agencies to prioritize and manage fish and wildlife program projects.

Bonneville initiatives are impacted by external factors such as continually changing economic and institutional conditions, competitive dynamics, and the continued restructuring of the electric industry.

Private and public sector partners have been and continue to be an important part of BPA's collaborative efforts to promote and foster efficient use of energy. BPA has initiated efforts to explore non-Federal financial participation in its transmission infrastructure projects with transmission customers and others in the region. Additionally, BPA has partnered and assisted with a DOE Wind Power crosscutting initiative to strengthen energy security by adding alternative sources of renewable energy.

Additional activities and products contributing to BPA's long-term achievement of its mission include the Regional Dialogue, an enhanced capital asset management plan, a workforce plan that addresses the long-term staffing needs of the agency, and continuing efforts to increase operational efficiencies. A separate Technology and Innovation office within BPA leads the long-term strategy development and management for research, development, demonstration and deployment of new technology by BPA.

Validation and Verification

To validate and verify program performance, Bonneville conducts various internal and external reviews and audits. Bonneville's programmatic activities are subject to review by Congress, the U.S. Government Accountability Office (GAO), the Department's Inspector General, and other governmental entities. Bonneville accounts and financial statements are reviewed annually by an independent outside auditor. Bonneville has received a clean audit opinion since the mid-1980s and no material weaknesses have been identified in controls over financial reporting.

Program Perspectives

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

Introduction

Bonneville is DOE's 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, Congress has since directed Bonneville to sell at wholesale the electrical power produced from 31 operating Federal hydro projects and to acquire 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 foundation for Bonneville's statutory utility responsibilities and authorities. In 1974, passage of the Transmission System Act placed Bonneville under provisions of the Government Corporation Control Act (31 U.S.C. 9101-9110). The legislation provided Bonneville with "self-financing" authority and 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 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 utility obligations and responsibilities to: encourage electric energy conservation; 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 capital improvements. Bonneville received an additional

\$700 million in available Treasury financing through the FY 2003 Appropriations Act 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. The ARRA of 2009 increased the amount of borrowing that BPA conducts under the Transmission System Act by \$3.25 billion to the current authority for \$7.7 billion in bonds outstanding to the Treasury.

Bonneville's program is treated as mandatory and nondiscretionary. As such, Bonneville is "self-financed" by the ratepayers of the Pacific Northwest and is not annually appropriated by Congress. Under the Transmission System 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. Bonneville's permanent statutory borrowing authority authorizes the agency to sell bonds to the Treasury up to a cumulative total of \$7.70 billion outstanding at any one time. Through FY 2008, Bonneville has returned approximately \$24.7 billion to the Treasury for payment of FCRPS O&M and other costs (about \$3.0 billion), interest (about \$12.6 billion), and amortization (about \$9.1 billion) of appropriations and bonds.

In this FY 2010 budget, the term BPA "bonds" 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.

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 arrangement also modernizes and formalizes the BPA-Treasury relationship, and aligns practices with current Treasury standards.

The new comprehensive arrangement covers BPA's short- and long-term Federal borrowings and establishes a phased-in approach to a market-based investing program. The arrangement is laid out in two primary agreements: 1) an Obligation Purchase Memorandum of Understanding and 2) an Interest Offset Credit Memorandum of Understanding. The borrowing process will be greatly streamlined and more flexible under the new arrangement and will provide BPA the ability to borrow for Northwest Power Act-related operating expenses in a financial emergency.

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.

The Northwest Power Act also required regional energy plans and programs and created the Pacific Northwest Electric Power and Conservation Planning Council, now commonly called the Northwest Power and Conservation Council.

Treasury Payments and Budget Overview:

Bonneville made its full planned FY 2008 payment of \$963 million to the Treasury, including \$211 million in advanced amortization (as part of BPA's debt optimization program). Total FY 2008 4(h)(10)(C) credits applied to the Treasury payment for fish mitigation were about \$96 million. For FY 2009, Bonneville plans to pay the Treasury \$654 million: \$276 million to repay investment principal, \$340 million for interest, and \$38 million for Associated Project costs and pension and post-retirement benefits. The FY 2010 Treasury payment is currently estimated at \$824 million. FYs 2009-2010 4(h)(10)(C) credits, associated with fish recovery and to be applied toward BPA's Treasury payment, are estimated at \$101 million, and \$111 million, respectively.

Estimates of interest and amortization levels for outyear Treasury payments are based on preliminary Integrated Program Review (IPR) estimates. 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 2008 is about \$2,302 million. Amortization estimates in this FY 2010 budget include planned amortization in advance of scheduled amortization (due to earlier EN refinancing) in FY 2009 of \$78 million, consistent with power 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 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 capital investments. Direct funded capital costs, previously funded through appropriations, are now being paid through BPA borrowing from the Treasury. BPA's total O&M direct funding, including the small capital program, was \$269 million in FY 2008.

This FY 2010 budget proposes Bonneville accrued expenditures of \$3,029 million for operating expenses, \$105 million for Projects Funded in Advance, \$846 million for capital investments, and \$420 million for capital transfers in FY 2010. The budget has been prepared on the basis of Bonneville's major areas of activity, power and transmission. This business structure arose as a response to FERC Orders 888 and 889 requiring separation of public utilities' power and transmission functions. As a Federal agency, Bonneville is not subject to FERC's jurisdiction but chooses to voluntarily comply with FERC open-access policy.

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. From these efforts, results include continued efficiency gains, performance integration improvements, and a high assurance for repayment of Treasury borrowing.

- After several years of sustained effort, BPA has recovered from the financial effects of the 2000-2001 west coast power crisis. Continued cost management efforts have 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 2009, BPA is experiencing low water conditions and the effects of the downturn in the economy. It is expected that BPA will not achieve its modified net revenue target for the year, but the financial reserves BPA has established result in still having a near 100 percent probability that the annual scheduled Treasury repayment will be made in full.
- BPA conducted separate extensive consultation processes with stakeholders on its power and transmission cost structures in anticipation of establishing rates through FY 2009. These processes gave the region the opportunity to examine and provide input on the cost projections that formed the basis for BPA's 2007-2009 power rates and for BPA's 2008-2009 transmission rates.
- BPA aligned its transmission and power rate cases for the FY 2010-2011 rate period and consolidated its public processes on agency wide expenses and capital plans as part of its efforts to increase transparency for customers and stakeholders. The new public process established in 2008, the IPR, included updated power expenses for FY 2009, all expenses for FYs 2010-2011, and capital programs through FY 2013. Costs estimated in the IPR provided the basis for the final Supplemental Proposal for FY 2009 Power rates, which received interim approval from the Federal Energy Regulatory Commission (FERC) on October 31, 2008.
- BPA published in the Federal Register its initial proposal for power and transmission rates for the FY 2010 and 2011 rate period in February 2009 and expects to complete the rate case by August 2009. In spring 2009 BPA will initiate an abbreviated IPR2 to provide regional stakeholders an opportunity to revisit proposed program spending levels for FY 2010-2011 and to discuss risk mitigation and liquidity tools related to the upcoming power rate period.
- Bonneville released its Long-Term Regional Dialogue Policy and Record of Decision (ROD) in July 2007. The Regional Dialogue Policy is focused on defining 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. BPA expects to release a draft Resource Program document for public comment in July 2009.

- In the Regional Dialogue Policy, BPA committed to updating its Financial Plan given the significant business and regulatory changes in the last decade. The new Financial Plan, released in July 2008, addresses financial risk metrics, access to capital, variation in annual financial performance, and cost recovery. In addition, the Financial Plan describes how BPA will continue to manage to ensure that it meets its Treasury repayment responsibilities. The new plan is intended to guide the development of new financial policies and practices as they are needed.

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 that encompasses 14 western States, two Canadian provinces and one Mexican State. These efforts will help meet the increasing demand for our service to meet regional greenhouse gas reduction and environmental goals. 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 a Network Open Season (NOS) in 2008 to ensure the region will have sufficient transmission infrastructure available for customers seeking capacity on BPA's transmission system network. Many of the requests were 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 Federal hydro 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 2010 budget assumes \$15 million of annual reserve financing in FYs 2008-2014 for transmission infrastructure capital that is included in this budget in Projects Funded In Advance.
- As part of its continuing efforts, Bonneville is working to further optimize debt service costs (often referred to as debt optimization elsewhere in this budget). BPA, in collaboration with EN, is pursuing the refinancing of certain EN bonds as part of an ongoing debt optimization program. Through this program, BPA uses the reductions in debt service for its EN bonds to make advance payments on its Federal debt. Implementation of the refinancing components will be subject to favorable market conditions and interest rate environment.

Budget Estimates and Planning:

- This FY 2010 budget includes capital and expense estimates based on preliminary IPR forecasted data for FYs 2009-2014. FY 2008 costs are based on BPA's FY 2008 audited actual financial results.
- Capital funding levels also reflect BPA's Capital Planning Review 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 2010 budget also reflect executive management decisions from BPA's Capital Allocation Board (CAB).
- The FYs 2008-2014 revenue estimates in this budget, 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; 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.
- Revenue calculations include depreciation and 4(h)(10)(C) credit assumptions. These credits offset BPA's fish and wildlife program costs allocable to the non-power project purposes of the FCRPS, consistent with the Northwest Power Act. Credits for 4(h)(10)(C) included in this FY 2010 budget are \$96 million for FY 2008, and estimated at \$101 million and \$111 million for FYs 2009 and 2010, respectively. 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.
- Bonneville's efforts to keep its rates as low as possible are augmented by the implementation of the BPA Appropriations Refinancing Act (part of the Omnibus Consolidated Rescissions and Appropriations Act of 1996) that refinanced Bonneville's outstanding repayment obligations on appropriations. The legislation called for raising low interest rates on historic appropriations to then current Treasury market rates and resetting the principal of unpaid FCRPS appropriations. As called for in the legislation, Bonneville submitted its calculations and interest rate assignments implementing the refinancing to the Treasury. The Treasury then approved the BPA submission in July 1997, thus finalizing the implementation of the BPA Appropriations Refinancing Act refinancings.
- The Residential Exchange Program (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 settled the REP 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 (WP-07 Supplemental ROD), 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 Settlement Agreements, 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 2010 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 traditionally non-jurisdictional entities, are required to comply. These standards became enforceable on June 18, 2007, and compliance is monitored by the North American Electric Reliability Corporation (NERC) and the regional reliability organizations. Because FERC's authority includes the imposition of financial penalties for violations, BPA may be required to pay fines in the event of BPA violations of FERC-approved reliability standards.
- As part of its strategic staffing efforts and implementation of operational efficiency initiatives, Bonneville has shown a downward trend in Full-Time Employee (FTE) levels since FY 2003. BPA expects its succession planning efforts and continuing efficiency initiatives in targeted areas to level out FTE at slightly above 3,000 in the outyears. BPA continues to pursue various authorities, including the use of Voluntary Separation Incentive Payments (VSIP) and Voluntary Early Retirement Authority (VERA) to help achieve targeted levels. Annual Bonneville FTE projections included in this FY 2010 budget for FYs 2009 and 2010 are 3,064 and 3,061, respectively.

Fish and Wildlife Program Overview:

- Bonneville is committed to continue funding its share of the region's efforts to recover 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 NOAA Willamette BiOp and the USFWS' 2006 Libby 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, enhancement, and mitigation of Columbia River Basin fish and wildlife adversely affected by the development and operation of Federal hydroelectric projects on the Columbia River and its tributaries from which Bonneville markets power. Bonneville satisfies a major portion of its fish and wildlife responsibilities by funding projects and activities designed to be consistent with the Council's 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 recovery 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 May 2008. These

agreements provide specific hydro, habitat, hatchery and other measures that will address recovery needs and provide measurable biological benefits for fish. The agreements set a course of action for restoration 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 1996 through 2008.

Overview of Detailed Justifications:

Bonneville's Detailed Justification Summaries, included in this FY 2010 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 2010 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 power and transmission services, 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 use of existing borrowing authority of \$846 million in FY 2010.

The near-term forecast capital funding levels have undergone an extensive internal review as a result of BPA's Capital Planning Review process and its associated 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 2010 budget includes updated capital funding levels for FY 2009. 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). BPA will continue its efforts to refine and further implement its capital investment review process to improve the value provided.

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 2010, budget expense obligations are estimated at \$3,029 million. The total program requirements of all Bonneville programs include estimated budget obligations of \$3,980 million in FY 2010.

Bonneville Power Administration

Funding Profile by Subprogram 1/

(accrued expenditures in thousands of dollars)

	Fiscal Year				
	2008 (Audited Actuals)	2009 Original ^{2/}	2009 Adjustments	2009 Revised ^{2/}	2010 Proposed
Capital Investment Obligations					
Associated Project Costs ^{3/}	105,346	N/A	-	158,650	186,900
Fish & Wildlife	26,388	N/A	-	50,000	70,000
Conservation & Energy Efficiency ^{3/}	7,868	N/A	-	32,000	56,000
Subtotal, Power Services ^{4/}	139,602	N/A	-	240,650	312,900
Transmission Services	129,205			322,379	490,028
Capital Equipment & Bond Premium	21,526	N/A	-	29,916	42,638
Total, Capital Obligations ^{3/ 5/}	290,333	510,062	-	592,945	845,566
Expensed and Other Obligations					
Expensed	2,331,246	2,464,963	-	2,891,259	3,029,504
Projects Funded in Advance	98,682	94,989	-	99,428	105,164
Total, Obligations	2,720,261	3,070,014		3,583,632	3,980,234
Capital Transfers (cash) ^{5/}	555,439	877,573	-	275,724	419,996
BPA Total	3,275,700	3,947,587	-	3,859,356	4,400,230
Full-time Equivalents (FTEs)	2,924	3,000	-	3,064	3,061

Public Law Authorizations include:

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

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

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

Pacific Northwest Electric Power Planning and Conservation Act of 1980 (Northwest Power Act), Public Law No. 96-501, S. 885

Outyear Funding Profile by Subprogram 1/

(accrued expenditures in thousands of dollars)

	Fiscal Year			
	2011	2012	2013	2014
Capital Investment Obligations				
Associated Project Costs ^{3/}	202,900	211,900	223,900	225,900
Fish & Wildlife	60,000	50,000	50,000	50,000
Conservation & Energy Efficiency ^{3/}	56,000	56,000	56,000	56,000
Subtotal, Power Services ^{4/}	318,900	317,900	329,900	331,900
Transmission Services	559,255	475,747	450,867	439,497
Capital Equipment & Bond Premium	51,413	51,620	51,751	52,209
Total, Capital Obligations ^{3/ 5/}	929,568	845,267	832,518	823,606
Expensed and Other Obligations				
Expensed	3,302,804	3,328,453	3,500,221	3,545,349
Projects Funded in Advance	117,286	98,904	87,742	89,070
Total, Obligations	4,349,658	4,272,624	4,420,481	4,458,025
Capital Transfers (cash) ^{5/}	422,381	318,641	199,105	204,020
BPA Total	4,772,039	4,591,265	4,619,586	4,662,045
Full-time Equivalents (FTEs)	3,060	3,060	3,060	3,060

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 this Act 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 a Budget Enforcement "pay-as-you-go" test regarding its revision of current-law funding estimates.
- ^{2/} Original estimates reflect BPA's FY 2009 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 2009.
- ^{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 2010 budget includes capital and expense estimates based on preliminary IPR forecasted data for FYs 2009-2014.

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

The cumulative amount of actual advance amortization payments as of the end of FY 2008 is \$2,302 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 2008	FY 2009	FY 2010
Power Services - Capital			
Associated Project Costs	105,346	158,650	186,900
Fish & Wildlife	26,388	50,000	70,000
Conservation & Energy Efficiency	7,868	32,000	56,000
Total, Power Services - Capital	139,602	240,650	312,900

Outyear Funding Schedule

	(accrued expenditures)			
	(dollars in thousands)			
	FY 2011	FY 2012	FY 2013	FY 2014
Total, Power Services - Capital	318,900	317,900	329,900	331,900

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 Reclamation and Corps 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 composed of 31 operating Federal hydro electric projects with over 200 generating units. These projects have an average age of over 45 years, with some that exceed 60 years of age. Through direct funding and the close 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 significantly 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 next 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.

These planned investments, included in these FY 2010 budget funding estimates, will maintain the output of the FCRPS. Moving forward with these 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.

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 portion of its fish and wildlife responsibilities by funding projects and activities that implement the Program. Bonneville also implements measures addressed to avoid jeopardizing listed salmon and steelhead as required under the ESA.

These ESA measures are part of the most recent BiOps issued by National Oceanic and Atmospheric Administration Fisheries Service (NOAA) and USFWS. In February 2006, USFWS issued a new BiOp for Libby Dam for the Kootenai River white sturgeon and bulltrout. In May 2008, NOAA issued the new, remanded FCRPS BiOp, which is again being challenged in Oregon District Court by the same plaintiffs. Also, as described below, in July 2008, USFWS and NOAA issued Willamette River BiOps for the first time, to address impacts from 13 USFWS federal dams located throughout the Willamette Basin. These BiOps, and the 2000 USFWS FCRPS BiOp, collectively, require the action agencies (Corps, Bureau, and BPA) to implement 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.

The 2004 FCRPS BiOp was challenged in Federal District Court. In October 2005, the District Court invalidated the 2004 BiOp, although leaving it “in place” during the remand period. The Court ordered the sovereign parties to collaborate during the remand process, to try to find an acceptable approach for the 2004 BiOp that would have regional support. The collaboration process progressed over the past two years and was completed in 2008 when NOAA Fisheries released the final FCRPS BiOp. As a result, and discussed below, expenditures above and beyond planned FY 2009 and FY 2010 budgets are required.

In addition, in 2008, the FCRPS Action Agencies signed agreements, the Columbia Basin Fish Accords (Fish Accords), with five Northwest Tribes, and the states of Idaho and Montana. The Fish Accords supplement the activities encompassed within the 2008 BiOp and the Council-adopted Program, by providing firm commitments to mitigation actions and secure funding for the next 10 years.

There has also been litigation directed at the USFWS Biological Opinions for Libby Dam. In 2003, the Corps and BPA reinitiated consultation for the operations at Libby Dam to address

impacts to recently designated critical habitat for the Kootenai River white sturgeon, and to evaluate information that had been developed on Kootenai River white sturgeon and bull trout since the 2000 USFWS BiOp. That consultation was completed in February 2006, but was challenged by environmental groups, the Kootenai Tribe, and the State of Montana in Federal District Court of Montana. That litigation was recently settled, in March 2009.

The 2008 Willamette BiOp was issued on July 11, 2008. In this BiOp NOAA Fisheries issued a Jeopardy Opinion with Reasonable and Prudent Alternatives (RPAs) that describe potential river operations and configuration changes, improvements to hatcheries, flow changes, and habitat actions designed to address Willamette Project impacts to the Upper Willamette River spring chinook and the Upper Willamette River steelhead, both listed as threatened under ESA in 1999. The USFWS also issued a BiOp for the Willamette Projects on July 11, 2008 that addresses Project impacts on bull trout and the Oregon chub. The Oregon chub was listed as endangered in 1993. The bull trout was listed as threatened in 1998.

The above referenced NOAA and USFWS BiOps and Fish Accord commitments, and 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. As a result of these requirements, capital investments of \$50 million for FY 2009 (\$11 million higher than proposed in the FY 2009 Budget Submission of February 2008) and \$70 million for FY 2010 are estimated.

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 mainstream dams and increase fish production and survival through construction of hatchery and acclimation facilities, land acquisitions for resident fish and wildlife that are consistent with Bonneville's Capital Policy, and fish monitoring facilities. Capital project funding will focus on integrating ESA-related priorities with the region's Columbia 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 Basin fish and wildlife.

The FY 1997 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." The Conference Report on the FY 1999 Energy and Water Development Appropriations Act included a new assignment for the ISRP and the Council. The ISRP was to review the fish and wildlife projects, programs, or measures included in Federal agency budgets that are reimbursed and/or directly funded by Bonneville and to make funding recommendations to Congress. The ISRP was directed to determine whether the proposals are consistent with the scientific criteria in the Northwest Power

Act as amended in 1996, and to provide a report to the Council by April 1 of each year. The Council, in turn, must report to Congress annually by May 15.

The Federal Caucus, a group of eight agencies operating in the Columbia River Basin that have natural resource responsibilities related to ESA, released in December 2000 a comprehensive long-term strategy to restore ESA-listed fish throughout the Columbia Basin. This strategy includes the “All-H” paper that focuses on the establishment of explicit, scientifically based performance standards to gauge the status of salmon and the success of recovery efforts. Consistent with the principles of the All-H Strategy, Bonneville is implementing much of the off-site mitigation actions required by the FCRPS Biological Opinions through the Council’s Fish and Wildlife Program.

Under the 1980 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 Biological Opinions 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, 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 FY 2007-2009 for fish mitigation projects funded by BPA on U.S. Forest Service lands.

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 most recent Power Plan, finalized in January 2005, recommended that the region target 700 aMW of conservation over the next 5 years. Bonneville’s share of the conservation target is 40 percent or 280 aMW. Bonneville anticipates that between 100 and 150 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 be green.

Detailed Justification

(dollars in thousands)

FY 2008	FY 2009	FY 2010
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Associated Project Costs

105,346 158,650 186,900

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 through turbine runner replacements and optimization of hydro facility operation, and 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 purposes.

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

FY 2008: Completed main unit and station service breaker replacements at selected projects. Continued hydro optimization investigations and equipment installations at selected projects through the power plant efficiency improvements project. Completed spare transformers purchase contracts at four projects. Continued emergency notification system replacement/upgrades at several projects. Continued Intercontrol Center Communications Protocol (ICCP) improvements at multiple projects.

Completed the generator re-wedging project at Bonneville Powerhouse 2. Continued gantry crane replacement and headgates refurbishment/replacement at Bonneville. Continued exciter installation, DC and preferred AC upgrades, and HVAC upgrade at Bonneville Powerhouse 2. Continued rehabilitation work at Bonneville Powerhouse 1. Began the planning/design work for station service upgrades, fire protection upgrades and additional crane refurbishments at Bonneville. Completed exciter replacement installations at John Day and Willamette Valley projects. Repaired failed linkage for unit 16 at John Day. Continued fire protection upgrades and bridge crane refurbishment at John Day. Continued generator rewinds, intake crane rehabilitation, heat pump replacement, oil/water separator development and station service improvements at The Dalles.

Continued fire protection design, spare transformer replacement and disconnect replacement at The Dalles. Continued turbine runner replacement and bridge crane refurbishment at Hills Creek. Continued crane refurbishment and turbine runner replacement at Lookout Point. Completed plant upgrade and refurbishing of the turbine replacement which failed during testing at Cougar. Continued fire protection upgrades for all Willamette Valley projects. Continued generator winding replacement and electric reliability upgrades at Detroit.

(dollars in thousands)

FY 2008	FY 2009	FY 2010
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Continued governor replacement project, control system installation, hi-lift pump replacement and protective relay replacements at Albeni Falls. Began design for auxiliary boards upgrades at Albeni Falls. Continued exciter replacement at Libby. Completed crane rehabilitation at Chief Joseph. Continued CO2 system replacement and 480 volt upgrade at Chief Joseph. Continued with turbine replacements at Chief Joseph by awarding contract for new runners. Continued design for exciter replacements, protective relay replacements and supervisory control console replacement and began automatic synchronizer replacement at Chief Joseph.

Continued DC and preferred AC upgrades at McNary. Continued plant modernization at McNary, including fire protection, external oil cooler installation, station service upgrades, transformer purchases and installations and generator winding replacements. Began drainage pump replacement and spare bulkhead replacements at McNary. Began bridge crane refurbishment and elevator refurbishment at Dworshak. Continued generator winding replacements at Lower Granite. Completed or continued replacement and upgrades on protective relays and fire protection at Lower Snake River and Dworshak projects.

Continued diesel generator purchases for Lower Granite, Little Goose and Lower Monumental. Completed elevator refurbishment at Little Goose and Lower Monumental and T-1 disconnect replacement at Lower Monumental. Continued intake crane refurbishment at Lower Granite and Lower Monumental, and tailrace crane refurbishment at Lower Monumental. Began bridge crane refurbishment at Lower Monumental. Continued turbine runner development for Ice Harbor. Continued spare draft tube bulkhead purchase for Lower Snake projects, plus a variety of smaller continuing or new investments and refurbishing of failed units.

FY 2009: Complete ICCP improvements at multiple projects. Continue hydro optimization investigations and equipment installations at selected projects through the power plant efficiency improvements project. Continue emergency notification system replacement/upgrades at several projects. Complete gantry crane replacement and exciter installation at Bonneville. Continue head gate refurbishment, DC and preferred AC upgrades, and HVAC upgrade at Bonneville Powerhouse 2. Continue rehabilitation work at Bonneville Powerhouse 1. Continue station service upgrades, fire protection upgrades, and additional crane refurbishments at Bonneville. Continue fire protection upgrades and bridge crane refurbishment at John Day. Begin protective relay replacement at John Day. Complete intake crane rehabilitation, heat pump replacement, disconnect replacement, and oil/water separator development at The Dalles. Continue generator rewinds, station service improvements, fire protection upgrades, and spare transformer replacement at The Dalles. Continue turbine runner replacement and bridge crane refurbishment at Hills Creek. Complete crane refurbishment at Lookout Point. Continue turbine runner replacement at Lookout Point. Complete fire protection for all Willamette Valley projects. Complete generator winding replacement and electric reliability upgrades at Detroit.

(dollars in thousands)

FY 2008	FY 2009	FY 2010
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Continue governor replacement project, control system installation, hi-lift pump replacement protective relay replacements, and auxiliary board upgrades at Albeni Falls. Begin design for DC system upgrades at Albeni Falls. Complete exciter replacement at Libby. Complete CO2 system replacement at Chief Joseph. Continue turbine runner replacements, 480 volt upgrade and exciter replacements at Chief Joseph. Complete protective relay replacements, supervisory control console replacement, and automatic synchronizer replacement at Chief Joseph.

Complete DC and preferred AC upgrades, external oil cooler installation, transformer purchases, drainage pump replacement, and spare bulkhead replacements at McNary. Continue fire protection, transformer installations and generator winding replacements at McNary. Continue bridge crane refurbishment and elevator refurbishment at Dworshak. Complete generator windings replacement at Lower Granite. Complete fire protection at Lower Snake River and Dworshak projects. Complete diesel generator purchases for Lower Granite, Little Goose and Lower Monumental. Complete intake crane refurbishment at Lower Granite and Lower Monumental, and tailrace crane refurbishment at Lower Monumental. Continue bridge crane refurbishment at Lower Monumental. Continue turbine runner development for Ice Harbor. Complete spare draft tube bulkhead purchase for Lower Snake projects, plus a variety of smaller continuing investments. In addition, new investments and repairs to failed units will be pursued as needed per the Asset Plan.

FY 2010: Continue hydro optimization investigations and equipment installations at selected projects through the power plant efficiency improvements project. Complete DC and preferred AC upgrades, station service upgrades, and HVAC upgrade at Bonneville Powerhouse 2. Continue head gate refurbishment at Bonneville Powerhouse 2. Continue rehabilitation work at Bonneville Powerhouse 1. Continue fire protection upgrades and additional crane refurbishments at Bonneville. Continue fire protection upgrades and bridge crane refurbishment, and protective relay replacement at John Day. Continue generator rewinds, station service improvements, and fire protection upgrades at The Dalles. Complete spare transformer replacement at The Dalles. Continue turbine runner replacement and bridge crane refurbishment at Hills Creek. Continue turbine runner replacement at Lookout Point.

Complete hi-lift pump replacement at Albeni Falls. Continue auxiliary boards upgrades, and DC system upgrades at Albeni Falls. Continue turbine runner replacements, 480 volt upgrade and exciter replacements at Chief Joseph.

Continue transformer installations and generator winding replacements at McNary. Complete bridge crane refurbishment and elevator refurbishment at Dworshak. Continue bridge crane refurbishment at Lower Monumental. Continued turbine runner development for Ice Harbor, plus a variety of smaller continuing investments. In addition, new investments and repairs to failed units will be pursued as needed per the Asset Plan.

(dollars in thousands)

FY 2008	FY 2009	FY 2010
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Bureau of Reclamation (known projects to date):

FY 2008: Completed left/right power plants roof replacement and 500-230 kV relay replacements at Grand Coulee. Continued Grand Coulee runner replacements. Continued main unit breaker replacements, 11.95 KV switchyard upgrade, air housing cooler replacements, various transformer replacements, 500 KV differential relay replacements, right power plant station service upgrades, third power plant exciter replacements, and third power plant roof replacement and elevator refurbishment at Grand Coulee. Began third power plant governor replacement and left power plant spare transformer purchases at Grand Coulee. Continued hydro optimization investigations and equipment installations at Grand Coulee. Continued SCADA replacement at Grand Coulee and Hungry Horse. Continued various breaker replacements at Hungry Horse. Completed DC system upgrades and roof replacement at Palisades. Continued transformer replacements at Green Springs. Continued turbine seal ring and exciter replacements at Chandler. Continued transformer and exciter replacements at Roza, plus a variety of smaller continuing or new investments and repairs to failed units.

FY 2009: Complete main unit breaker and 11.95 KV switchyard upgrade, 500 KV differential relay replacements, and third power plant roof and elevator refurbishment at Grand Coulee. Continue Grand Coulee runner replacements. Continue air housing cooler replacements, various transformer replacements, right power plant station service upgrades, third power plant exciter replacements, and third power plant governor replacement at Grand Coulee. Continue hydro optimization investigations and equipment installations at Grand Coulee. Continue SCADA replacement at Grand Coulee and Hungry Horse. Complete various breaker replacements at Hungry Horse except continue main unit breaker replacements. Continue transformer replacement at Green Springs. Complete turbine seal ring and exciter replacements at Chandler. Complete transformer and exciter replacements at Roza, plus a variety of smaller continuing investments. In addition, new investments and repairs to failed units will be pursued as needed per the Asset Plan.

FY 2010: Continue Grand Coulee runner replacements. Continue air housing cooler replacements, various transformer replacements, right power plant station service upgrades, third power plant exciter replacements, and third power plant governor replacement at Grand Coulee. Continue hydro optimization investigations and equipment installations at Grand Coulee. Continue SCADA replacement at Grand Coulee and Hungry Horse. Complete main unit breaker replacement at Hungry Horse. Continue transformer replacement at Green Springs plus a variety of smaller continuing investments. In addition, new investments and repairs to failed units will be pursued as needed per the Asset Plan.

(dollars in thousands)

FY 2008	FY 2009	FY 2010
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Fish and Wildlife **26,388** **50,000** **70,000**

Specific project solicitation and funding decisions were completed in early 2008. The following projects require capital funding in FY 2010. It is Bonneville’s intention to proceed with design, environmental review, and construction of those projects from this list and that are recommended for funding within the available budget. The costs indicated are preliminary estimates only and actual costs may be greater or lower than those estimates, depending on final environmental review decisions and design and construction costs.

The following fish facilities have been submitted for congressional expenditure authority for FY 2010 as authorized by the Pacific Northwest Electric Power Planning and Conservation Act for new fish and wildlife facilities of \$1 million and an economic life greater than 15 years (PL 96-501, sec. 4(h)(10)(B)): the Okanogan Basin Locally Adapted Steelhead Supplementation Program, the Leaburg Dam Fish Sorter, and the Crystal Springs hatchery Facilities. See Proposed Appropriations Language included earlier in this FY 2010 budget.

These facilities are based upon the best available science and are regionally important in that they provide high priority mitigation and recovery actions for fish and wildlife populations as affected by the FCRPS, under the auspices of the Northwest Power Act and the Endangered Species Act. 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 fishery resource managers, local governments, watershed and environmental groups and other interested parties.

FY 2008-2010 efforts include continued implementation of high priority ESA-related projects and activities associated with the currently operative NOAA and USFWS BiOps.

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 and priorities for sequencing implementation are developed.

Although not subject to the Northwest Power Act’s section 4(h)(10)(B) for capital construction projects, Bonneville may include capitalization of investment in some wildlife habitat acquisitions and in land acquisition for fish and wildlife provided such land acquisition costs exceed \$1 million, such investment provides a creditable and quantifiable benefit against a defined obligation for Bonneville, and is consistent with Bonneville’s Capitalization Policy.

(dollars in thousands)

FY 2008	FY 2009	FY 2010
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The five types of capital projects as defined by the FY 2007 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). This may also include construction-related habitat restoration.
- 4) Mainstem passage -- Projects and activities which benefit fish passage in the mainstem of Columbia River or Snake River. Capital projects include: ladders, removable spillway weirs, collection facilities, PIT tag facilities, etc.
- 5) Land acquisition -- Land acquisition projects protect, enhance, and maintain instream wetland and riparian habitat and provide habitat units (HUs) for wildlife and instream miles for resident fish to fulfill the legal obligation of FCRPS.

Anadromous fish supplementation, production and related facilities, and/or juvenile and adult passage improvement projects that may require capital funds in FY 2010 include the following:

- 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. The 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 on the Willamette River and will allow managers to efficiently separate natural origin Upper Willamette Spring Chinook (UWSC) from hatchery reared Chinook. The UWSC 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.

(dollars in thousands)

FY 2008	FY 2009	FY 2010
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- Crystal Springs Hatchery Facilities: This project will develop facilities for rearing and out-planting resident and anadromous fish in central and southern Idaho. The facility will be located near the American Falls Reservoir in Idaho. Resident fish include Yellowstone Cutthroat and Westslope Cutthroat trout. The anadromous fish include Snake River spring Chinook salmon and Snake River steelhead. The facility is sponsored by the Shoshone-Bannock Tribes, 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: This project includes the construction of an interpretive building for public education at Bonneville’s existing hatchery and for the design and construction of a monitoring and evaluation building at Nelson Springs for use by project biologists.

- Snake River Spring Chinook Salmon artificial propagation facilities (known as the Northeast Oregon Hatchery or NEOH); to be located on the Upper Grande Ronde River near La Grande, Oregon, on Catherine Creek near Union, Oregon, and on Lostine River near Enterprise, Oregon: While design has been ongoing for this project for several years, the decision to proceed with construction is pending 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 these ESA-listed fish 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. The project requires development and review of a Master Plan prior to implementation. Fish and wildlife resources in the Kootenai drainage were historically abundant and were used by the Kootenai Tribe for cultural and subsistence purposes. Over the past decades, native fish and wildlife populations have declined significantly due to large-scale habitat and ecosystem changes. Native kokanee from the South Arm of Kootenay Lake are considered “functionally extinct,” burbot from the lower Kootenai River are on the verge of extinction, and the white sturgeon population in the Kootenai River was listed as endangered by the U.S. Fish and Wildlife Service in 1994. The Kootenai River White Sturgeon Study and Conservation Aquaculture Project was initiated by the Kootenai Tribe of Idaho as a stopgap measure in 1989 to produce fish from wild Kootenai River adults until effective habitat restoration measures could be identified and implemented. Only the long life span of the sturgeon has forestalled extinction to date.

(dollars in thousands)

FY 2008	FY 2009	FY 2010
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Natural recruitment has been absent or limited for decades and the current population of large old fish is steadily dwindling. Continued failure of natural recruitment means that the next generation of Kootenai white sturgeon will come almost entirely from the hatchery.

- 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 Master Plan is complete and is under review by regional entities, including the Council. The project will require an approved Master Plan prior to implementation. The Nez Perce Tribe (NPT) is motivated to implement the Clearwater Coho Restoration Project for the following reasons: 1) historically, coho salmon were one of the species making up a complex multi-species anadromous ecosystem within the Clearwater; and 2) coho salmon are a cultural resource to the NPT. The NPT goal is to restore coho salmon to the Clearwater sub-basin measured by 14,000 adults at Lower Granite Dam annually. The 2007-2009 proposal called for completing the Council's 3-Step planning process and construction based on the 2004 Master Plan. Plans are to develop an integrated management plan to optimize the use of hatchery fish to meet recovery and harvest objectives.

- 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 will be selected in Idaho to increase production annually to between 500,000 and 1,000,000 smolts as called for in the 2008 FCRPS BiOp. Project requires development and review of a Master Plan prior to implementation. 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 to maintain Snake River sockeye salmon and 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.

(dollars in thousands)

FY 2008	FY 2009	FY 2010
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- Chief Joseph Dam Hatchery: BPA is proposing to fund the Chief Joseph Dam Hatchery Program, a comprehensive management program for supplementing Chinook salmon to increase the abundance, productivity, distribution, and diversity of naturally spawning populations of spring/summer and fall Chinook in the Okanogan River and in the Columbia River below Chief Joseph Dam, in Washington (between the confluence of the Okanogan River and Chief Joseph Dam). Project includes a new hatchery facility (at the base of the Chief Joseph Dam) and acclimation ponds (throughout the Okanogan River sub-basin), broodstock collection, egg incubation, rearing, release, and selective broodstock collection method development. The objective is to improve production of spring/summer and fall Chinook salmon in the Okanogan River Sub-basin below Chief Joseph Dam. Planned production levels are 2 million summer/fall chinook and 0.9 million spring chinook smolts. Exploration of potential cost sharing for O&M and capital is underway with three public utility districts having some level of mitigation responsibility for their hydro projects within this geographic area.

- 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 restore and maintain sustainable, naturally producing populations of spring chinook and steelhead that support tribal and non-tribal harvest and cultural and economic practices while protecting the biological integrity and the genetic diversity of indigenous fish stocks in the sub-basin. Consistent with the Klickitat Master Plan, 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 are expected to be complete. Construction for these components of the project is expected to be initiated in late 2009 and continue through most of 2010. Additionally, a new Klickitat Hatchery EIS is planned to begin in 2009 that will examine options for the development and operation of new supplementation facilities and acclimation alternatives, and upgrades to the existing hatchery facility. This EIS is anticipated to be completed in 2011.

(dollars in thousands)

FY 2008	FY 2009	FY 2010
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- 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. Powerdale Dam, which is owned and operated by PacifiCorp, is scheduled for decommissioning during the summer of 2010. The dam forms 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. The Powerdale Dam Fish Trap currently provides 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. 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 in 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 were not re-established in mid-Columbia basins. Currently, the lack of locally adapted stock and in-basin habitat degradation may be the biggest challenges to coho reintroduction in mid-Columbia tributaries. This program'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.

Cultural, socio-economic, and ecological benefits are expected from the return of this species to areas where it once occurred in abundance. The phased approach 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 planning and design. Project requires development and review of a Master Plan prior to implementation. The Master Plan is undergoing review by regional fisheries managers. The proposed facility will rear spring Chinook on the South Fork Walla Walla River, near Milton Freewater, Oregon.

The FCRPS BiOp Remand Collaboration Process assessed potential hatchery reform actions for all Federally funded hatcheries including those funded by BPA as part of the Council Integrated Fish and Wildlife Program and those programs funded directly by BPA through the Corps, USFWS and Bureau. Specific actions designed to benefit ESA-listed stocks to be funded are identified in the 2008 FCRPS BiOp.

(dollars in thousands)

FY 2008	FY 2009	FY 2010
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-Yakama Coho restoration: 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. Over the last ten years, Yakima River mouth returns of coho have ranged from about 800 to 6,200 salmon. The significant decrease in abundance of these fish is mirrored on the terrestrial landscape. The goal of this restoration project is to restore extirpated coho salmon to the Yakima River basin at biologically sustainable levels.

- Walla Walla River Juvenile and Adult Passage Improvements: This project would provide safe passage for migrating juvenile and adult salmonids in the Walla Walla Basin by constructing and maintaining passage facilities at irrigation diversion dams and canals.

Potential non-construction Wildlife Habitat Acquisitions (Including Conservation Easements):

- Grand Coulee and Chief Joseph Wildlife Habitat Acquisition
- Couer d'Alene Fish and Wildlife Habitat Acquisition
- Albeni Falls Wildlife Mitigation
- Blue Creek Winter Range Wildlife Habitat Acquisition
- Yakima Valley Fish and Wildlife Habitat Acquisition
- Grande Ronde Wildlife Habitat Acquisition
- Salmon River Fish Habitat Acquisition
- Fish and Wildlife Land Acquisition - Selah Gap to Union Gap
- Palisades and Minidoka Wildlife Habitat Acquisition
- Black Canyon, Boise Diversion, Anderson Ranch Wildlife Habitat Acquisition
- Willamette Fish and Wildlife Habitat Acquisition
- Libby and Hungry Horse Reservoirs Resident Fish Acquisitions

(dollars in thousands)

	FY 2008	FY 2009	FY 2010
Conservation and Energy Efficiency	7,868	32,000	56,000

The 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 and Heating, Ventilation, and Air Conditioning (HVAC), industrial processes and lighting, and irrigated agriculture; (2) third party delivery programs, such as residential compact fluorescent lighting, and the Energy Smart Grocer and Green Motors programs, and the Water and Waste Water Treatment Facilities program; (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.

Total Power Services – Capital	139,602	240,650	312,900
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Explanation of Funding Changes

FY 2010 vs. FY 2009 (\$000)

Associated Project Costs

- Reflects a reshaping of funding requirements based on the need to maintain a minimum level of generation each year. +28,250

Fish and Wildlife

- Incorporates increase in funding to implement Biological Opinions, Fish Accord commitments, and *Columbia Basin Fish and Wildlife Program* activities. +20,000

Conservation and Energy Efficiency

- Funding is consistent with the Council's most recent Power Plan, finalized in 2005. +24,000

Total Funding Change, Power Services - Capital	+72,250
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Transmission Services – Capital

Funding Schedule by Activity

	(accrued expenditures)		
	(dollars in thousands)		
	FY 2008	FY 2009	FY 2010
Transmission Services - Capital			
Main Grid	9,515	74,989	171,014
Area & Customer Services	18,849	25,968	38,491
Upgrades & Additions	36,225	79,011	110,577
System Replacements	64,616	142,411	169,946
Projects Funded in Advance	98,682	99,428	105,164
Total, Transmission Services - Capital	227,887	421,807	595,192

Outyear Funding Schedule

	(accrued expenditures)			
	(dollars in thousands)			
	FY 2011	FY 2012	FY 2013	FY 2014
Total, Transmission Services - Capital	676,542	574,652	538,609	528,567

Description

TS is responsible for about 75 percent of the Pacific Northwest’s high-voltage transmission. TS provides for all additions, upgrades, and replacements to the Federal BPA transmission system, resulting in reliable service to northwest generators and utility customers. The Federal 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 has made, and 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 Federal 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 had been added to the system over the years.

The Northwest transmission system continues to show signs of stress, as two close calls in 2003 demonstrated. On June 4, 2003, voltage instability in the Spokane area was prevented by quick operator action on the Federal system. Two weeks later, the non-Federal transmission path between Montana and Idaho was overloaded for two days, and Washington operator adjustments prevented load loss. In 2004, it was noted that a small load change at BPA’s interconnection

with Idaho Power near LaGrande, Oregon, was causing an unusually large voltage change. These examples demonstrate how the transmission system is being 'pushed' to its limits of capacity to carry power. The completion of the Grand Coulee-Bell, Kangley-Echo Lake, and Schultz-Wautoma line projects have provided dispatchers with greater Operational Transfer Capability, and have reduced the likelihood of outages or reduction of transmission capacity for outage situations.

Bonneville's completed infrastructure investments that further strengthen the network consist of the following projects: Puget Sound Area Additions, North of Hanford/ North of John Day, Cross Cascades North, Celilo Modernization, Eastern Washington Reinforcement, and Portland Area Additions.

These projects relieve congestion and contribute toward restoring an adequate reliability margin to the grid. They will be used to respond to a competitive market, meet regional load during outages, move power to meet changing loads, perform maintenance without harming the market, and allow Columbia Grid to start with the regional grid less congested.

In 2005, with the Congressional approval of wind tax credits, a number of potential wind generation companies made requests for connection to the BPA transmission grid. In FY 2007, BPA built facilities to connect up to 2500 MW of wind generation and connected 650 MW. In 2008, 659 MW was connected and approximately 1100 MW will connect in 2009 to the FCRPS grid. Bonneville has several thousand MW in additional requests for wind project interconnection, many requesting interconnection in 2010, 2011 or 2012. The wind generation request quantities are in addition to approximately 1000 MW of natural gas and geothermal generation proposed for connection in 2012 and 2013. BPA estimates that another 850 MW of wind generation may interconnect in 2010, depending on the production tax credits and other market factors. BPA plans a major construction phase in 2011-2013, building several new large substations to meet the interconnection requests. Current projections are for approximately 1000 MW to interconnect in 2011, with similar amounts interconnecting in each of 2012 through 2015. Much of the wind generation interconnection will result from the Renewable Portfolio standards enacted by Oregon and Washington, requiring an estimated 5000 MW of renewable generation by 2015. Export to California could add another 2000-3000 MW during the same time period.

In June 2008, Bonneville concluded the first phase of its NOS. During that time, those desiring to secure long-term firm capacity on Bonneville's network transmission system but for whom no capacity was available were invited to sign agreements which committed them to take service at a specified time and under specified terms. BPA had 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 selected five new Main Grid capital projects from the NOS in early FY 2009: 1) McNary-John Day 500 kV transmission line, 2) Big Eddy-Substation Z 500 kV transmission line and substation, 3) Little Goose 500 kV transmission line and substation, 4) I-5 Corridor 500 kV transmission line and substation, and 5) West of Garrison remedial action scheme. These projects will provide almost 3,700 MW of new transmission service and Bonneville will construct new facilities and provide service at rolled-in rates.

As a means to sustain BPA's limited Treasury financing, third-party financing is currently being used as a financing option for some investments, including PFIA.

System Replacements replace high-risk, obsolete, and maintenance-intensive facilities and equipment and 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 Center and control and communications equipment and systems; and includes replacements provided for in the Commercial Spectrum Enhancement Act (CSE Act) (under PFIA); and 3) replacing all other existing high-risk equipment and facilities affecting the safety and reliability of the transmission system.

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, 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 particularity 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, braking resistor, 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 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.

Detailed Justification

(dollars in thousands)

FY 2008	FY 2009	FY 2010
9,515	74,989	171,014

Main Grid

Bonneville’s strategic objectives for Main Grid projects are to provide voltage support; provide a reliable transmission system for open access, per FERC criteria; provide for relief of transmission system congestion; and assure compliance with the NERC, Western Electricity Coordinating Council (WECC), and BPA reliability standards. 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 provide for transmission access for new generation projects to the load center. Reinforcements along the Interstate-5 corridor are also planned.

- FY 2008: (1) Began the planning of Interstate-5 Corridor reinforcements; (2) Began the design of the Libby-Troy 115kv transmission line upgrade; (3) Completed the environmental work and started the design for the Olympia Peninsula Reinforcement project(formerly known as the Olympic Peninsula Addition project); (4) As a result of the NOS that Bonneville conducted, two new projects emerged: West of McNary Reinforcements Group 1 (WOMR 1) consisting of a new McNary-John Day 500kV line along with other line upgrades and the West of McNary Reinforcements Group 2 project (WOMR 2) a new 500kV line from Big Eddy substation to a new 500kV substation that will intersect the Wautoma-Ostrander 500kV line. An Environmental Supplemental Assessment was started for the McNary-John Day line and preliminary engineering and environmental work began for WOMR 2; (5) Continued planning studies to identify and

(dollars in thousands)

FY 2008	FY 2009	FY 2010
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clarify needed infrastructure additions; (6) Continued planning studies to identify projects driven by NERC/ WECC reliability Standards; (7) Continued planning and design studies to comply with the N-2 outage criteria; (8) Continued planning studies to identify additional system reactive needs to mitigate unacceptable low or high voltage problems and other system additions; (9) Continued planning studies to relieve the transmission system capacity congestion and to integrate new generation facilities.

- FY 2009: (1) Continue planning and begin the design of I-5 Corridor reinforcements; (2) Continue the design, material ordering and begin the construction of the Libby-Troy 115KV transmission line upgrade; (3) Continue the construction for the Olympic Peninsula Reinforcement project; (4) West of McNary Reinforcements Group 1- continue design and procurement of materials and start construction; West of McNary Reinforcements Group 2- continue environmental and preliminary design studies; (5) Begin the design and material ordering for the Redmond 230/115 kv bank #2; (6) Continue planning studies to identify and clarify needed infrastructure additions; (7) Continue planning studies and design to identify projects driven by NERC/ WECC reliability Standards; (8) Continue planning and design studies to comply with the N-2 outage criteria; (9) Continue planning studies to identify other system reactive needs to mitigate unacceptable low or high voltage problems and other system additions; (10) Continue planning studies to relieve the transmission system capacity congestion and for integrating potential new generation facilities; (11) Begin planning studies and design for other projects related to the Network Open Season.
- FY 2010: (1) Continue design and material ordering and begin the construction of I-5 Corridor reinforcements; (2) Complete construction of the Libby-Troy 115KV transmission line upgrade; (3) Complete construction of the Olympic Peninsula Reinforcement project; (4) West of McNary Reinforcements Group 1 (WOMR 1)- complete design, procurement of materials, and continue construction; West of McNary Reinforcements Group 2 (WOMR 2)- continue environmental and preliminary design studies; (5) Complete the design and begin construction for the Redmond 230/115 kv Bank #2; (6) Continue planning studies to identify and clarify needed infrastructure additions; (7) Continue planning studies and design to identify projects driven by NERC/ WECC reliability Standards; (8) Continue planning and design studies to comply with the N-2 outage criteria; (9) Continue planning studies to identify other system reactive needs to mitigate unacceptable low or high voltage problems and other system additions; (10) Continue planning studies to relieve the transmission system capacity congestion and for integrating potential new generation facilities; (11) Continue planning studies and design for projects related to the Network Open Season.

Area and Customer Services	18,849	25,968	38,491
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Bonneville’s strategic objective for Area and Customer Service projects is to assure that Bonneville meets the reliability standards and the contractual obligations we have to our

(dollars in thousands)

FY 2008	FY 2009	FY 2010
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customers for serving load.

- FY 2008: (1) Began design and construction of the SVC at Rogue Substation to serve Southern Oregon Coast; (2) Cancelled the design for shunt capacitor addition at Fords Prairie area; (3) Continued development of project scope for new Hooper Springs (formerly know as Lower Valley Reinforcement, Caribou Substation); (4) Began the design, material ordering and construction of the City of Centralia Reinforcement Project; (5) Continued preliminary engineering and design for miscellaneous facilities required to meet contractual obligations and maintain reliable service for BPA’s service area.
- FY 2009: (1) Complete construction for the SVC at Rogue Substation; (2) Cancelled the addition of the SVC at Port Angeles Substation; (3) Begin the design and material ordering and start the construction on Hooper Springs substation; (4) Complete the construction on the City of Centralia Reinforcement Project; (5) Begin the design and material ordering of the Drummond Shunt Capacitors; (6) Begin design and material ordering of the Albany-Eugene Rebuild; (7) Begin the design and material ordering for the Lebanon 115 kv shunt capacitors; (8) Continue preliminary engineering and design for miscellaneous facilities required to meet contractual obligations and maintain reliable service for BPA’s service area.
- FY 2010: (1) Complete construction on Hooper Springs substation; (2) Complete design and construction of the Drummond Shunt Capacitors; (3) Complete the construction of the Albany-Eugene Rebuild; (4) Complete the construction of the Lebanon 115 kv shunt capacitors; (5) Continue preliminary engineering and design for miscellaneous facilities required to meet contractual obligations and maintain reliable service for BPA’s service area.

Upgrades & Additions **36,225** **79,011** **110,577**

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

(dollars in thousands)

FY 2008	FY 2009	FY 2010
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telecommunication services as a public benefit.

- FY 2008: (1) Continued developing project scope and agreement for the Maple Valley – SnoKing - Snohomish fiber optic project; (2) Completed design for the 2 mile taps for Sifton and Kennewick Fiber optic projects; (3) Designed 1 mile tap for Augspunger fiber project; (4) Designed 2 miles of fiber between Bonneville power house and Bonneville control house; (5) Continued construction of secondary fiber related projects and digital radio system upgrades to improve the operational telecommunication system; (6) Completed design and construction of seismic upgrade projects; (7) Continued planning, design, material acquisition and construction of special remedial action control schemes required for interconnecting new generation projects and mitigating immediate constrained paths; (8) Continued planning, design, material acquisition and construction of various system additions and upgrades necessary to maintain a reliable system for BPA’s service area.
- FY 2009: (1) Continue material acquisition and complete construction for Maple Valley – SnoKing - Snohomish fiber project; (2) Order materials and complete construction on the 2 mile taps for Sifton and Kennewick fiber projects; (3) Order materials and complete construction on the 1 mile tap for Augspunger fiber project; (4) Complete the design and order materials for the 2 miles of fiber between Bonneville power house and Bonneville control house; (5) Complete design and construction of seismic upgrade projects; (6) Continue planning, design, material acquisition and construction of special remedial action control schemes required for interconnecting new generation projects and mitigating immediate constrained paths; (7) Continue planning, design, material acquisition and construction of various system additions and upgrades necessary to maintain a reliable system for BPA’s service area; (8) Continued construction of secondary fiber related projects and digital radio system upgrades to improve the operational telecommunication system.
- FY 2010: (1) Continue negotiations for joint use fiber project from SnoKing to Intalco; (2) Continue material acquisition and complete construction on the 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.

System Replacements	64,616	142,411	169,946
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Bonneville’s strategic objectives for System Replacement are to replace high-risk, obsolete, and maintenance-intensive facilities and equipment and to reduce the chance of equipment

(dollars in thousands)

FY 2008	FY 2009	FY 2010
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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 2008: (1) Completed non-electric replacements as necessary; (2) Continued the design, material acquisition, and construction for the Access Road Program capital component; (3) Completed 12 security enhancement projects at various substations; (4) Completed order for replacement of three BPA helicopters for future delivery utilizing General Services Administration exchange sale authority.
- FY 2009: (1) Complete other non-electric replacements as necessary; (2) Complete seismic upgrades to substations and buildings; (3) Continued the design, material acquisition, and construction for the Access Road Program capital component; (4) Receive delivery of two helicopters. (5) Acquire land, begin design, and conduct required studies for the construction of the Maintenance Headquarters in the Tri-Cities, Washington area; (6) Continue design and construction of capital improvements for identified existing facilities.
- FY 2010: (1) Complete other non-electric replacements as necessary; (2) Continue the design, material acquisition, and construction for the Access Road Program capital component; (3) Receive delivery of one helicopter, (4) Begin and complete construction of Tri-cities Maintenance Headquarters facilities; (5) Continued design and construction of capital improvements for identified existing facilities.

Electric Replacements:

- FY 2008: (1) Continued replacement of system protection and control equipment and other substation and line facilities as needed to maintain reliability using Reliability Centered Maintenance (RCM) criteria. Such replacements include relays, annunciators, oscillographs, metering and replacing and migrating analog to digital technology and Supervisory Control and Data Acquisition (SCADA) equipment; (2) Continued replacement of under-rated and high maintenance substation equipment; (3) Continued replacing spacer dampers on various 500kV 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 and insulators with Non-Ceramic Insulators (NCI).
- FY 2009: (1) Continue replacement of system protection and control equipment and other substation and line facilities as needed to maintain reliability using Reliability

(dollars in thousands)

FY 2008	FY 2009	FY 2010
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Centered Maintenance (RCM) criteria. Such replacements include relays, annunciators, oscillographs, metering and replacing and migrating analog to digital technology and Supervisory Control and Data Acquisition (SCADA) equipment; (2) Continue replacement of under-rated and high maintenance substation equipment; (3) Continue replacing spacer dampers on various 500kV 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 and insulators with Non-Ceramic Insulators (NCI).

- FY 2010: (1) Continue replacement of system protection and control equipment and other substation and line facilities as needed to maintain reliability using RCM 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 500kV 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.

Projects Funded in Advance

98,682 99,428 105,164

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

- FY 2008: (1) Continued to integrate various new wind generation projects into BPA transmission grid per Interconnection Requests via the Open Access Tariff; (2) Completed planning studies to identify system impacts and needs regarding proposed new generation projects; (3) Continue environmental cleanup and other work necessary for the sale of BPA facilities; (4) Completed other projects as agreed to with customers; (5) Began design for the radio replacements associated with the CSE Act; (6) Began the design of the California-Oregon Intertie (COI) reinforcement project.
- FY 2009: (1) Continue to integrate various new wind generation projects into BPA transmission grid per Interconnection Requests via the Open Access Tariff; (2) Complete planning studies to identify system impacts and needs regarding proposed new generation projects; (3) Continue environmental cleanup and other work necessary for the sale of BPA facilities; (4) Complete other projects as agreed to with customers; (5) Continue design and start construction for the radio replacements associated with the CSE Act; (6) Complete design, material ordering and begin construction of the COI reinforcement project.

(dollars in thousands)

FY 2008	FY 2009	FY 2010
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- FY 2010: (1) Continue to integrate various new wind generation projects into BPA transmission grid per Interconnection Requests via the Open Access 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 CSE Act; (7) Continue construction of the COI reinforcement project.

Total, Transmission Services – Capital	227,887	421,807	595,192
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Explanation of Funding Changes

FY 2010 vs. FY 2009 (\$000)

Main Grid

- Reflects increase to accommodate new projects associated with updated power flow study results and upgrade existing transmission projects. +96,025

Area & Customer Services

- Reflects increase in the number of new customer service projects. +12,523

Upgrades & Additions

- Reflects increase on both system wide controls schemes, fiber projects and communications upgrades and improvements and additions to other transmission facilities. +31,566

System Replacements

- Reflects continuing focus on system replacements. +27,535

Projects Funded in Advance

- Reflects increase of large customer funded projects related to generation integration. +5,736

Total Funding Change, Transmission Services - Capital	+173,385
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Capital IT & Equipment/Capitalized Bond Premium

Funding Schedule by Activity

(accrued expenditures)			
(dollars in thousands)			
	FY 2008	FY 2009	FY 2010
Capital IT & Equipment/Capitalized Bond Premium	21,526	29,916	42,638
Capital Information Technologies (IT) & Equipment	0	0	0
Capitalized Bond Premium	0	0	0
Total, Capital IT & Equipment/Capitalized Bond Premium	21,526	29,916	42,638

Outyear Funding Schedule

(accrued expenditures)				
(dollars in thousands)				
	FY 2011	FY 2012	FY 2013	FY 2014
Total, Capital IT & Equipment/Capitalized Bond Premium	51,413	51,620	51,751	52,209

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.

As part of a major efficiency effort, BPA continues to move its IT infrastructure to a more efficient architecture. This FY 2010 budget supports, in part, this effort. IT seeks 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, improve IT project management, and formulate an agency IT portfolio cost management strategy. The IT estimates in this FY 2010 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 incurs a bond premium whenever it repays a Treasury bond before the due date. When bonds are refinanced, the bond premiums incurred 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 of 1974.

Detailed Justification

(dollars in thousands)

FY 2008	FY 2009	FY 2010
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Capital Information Technology/Equipment **21,526** **29,916** **42,638**

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** **0** **0**

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

Total, Capital IT & Equipment/Capitalized Bond Premium	<hr/>
	21,526 29,916 42,638

Explanation of Funding Changes

FY 2010 vs. FY 2009 (\$000)

Capital Information Technology & Equipment

- Reflects increasing emphasis on BPA business resiliency efforts. +12,722

Capitalized Bond Premium

- No change 0

Total Funding Change, Capital Equipment/Capital Bond Premium	<hr/> +12,722
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Power Services - Operating Expense

Funding Schedule by Activity

(accrued expenditures) (dollars in thousands)			
	FY 2008	FY 2009	FY 2010
Power Services - Operating Expenses			
Production	1,102,223	1,415,432	1,428,258
Associated Projects Costs	290,454	302,199	325,628
Fish & Wildlife	148,756	199,998	230,000
Residential Exchange Program	329	212,985	221,426
NW Power & Conservation Council	8,245	9,450	9,641
Conservation and Energy Efficiency	94,954	62,523	64,447
Total, Power Services - Operating Expenses	1,644,961	2,202,587	2,279,400

Outyear Funding Schedule

(accrued expenditures) (dollars in thousands)				
	FY 2011	FY 2012	FY 2013	FY 2014
Total, Power Services - Operating Expense	2,504,714	2,479,818	2,596,036	2,581,515

Description

Production includes all Bonneville non-Federal debt service (including EN debt), O&M of 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.

During FY 2009, BPA will be developing a long-term resource program to guide future resource acquisitions needed to meet customer loads. This plan is expected to be completed in time for acquisitions to begin as necessary in FY 2011. Once the plan is complete, BPA will modify its budget as needed to reflect expected acquisitions.

EN debt is one of Bonneville's largest expense components. BPA, in collaboration with EN, is pursuing the refinancing of certain EN bonds as part of an ongoing debt optimization program. Through this program, BPA uses the reductions in debt service for its EN bonds to make advance payments on its Federal debt. Implementation of the refinancing components will be subject to favorable market conditions and interest rate environment.

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 recovery 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 recovery required under the ESA as part of the most recent FCRPS Biological Opinions issued in 2006 by the USFWS (2006 BiOp), and in May 2008 by NOAA Fisheries (2008 BiOp) to address the effects of the operation of the FCRPS on threatened and endangered salmon, steelhead, Kootenai River white sturgeon, and bull trout. The Biological Opinions require the FCRPS Action Agencies to implement 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.

NOAA Fisheries issued its 2008 FCRPS BiOp in May 2008. It replaces the 2004 BiOp that was challenged and remanded. The new opinion includes, with few modifications, the spill that the Court ordered as temporary injunctive relief in 2006. The 2008 BiOp was developed through a court-ordered collaboration process over the past two years. In addition, in 2008, the FCRPS Action Agencies signed agreements, the Columbia Basin Fish Accords (Fish Accords) with four Northwest Tribes and the states of Idaho and Montana. The Fish Accords supplement the 2008 BiOp and the Council's Fish and Wildlife Program and provide firm commitments to mitigation actions and secure funding for the next 10 years.

There has also been litigation directed at the U.S. Fish and Wildlife Service Biological Opinions for Libby Dam. In 2003, the Corps and BPA reinitiated consultation for the operations at Libby Dam to address impacts to recently designated critical habitat for the Kootenai River white sturgeon, and to evaluate information that had been developed on Kootenai River white sturgeon and bull trout since the 2000 USFWS BiOp. That consultation was completed in February 2006, but was challenged by environmental groups, the Kootenai Tribe, and the State of Montana in Federal District Court of Montana. This litigation was settled in March 2009 and includes a combination of hatchery, habitat and flow/spill actions subject to modification depending on the results.

As a result of these developments, expenditures planned for FY 2009 are higher by about \$57 million over the FY 2009 Budget Submission of February 2008. The 2006 BiOp, 2008 BiOp, Fish Accord commitments, and 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 expense level of \$200 million for FY 2009 and \$230 million for FY 2010.

Bonneville's mitigation and recovery expenditures will focus on activities that benefit Columbia River Basin fish and wildlife resources including projects, consistent with priorities established in Council Sub-basin Plans, designed to:

- 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 as defined in Sub-basin Plans;
- 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, 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.

The Energy and Water Development Appropriations Act of 1997 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 projects funded by Bonneville under the Program receive ISRP review as part of the Council recommendation process.

The Conference Report on the Energy and Water Development Appropriations Act of 1999 included a new assignment for the ISRP and the Council. The ISRP was to review the fish and wildlife projects, programs, or measures included in Federal agency budgets that are reimbursed, or directly funded, by Bonneville. The ISRP was directed to determine whether the proposals are consistent with the scientific criteria in the Northwest Power Act as amended in 1996, and provide

a report to the Council by April 1 of each year. The Council, in turn, must report to Congress annually, by May 15.

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. BPA's IOUs have been the most active utilities participating in the REP. The 1996 Comprehensive Regional Review recommended that Bonneville engage in settlement discussions regarding the REP. Bonneville then developed a Subscription Strategy based on the recommendations of the Comprehensive Review. That Strategy proposed a comprehensive settlement of REP disputes with IOUs in the Pacific Northwest, which resulted in new contracts with regional IOUs that provided power and monetary benefits to their residential and small farm customers for FYs 2002-2011.

The 2000 REP Settlement Agreements, as amended, and the way the settlement costs were allocated in setting the Priority Firm (PF) rate for FYs 2002-2006, were challenged by public utilities and others in the U.S. Court of Appeals for the Ninth Circuit. The PF rate is the cost-based rate that preference customers pay for their requirements purchases from BPA. On May 3, 2007, the Court held that the REP Settlement Agreements were inconsistent with the Northwest Power Act and that the settlement costs were improperly allocated in setting the PF rate.

As a result of these Court rulings, payments to the IOUs were suspended in May 2007. However, the PF rate remained unchanged. BPA conducted a section 7(i) rate proceeding during FY 2008 to revise FY 2009 power rates and re-establish the REP. BPA also completed a public process to review and revise the 1984 ASC Methodology, to respond to the Court's rulings. These processes concluded at the end of FY 2008.

BPA has not implemented a traditional REP since 1996 due to the existence of settlements. Since the Ninth Circuit Court rulings, it has become clear to BPA that a traditional REP must be established. The components for re-establishing an REP are the utility's ASC, BPA's PF Exchange rate, and the utility's residential and small farm loads.

Payments made under the REP are based on the difference between BPA's IOU-specific PF Exchange rates and each utility's ASC, times the utility's residential and small farm loads. With BPA's new 2008 ASC Methodology, the ASCs that determine exchange payments are established in a public process that occurs prior to a rate case. Then, the subsequent rate case uses those ASCs and determines the PF Exchange rate. Payments are made monthly based on the actual exchange loads.

The WP-07 Supplemental rate case responded to the Court's rulings and revised power rates for FY 2009. This rate case also established the amount by which the preference customers were overcharged in FY 2002-2008 due to the REP Settlement Agreements found to be in violation of the Northwest Power Act by the Court. It also determined the approach to recovering those overcharges from the IOUs and returning them to the Preference customers who paid the too-high PF rates. The WP-07 Supplemental ROD, studies and documentation for the WP-07 Supplemental rate case determined the PF Exchange rate 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 FY 2002-2006.

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 2008	FY 2009	FY 2010
Production	1,102,223	1,415,432	1,428,258

- **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 demolition of buildings and site restoration activities continued through FY 2008 with operation and maintenance continuing for the Independent Spent Fuel Storage Installation.
- **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 2009.
- **WNP-1/WNP-3:** Continue to fulfill contractual obligations for WNP-1 and WNP-3.

(dollars in thousands)

FY 2008	FY 2009	FY 2010
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- Long-Term Power Purchases and Wheeling: Continue to acquire 100 percent of the following wind projects: Foote Creek 2 (2 MW) and 4 (17 MW), Condon (50 MW) and Klondike I (24 MW). BPA continues to purchase 41 MW of Foote Creek 1, 90 MW of the Stateline wind project, and as of November 2007, BPA purchases 50 MW of the Klondike III wind project. Wind purchases now total 274 MW. BPA also continues to purchase a 15 kW share of the output from the Solar Ashland Project.

Generation and Oversight:

FY 2008: 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 2009: 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 2010: 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 **290,454** **302,199** **325,628**

- 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 2008: Continued direct funding Reclamation O&M power activities.
 - FY 2009: Continue direct funding Reclamation O&M power activities.
 - FY 2010: Continue direct funding Reclamation O&M power activities.

(dollars in thousands)

FY 2008	FY 2009	FY 2010
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- Corps of Engineers:
FY 2008: Continued direct funding Corps O&M power activities.
FY 2009: Continue direct funding Corps O&M power activities.
FY 2010: Continue direct funding Corps O&M power activities.

Fish and Wildlife **148,756** **199,998** **230,000**

- Specific project solicitation recommendations were made by the Council in late 2006 followed by BPA review and funding decisions completed in early 2007. These decisions were based upon the management objectives and priorities in the Program and Sub-basin Plans 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.
- Anadromous Fish: Continue implementing both ongoing and new projects that support ESA-listed species and other measures called for under the 2008 FCRPS BiOp and the Fish Accords. Prioritize projects that address the factors that limit mitigation success as identified in the Sub-basin Plans and that fulfill BPA’s responsibility for mitigation of the FCRPS. 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. These activities have been selected in response to the Northwest Power Act section 2(6) to “protect, mitigate and enhance fish and wildlife including related spawning grounds and habitat on the Columbia River and its tributaries.”
- 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 Fish Accords, and 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.”
- Continue mitigation using resident fish to offset anadromous losses (substitution); mitigate for reservoir 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 2008	FY 2009	FY 2010
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- Wildlife: Use existing Bonneville policies to continue the current effort to mitigate wildlife in a manner consistent with Council’s 2000 Fish and Wildlife Program. 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 acquisition projects that meet BPA’s Capitalization Policy will be funded under the capital portion of Bonneville’s Fish and Wildlife budget.

Residential Exchange Program **329** **212,985** **221,426**

- Includes actual REP costs for FY 2008 and forecasts of possible REP costs for FY 2009 and FY 2010. Actuals for FY 2008 also reflect off-setting accounting treatments resulting from the decisions on the REP established in the WP-07 Supplemental rate case. In addition, FY 2008 actuals include a settlement payment for a contract for a geothermal resource that did not prove economic.

Northwest Power and Conservation Council **8,245** **9,450** **9,641**

- 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 **94,954** **62,523** **64,447**

- 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.
- This FY 2010 budget for Conservation expense includes about \$36 million for a portion of power renewables in FY 2008 which are otherwise included in this budget in Power-Production for FYs 2009 and beyond, consistent with IPR data assumptions.

Total, Power Services – Operating Expense **1,644,961** **2,202,587** **2,279,400**

Explanation of Funding Changes

FY 2010 vs. FY 2009 (\$000)

Production

- Primarily reflects increases in power purchases and CGS O&M +12,826

Associated Project Costs

- Reflects minor changes to security, biological opinion requirements, non-routine extraordinary maintenance, WECC/NERC compliance activities, and improvements, replacements, and minor additions at the projects. +23,429

Fish and Wildlife

- Reflects funding associated with Biological Opinions, Fish Accord commitments and Northwest Power Act activities. +30,002

Residential Exchange

- Increase due to increase in forecast of public exchange costs. +8,441

Northwest Power and Conservation Council

- Small increase reflects continuing Council program activities. +191

Conservation and Energy Efficiency

- Small increase reflects normal program adjustments. +1,924

Total Funding Change, Power Services - Operating Expense +76,813

Transmission Services - Operating Expense

Funding Schedule by Activity

(accrued expenditures)			
(dollars in thousands)			
	FY 2008	FY 2009	FY 2010
Transmission Services - Operating Expense			
Engineering	27,828	64,594	66,384
Operations	127,346	110,039	115,954
Maintenance	151,503	162,391	184,519
Total, Transmission Services - Operating Expense	306,677	337,024	366,857

Outyear Funding Schedule

(accrued expenditures)				
(dollars in thousands)				
	FY 2011	FY 2012	FY 2013	FY 2014
Total, Transmission Services - Operating Expense	375,066	381,986	394,800	406,729

Description

This activity provides for the transmission system services of engineering, operations, and maintenance for Bonneville’s electric transmission system, consisting of over 15,190 circuit miles (24,441 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; and 4) provide open and nondiscriminatory transmission access; and 5) improve Bonneville's cost effectiveness.

Detailed Justification

(dollars in thousands)			
	FY 2008	FY 2009	FY 2010
Engineering	27,828	64,594	66,384

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 2008	FY 2009	FY 2010
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- **Asset Management:** Begin 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 based on the load of WECC members as a proportion of the total load within the WECC area. Includes planning, direction, and management of the comprehensive industry restructuring program aligned to meet BPA's mission and objectives, including leading BPA's analysis and support of the regional changes necessary for a transition to ColumbiaGrid.
- **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 utilities. The projects must be beneficial, under agreed upon criteria, to Bonneville operations and to the Federal or non-Federal entity involved. Additionally, these activities 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 2008	FY 2009	FY 2010
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Operations

127,346

110,039

115,954

- FY 2008: Continued to operate within parameters of regional transmission authorities. Supported new compliance activities related to the reliability of the transmission system. Developed policies and procedures for integrating the 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 2009: Continue to operate within parameters of regional transmission authorities. Continue support of increased compliance activities related to the reliability of the transmission system. Continue developing 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.
- FY 2010: Continue to operate within parameters of regional transmission authorities. Continue support of compliance activities related to the reliability of the transmission system. Further 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, et cetera.
- 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 support for Dittmer Control Center (DCC) and Monroe Control Center (MCC) power system control centers.

(dollars in thousands)

FY 2008	FY 2009	FY 2010
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- **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 Federal transmission system consistent with the Open Access Transmission Tariff. Schedule and market transmission capacity to Bonneville customers, California ISO, and Pacific Northwest’s interconnected utilities. Manage the reservations and scheduling of all transmission services associated with the Open Access Transmission Tariff.

Maintenance **151,503** **162,391** **184,519**

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 15,190 circuit miles on over 8,600 right-of-way miles (many of these miles are through rugged, inaccessible terrain).

(dollars in thousands)

FY 2008	FY 2009	FY 2010
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- FY 2008: Continued to refine 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 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.
- FY 2009: Continue to refine RCM practices and deploying 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, 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.

(dollars in thousands)

FY 2008	FY 2009	FY 2010
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- FY 2010: 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 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 15,190 circuit miles (24,441 km) of high voltage transmission lines, of which over 7,617 km (4,734 circuit miles) are 500-kV transmission EHV (extra-high voltage), for which maintenance 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 Bonneville's 8,600 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.
- 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.

(dollars in thousands)

FY 2008	FY 2009	FY 2010
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- 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	306,677	337,024	366,857
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Explanation of Funding Changes

FY 2010 vs. FY 2009 (\$000)

Engineering

- Reflects emphasis on system reliability improvements, research and development, and an increase in lease payments. +1,790

Operations

- Reflects continued emphasis on reliability compliance activities, wind integration activities, security, and control center systems support. +5,915

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. +22,128

Total Funding Change, Transmission Services – Operating Expense.	+	29,833
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**Interest, Pension and Post-retirement Benefits -
Operating Expense and Capital Transfers**

Funding Schedule by Activity

	(accrued expenditures) (dollars in thousands)		
	FY 2008	FY 2009	FY 2010
Interest, Pension and Post-retirement Benefits			
BPA Bond Interest (Net)	99,131	69,216	102,358
BPA Appropriation Interest	40,838	30,858	23,198
Corps of Engineers Appropriation Interest	161,358	161,145	166,621
Lower Snake River Comp Plan Interest	16,487	16,485	16,485
Bureau of Reclamation Appropriation Interest	43,794	43,390	43,390
Subtotal, Interest – Operating Expense	361,608	321,094	352,052
Pension and Post-retirement Benefits	18,000	30,554	31,195
Total, Interest, Pension and Post-retirement Benefits	379,608	351,648	383,247

Outyear Funding Schedule

	(accrued expenditures) (dollars in thousands)			
	FY 2011	FY 2012	FY 2013	FY 2014
Total, Interest, Pension and Post-retirement Benefits	423,024	466,649	509,385	557,105

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 Oct 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 Sept 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 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 new interest rates based on the Treasury yield curve rates prevailing at the end of FY 1996. Bonneville's outstanding repayment obligations on

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

FY 2010 Congressional Budget

appropriations at the end of FY 1996 were \$6.7 billion with a weighted average interest rate of 3.4 percent. The refinancing reduced the principal amount to \$4.1 billion with a weighted average interest rate of 7.1 percent. Implementation of the refinancing took place in 1997 after audited actual financial data 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 their 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 below include the impact of Bonneville's appropriation refinancing legislation.

Bonneville has been paying its unfunded liability of the Civil Service Retirement System (CSRS) 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. As part of the FY 2001 Administration's Budget, Bonneville assumed its entire CSRS cost recovery would be phased in over a 10-year period, given that wholesale power and transmission rates for Bonneville were contractually frozen until the end of FY 2001, in order to meet competitive market pressures. For FY 2008, the final year of the scheduled 10-year period, \$18 million was recovered by Bonneville through rates and paid into the General Fund of the Treasury. Post FY 2008 amounts are unscheduled estimates and may change. 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 2008	FY 2009	FY 2010
Capital Transfers			
BPA Bond Amortization /1	404,600	160,000	285,000
Reclamation Appropriation Amortization	675	0	248
BPA Appropriation Amortization	75,462	105,649	71,322
Corps Appropriation Amortization	74,702	10,075	63,426
Total, Capital Transfers	555,439	275,724	419,996

Outyear Funding Schedule

(accrued expenditures) (dollars in thousands)				
	FY 2011	FY 2012	FY 2013	FY 2014
Total, Capital Transfers	422,381	318,641	199,105	204,020

/1 BPA "Bond(s)" in this FY 2010 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 indebtednesses issued and sold to the U.S. Treasury.

Description

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

**BONNEVILLE POWER ADMINISTRATION
TOTAL OBLIGATIONS/OUTLAYS**

Current Services
(in millions of dollars)
FISCAL YEAR

FB 27-Apr-09

BP-1 SUMMARY

1,3/

1 Residential Exchange Program

2 Power Services 2/

3 Transmission Services

4 Conservation & Energy Efficiency

5 Fish & Wildlife

6 Interest/ Pension 4/

7 Associated Project Cost - Capital

8 Capital Equipment

3 Planning Council

10 Misc. Accounting Adjs.

11 Projects Funded in Advance

12 Capitalized Bond Premiums

13 Misc. Accounting Adjs.

**TOTAL OBLIGATIONS/
OUTLAYS 3/**

	2008		2009		2010		2011	2012	2013	2014
	Oblig.	Outlays	Oblig.	Outlays	Oblig.	Outlays	Oblig.	Oblig.	Oblig.	Oblig.
1 Residential Exchange Program	0	0	213	213	221	221	220	222	221	222
2 Power Services 2/	1,392	1,392	1,718	1,718	1,754	1,754	1,974	1,938	2,048	2,027
3 Transmission Services	436	436	659	659	857	857	934	858	846	846
4 Conservation & Energy Efficiency	103	103	95	95	120	120	121	124	125	125
5 Fish & Wildlife	175	175	250	250	300	300	296	292	298	304
6 Interest/ Pension 4/	380	380	352	352	383	383	423	467	509	557
7 Associated Project Cost - Capital	105	105	159	159	187	187	203	212	224	226
8 Capital Equipment	22	22	30	30	43	43	50	50	50	51
3 Planning Council	8	8	9	9	10	10	10	10	10	10
10 Misc. Accounting Adjs.	0	0	0	0	0	0	0	0	0	0
11 Projects Funded in Advance	99	99	99	99	105	105	117	99	88	89
12 Capitalized Bond Premiums	0	0	0	0	0	0	2	2	2	2
13 Misc. Accounting Adjs.	0	0	0	0	0	0	0	0	0	0
TOTAL OBLIGATIONS/ OUTLAYS 3/	2,720	2,720	3,584	3,584	3,980	3,980	4,350	4,274	4,421	4,459

REVENUES AND REIMBURSEMENTS

Current Services
(in millions of dollars)

FISCAL YEAR

BP-1 SUMMARY

	2008		2009		2010		2011	2012	2013	2014
	Oblig.	Outlays	Oblig.	Outlays	Oblig.	Outlays	Oblig.	Oblig.	Oblig.	Oblig.
13 Revenues 5/	3,538	3,538	3,495	3,495	3,885	3,885	4,243	4,185	4,343	4,380
14 Project Funded in Advance	99	99	99	99	105	105	117	99	88	89
15 TOTAL	3,637	3,637	3,594	3,594	3,990	3,990	4,360	4,284	4,431	4,469
BUDGET AUTHORITY (NET) 6/	166		317		427		507	527	633	620
16 OUTLAYS (NET) 6,7/		(372)		(10)		(10)	(10)	(10)	(10)	(10)

The accompanying notes are an integral part of this table.

1/ This FY 2010 budget includes capital and expense estimates based on preliminary IPR forecasted data for FYs 2009-2014.

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 this Act 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 a Budget Enforcement "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

	2008		2009		2010		2011	2012	2013	2014
	Oblig.	Outlays	Oblig.	Outlays	Oblig.	Outlays	Oblig.	Oblig.	Oblig.	Oblig.
1 Residential Exchange Program	0	0	213	213	221	221	220	222	221	222
2 Power Services 2/	1,393	1,393	1,718	1,718	1,754	1,754	1,974	1,938	2,048	2,027
3 Transmission Services	307	307	337	337	367	367	375	382	395	407
4 Conservation & Energy Efficiency	95	95	63	63	64	64	65	68	69	69
5 Fish & Wildlife	149	149	200	200	230	230	236	242	248	254
6 Interest/ Pension 3/	380	380	352	352	383	383	423	467	509	557
7 Planning Council	8	8	9	9	10	10	10	10	10	10
8 TOTAL EXPENSE	2,332	2332	2892	2892	3029	3029	3303	3329	3500	3546
10 Projects Funded in Advance	99	99	99	99	105	105	117	99	88	89

CAPITAL OBLIGATIONS/OUTLAYS

Current Services
(in millions of dollars)
FISCAL YEAR

BP-2 continued

	2008		2009		2010		2011	2012	2013	2014
	Oblig.	Outlays	Oblig.	Outlays	Oblig.	Outlays	Oblig.	Oblig.	Oblig.	Oblig.
Conservation & Energy Efficiency	8	8	32	32	56	56	56	56	56	56
11 Transmission Services	129	129	322	322	490	490	559	476	451	439
12 Associated Project Cost	105	105	159	159	187	187	203	212	224	226
13 Fish & Wildlife	26	26	50	50	70	70	60	50	50	50
14 Capital Equipment	22	22	30	30	43	43	50	50	50	51
15 Capitalized Bond Premiums	0	0	0	0	0	0	2	2	2	2
16 TOTAL CAPITAL INVESTMENTS 15	290	290	593	593	846	846	930	846	833	824
17 TREASURY BORROWING AUTHORITY TO										
FINANCE CAPITAL OBLIGATIONS 4/	341		593		846		930	846	833	824

The accompanying notes are an integral part of this table.

1/ This FY 2010 budget includes capital and expense estimates based on preliminary IPR forecasted data for FYs 2009-2014.

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 this Act 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 a Budget Enforcement "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.						
	2008	2009	2010	2011	2012	2013	2014
Program by activities:							
Operating expenses:							
0.01 Power Services	1,103	1,415	1,428	1,631	1,584	1,684	1,654
0.02 Residential Exchange Program	0	213	221	220	222	221	222
Associated Project Costs:							
0.05 Bureau of Reclamation	72	82	88	99	105	107	110
0.06 Corps of Engineers	178	180	193	198	201	207	213
0.07 Colville Settlement	20	21	21	22	22	23	23
0.19 U.S. Fish & Wildlife Service	19	20	24	24	26	27	27
0.20 Planning Council	8	9	10	10	10	10	10
0.21 Fish & Wildlife	149	200	230	236	242	248	254
0.23 Transmission Services	307	337	367	375	382	395	407
0.24 Conservation & Energy Efficiency	95	63	64	65	68	69	69
0.25 Interest	362	321	352	391	434	476	523
0.26 Pension and Health Benefits 1/	18	31	31	32	33	33	34
0.91 Total operating expenses 2/	2,331	2,892	3,029	3,303	3,329	3,500	3,546
Capital investment:							
1.01 Power Services	105	159	187	203	212	224	226
1.02 Transmission Services	129	322	490	559	476	451	439
1.03 Conservation & Energy Efficiency	8	32	56	56	56	56	56
1.04 Fish & Wildlife	26	50	70	60	50	50	50
1.05 Capital Equipment	22	30	43	50	50	50	51
1.06 Capitalized Bond Premiums	0	0	0	2	2	2	2
1.07 Total Capital Investment 3/	290	593	846	930	846	833	824
1.08 Misc. Accounting Adjustments	0						
2.01 Projects Funded in Advanced	99	99	105	117	99	88	89
10.00 Total obligations 4/	2,720	3,584	3,980	4,350	4,274	4,421	4,459

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 2010 budget includes capital and expense estimates based on preliminary IPR forecasted data for FYs 2009-2014.

For purposes of this table, this FY 2010 budget reflects, for FY 2008, 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.						
	2008	2009	2010	2011	2012	2013	2014
Financing:							
21.90 Unobligated balance available, start of year. 5/	47	38	23	12	1	0	0
24.40 Unobligated balance available, end of year.5/	38	23	12	1	0	0	0
25.00 Unobligated balance lapsing							
39.00 Budget authority (gross)	3,191	3,911	4,417	4,863	4,807	5,059	5,084
Budget Authority:							
67.10 Permanent Authority: Authority to borrow from Treasury (indefinite) 6/	425	593	846	930	846	833	824
Spending authority from off-setting collections	3,033	3,594	3,990	4,360	4,284	4,431	4,469
69.47 Portion applied to debt reduction	(480)	(276)	(419)	(423)	(319)	(200)	(204)
69.90 Spending authority from offsetting collections (adjusted)	2,333	3,318	3,571	3,937	3,965	4,231	4,265
71.00 Total obligations	2,720	3,584	3,980	4,350	4,274	4,421	4,459
87.00 Outlays (gross)	2,661	3,584	3,980	4,350	4,274	4,421	4,459
Adjustments to budget authority and outlays:							
Deductions for offsetting collections:							
88.00 Federal funds	(28)	(90)	(90)	(90)	(90)	(90)	(90)
88.40 Non-Federal sources	(3,005)	(3,504)	(3,900)	(4,270)	(4,194)	(4,341)	(4,379)
88.90 Total, offsetting collections	(3,033)	(3,594)	(3,990)	(4,360)	(4,284)	(4,431)	(4,469)
89.00 Budget authority (net)	166	317	427	507	527	633	620
90.00 Outlays (net) 7/	(372)	(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 this Act 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 a Budget Enforcement "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							
	2008				2009			
	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	1,430	1,430	2,523	2,241	1,511	1,317	2,604	2,187
Plus: Annual Increase								
Cum.-Annual Treasury Borrowing Treasury Borrowing (Cash)	291	291	291	350	593	593	593	593
Less:								
BPA Bond Amortization	404	404	404	404	160	160	160	160
Net Increase/(Decrease):	(113)	(113)	(113)	(54)	433	433	433	433
Cum.-End-of-Year: Total	1,511	1,317	2,410	2,187	1,944	1,750	3,037	2,620
Total Remaining Treasury Borrowing Amount				2,263				5,080
Total Legislated Treasury Borrowing Amount				4,450				7,700

The accompanying notes are an integral part of this table.

In any given year, BPA may issue less debt than forecast depending on net revenues, Treasury interests rates, and other cash management factors. In such cases, BPA accumulates a deferred borrowing balance that it accesses as necessary in the future.

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

In this FY 2010 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 reserve financing of \$15 million annually is assumed as part of TS capital-PFIA for FYs 2008-2014.

The cumulative amount of actual advance amortization payments as of the end of FY 2008 is \$2,302 million.

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

BP-4B

	Fiscal Year							
	2010				2011			
	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	1,944	1,750	3,037	2,620	2,505	2,311	3,598	3,181
Plus: Annual Increase								
Cum.-Annual Treasury Borrowing	846	846	846		930	930	930	
Treasury Borrowing (Cash)				846				930
Less:								
Total BPA Bond Amortization	285	285	285	285	290	290	290	290
Net Increase/(Decrease):								
Total	561	561	561	561	640	640	640	640
Cum.-End-of-Year: Total	2,505	2,311	3,598	3,181	3,145	2,951	4,238	3,821
Total Remaining Treasury Borrowing Amount				<u>4,519</u>				<u>3,879</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 interests rates, and other cash management factors. In such cases, BPA accumulates a deferred borrowing balance that it accesses as necessary in the future.

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

In this FY 2010 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 reserve financing of \$15 million annually is assumed as part of TS capital-PFIA for FYs 2008-2014.

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

BP-4C

	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	3,145	2,951	4,238	3,821	3,815	3,621	4,908	4,491
Plus: Annual Increase								
Cum.-Annual Treasury Borrowing	845	845	845		833	833	833	
Treasury Borrowing (Cash)				845				833
Less:								
Total BPA Bond Amortization	175	175	175	175	133	133	133	133
Net Increase/(Decrease):								
Total	670	670	670	670	700	700	700	700
Cum.-End-of-Year: Total	3,815	3,621	4,908	4,491	4,515	4,321	5,608	5,191
Total Remaining Treasury Borrowing Amount				<u>3,209</u>				<u>2,509</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 interests rates, and other cash management factors. In such cases, BPA accumulates a deferred borrowing balance that it accesses as necessary in the future.

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

In this FY 2010 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 reserve financing of \$15 million annually is assumed as part of TS capital-PFIA for FYs 2008-2014.

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

BP-4D

	Fiscal Year			
	2014			
	Net Capital Capital Obs	Obs Subject to BA	Net Capital Expend.	Bonds Out- Standing
Start-of-Year: Total	4,515	4,321	5,608	5,191
Plus: Annual Increase				
Cum.-Annual Treasury Borrowing Treasury Borrowing (Cash)	824	824	824	824
Less:				
Total BPA Bond Amortization	71	71	71	71
Net Increase/(Decrease):				
Total	753	753	753	753
Cum.-End-of-Year: Total	5,268	5,074	6,361	5,944
Total Remaining Treasury Borrowing Amount				<u>1,756</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 interests rates, and other cash management factors. In such cases, BPA accumulates a deferred borrowing balance that it accesses as necessary in the future.

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

In this FY 2010 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 reserve financing of \$15 million annually is assumed as part of TS capital-PFIA for FYs 2008-2014.

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

BP-5

	Fiscal Year						
	2008	2009	2010	2011	2012	2013	2014
Transmission Services - Capital							
Main Grid	10	75	171	249	234	216	211
Area & Customer Services	19	26	38	8	8	10	22
Upgrades & Additions	36	79	111	129	87	71	75
System Replacements	65	142	170	174	146	154	132
Projects Funded in Advance	99	99	105	117	99	88	89
Total, Transmission Services - Capital	229	421	595	677	574	539	529

Federal and Non-Federal Funding

	Sources						
	2008	2009	2010	2011	2012	2013	2014
Projects Funded in Advance	99	99	105	117	99	88	89
Treasury Borrowing Authority	130	322	490	560	475	451	440

Scenario

	Scenario						
	2008	2009	2010	2011	2012	2013	2014
Third Party Financing	55	119	183	220	191	174	177
Alternate Treasury Borrowing Authority	NA	203	307	340	284	277	263

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 2010 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 2010 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.

	Fiscal Year						
	2008	2009	2010	2011	2012	2013	2014
Start-of-Year: Total Bonds Outstanding	2,241	2,187	2,501	2,879	3,299	3,778	4,304
Plus:							
Treasury Borrowing (Cash)	350	593	846	930	845	833	824
Less:							
Potential Third Party Financing	NA	119	183	220	191	174	177
BPA Bond Amortization	404	160	285	290	175	133	71
Net Increase/(Decrease) Bonds Outstanding:	(54)	314	378	420	479	526	576
Cum.-End-of-Year: Total	2,187	2,501	2,879	3,299	3,778	4,304	4,880
Total Remaining Treasury Borrowing Amount	2,263	5,199	4,821	4,401	3,922	3,396	2,820
Total Legislated Treasury Borrowing Amount	4,450	7,700	7,700	7,700	7,700	7,700	7,700

TREASURY PAYMENTS

(in millions of dollars)

	FISCAL YEAR						
	2008	2009	2010	2011	2012	2013	2014
A. INTEREST ON BONDS & APPROPRIATIONS							
Bonneville Bond Interest							
1 Bonneville Bond Interest (net)	99	69	102	146	193	242	287
2 AFUDC ^{1/}	22	20	23	31	35	30	28
Appropriations Interest							
3 Bonneville	41	31	23	18	14	8	4
4 Corps of Engineers ^{2/}	161	161	167	167	168	166	171
5 Lower Snake River	16	16	16	16	16	16	16
6 Bureau of Reclamation ^{3/}	44	43	43	43	43	43	43
7 Total Bond and Approp. Interest	383	340	374	421	469	505	549
B. ASSOCIATED PROJECT COST							
8 Bureau of Reclamation Irrigation Assistance	3	7	0	0	1	60	53
9 Bureau of Rec. O & M ^{4/}	1	0	0	0	0	0	0
10 Corps of Eng. O & M ^{4/}	2	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	6	7	0	0	1	60	53
C. CAPITAL TRANSFERS							
Amortization							
13 Bonneville Bonds ^{6/}	405	160	285	290	175	133	71
14 Bureau of Reclamation Appropriations	1	0	0	1	0	0	0
15 Corps of Engineers Appropriations	75	10	63	71	69	15	86
16 Lower Snake River Comp. Plan	0	0	0	0	0	0	0
17 Bonneville Appropriations	75	106	71	61	75	52	47
Total Capital Transfers	556	276	419	423	319	200	204
D. OTHER PAYMENTS							
18 Unfunded CSRS Liability ^{5/}	18	31	31	32	33	33	34
21 TOTAL TREASURY PAYMENTS	963	654	824	876	822	798	840

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	2008	2009	2010	2011	2012	2013	2014
Bureau of Reclamation	72	82	88	99	105	107	110
Corps of Engineers	178	180	193	198	201	207	213
Subtotal Bureau and Corps	250	262	281	297	306	314	323
Lower Snake River Comp. Plan	19	20	24	24	26	27	27
Total	269	282	305	321	332	341	350

^{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 2010 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.

Does not include Treasury bond premiums on refinanced Treasury bonds.

OBJECT CLASSIFICATION STATEMENT
(in millions of dollars) 1/

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

ESTIMATES

	2008	2009	2010
11.1 Full-time permanent	227	234	260
11.3 Other than full-time permanent	11	56	62
11.5 Other personnel compensation	24	15	17
11.9 Total personnel compensation	262	305	339
12.1 Civilian personnel benefits	75	19	21
13.0 Benefits for former personnel	18	25	28
21.0 Travel and transportation of persons	17	16	18
22.0 Transportation of things	1	2	2
23.1 Rental payments to GSA	1	1	1
23.2 Rents, other	46	22	24
23.3 Communication, utilities & misc. charges	7	6	7
25.1 Consulting Services	190	323	359
25.2 Other Services	1,188	1,788	1,992
25.3 Purchases from Government Accounts			
25.4 O&M of Facilities	3		
25.5 R & D Contracts	5	8	8
26.0 Supplies and materials	89	201	223
31.0 Equipment	2	8	4
32.0 Lands and structures	42	42	47
41.0 Grants, subsidies, contributions	63	73	81
43.0 Interest and dividends	711	745	827
99.0 Total obligations	2,720	3,584	3,980

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 Proprietary Receipts
(in millions of dollars)

	Fiscal Year						
	2008	2009	2010	2011	2012	2013	2014
Reclamation Interest	44	43	43	43	43	43	43
Reclamation Amortization	1	0	0	1	0	0	0
Reclamation O&M	1	0	0	0	0	0	0
Reclamation Irrig. Assist.	3	7	0	0	1	60	53
Revenues Collected by Reclamation Distributed in Treasury Account (credit)	-13	-7	-7	-7	-7	-7	-7
Colville Settlement (credit)	-5	-5	-5	-5	-5	-5	-5
Total 1/ Reclamation Fund	31	38	31	32	32	91	84
Corps O&M	3						
CSRS	18	31	31	32	33	33	33
Total 2/ Repayments on misc.costs	21	31	31	32	33	33	33

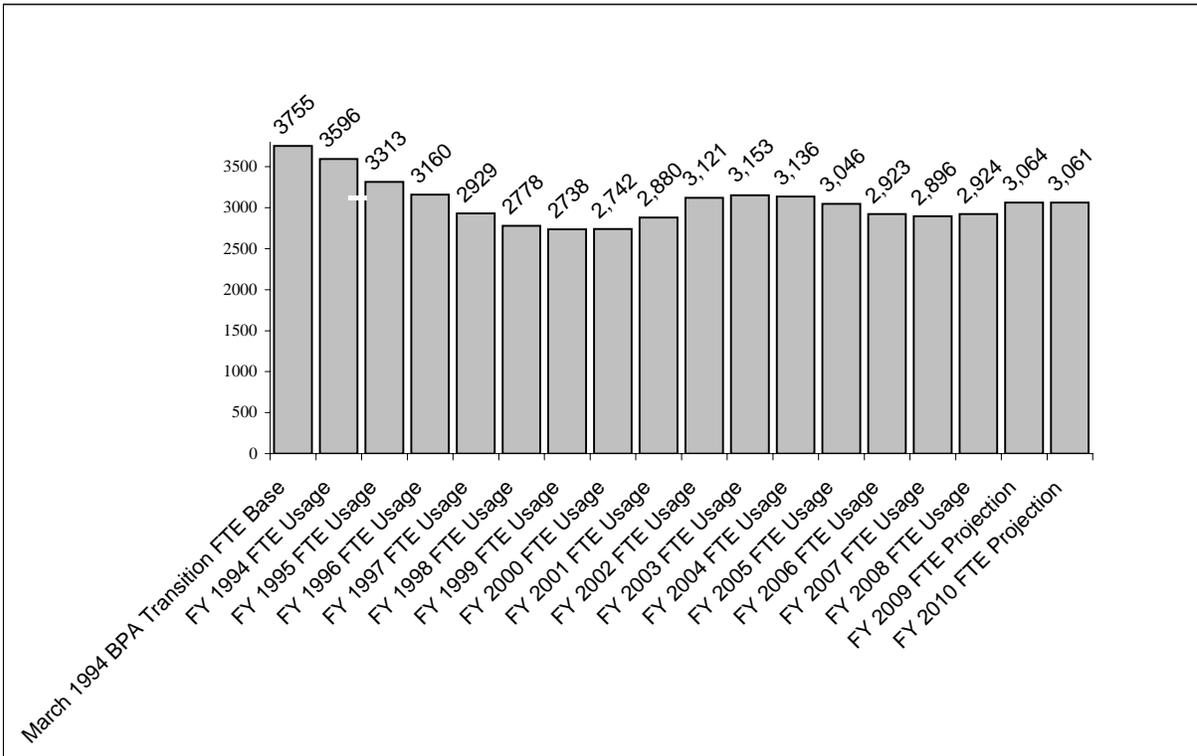
1/ Includes amortization of appropriations and irrigation assistance, and interest costs for Reclamation. The cost of power O&M for Reclamation is no longer included in Proprietary Receipts due to Direct Funding by Bonneville. Represents transfer to Account #895000.26

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)

	2008	2009	2010	2011	2012	2013	2014
Bureau of Reclamation	72	82	88	99	105	107	110
Corps of Engineers	178	180	193	198	201	207	213
Lower Snake River Comp. Plan	19	20	24	24	26	27	27

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 February 2009)**



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.

BONNEVILLE POWER ADMINISTRATION

FISH AND WILDLIFE COSTS ^{1/}

COST ELEMENT	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008
CAPITAL INVESTMENTS ^{2/}										
BPA FISH AND WILDLIFE	14.7	13.9	16.5	6.1	11.6	8.5	12.2	36.3	36.2	26.9
ASSOCIATED PROJECTS (FEDERAL HYDRO)	14.1	47.0	6.2	8.8	68.4	75.9	53.8	360.0	60.4	37.3
TOTAL CAPITAL INVESTMENTS	28.8	60.9	22.7	14.9	80.0	84.4	66.0	396.3	96.6	64.2
PROGRAM EXPENSES										
BPA DIRECT FISH AND WILDLIFE PROGRAM	108.2	108.2	101.1	137.1	140.7	137.9	135.8	137.9	139.5	148.9
SUPPLEMENTAL MITIGATION PROGRAM EXPENSES ^{3/}			2.9	7.1	6.5	7.8	0.0	0.0	0.0	0.0
REIMBURSABLE/DIRECT-FUNDED PROJECTS ^{4/}										
O & M LOWER SNAKE RIVER HATCHERIES	13.0	12.4	12.7	14.9	15.1	17.3	17.2	20.1	19.3	19.4
O & M CORPS OF ENGINEERS	19.9	19.7	23.1	28.2	30.3	32.3	32.5	31.8	32.9	34.4
O & M BUREAU OF RECLAMATION	2.6	1.8	3.0	3.8	3.1	3.9	3.9	4.5	3.9	4.3
OTHER (NW POWER AND CONSERVATION COUNCIL)	3.4	3.7	3.7	4.0	4.0	3.7	4.3	4.3	4.2	4.1
SUBTOTAL (REIMB/DIRECT-FUNDED)	38.9	37.6	42.5	50.9	52.6	57.2	57.9	60.7	60.3	62.2
TOTAL OPERATING EXPENSES	147.1	145.8	146.5	195.1	199.8	202.9	193.7	198.6	199.7	211.1
PROGRAM RELATED FIXED EXPENSES ^{5/}										
INTEREST EXPENSE	49.4	48.4	49.1	48.5	49.9	53.3	56.4	53.4	76.0	76.9
AMORTIZATION EXPENSE	15.3	16.1	16.8	17.2	17.4	17.5	17.4	17.4	22.9	24.4
DEPRECIATION EXPENSE	11.4	11.8	12.3	12.5	13.2	14.6	15.9	16.7	14.0	14.9
TOTAL FIXED EXPENSES	76.1	76.3	78.2	78.2	80.5	85.4	89.7	87.5	112.9	116.2
GRAND TOTAL PROGRAM EXPENSES	223.2	222.1	224.7	273.3	280.3	288.3	283.4	286.1	312.6	327.3
FOREGONE REVENUES AND POWER PURCHASES										
FOREGONE REVENUES	197.8	193.1	115.9	12.6	79.2	21.7	182.1	397.4	282.6	273.5
BPA POWER PURCH. FOR FISH ENHANCEMENT	47.6	64.8	1,389.6	147.8	171.1	191.0	110.8	168.2	120.7	274.9
TOTAL FOREGONE REVENUES AND POWER PURCHASES	245.4	257.9	1,505.5	160.4	250.3	212.7	292.9	565.6	403.3	548.5
TOTAL PROGRAM EXPENSES, FOREGONE REVENUES, & POWER PURCHASES	468.6	480.0	1,730.2	433.7	530.6	501.0	576.3	851.7	715.9	875.8
CREDITS										
4(h)(10)(C) credits earned	(46.0)	(50.4)	(336.6)	(66.4)	(73.6)	(77.0)	(57.7)	(76.4)	(66.1)	(100.5)
FISH COST CONTINGENCY FUND ^{6/}	-	-	(246.5)	-	(78.7)	-	-	-	-	-
TOTAL CREDITS	(46.0)	(50.4)	(583.1)	(66.4)	(152.3)	(77.0)	(57.7)	(76.4)	(66.1)	(100.5)

1/ For purposes of this presentation, this financial information has been made publicly available by BPA in April 2009 and is consistent with the financial system of record used in preparation of the audited financial statements for the respective period reported.

2/ Capital Investments include both BPA's direct Fish and Wildlife Program capital investments, funded by BPA's Treasury borrowing, and "Associated Projects", which include capital investments at the Corps and Reclamation projects, funded by appropriations and repaid by BPA.

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

4/ 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.

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

6/ The Fish Contingency Fund was exhausted in 2003