

# **Department of Energy**

## **FY 2012 Congressional**

### **Budget Request**



## **Power Marketing Administrations**

**Southeastern Power Administration**  
**Southwestern Power Administration**  
**Western Area Power Administration**  
**Bonneville Power Administration**



**Southeastern Power Administration**



**Southwestern Power Administration**



**Western Area Power Administration**



**Bonneville Power Administration**





**Southeastern Power Administration**



**Southwestern Power Administration**



**Western Area Power Administration**



**Bonneville Power Administration**

## Volume 6

### Table of Contents

	Page
Appropriation Account Summary.....	3
Power Marketing Administrations	
Southeastern Power Administration .....	5
Southwestern Power Administration .....	29
Western Area Power Administration.....	61
Bonneville Power Administration .....	123
General Provisions .....	213

The Department of Energy's Congressional Budget justification is available on the Office of Chief Financial Officer, Office of Budget homepage at <http://www.cfo.doe.gov/corg/cf30.htm>.



**DEPARTMENT OF ENERGY**  
**Appropriation Account Summary**  
(dollars in thousands - OMB Scoring)

	FY 2010 Current Approp.	FY 2011 Cong. Request	FY 2011 Annualized CR	FY 2012 Congressional Request	FY 2012 vs. FY 2010	
					\$	%
<b>Discretionary Summary By Appropriation</b>						
Energy And Water Development, And Related Agencies						
Appropriation Summary:						
Energy Programs						
Energy efficiency and renewable energy.....	2,216,392	2,355,473	2,242,500	3,200,053	+983,661	+44.4%
Electricity delivery and energy reliability.....	168,484	185,930	171,982	237,717	+69,233	+41.1%
Nuclear energy.....	774,578	824,052	786,637	754,028	-20,546	-2.7%
Fossil energy programs						
Fossil energy research and development.....	659,770	586,583	672,383	452,975	-206,795	-31.3%
Naval petroleum and oil shale reserves.....	23,627	23,614	23,627	14,909	-8,718	-36.9%
Strategic petroleum reserve.....	243,823	138,861	243,823	121,704	-122,119	-50.1%
Northeast home heating oil reserve.....	11,300	11,300	11,300	10,119	-1,181	-10.5%
Northeast home heating oil reserve oil sale.....	0	0	0	-79,000	-79,000	N/A
<b>Total, Fossil energy programs.....</b>	<b>938,520</b>	<b>760,358</b>	<b>951,133</b>	<b>520,707</b>	<b>-417,813</b>	<b>-44.5%</b>
Uranium enrichment D&D fund.....	573,850	730,498	573,850	504,169	-69,681	-12.1%
Energy information administration.....	110,595	128,833	110,595	123,957	+13,362	+12.1%
Non-Defense environmental cleanup.....	254,673	225,163	244,673	219,121	-35,552	-14.0%
Science.....	4,963,887	5,121,437	4,903,710	5,416,114	+452,227	+9.1%
Energy transformation acceleration fund.....	0	299,966	0	550,011	+550,011	N/A
Nuclear waste disposal.....	98,400	----	98,400	0	-98,400	-100.0%
Departmental administration.....	168,944	169,132	168,944	128,740	-40,204	-23.8%
Inspector general.....	51,927	42,850	51,927	41,774	-10,153	-19.6%
Title 17 - Innovative technology						
loan guarantee program.....	0	500,000	-15,000	200,000	+200,000	N/A
Section 1705 temporary loan guarantee program.....	0	----	0	0	-----	-----
Advanced technology vehicles manufacturing loan.....	20,000	9,998	20,000	6,000	-14,000	-70.0%
Better building pilot loan guarantee initiative for Universities, Schools, and Hospitals.....	0	0	0	105,000	+105,000	N/A
<b>Total, Energy Programs.....</b>	<b>10,340,250</b>	<b>11,353,690</b>	<b>10,309,351</b>	<b>12,007,391</b>	<b>+1,667,145</b>	<b>+16.1%</b>
Atomic Energy Defense Activities						
National nuclear security administration:						
Weapons activities * .....	6,386,371	7,008,835	7,008,835	7,629,716	+620,881	+8.9%
Defense nuclear nonproliferation * .....	2,131,382	2,687,167	2,136,709	2,549,492	-137,675	-5.1%
Naval reactors * .....	945,133	1,070,486	945,133	1,153,662	+83,176	+7.8%
Office of the administrator * .....	410,754	448,267	410,754	450,060	+1,793	+0.4%
<b>Total, National nuclear security administration.....</b>	<b>9,873,640</b>	<b>11,214,755</b>	<b>10,501,431</b>	<b>11,782,930</b>	<b>+568,175</b>	<b>+5.1%</b>
Environmental and other defense activities:						
Defense environmental cleanup.....	5,640,371	5,588,039	5,642,331	5,406,781	-233,590	-4.1%
Other defense activities.....	847,468	878,209	847,468	859,952	+12,484	+1.5%
Defense nuclear waste disposal.....	98,400	0	98,400	0	-98,400	-100.0%
<b>Total, Environmental &amp; other defense activities.....</b>	<b>6,586,239</b>	<b>6,466,248</b>	<b>6,588,199</b>	<b>6,266,733</b>	<b>-319,506</b>	<b>-4.9%</b>
<b>Total, Atomic Energy Defense Activities.....</b>	<b>16,459,879</b>	<b>17,681,003</b>	<b>17,089,630</b>	<b>18,049,663</b>	<b>+248,669</b>	<b>+1.5%</b>
Power marketing administrations:						
Southeastern power administration.....	0	0	0	0	-----	-----
Southwestern power administration.....	13,076	12,699	13,076	11,892	-1,184	-9.1%
Western area power administration.....	109,181	105,558	109,181	95,968	-13,213	-12.1%
Falcon & Amistad operating & maintenance fund.....	220	220	220	220	-----	-----
Colorado River Basins.....	-23,000	-23,000	-23,000	-23,000	-----	-----
<b>Total, Power marketing administrations.....</b>	<b>99,477</b>	<b>95,477</b>	<b>99,477</b>	<b>85,080</b>	<b>-14,397</b>	<b>-14.5%</b>
Federal energy regulatory commission.....	0	0	0	0	-----	-----
<b>Subtotal, Energy And Water Development and Related Agencies.....</b>	<b>26,899,606</b>	<b>29,130,170</b>	<b>27,498,458</b>	<b>30,142,134</b>	<b>+1,901,417</b>	<b>+6.7%</b>
Uranium enrichment D&D fund discretionary payments.....	-463,000	-696,700	-463,000	0	+463,000	+100.0%
Excess fees and recoveries, FERC.....	-10,933	-29,111	-28,886	-25,072	-14,139	-129.3%
<b>Subtotal, Discretionary Funding.....</b>	<b>26,425,673</b>	<b>28,404,359</b>	<b>27,006,572</b>	<b>30,117,062</b>	<b>+2,350,278</b>	<b>+8.5%</b>
Strategic petroleum reserve sale.....	0	0	0	-500,000	-500,000	N/A
Cancellation of prior year unobligated balances.....	0	0	0	-70,332	-70,332	N/A
<b>Total, Discretionary Funding ** .....</b>	<b>26,425,673</b>	<b>28,404,359</b>	<b>27,006,572</b>	<b>29,546,730</b>	<b>+3,121,057</b>	<b>+11.8%</b>

NOTE: \* FY12 is compared against the FY11 Request. This exception has been implemented for NNSA only.

\*\* The Total, Discretionary Funding, FY12 vs FY10 "\$" and "%" columns, reflects a comparison of FY12 Request vs. FY10 Current Approp for all programs including NNSA







# **Southeastern Power Administration**



# **Southeastern Power Administration**

## **Southeastern Power Administration**

### **Proposed Appropriation Language**

*For necessary expenses of operation and maintenance of power transmission facilities and marketing electric power and energy, including transmission wheeling and ancillary services in carrying out section 5 of the Flood Control Act of 1944 (16 U.S.C. 825s), as applied to the southeastern power area, \$8,428,000, to remain available until expended: Provided, That notwithstanding 31 U.S.C. 3302 and section 5 of the Flood Control Act of 1944, up to \$8,428,000, collected by the Southeastern Power Administration from the sale of power and related services shall be credited to this account as discretionary offsetting collections, to remain available until expended for the sole purpose of funding the annual expenses of the Southeastern Power Administration: Provided further, That the sum herein appropriated for annual expenses shall be reduced as collections are received during the fiscal year so as to result in a final fiscal year 2012 appropriation estimated at not more than \$0: Provided further, That notwithstanding 31 U.S.C. 3302, up to \$100,162,000 collected by the Southeastern Power Administration pursuant to the Flood Control Act of 1944 to recover purchase power and wheeling expenses shall be credited to this account as offsetting collections, to remain available until expended for the sole purpose of making purchase power and wheeling expenditures: Provided further, That for purposes of this appropriation, annual expenses means expenditures that are generally recovered in the same year that they are incurred (excluding purchase power and wheeling expenses).*



# Southeastern Power Administration

## Overview

### Appropriation Summary by Program

	(dollars in thousands)		
	FY 2010 Current Appropriation	FY 2011 CR	FY 2012 Request
Southeastern Power Administration			
Purchase Power and Wheeling (PPW)	85,228	—	114,870
Program Direction (PD)	7,638	—	8,428
Subtotal, Southeastern Program Level	92,866	—	123,298
Offsetting Collections, PPW	-70,806	—	-100,162
Alternative financing, PPW	-14,422	—	-14,708
Offsetting Collections, Annual Expenses	-7,638	—	-8,428
Total, Southeastern Power Administration	0	0	0

### Preface

As the Nation moves forward to strengthen its national and economic security, the Department of Energy (DOE or the Department) leads a critical effort promoting a diverse supply and delivery of reliable, affordable, and environmentally sound energy. Southeastern Power Administration (Southeastern or SEPA) exists to carry out the functions assigned by the Flood Control Act of 1944: to market the electric power and energy generated by the Federal reservoir projects, encourage widespread use of the power at the lowest cost to consumers and repay the Federal investment consistent with sound business principles.

Within the Southeastern appropriation, there is one program, Operation and Maintenance, which includes two subprograms: Program Direction and Purchase Power and Wheeling. Program Direction supports day-to-day agency operation and Purchase Power and Wheeling supports acquisition of contractually-required transmission services and power purchases. Consistent with the authority provided in the 2010 Energy and Water Appropriations, the FY12 Budget provides funding for annual expenses (Program Direction) through discretionary offsetting collections derived from power receipts collected to recover those expenses.

### Mission

The mission of Southeastern is to market and deliver Federal hydroelectric power at the lowest possible cost to public bodies and cooperatives in the southeastern United States in a professional, innovative, customer-oriented manner, while continuing to meet the challenges of an ever-changing electric utility environment through continuous improvements.

## **Benefits**

Southeastern promotes energy efficiency, renewable energy, and sound management of the dispatch and distribution of Federal hydroelectric power resources in the southeastern United States in a safe, affordable, and environmentally friendly manner, while also meeting national utility performance standards and balancing the diverse interests of other water resource users. This budget submission ensures effective management of Federal hydroelectric power resources and provides for: a diverse supply of generating resources that enhance regional power system reliability; power revenues that repay taxpayers' investment in the Federal power system; and regional economic benefits from the delivery of Federal power primarily to rural electric cooperatives, municipal utilities, and other public entities. Southeastern has implemented rates that repay emergency power purchases within the fiscal year that they are incurred and is on track to repay the Federal investment in hydroelectric resources within required time periods.

This budget submission enables Southeastern to promote strategies that enhance energy efficiency and renewable energy technologies. Effective management of hydroelectric resources, combined with promotion of energy efficiency and renewable technologies, contributes to long-term solutions to the economic and environmental challenges associated with electricity demand.

## Southeastern Power Administration

### Funding by Site by Program

(dollars in thousands)

	FY 2010 Current Appropriation	FY 2012 Request
Southeastern Power Administration	92,866	123,298
Total, Southeastern Power Administration	92,866	123,298

### Major Changes or Shifts by Site

#### Purchase Power and Wheeling

- Additional Dam Safety issues have been discovered at several projects in the Cumberland System. It is likely that the interim operating plan, which fundamentally alters the operation of the Cumberland System, will continue through 2014.

### Site Description

#### Southeastern Power Administration

Southeastern is one of four Power Marketing Administrations within the Department of Energy. Southeastern was created in 1950 to market power and energy produced at Corps hydroelectric power projects. Southeastern markets power at wholesale rates to 291 publicly owned utilities, 198 rural electric cooperatives, and one investor-owned utility in the 11 States of Florida, Georgia, South Carolina, North Carolina, Tennessee, Alabama, Mississippi, Virginia, West Virginia, Kentucky, and Illinois. Southeastern is located in Elberton, Georgia, and has no field offices.

# Service Area Map





## Southeastern Power Administration

### Funding Profile by Subprogram

(dollars in thousands)

	FY 2010 Current Appropriation	FY 2012 Request
Southeastern Power Administration		
Purchase Power and Wheeling (PPW)	85,228	114,870
Program Direction (PD)	7,638	8,428
Subtotal, Southeastern Program Level	92,866	123,298
Offsetting collections, PPW	-70,806	-100,162
Alternative financing, PPW	-14,422	-14,708
Offsetting collections, Annual Expenses	-7,638	-8,428
Total, Southeastern Power Administration	0	0

**Public Law Authorizations:**

- Public Law 78-534, Flood Control Act of 1944
- Public Law 95-91, DOE Organization Act of 1977, Section 302
- Public Law 101-1-1, Title III, Continuing Fund (amended 1989)
- Public Law 102-486, Energy Policy Act of 1992

**Mission**

Southeastern’s power marketing and wheeling activities fulfill the requirements of Section 5 of the Flood Control Act of 1944 and reflect Southeastern’s goals and objectives to market and deliver cost-based power in a safe and reliable manner, and repay the Federal investment with interest, while providing environmental and economic benefits to the region. Southeastern focuses on its repayment goal, which assures timely repayment of the Federal hydropower investment.

**Benefits**

Southeastern’s appropriation supports the Energy Strategic Goal of the Department’s mission by providing delivery of reliable, affordable, and environmentally sound energy. Southeastern, in conjunction with the Corps, participates in this effort by managing the power delivery from multiple-purpose hydropower projects through effective marketing, and delivery of clean, safe, reliable, cost-based electric power. This Federal program provides reliable energy to the Nation, which can “cold-start” other power generation sources during energy emergencies.

Southeastern’s program provides numerous benefits to the Nation. The significant benefits are:

- Operating a reliable Federal power system in the most effective, cost-efficient, and environmentally sound manner, while meeting national utility performance standards and balancing the diverse interests of other water resource users.
- Repaying taxpayers’ investments in the Federal power system.

- Providing reliable delivery of power to customers.
- Providing low-cost power and increased competition in the region.
- Promoting regional economic growth.

## **Overview**

Southeastern contributes to the transformation of our energy system by performing its power marketing mission through two subprogram activities: Program Direction and Purchase Power and Wheeling. Southeastern contributes to grid modernization, by marketing and delivering all available hydroelectric power from U. S. Army Corps of Engineers (Corps) dams, while balancing power needs with the diverse interests of other water resource users; and markets and delivers federal power in a cost-efficient manner to assure reliability of the power system and maximize the use of Federal assets to repay the investment (principal and interest).

## **Means and Strategies**

Southeastern will use the means and strategies identified below to carry out its mission. Although external factors may affect its efforts, with the support of its Federal power partners, Southeastern can effectively meet industry trends and address current issues in the marketing and delivery of Federal power.

Southeastern will implement the following means:

- Operate the Federal power system effectively and efficiently by providing training and certification to update workforce skills and by updating power system operation technologies to maintain required industry standard compliance.
- Assure power rates are adequate to repay the Federal investment by conducting annual power repayment studies.
- Conduct business process reviews to maximize efficiency and eliminate redundancy.
- Provide economic benefits to the region by marketing and delivering all available hydropower.

Southeastern will implement the following strategies:

- Market and deliver power using appropriations, net billing, bill crediting, and offsetting collections.
- Maintain a diverse and knowledgeable workforce by providing employee training, leadership development, retention programs, and recruitment activities.
- Market all available hydropower by working with the Corps, other Federal entities, States, cooperative and municipal utilities to meet the expectations of our customers, while balancing the interest of other water users.
- Maintain the security of the Federal power system, facilities, and information technology (IT) systems.
- Address industry restructuring changes, when needed, by reclassifying positions as opportunities arise.
- Maximize the capabilities of business systems to improve processes and provide greater efficiency.
- Promote adoption of energy efficiency and renewable energy among Federal power customers.

These strategies will result in a well-maintained Federal power system that is in compliance with Energy Reliability Organization (ERO) operating regulations and an expert workforce to operate the system in the most effective and cost-efficient manner possible.

The following external factors could affect Southeastern's ability to achieve its goals:

- Achieving and maintaining system reliability can be affected by weather, natural disasters, changes in the North American Electric Reliability Corporation (NERC) operating standards, new load patterns, deregulation of the electricity market, changing electric industry organizational structures, and additions to other transmission systems interconnected to the Federal system.
- Achieving full repayment of the Federal power investment and enhancing economic growth to the region can be affected by weather, power markets, natural disasters, and other external costs and revenue factors.
- Statutory or administrative reallocation of water storage from hydropower to water supply.

In carrying out its mission to market and deliver hydroelectric power, Southeastern performs the following collaborative activities:

- Southeastern coordinates operational activities with NERC, other regional electric reliability councils, the Corps, customers and other stakeholders to provide the most efficient use of Federal assets.

### **Annual Performance Results and Targets**

The Department is in the process of updating its strategic plan, and has been actively engaging stakeholders including Congress. The draft strategic plan is being released for public comment concurrent with this budget submission, with the expectation of official publication this spring. The draft plan and FY12 budget are consistent and aligned. Updated measures will be released at a later date and available at the following link <http://www.mbe.doe.gov/budget/12budget/index.htm>.

**Purchase Power and Wheeling  
Funding Schedule by Activity**

(dollars in thousands)

	FY 2010 Current Appropriation	FY 2012 Request
Purchase Power and Wheeling		
Purchase Power	49,000	76,370
Wheeling	36,228	38,500
Subtotal, Purchase Power and Wheeling	85,228	114,870
Alternative Financing		
Net Billing	-14,422	-14,708
Subtotal, Purchase Power and Wheeling	70,806	100,162
Offsetting Collections Realized	-70,806	-100,162
Total, Purchase Power and Wheeling Budget Authority	0	0

**Benefits**

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

**Detailed Justification**

(dollars in thousands)

	FY 2010 Current Appropriation	FY 2012 Request
<b>Purchase Power</b>	<b>49,000</b>	<b>76,370</b>
▪ Replacement Power Purchase power on the open market when its Federal generating assets cannot provide enough power to fulfill its contracts with its customers.	13,190	37,700
▪ Pumping: Russell Project Purchase off-peak energy to pump water into the Richard B. Russell pumped storage Project for on-peak generation	17,910	17,910
▪ Pumping: Carters Project Purchase off-peak energy to pump water into the Carters pumped storage Project for on-peak generation	16,900	17,460
▪ Support Jim Woodruff Project Purchase of energy during periods of adverse water conditions including floods (loss of head) and drought	1,000	3,300
<b>Wheeling</b>	<b>36,228</b>	<b>38,500</b>
▪ Wheeling service charges Wheeling service charges for delivery of power over non-Federal systems	31,524	33,736
▪ Ancillary Services Payment for ancillary services	4,704	4,764
<b>Total, Purchase Power and Wheeling</b>	<b>85,228</b>	<b>114,870</b>

**Explanation of Funding Changes**

**Purchase Power and Wheeling**

The increased reflects higher pumping energy costs from fuel and fuel transportation expenses incurred by utilities that provide pumping energy. Transmission cost increases also added to higher PPW expenses.

<b>Total, Purchase Power and Wheeling</b>	<u>+29,642</u>
	+29,642

FY 2012 vs. FY 2010 Current Approp (\$000)
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**Program Direction**  
**Funding Profile by Category**

(dollars in thousands/whole FTEs)

	FY 2010 Current Approp	FY 2012 Request
Southeastern Power Administration		
Salaries/Benefits	5,199	5,630
Travel	355	450
Support Services	61	100
Other Related Expenses	2,023	2,248
Total, Headquarters	7,638	8,428
Full Time Equivalent Employees	44	44

**Benefits**

Program direction makes available the Federal staffing resources and associated funding necessary to provide overall direction and execution of Southeastern's program. All of Southeastern's annual expenditures are repaid within one year. Southeastern's de minimis capital expenditures are also repaid within one year, and for budget purposes, deemed annual expenses. Southeastern coordinates and cooperates with its partners to operate projects in a manner that enhances the value and reliability of hydropower. Priority is given to integrating environmental concerns and determinations into program actions. Emerging energy efficiency and renewable energy technologies are integrated with marketing strategies and programs.

## Detailed Justification

(dollars in thousands)

FY 2010 Current Appropriation	FY 2012 Request
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**Salaries and Benefits**

5,199

5,630

Funding supports salaries and benefits for 44 Federal employees who market Federal hydropower, promote energy efficiency and renewable energy, and provide administrative support. The salary estimate is derived from the current year budgeted salaries, promotions, within-grade increases, DOE-cascading performance awards, retirement payouts for unused leave (annual retirements of five FTEs are anticipated over the planning horizon), and overtime. Benefits are calculated as a percentage of prior years' actual. The funding provides for negotiation, preparation, execution, and administration of all contracts for the disposition of electric power, and ensures continuity of electric service to customers; operators who coordinate and schedule pumping energy among providers of pumping energy and the projects and account for all transactions relative to pumping operations of the Carters and Richard B. Russell Projects; and personnel who perform Balancing Authority services for Hartwell, Russell, and Thurmond Projects. Southeastern coordinates power operations of projects with all parties, making determinations of capacity and energy availability weekly. Efficiency Performance is measured by two Efficiency Performance Indicators that provide Balancing Area compliance ratings. Southeastern executes budget, accounting, and financial management activities, prepares repayment analyses of each system to determine rates, and organizes rate forums, as needed. Repayment performance is measured by comparing required to actual repayment of principal on power investment. Funding provides for accounts receivable and payable functions for approximately 300 contracts that benefit more than 500 preference customers. In support of the Energy Policy Act of 2005, Southeastern vigorously promotes energy efficiency and development of renewable energy among its customers. Funding also covers continuing engineering studies, review of project operations, and evaluation of impacts of proposed or actual changes to project operations. Funding also supports Information Management and Homeland Security initiatives.



(dollars in thousands)

FY 2010 Current Appropriation	FY 2012 Request
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**Travel**

355

450

Travel supports transportation and per diem expenses incurred for participation in and development of regional transmission organizations; training expenses; relocation expenses for new FTEs; contract negotiations; preference customer meetings; rate forums; hearings and meetings; Congressional hearings; site visits of existing and new projects; promotion of energy efficiency and renewable energy via Competitive Resource Strategy workshops and meetings; and operations meetings with industry groups. These groups include: SERC Reliability Corporation, Virginia Carolina Electric Reliability Group, NERC, Electric Reliability Organization, and American Public Power Association. Funding also supports travel expenses for SEPA Working Group interactions with Southeastern Federal Power Customers O&M Subcommittee meetings, interagency Task Force on Finance, technical advisory group meetings, FERC pre-filings and hearings, PJM RTO, and headquarters responsibilities.

**Support Services**

61

100

The Energy Efficiency and Renewable Energy Program supports preference customer's efforts to address energy efficiency issues, and promote development of renewable resources in support of the Energy Policy Act of 2005. Funding also supports services to develop specifications for training programs, prepare program plans, conduct training, and review and evaluate contractors.

**Other Related Expenses**

2,023

2,248

Funding provides administrative support for the office, rent, communications, maintenance, contract services (library services, support for DOE Power Marketing Liaison Office, and independent audit of the Southeastern Federal Power Program financial statements), supplies, materials, and equipment and support for cyber and physical security initiatives associated with Homeland Security,<sup>a</sup> training expenses for power operator certification, support for installation of electronic hardware and software for the operations center and provides maintenance to integrate real-time data from the control area and provides the data to other transmission operators and NERC. This equipment supports additional NERC compliance requirements and system reliability. This system is a resource-intensive application that requires maintenance of interconnected fiber optic communication lines for the Supervisory Control and Data Acquisition system. The funding level also reflects expenses associated with infrastructure support: telecommunications equipment; accounting system maintenance; building and computer security equipment; computer hardware and software; and office equipment and financial management system (Oracle).

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<sup>a</sup> Southeastern is required to meet the Common Identification Standard for Federal Employees and Contractors, as required by HSPD-12, FIPS Publication 201, Personal Identification Verification for Federal Employees and Contractors, NIST 800-73, Integrated Circuit Card for Personal Identity and Verification for Federal Employees and Contractors, NIST 800-76, Biometric Data Specification for Personal Identity Verification and all other DOE requirements.

(dollars in thousands)

FY 2010 Current Appropriation	FY 2012 Request
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**Total, Program Direction**

7,638

8,428

**Explanation of Funding Changes**

FY 2012 vs. FY 2010 Current Approp (\$000)
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**Salaries and Benefits**

Fiscal Year 2012 salaries are derived from budgeted FY 2010 salaries and benefits, promotions, within-grade increases, DOE-cascading performance awards, retirement payouts for unused leave, and overtime.

+431

**Travel**

The decrease reflects broader usage of teleconference to replace travel.

+95

**Support Services**

The increase in funding is for co-sponsored energy efficiency and renewable energy support programs for municipal and cooperative utilities.

+39

**Other Related Expenses**

- Communication expenses primarily reflect NERC operating requirements. +49
- Equipment expense increases reflect normal inflation and include operation center equipment upgrades required to maintain NERC reliability compliance. +8
- Maintenance expenses reflect increases in Operations Center Frame Relay and Data acquisition system maintenance. +9
- Rent expense increase due to normal inflation. +42
- Training Expense increase due to new systems integration. +10
- Contract services reflect normal increases in contracting services including Oracle. FY 2012 includes added expense for an IT Security Assessment. +84
- Audit of financial statements reflect normal inflation. +11
- Supplies, Working Capital Fund, and Printing +12

Subtotal, Other Related Expenses

+225

**Total Funding Change, Program Direction**

**+790**

### Support Services by Category

(dollars in thousands)		
	FY 2010 Current Approp	FY 2012 Request
Management and Professional Support Services		
Co-sponsored energy efficiency services and renewable energy acquisition support for municipal and cooperative utilities	61	100
Total, Management and Professional Support Services	61	100

### Other Related Expenses by Category

(dollars in thousands)		
	FY 2010 Current Approp	FY 2012 Request
Other Related Expenses		
Communications, Utilities, Misc.	323	372
Equipment	208	217
Maintenance Agreements	134	142
Rent to GSA	364	405
Rent to Others	9	10
Training	121	131
Tuition	16	16
Contract Services	439	523
Audit of Financial Statements	256	267
Supplies and Materials	116	123
Working Capital Fund	33	37
Printing and Reproduction	4	5
Total, Other Related Expenses	2,023	2,248



## Revenue and Receipts

(dollars in thousands)

	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Southeastern Power Administration							
Gross Revenues	240,720	298,268	339,489	340,829	346,199	349,004	350,555
Net Billing (Credited as an Offsetting Receipt)	-14,422	-14,473	-14,708	-14,945	-15,193	-15,453	-15,726
<b>Total Cash Receipts</b>	<b>226,298</b>	<b>283,795</b>	<b>324,781</b>	<b>325,884</b>	<b>331,006</b>	<b>333,551</b>	<b>334,829</b>
Continuing Fund							
Use of Offsetting Collections to fund PPW	-70,806	-74,157	-100,162	-101,150	-102,156	-103,212	-104,322
Use of Offsetting Collections to fund Annual Expenses	-7,638	-8,034	-8,428	-9,000	-9,033	-9,422	-9,743
<b>Total Receipts, net use of Offsetting Collections</b>	<b>155,492</b>	<b>201,604</b>	<b>216,191</b>	<b>215,734</b>	<b>219,817</b>	<b>220,917</b>	<b>220,764</b>
Cumberland Rehabilitation	-20,000	-20,000	-20,000	-20,000	-20,000	-20,000	-20,000
GA-AL-SC Rehabilitation	-15,000	-15,000	-15,000	-15,000	-15,000	-15,000	-15,000
Kerr-Philpott Rehabilitation	-600	-600	-600	-600	-600	-600	-600
Jim Woodruff	-1,000	-1,000	-1,000	-1,000	-1,000	-1,000	-1,000
<b>Total Proprietary Receipts</b>	<b>118,892</b>	<b>165,004</b>	<b>179,591</b>	<b>179,134</b>	<b>183,217</b>	<b>184,317</b>	<b>184,164</b>
Percent of Sales to Preference Customers							
	99%	99%	99%	99%	99%	99%	99%
Energy Sales and Power Marketed (megawatt-hours)							
	7,886,000	7,886,000	7,886,000	7,886,000	7,886,000	7,886,000	7,886,000

## System Statistics

	FY 2010 Actual	FY 2010 Estimate	FY 2011 Estimate
<u>Generating Capacity:</u>			
Nameplate Capacity (KW)	3,392,375	3,392,375	3,392,375
Peak Capacity (KW) <sup>a</sup>	3,710,000	3,710,000	3,710,000
<u>Generating Stations</u>			
Generating Projects (Number)	22	22	22
<u>Available Energy</u>			
Energy from Stream-flow (MWH)	7,459,272	7,459,272	7,459,272
Energy generated from Pumping (MWH)	427,128	427,128	427,128
Energy Purchased for Replacement (MWH)	75,000	75,000	75,000
Total, Energy available for marketing <sup>b</sup> (MWH)	7,961,400	7,961,400	7,961,400

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

<sup>b</sup> Gross amount. Transmission losses are deducted from this amount to estimate the amount of energy marketed.

**Power Marketed, Wheeled, or Exchanged by Project**

Project	State	Plants	Installed Capacity (KW)	FY 2010 Estimated Power (GWH)	FY 2011 Estimated Power (GWH)	FY 2012 Estimated Power (GWH)
<b><u>Kerr-Philpott System</u></b>				463	463	463
John H. Kerr	VA-NC	1	204,000			
Philpott	VA	1	14,000			
<b><u>Georgia-Alabama-South Carolina System</u></b>				4,059	4,059	4,059
Allatoona	GA	1	74,000			
Buford	GA	1	86,000			
Carters	GA	1	500,000			
J. Strom Thurmond	GA-SC	1	280,000			
Walter F. George	GA-AL	1	130,000			
Hartwell	GA-SC	1	344,000			
R. F. Henry	AL	1	68,000			
Millers Ferry	AL	1	75,000			
West Point	GA-AL	1	73,375			
Richard B. Russell	GA-SC	1	600,000			
<b><u>Jim Woodruff Project</u></b>				237	237	237
<b><u>Cumberland System</u></b>				3,127	3,127	3,127
Barkley	KY	1	130,000			
Center Hill	TN	1	135,000			
Cheatham	TN	1	36,000			
Cordell Hull	TN	1	100,000			
Dale Hollow	TN	1	54,000			
Old Hickory	TN	1	100,000			
J. Percy Priest	TN	1	28,000			
Wolf Creek	TN	1	270,000			
Laurel	TN	1	61,000			
<b>Total Power Marketed</b>		22	3,392,375	7,886	7,886	7,886

### Alternative Financing

2010

Jim Woodruff System  
 Kerr-Philpott System  
 GA-AL-SC System  
 Cumberland System

Transmission	Purchase Power	Offsetting Collections	Net Billing	Appropriated Funds
0	1,000	-800	-200	0
4,704	0	-4,704		0
21,757	48,000	-65,302	-4,455	0
9,767	0	0	-9,767	0
36,228	49,000	-70,806	-14,422	0

2011

Jim Woodruff System  
 Kerr-Philpott System  
 GA-AL-SC System  
 Cumberland System

Transmission	Purchase Power	Offsetting Collections	Net Billing	Appropriated Funds
0	3,200	-3,000	-200	0
9,517	0	-9,517	0	0
18,378	47,747	-61,454	-4,671	0
9,773	0	-186	-9,587	0
37,668	50,947	-74,157	-14,458	0

2012

Jim Woodruff System  
 Kerr-Philpott System  
 GA-AL-SC System  
 Cumberland System

Transmission	Purchase Power	Offsetting Collections	Net Billing	Appropriated Funds
265	3,300	-3,165	-400	0
4,220	0	-4,220	0	0
24,242	73,070	-92,592	-4,720	0
9,773	0	-185	-9,588	0
38,500	76,370	-100,162	-14,708	0





# **Southwestern Power Administration**



# **Southwestern Power Administration**

## **Southwestern Power Administration**

### **Proposed Appropriation Language**

*For necessary expenses of operation and maintenance of power transmission facilities and of marketing electric power and energy, for construction and acquisition of transmission lines, substations and appurtenant facilities, and for administrative expenses, including official reception and representation expenses in an amount not to exceed \$1,500 in carrying out section 5 of the Flood Control Act of 1944 (16 U.S.C. 825s), as applied to the Southwestern Power Administration, \$45,010,000, to remain available until expended: Provided, That notwithstanding 31 U.S.C. 3302 and section 5 of the Flood Control Act of 1944 (16 U.S.C. 825s), up to \$33,118,000 collected by the Southwestern Power Administration from the sale of power and related services shall be credited to this account as discretionary offsetting collections, to remain available until expended, for the sole purpose of funding the annual expenses of the Southwestern Power Administration: Provided further, That the sum herein appropriated for annual expenses shall be reduced as collections are received during the fiscal year so as to result in a final fiscal year 2012 appropriation estimated at not more than \$11,892,000: Provided further, That, notwithstanding 31 U.S.C. 3302, up to \$40,000,000 collected by the Southwestern Power Administration pursuant to the Flood Control Act of 1944 to recover purchase power and wheeling expenses shall be credited to this account as offsetting collections, to remain available until expended for the sole purpose of making purchase power and wheeling expenditures: Provided further, That for purposes of this appropriation, annual expenses means expenditures that are generally recovered in the same year that they are incurred (excluding purchase power and wheeling expenses).*



## Southwestern Power Administration

### Overview

### Appropriation Summary by Program

(dollars in thousands)

	FY 2010 Current Appropriation	FY 2011 CR	FY 2012 Request
Southwestern Power Administration			
Operation and Maintenance	94,944		107,007
Subtotal, Southwestern Power Administration	94,944		107,007
Offsetting Collections, Annual Expenses	-31,868		-33,118
Offsetting Collections, Purchased Power and Wheeling (PPW) <sup>a</sup>	-38,000		-40,000
Alternative Financing	-12,000		-21,997
Total, Southwestern Power Administration	13,076	13,076	11,892

#### Preface

The U.S. Department of Energy (DOE) is leading the Nation forward to strengthen its national energy and economic security by promoting a diverse supply and delivery of reliable, affordable, and environmentally sound energy. Southwestern Power Administration (Southwestern) exists to meet its public responsibilities consistent with the Flood Control Act of 1944: to market and reliably deliver Federal power, recover power costs, and repay the Federal investment consistent with sound business principles, giving preference to public bodies and cooperatives, while encouraging the most widespread use of power and implementing public policy.

Within the Southwestern appropriation, there is one program: Operation and Maintenance, with four subprograms: Operations and Maintenance, Construction, Purchased Power and Wheeling, and Program Direction. Consistent with the authority provided in the 2010 Energy and Water Appropriations, the FY 2012 Budget provides funding for annual expenses (operations and maintenance and program direction) through discretionary offsetting collections derived from power receipts collected to recover those expenses.

#### Mission

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

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<sup>a</sup> Southwestern's budget request for the Purchased Power and Wheeling subprogram reflects anticipated needs to ensure adequate funding to fulfill its 1200-hour peaking power contractual obligations based on volatile market prices, limited availability of energy banks, and all but the most severe hydrological conditions.

## **Benefits**

Southwestern markets and delivers Federal hydropower at the lowest cost-based rates possible, consistent with sound business practices to over 100 wholesale customers in a six-state area. In turn, Southwestern's customers distribute that power to over seven million end users in a six-state area. Southwestern's marketing efforts and delivery capability provide for recovery of annual operating costs, including the generating agencies' hydropower related costs, and repayment of taxpayer investment in the Federal hydropower program.

Hydroelectric power contributes to the reduction of greenhouse gas emissions and fossil fuel usage while reducing our country's dependence on foreign energy supplies. Annually, Southwestern produces an average of 5,570 gigawatt-hours of clean renewable hydroelectric energy. This energy production reduces emissions of carbon dioxide by 4.6 million tons per year, sulfur dioxide by 13,900 tons per year, and nitrogen oxides by 11,100 tons per year. Without the clean renewable hydropower from Southwestern, 9.2 million barrels of fuel oil, 2.7 million tons of coal, or 56.5 billion cubic feet of natural gas would be depleted each year.

## **Means and Strategies**

Southwestern will use the means and strategies identified below to carry out its mission. Although external factors may affect its efforts, with the support of its Federal power partners, Southwestern can effectively meet industry trends and address current issues in the marketing and delivery of Federal power.

Southwestern will implement the following means:

- Employ technology and equipment to improve the capability, performance, reliability, compliance, and efficiency of the integrated grid.
- Upgrade and modernize the financial system and associated peripherals to ensure financial integrity.
- Utilize the following funding mechanisms: appropriations; appropriations offset by receipts; use of Federal power receipts; and alternative financing arrangements, including net billing, bill crediting, and/or reimbursable authority (customer advances).
- Maintain a diverse and knowledgeable workforce through employee training, skills gap analyses, leadership development, student intern programs, retention programs, and aggressive recruitment activities.
- Address changes in the electric utility industry, technology, and workload by moving administrative and indirect positions to direct ("front line") positions as opportunities arise.

Southwestern will implement the following strategies:

- Market all available hydropower generated at the Corps multipurpose projects and work with the Corps, states, cooperatives, and municipalities to meet statutory requirements while balancing the interests of other water users and provide power at the lowest possible cost.
- Maintain and modernize systems and infrastructure to increase the reliability, efficiency, and use of Federal assets.
- Conduct annual power repayment studies to ensure power rates are sufficient to repay all annual operating costs and the Federal investment with interest.
- Meet Southwestern's limited 1200-hour peaking power contractual obligations with necessary purchased power and wheeling through the use of Federal power receipts; alternative financing arrangements, including net billing, bill crediting, and/or reimbursable authority (customer

advances); and the Continuing Fund as necessary in periods of below-average hydropower generation.

- Operate the transmission system efficiently to support the Nation's integrated power grid.
- Meet requirements for Southwestern's compliance with the latest North American Electric Reliability Corporation (NERC) standards and perform operating personnel certification and annual emergency operations training for power system dispatchers.
- Maintain and modernize the Federal power system and facilities.

These strategies will result in a well-maintained, reliable Federal power system, and an exemplary workforce to operate and maintain the system in the most effective and cost-efficient manner possible.

The following external factors could impact Southwestern's ability to achieve its goals: weather, natural disasters, changes in the NERC operating standards, industry deregulation, changing electric industry organizational structures, interconnections, open access, the lack of adequate funding resources, and other unforeseen requirements. More specifically:

- Southwestern's transmission infrastructure continues to age, despite an ongoing replacement program.
- Industry efforts to improve the reliability of the bulk power grid are placing more requirements on our workforce to implement mandatory reliability standards.
- Our highly skilled technical workforce continues to age and we are competing with the rest of the electric utility industry to attract and retain the caliber of workforce needed to provide reliable power supply and transmission services.

Southwestern coordinates its operational activities with the Corps, customers, competing resources interests, the Southwest Power Pool/Regional Transmission Organization, and Congress to provide the most efficient and effective use of Federal assets and to ensure NERC and regional reliability council standards are met.

### **Annual Performance Results and Targets**

The Department is in the process of updating its strategic plan, and has been actively engaging stakeholders including Congress. The draft strategic plan is being released for public comment concurrent with this budget submission, with the expectation of official publication this spring. The draft plan and FY12 budget are consistent and aligned. Updated measures will be released at a later date and available at the following link <http://www.mbe.doe.gov/budget/12budget/index.htm>.





## Southwestern Power Administration

### Funding by Site by Program

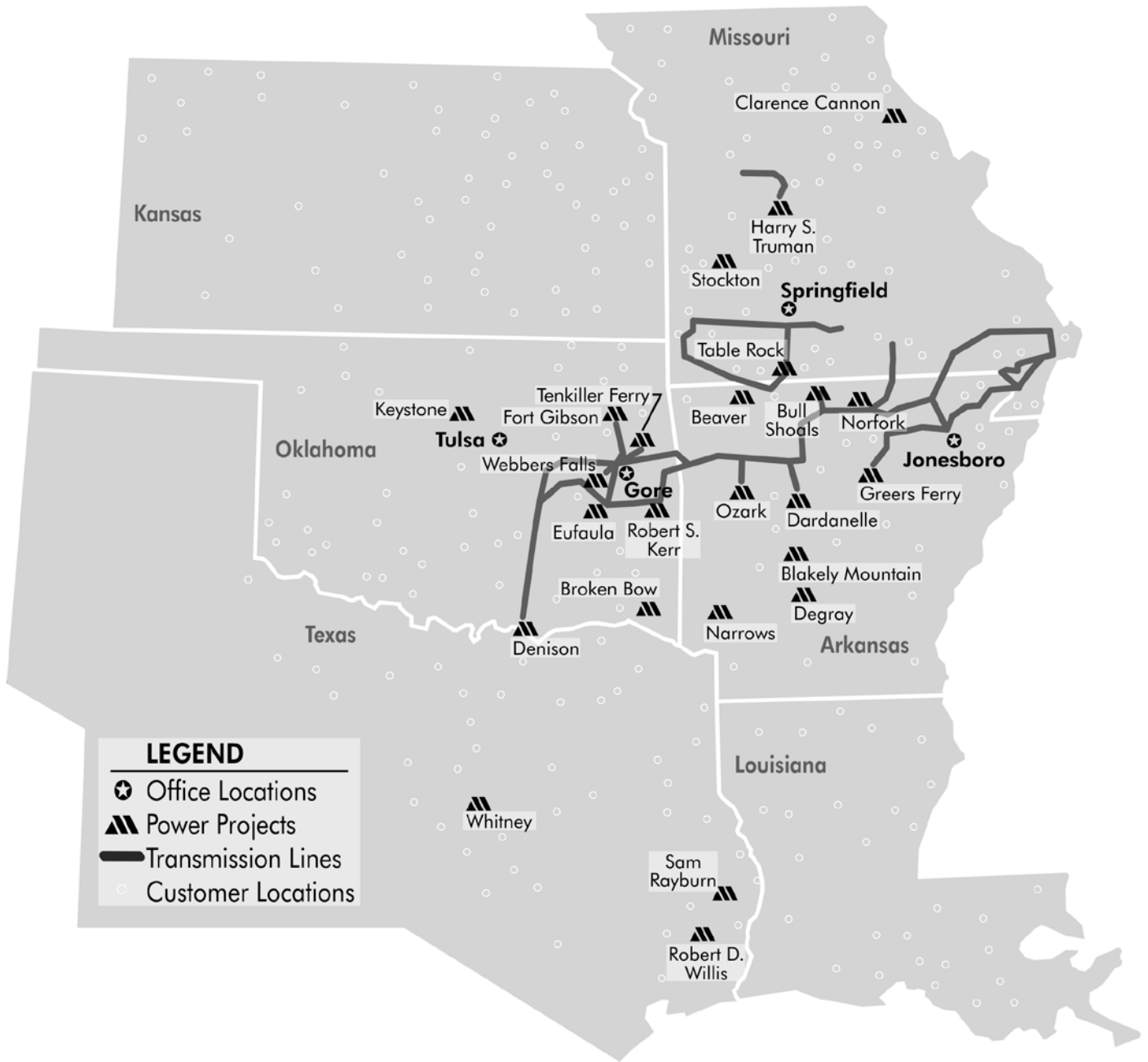
(dollars in thousands)

	FY 2010 Current Appropriation	FY 2012 Request
Southwestern Power Administration	94,944	107,007
Total, Southwestern Power Administration	94,944	107,007

### Site Description

An Agency of the Department of Energy, Southwestern Power Administration (Southwestern) was created in 1943 to market and deliver power and energy produced at U.S. Army Corps of Engineers (Corps) hydroelectric power projects. Southwestern markets and delivers power at wholesale rates to 78 municipal utilities, 22 rural electric cooperatives, and 3 government entities in the six states of Arkansas, Kansas, Louisiana, Missouri, Oklahoma, and Texas. In order to integrate the operation of the Federal hydroelectric generating plants and to transmit power from 24 multi-purpose Corps dams to customers, Southwestern operates and maintains 1,380 miles of high-voltage transmission lines, 25 substations/switchyards, and 51 microwave and very high frequency (VHF) radio sites. Southwestern operates from its Headquarters in Tulsa, Oklahoma; a Dispatch Center in Springfield, Missouri; and maintenance facilities in Jonesboro, Arkansas; Gore, Oklahoma; and Springfield, Missouri.

# System Map



## Operation and Maintenance

### Funding Profile by Subprogram

(dollars in thousands)

	FY 2010 Current Appropriation	FY 2012 Request
Operation and Maintenance		
Program Direction (PD)	27,153	31,889
Operations and Maintenance (O&M)	13,775	14,346
Construction (CN)	6,016	10,772
Purchased Power and Wheeling (PPW)	48,000	50,000
Subtotal, Operation and Maintenance	94,944	107,007
Offsetting Collections, PD (annual expenses)	-26,247	-25,687
Offsetting Collections, O&M (annual expenses)	-5,621	-7,431
Offsetting Collections, PPW <sup>a</sup>	-38,000	-40,000
Alternative Financing, PD	0	-4,740
Alternative Financing, O&M	0	-2,153
Alternative Financing, CN	-2,000	-5,104
Alternative Financing, PPW	-10,000	-10,000
Total, Operation and Maintenance	13,076	11,892

#### Public Law Authorizations:

Public Law No. 78-534, Section 5, Flood Control Act of 1944  
 Public Law No. 95-91, Section 302, DOE Organization Act of 1977  
 Public Law No. 100-71, Supplemental Appropriations Act, 1987  
 Public Law No. 101-101, Title III, Continuing Fund (amended 1989)  
 Public Law No. 102-486, Section 721, Energy Policy Act of 1992  
 Public Law No. 108-137, Appropriations Act, FY 2004  
 Public Law No. 111-85, Appropriation Act, FY 2010

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<sup>a</sup> Southwestern's budget request for the Purchased Power and Wheeling subprogram reflects anticipated needs to ensure adequate funding to fulfill its 1200-hour peaking power contractual obligations based on volatile market prices, limited availability of energy banks, and all but the most severe hydrological conditions.

**Mission**

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

**Benefits**

Southwestern Power Administration (Southwestern) markets and delivers Federal hydropower at the lowest cost-based rates possible, consistent with sound business practices to over 100 wholesale customers in a six-state area. In turn, Southwestern's customers distribute that power to over seven million end users in a six-state area. Southwestern's marketing efforts and delivery capability provide for recovery of annual operational costs, including the generating agencies' hydropower related costs, and repayment of taxpayer investment in the Federal hydropower program.

**Operations and Maintenance**

**Funding Schedule by Activity**

(dollars in thousands)

	FY 2010 Current Appropriation	FY 2012 Request
Operations and Maintenance (O&M)		
Power Marketing	1,748	602
Operations	4,080	4,094
Maintenance	6,680	7,930
Capitalized Movable Equipment	1,267	1,720
Subtotal, Operations and Maintenance	13,775	14,346
Offsetting Collections	-5,621	-7,431
Alternative Financing	0	-2,153
Total, Operations and Maintenance	8,154	4,762

**Benefits**

The activities of the Operations and Maintenance subprogram are critical components in maintaining the reliability of the Federal power system, which is part of the Nation’s interconnected generation and transmission system. Through the use of renewable hydroelectric energy, Southwestern Power Administration (Southwestern) makes a meaningful contribution of clean, safe, reliable, affordable, and secure energy to our Nation. The Energy Policy Act (EPACT), the National Energy Policy (NEP), and the Department of Energy (DOE) reinforce the importance of renewable hydroelectric energy by emphasizing its ongoing significant contribution to the Nation’s past, current, and future energy supply and identify Southwestern’s important role meeting electricity demand by supplying cost-based hydroelectric power to its customers. All emphasize the need to repair, maintain, and improve the transmission and generation facilities to ensure reliability of the energy infrastructure.

Consistent with EPACT, Southwestern complies with the North American Electric Reliability Corporation (NERC) standards and participates with the Southwest Power Pool/Regional Transmission Organization (SPP/RTO), which reinforces Southwestern’s role as part of the Nation’s interconnected electric grid. In participation with the SPP/RTO, Southwestern works on regional initiatives to develop renewables in its region. During power grid emergencies, Southwestern also has the capability to provide reliable off-site power to help restore other power generation sources. As demand for the transmission of power increases, the investment in maintaining and improving the Nation’s energy infrastructure will be critical for achieving energy security for present and future generations.

Southwestern’s planned Operations and Maintenance projects are subject to change based on unanticipated equipment failure, customer needs, and weather conditions. The realities of maintaining a complex interconnected power system means unforeseen priority projects will arise periodically, causing a reprioritization of planned projects. All projects share the commonality of maintaining, repairing, and improving the aging and deteriorating infrastructure to ensure the reliability of the Federal power system.

## Detailed Justification

(dollars in thousands)

FY 2010 Current Appropriation	FY 2012 Request
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### **Power Marketing**

**1,748**

**602**

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

### **Operations**

**4,080**

**4,094**

This activity funds communication activities associated with the dispatch and delivery of power; environmental, safety, and health activities; and other transmission activity costs such as physical security, cyber security, and day-to-day power dispatch functions.

#### ▪ **Communications**

**2,942**

**2,953**

This subactivity funds telemetering improvements, technical support to protect cyber infrastructure, SCADA/EMS maintenance agreements, an e-tagging system that electronically schedules power for customers, load forecasting, digital test equipment, the fee for spectrum, and supplies and materials. The telemetering improvements include replacement of obsolete power and energy accounting equipment and modification of existing remote terminal units that improve the reliability of the power system, specifically in the areas of monitoring and control. Funding is required for upgrades that enable Southwestern to meet the goals of the EPACT, NEP, NERC and the Department of Energy's (DOE) Strategic Plan by replacing deteriorating infrastructure while assuring reliability and continuing to actively participate in the SPP/RTO. The funding level for communications maintenance is derived from maintenance history, the age of equipment, expected life span, annual diagnostic maintenance testing, and historical pricing information.

#### ▪ **Environmental, Safety, and Health**

**835**

**835**

This subactivity funds environmental activities including waste disposal/clean-up of oil and polychlorinated biphenyl contaminates from old circuit breakers and transformers, environmental assessments for threatened and endangered species, property transfers, wetland assessments, environmental library access, Toxic Substance Control Act and Resource Conservation Recovery Act compliance, contractor services, and requirements of the Environmental Protection Program as identified in DOE Order 450.1. The Safety and Health Program activities require funding for aviation safety, industrial hygiene, medical examinations, medical officer, wellness program, safety equipment, and first aid supplies.

(dollars in thousands)

FY 2010 Current Appropriation	FY 2012 Request
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▪ **Other Transmission** **303** **306**

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

**Maintenance** **6,680** **7,930**

This activity funds routine repair, maintenance, and improvement of Southwestern's 25 substations/switchyards and 1,380 miles of high-voltage transmission lines. Southwestern's initial facilities, which were built approximately 60 years ago, are constantly evaluated for reliability. The funding level is derived from the age of the equipment, risk of failure and life cycle of equipment, and field crew evaluation. Internal and external factors include obsolescence of technology and lack of replacement parts. This budget request reflects Southwestern's assessment of the funding required to ensure continued reliability of the Federal power system and to fulfill the NERC operational criteria.

▪ **Substation Maintenance** **5,271** **6,747**

This subactivity funds a transformer, power circuit breakers, disconnect switches, protective relays and related equipment, computer-aided drafting and design, revenue meters, vehicle maintenance, fuel, and other equipment to reliably perform general maintenance projects while maintaining the Federal power system as required by Southwestern's participation in a regional electric reliability council and to comply with NERC requirements. The funding level is derived from an internal maintenance information system, which includes the age and condition of the existing equipment. The request also funds the purchase and installation of a new power transformer. The transformer is required to maintain reliability of the power system while accommodating increased loads on the Federal power system resulting from interconnection and open access requests from other utilities.

▪ **Transmission Line Maintenance** **1,409** **1,183**

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

**Capitalized Moveable Equipment** **1,267** **1,720**

This activity funds the replacement of vehicles, tractor-trailers, and heavy equipment used for the maintenance and repair of the transmission system and facilities. The replacement criteria Southwestern utilizes for specialized equipment needed to maintain 1,380 miles of transmission line is derived from the General Services Administration (GSA) and DOE guidelines based on operation duration and age. These vehicles exceed their useful lives and require high levels of maintenance. The vehicle cost estimates are derived from GSA pricing schedules.

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**Total, Operations and Maintenance** **13,775** **14,346**

Southwestern Power Administration/  
Operations and Maintenance

FY 2012 Congressional Budget

## Explanation of Funding Changes

FY 2012 vs. FY 2010 Current Appropriation (\$000)
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**Power Marketing**

The decrease in funding reflects a reduction in the number and scope of studies to be performed.

-1,146

**Operations**

▪ **Communications**

The slight increase in telemetering replacements.

+11

▪ **Other Transmission**

The slight increase in funding reflects additional physical security hardware costs.

+3

**Maintenance**

▪ **Substation Maintenance**

The increase in funding reflects the purchase of instrument transformers for replacements to ensure system reliability.

+1,476

▪ **Transmission Line Maintenance**

The decrease in funding reflects reduced purchases of steel structures to restock inventory.

-226

**Capitalized Movable Equipment**

The increase reflects the number and/or type of vehicles being purchased.

+453

**Total Funding Change, Operations and Maintenance**

+571



## Construction

### Funding Schedule by Activity

	(dollars in thousands)	
	FY 2010 Current Appropriation	FY 2012 Request
Construction		
Transmission System	6,016	10,772
Subtotal, Construction	6,016	10,772
Alternative Financing	-2,000	-5,104
Total, Construction	4,016	5,668

### Benefits

The activities of the Construction subprogram enable Southwestern Power Administration (Southwestern) to market and deliver Federal hydropower in the most reliable, safe, efficient, and cost-effective manner to meet the operational criteria required by the North American Electric Reliability Corporation (NERC) and as a participant in the National electrical grid while avoiding transmission infrastructure deterioration. The Energy Policy Act, The National Energy Policy, and DOE's Strategic Plan reinforce the importance of renewable hydroelectric energy by emphasizing its ongoing significant contribution to the Nation's past, present, and future energy supply and Southwestern's important role in meeting electricity demand by supplying cost-based hydroelectric power to its customers.

Southwestern's participation in the Southwest Power Pool/Regional Transmission Organization (SPP/RTO) reinforces Southwestern's role as an integral part of the Nation's interconnected generation and transmission system. In participation with the SPP/RTO, Southwestern works on regional initiatives to develop renewables in our region. As the demand for the transmission of power increases, the investment in improving the Nation's energy infrastructure, by providing improvements, replacements, and interconnections, is critical in assuring reliable delivery of power and fulfilling energy security for the present as well as for future generations.

Southwestern's planned construction projects are subject to change based on unanticipated equipment failure, customer needs, and weather conditions. The realities of maintaining a complex interconnected power system means unforeseen priority projects will arise periodically, causing a reprioritization of planned projects. All projects share the commonality of replacing aging and deteriorating infrastructure necessary to maintain the reliability of the Federal power system.

**Detailed Justification**

(dollars in thousands)

FY 2010 Current Appropriation	FY 2012 Request
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**Transmission System**

**6,016                      10,772**

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

▪ **Communication Equipment**

**5,840                      6,049**

This subactivity funds all communication equipment and microwave radio and tower replacements that are planned to provide improved system reliability and reduce future maintenance and equipment costs. This subactivity also provides funding for microwave radios and microwave tower additions, replacements, and modifications that will allow Southwestern to complete an important communication ring within its network that will increase the reliability of communications with the generating plants and substations in the Oklahoma region. The communication system provides for the transfer of voice and data traffic to allow monitoring and control of power system generation and transmission assets.

The Commercial Spectrum Enhancement Act of 2004 (CSEA, Title II of P.L. 108-494) created the Spectrum Relocation Fund (SRF) to streamline the relocation of Federal systems from existing spectrum bands to accommodate commercial use by facilitating reimbursement to affected agencies of relocation costs. Southwestern received \$25.8 million in spectrum relocation funds, as approved by the Office of Management and Budget, and as reported to the Congress. 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. Spectrum relocation activities were funded from spectrum auction proceeds; thus, no funding is provided in this subactivity.

▪ **Transmission Upgrades**

**176                      4,723**

This subactivity funds transmission system upgrades. Southwestern’s transmission lines are reaching the intended service life of 45 years and are in need of repair and upgrading. For FY 2012, 35 miles of transmission line has been identified as being in critical need of replacement. Southwestern will use this opportunity to increase the capacity of the line to provide more reliable service to the interconnected transmission system, thereby increasing energy efficiency.

**Total, Construction**

**6,016                      10,772**

## Explanation of Funding Changes

FY 2012 vs. FY 2010 Current Appropriation (\$000)
--

### Transmission System

- **Communication Equipment**

The increase in funding reflects a small addition to the planned microwave radio and tower replacements.

+209

- **Transmission Upgrades**

The increase in funding reflects an emphasis on repairing and upgrading approximately 35 miles of transmission line and replacing worn shield wire.

+4,547

**Total Funding Change, Construction**

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**+4,756**



## Purchased Power and Wheeling

### Funding Schedule by Activity

(dollars in thousands)

	FY 2010 Current Appropriation	FY 2012 Request
Purchased Power and Wheeling (PPW) <sup>a</sup>		
System Support	44,500	46,500
Other Contractual Services	3,500	3,500
Total, PPW	48,000	50,000
Use of Alternative Financing – Reimbursable Authority (customer advances), Net Billing, Bill Crediting:		
Purchased Power	-6,725	-6,725
Wheeling	-3,275	-3,275
Total, Alternative Financing	-10,000	-10,000
Subtotal, Purchased Power and Wheeling	38,000	40,000
Offsetting Collections	-38,000	-40,000
Total, Purchased Power and Wheeling	0	0

### Benefits

The Purchased Power and Wheeling (PPW) subprogram provides for the purchase of energy to meet peaking power contractual obligations and the delivery of Federal power. Southwestern Power Administration's (Southwestern) power sales contracts provide for only 1200-hours of peaking power per year, representing only a portion of its customers' firm load requirements. The customers provide their own resources and/or purchases for the remainder of their firm loads. Southwestern must purchase power when the generating projects cannot produce our 1200-hour contract obligations. Above average purchases are required in times of severe drought or instances of multiple project outages that limit our power production. Purchases of power are generally made in the open spot market and with public entities. Delivery of purchased power to our system is made via the Southwest Power Pool/Regional Transmission Organization or our own transmission system. All such power purchases are blended with the available Federal hydroelectric power to provide a more beneficial and reliable product while ensuring repayment of the Federal investment plus interest.

Southwestern will continue to use Federal power receipts and alternative financing methods, including net billing, bill crediting, and/or reimbursable authority (customer advances), to fund this subprogram. When hydro generation is significantly below normal due to severe drought conditions, Southwestern will utilize the Continuing Fund for emergency PPW expenses.

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<sup>a</sup> Southwestern's budget request for the Purchased Power and Wheeling subprogram reflects anticipated needs to ensure adequate funding to fulfill its 1200-hour peaking power contractual obligations based on volatile market prices, limited availability of energy banks, and all but the most severe hydrological conditions.

The activities of the PPW subprogram provide for the purchase of energy to fulfill limited peaking power contractual obligations to ensure the marketability of the Federal resource and repayment of the Federal investment. This subprogram also provides for wheeling services that deliver Federal power to optimize the operation of the hydroelectric facilities marketed by Southwestern. The Energy Policy Act, the National Energy Policy, and the North American Electric Reliability Corporation (NERC) reinforce the importance of domestic, renewable hydroelectric energy by emphasizing its ongoing significant contribution to the Nation's past, present, and future energy supply and identify Southwestern's important role in meeting electricity demand by supplying cost-based hydroelectric power to its customers. This subprogram enhances the reliability of the electrical transmission grid.

**Detailed Justification**

(dollars in thousands)

FY 2010 Current Appropriation	FY 2012 Request
----------------------------------	--------------------

**System Support**

**44,500**

**46,500**

This activity funds purchased power requirements of the hydroelectric power system needed to fulfill all 1200-hour contractual peaking power obligations with customers. System support requirements depend on the conditions of the hydroelectric power system which is affected by weather, volatile market prices, and limited availability of energy banks. In prior years, inadequate funding for PPW and hydrological fluctuations required constant requests to access the Continuing Fund in order to ensure sufficient funding was available to fulfill Southwestern's 1200-hour peaking power contractual obligations. In FY 2008, Southwestern requested, and Congress approved, an increase in its authority to use Federal power receipts (offsetting collections). The use of this authority will be dependent upon the hydrological conditions realized during the fiscal year which, under average conditions, will be less than half of the authority requested. Since the rates charged to its customers are based on full cost recovery, Southwestern has a built-in incentive to minimize expenditures for purchased power. This authority ensures greater flexibility in times of below average generation and volatile market prices, and will decrease dependence on the Continuing Fund under all but the most severe hydrological conditions.

**Other Contractual Services**

**3,500**

**3,500**

This activity funds other contractual services that provide for wheeling associated with the purchase of transmission service to meet limited peaking power obligations and for the integration of projects for the delivery of Federal power. The funding level is derived from contractual wheeling requirements. Southwestern will continue to use Federal power receipts and alternative financing methods, including net billing, bill crediting, and/or reimbursable authority (customer advances), to meet wheeling requirements. The FY 2012 funding request reflects the projected cost for wheeling services based on contractual pricing and delivery terms.

**Total, Purchased Power and Wheeling**

**48,000**

**50,000**

**Explanation of Funding Changes**

FY 2012 vs. FY 2010 Current Appropriation (\$000)
---

**System Support**

- Increase in system support reflects anticipated needs based on projected increase in market prices.

+2,000

**Other Contractual Services**

0

**Total Funding Change, Purchased Power and Wheeling**

+2,000





## Program Direction

### Funding Profile by Category

	(dollars in thousands)	
	FY 2010 Current Appropriation	FY 2012 Request
Program Direction (PD)		
Salaries and Benefits	21,288	22,233
Travel	938	1,050
Support Services	2,212	2,745
Other Related Expenses	2,715	5,861
Subtotal, Program Direction	27,153	31,889
Alternative Financing	0	-4,740
Offsetting Collections	-26,247	-25,687
Total, Program Direction	906	1,462
Full-time Equivalents	177	188

#### **Mission**

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

The Program Direction subprogram provides compensation and all related expenses for 188 Federal personnel who market, deliver, operate, maintain, and administer Southwestern's high-voltage interconnected power system and associated facilities. Southwestern will use appropriations; appropriations offset by receipts; and alternative financing arrangements, including net billing, bill crediting, and/or reimbursable authority (customer advances), with customers and others who provide services or funds to ensure a dependable and reliable Federal power system.

## Detailed Justification

(dollars in thousands)

FY 2010 Current Appropriation	FY 2012 Request
----------------------------------	--------------------

**Salaries and Benefits**

**21,288**

**22,233**

This activity funds salaries and benefits for 188 skilled Federal employees who market and deliver Federal hydropower by operating and maintaining Southwestern’s high-voltage interconnected power system with its associated facilities and providing support for these functions. The funding level for salaries is derived from the current year budgeted salaries, promotions, and within-grade increases. The funding level for benefits is derived from a percentage of budgeted salaries. The benefits for FERS employees are higher than CSRS. As more and more CSRS employees retire, the benefit costs will continue to increase.

The FY 2012 level supports 188 Federal employees: 54 percent of the employees are General Schedule (GS) and subject to the Administration’s proposed cost-of-living adjustment; salaries of the remaining 46 percent (craft workers and power system dispatchers) are determined through union negotiations and wage surveys. This activity also includes overtime, awards, relocation, workers’ compensation, recruitment bonuses, retention pay, and advanced in-hire rates.

By the end of FY 2012, approximately 27 percent of Southwestern’s staff will be eligible for retirement. Southwestern will continue to invest in its current employees, emphasizing strong development programs, completing skills gap analyses, and pursuing aggressive recruitment and retention efforts as identified in its Human Capital Management Workforce Plan.

**Travel**

**938**

**1,050**

This activity funds all related travel and per diem expenses for mission-related travel to maintain the integrity and reliability of Southwestern’s geographically dispersed power system. The funding level for this activity is primarily derived from the daily requirement of the field maintenance personnel to maintain 1,380 miles of transmission line, 25 substations/switchyards, 51 microwave/radio sites, communication equipment, and the Supervisory Control and Data Acquisition network. Travel for the performance of general and administrative functions is also included.

**Support Services**

**2,212**

**2,745**

This activity funds contracted management support services including information technology, E-Government, and administrative/records management support. The funding level for this activity is derived from the most recent negotiated contract for support services essential to achieve Southwestern’s mission.

(dollars in thousands)

FY 2010 Current Appropriation	FY 2012 Request
----------------------------------	--------------------

**Other Related Expenses**

**2,715**

**5,861**

This activity funds rental space, facility security, financial audit, services of the Power Marketing Liaison Office, working capital fund, technology refresh in the areas of personal computers, hardware and software, printing and reproduction, and training and tuition fees in support of workforce planning and required training to meet the North American Electric Reliability Corporation (NERC) emergency operations requirement. Southwestern plans to upgrade the financial system since support for current version ends in November 2013. Rental space costs assume the GSA inflation factor. Other costs are based on the historical usage and actual cost of similar items.

**Total, Program Direction**

**27,153**

**31,889**

**Explanation of Funding Changes**

FY 2012 vs. FY 2010 Current Appropriation (\$000)
---

**Salaries and Benefits**

- Increase reflects additional FTE added in FY 2011 for NERC related issues and succession planning. Increase also includes planned promotions and step increases. Amount identified for Salaries and Benefits has been adjusted to reflect salary freeze for FY 2012.

+945

**Travel**

- The increase in funding for this activity is due to required additional travel and rising costs.

+112

**Support Services**

- Increase reflects funding for support services per the recent negotiated contract.

+533

**Other Related Expenses**

- Increase in funding for this activity is primarily due to costs for a major financial system upgrade (Oracle) and IT-related costs.

+3,146

**Total Funding Change, Program Direction**

**+4,736**

### Support Services by Category

(dollars in thousands)

	FY 2010 Current Appropriation	FY 2012 Request
Management Support		
Reports and Analysis Management and General Administrative Services	2,212	2,745
Subtotal, Management Support	2,212	2,745
Total, Support Services	2,212	2,745

### Other Related Expenses by Category

(dollars in thousands)

	FY 2010 Current Appropriation	FY 2012 Request
Other Related Expenses		
Training	190	231
Printing and Reproduction	49	85
Rent to Others	705	715
Financial Audit	364	450
Power Marketing Liaison Office	140	140
Supplies and Materials	200	220
Working Capital Fund	160	170
Equipment	100	200
Other	807	3,650
Total, Other Related Expenses	2,715	5,861

## Revenues and Receipts

(dollars in thousands)

	FY 2010 Actual	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	FY 2016 Estimate
Gross Revenues							
Sale and Transmission of Electric Energy	202,300	205,500	206,600	208,400	209,400	210,400	211,400
Total, Gross Revenues	202,300	205,500	206,600	208,400	209,400	210,400	211,400
Alternative Financing Credited as an Offsetting Receipt, Net Billing/Bill Crediting	-15,492	-56,200	-55,700	-56,400	-57,300	-58,200	-59,100
Offsetting Collections, Southwestern Annual Expenses (Net Zero)	-31,868	-33,613	-33,118	-34,113	-35,141	-37,172	-39,926
Offsetting Collections Realized, Purchased Power and Wheeling	-796	-39,000	-40,000	-41,000	-42,000	-43,000	-43,900
White River Minimum Flows Legislation	-40,000	0	0	0	0	0	0
Adjustments not otherwise Classified	-3,700	0	0	0	0	0	0
Continuing Fund Usage for PPW	0	0	0	0	0	0	0
<b>Total Proprietary Receipts</b>	<b>110,444</b>	<b>76,687</b>	<b>77,782</b>	<b>76,887</b>	<b>74,959</b>	<b>72,028</b>	<b>68,474</b>
Percent of Sales to Preference Customers	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%
Energy Sales from Power Marketed (billions of kilowatt hours)	5.4	5.4	5.4	5.4	5.4	5.4	5.4

## System Statistics

	FY 2010 Actual	FY 2011 Estimate	FY 2012 Estimate	FY 2013 Estimate	FY 2014 Estimate	FY 2015 Estimate	FY 2016 Estimate
Generating Capacity (kilowatts)							
Installed Capacity	2,173,800	2,173,800	2,173,800	2,173,800	2,173,800	2,173,800	2,173,800
Peak Capacity	2,052,500	2,052,500	2,052,500	2,052,500	2,052,500	2,052,500	2,052,500
Generating Stations							
Generating Projects (Number)							
	24	24	24	24	24	24	24
Substations/Switchyards (Number)							
	25	25	25	25	25	25	25
Substations/Switchyards (kVA Capacity)							
	1,026,900	1,026,900	1,026,900	1,026,900	1,026,900	1,026,900	1,026,900
Available Energy (Megawatt-hours)							
Energy Generated	7,720,539	5,346,600	5,346,600	5,444,900	5,444,900	5,444,900	5,444,900
Energy Received	31,059	221,500	221,500	209,700	209,700	209,700	209,700
Total, Energy Available for Marketing							
	7,751,598	5,568,100	5,568,100	5,654,600	5,654,600	5,654,600	5,654,600
Transmission Lines (Circuit-Miles)							
161-KV	1,117	1,117	1,117	1,117	1,117	1,117	1,117
138-KV	164	164	164	164	164	164	164
69-KV	99	99	99	99	99	99	99
Total, Transmission Lines	1,380	1,380	1,380	1,380	1,380	1,380	1,380

## Power Marketed, Wheeled, or Exchanged by Project

State	Number of Plants	Installed Capacity (kW)	FY 2010 Actual Energy (GWh)	FY 2011 Estimated Energy (GWh)	FY 2012 Estimated Energy (GWh)	FY 2013 Estimated Energy (GWh)	FY 2014 Estimated Energy (GWh)	FY 2015 Estimated Energy (GWh)	FY 2015 Estimated Energy (GWh)
<b>Power Marketed</b>									
<b>Interconnected System</b>									
Missouri	4	463,200	2,585	1,835	1,835	1,866	1,866	1,866	1,866
Arkansas	9	1,037,100	1,416	970	970	986	986	986	986
Oklahoma	7	514,100	1,508	1,043	1,043	1,060	1,060	1,060	1,060
Texas	2	100,000	838	575	575	585	585	585	585
Louisiana	0	0	515	361	361	367	367	367	367
Kansas	0	0	582	400	400	406	406	406	406
<b>Subtotals</b>	<b>22</b>	<b>2,114,400</b>	<b>7,444</b>	<b>5,184</b>	<b>5,184</b>	<b>5,270</b>	<b>5,270</b>	<b>5,270</b>	<b>5,270</b>
<b>Isolated:</b>									
<b>Robert D. Willis Project</b>									
<b>Sam Rayburn Project</b>									
50% to Texas	2	59,400	77	76	76	76	76	76	76
50% to Louisiana	0	0	77	76	76	76	76	76	76
<b>Subtotals</b>	<b>2</b>	<b>59,400</b>	<b>154</b>	<b>152</b>	<b>152</b>	<b>152</b>	<b>152</b>	<b>152</b>	<b>152</b>
<b>Total, Power Marketed</b>	<b>24</b>	<b>2,173,800</b>	<b>7,598</b>	<b>5,336</b>	<b>5,336</b>	<b>5,422</b>	<b>5,422</b>	<b>5,422</b>	<b>5,422</b>
<b>Power Wheeled/Exchanged</b>									
Wheeled (MW)			998	1,219	1,232	1,238	1,238	1,238	1,238
Exchanged (GWh)			7	0	0	0	0	0	0







# **Western Area Power Administration**



# **Western Area Power Administration**

## **Construction, Rehabilitation, Operation and Maintenance**

### **Western Area Power Administration**

#### **Proposed Appropriation Language**

*For carrying out the functions authorized by title III, section 302(a)(1)(E) of the Act of August 4, 1977 (42 U.S.C. 7152), and other related activities including conservation and renewable resources programs as authorized, including official reception and representation expenses in an amount not to exceed \$1,500; \$285,900,000, to remain available until expended, of which \$278,856,000 shall be derived from the Department of the Interior Reclamation Fund: Provided, That notwithstanding the provisions of 31 U.S.C. 3302, 16 U.S.C. 825s, and 43 U.S.C. 392a, up to \$189,932,000 collected by the Western Area Power Administration from the sale of power and related services shall be credited to this account as discretionary offsetting collections, to remain available until expended, for the sole purpose of funding the annual expenses of the Western Area Power Administration: Provided further, That the sum herein appropriated for annual expenses shall be reduced as collections are received during the fiscal year so as to result in a final fiscal year 2012 appropriation estimated at not more than \$95,968,000, of which \$88,924,000 is derived from the Reclamation Fund: Provided further, That of the amount herein appropriated, not more than \$3,375,000 is for deposit into the Utah Reclamation Mitigation and Conservation Account pursuant to title IV of the Reclamation Projects Authorization and Adjustment Act of 1992: Provided further, That notwithstanding the provision of 31 U.S.C. 3302, up to \$306,541,000 collected by the Western Area Power Administration pursuant to the Flood Control Act of 1944 and the Reclamation Project Act of 1939 to recover purchase power and wheeling expenses shall be credited to this account as offsetting collections, to remain available until expended for the sole purpose of making purchase power and wheeling expenditures: Provided further, That for purposes of this appropriation, annual expenses means expenditures that are generally recovered in the same year that they are incurred (excluding purchase power and wheeling expenses).*



## **Falcon and Amistad Operating and Maintenance Fund**

### **Proposed Appropriation Language**

*For operation, maintenance, and emergency costs for the hydroelectric facilities at the Falcon and Amistad Dams, \$4,169,000, to remain available until expended, and to be derived from the Falcon and Amistad Operating and Maintenance Fund of the Western Area Power Administration, as provided in section 2 of the Act of June 18, 1954, as amended: Provided, That notwithstanding the provisions of that Act and of 31 U.S.C. 3302, up to \$3,949,000 collected by the Western Area Power Administration from the sale of power and related services from the Falcon and Amistad Dams shall be credited to this account as discretionary offsetting collections, to remain available until expended for the sole purpose of funding the annual expenses of the hydroelectric facilities of these Dams and associated Western Area Power Administration activities: Provided further, That the sum herein appropriated for annual expenses shall be reduced as collections are received during the fiscal year so as to result in a final fiscal year 2012 appropriation estimated at not more than \$220,000: Provided further, That for purposes of this appropriation, annual expenses means expenditures that are generally recovered in the same year that they are incurred.*



**Western Area Power Administration**  
**Overview**  
**Appropriation Summary by Program**

(dollars in thousands)

	FY 2010 Current Appropriation	FY 2011 CR	FY 2012 Request
Western Area Power Administration			
Construction, Rehabilitation, Operation and Maintenance (CROM)	899,317		863,469
Less use of alternative financing	-288,920		-266,207
Offsetting collections from Colorado River Dam Fund	-3,879		-4,821
Offsetting collections, annual Operation and Maintenance and Program Direction expenses	-147,530		-189,932
Offsetting collections, Purchase Power and Wheeling expenses	-349,807		-306,541
<b>Total, CROM</b>	<b>109,181</b>	<b>109,181</b>	<b>95,968</b>
Falcon and Amistad Operating and Maintenance Fund (Falcon and Amistad)	2,568		4,169
Offsetting collections, annual operation and maintenance expenses	-2,348		-3,949
<b>Total, Falcon and Amistad</b>	<b>220</b>	<b>220</b>	<b>220</b>
Colorado River Basins Power Marketing Fund (CRBPMF) operating expenses	261,723		220,397
Offsetting collections realized	-284,723		-243,397
<b>Total, CRBPMF</b>	<b>-23,000</b>	<b>-23,000</b>	<b>-23,000</b>
<b>Total, Western Area Power Administration</b>	<b>86,401</b>	<b>86,401</b>	<b>73,188</b>

**Preface**

The Department of Energy (DOE) leads a critical effort to transform the Nation's energy system and secure U.S. leadership in clean energy technologies. Western, in conjunction with the U.S. Army Corps of Engineers, U.S. Bureau of Reclamation and the Department of State's International Boundary and Water Commission, strongly supports this effort in managing the multipurpose operation of the Federal Power Program and maintaining its high-voltage, integrated transmission system to reliably deliver renewable energy.

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

Consistent with the authority provided in the 2010 Energy and Water Appropriations, the FY 2012 Budget provides funding for annual expenses (Operations and Maintenance and Program Direction) through discretionary offsetting collections derived from power receipts collected to recover those expenses.

## **Mission**

Western markets and delivers reliable, cost-based Federal hydroelectric power and provides related services throughout the central and western United States.

## **Benefits**

Western's marketing and delivery capability span a 1.3-million-square-mile area serving a diverse group of 687 wholesale customers, including municipalities, cooperatives, public utility and irrigation districts, Federal and state agencies and Native American tribes. In turn, Western's customers distribute power to provide service to millions of retail consumers.

## **American Recovery and Reinvestment Act (Recovery Act)**

- The Act of 2009:
  - provided Western \$10 million in non-reimbursable appropriations to remain available until expended to support implementation of activities authorized in section 402 of the Act.
  - expanded Western's role. As a complement to its core mission, the Act gave Western the responsibility and authority to further efforts to diversify America's energy supply and modernize energy infrastructure by allowing Western to borrow from the U. S. Treasury to finance the development of transmission lines to facilitate the delivery of power generated by new renewable energy resources.

## **Means and Strategies**

Western will use the means and strategies identified below to carry out its mission. Although external factors may affect its efforts, with the support of its Federal power partners, Western can effectively meet industry trends and address current issues in the marketing and delivery of Federal power.

Western will implement the following means:

- Employ technology and equipment enhancements to improve the capability, performance and reliability of the integrated grid.
- Encourage partnerships and economic coordination in the development of large-scale transmission projects to improve Western's transmission infrastructure, system reliability and the overall effectiveness of the Nation's integrated grid.
- Improve workforce capabilities and skills in maintaining a high-performing team to carry out the agency's mission.
- Update power system operational technologies to maintain required industry reliability standards and compliance.
- Conduct business and operational evaluations to maximize capabilities and meet growing demands in complying with transmission service commitments and energy policy requirements.

Western will implement the following strategies:

- Meet the increasing demands on maintenance for aging infrastructure from transmission growth and evolving transmission and regulatory reliability compliance standards.
- Maintain and modernize systems and infrastructure to increase the reliability, efficiency and use of Federal assets.



- Operate the transmission system efficiently to support the Nation’s integrated power grid.
- Manage power delivery costs.
- Participate in reliability and restructuring initiatives in Federal, state and industry forums and transmission studies as an advocate for customer benefits.
- Continue to provide open access to Western’s transmission system to further industry restructuring and to support local and regional utilities in the delivery of electricity to their customers.

These strategies will support a well-maintained, reliable Federal power system and an exemplary workforce to operate and maintain the system in the most efficient and cost effective manner possible.

The following external factors may affect Western’s ability to achieve its goals: Weather, natural disasters, changes in North American Electric Reliability Corporation (NERC) operating standards, industry deregulation, changing electric industry organizational structures, interconnections, open access, etc. More specifically:

- The Nation’s energy infrastructure is not keeping pace with the growth in energy supply and demand, endangering the reliability of the integrated electrical system.
- Western’s transmission infrastructure continues to age, despite an ongoing replacement program.
- A number of states have adopted aggressive Renewable Portfolio Standards calling for the integration of renewable resources into the Nation’s energy mix further straining the grid.
- Many of the best sites for renewable generating sources--wind, solar and biomass--are located in parts of the West and Midwest that are not near load centers, and many of the nearby transmission lines lack available capacity to transport this energy.
- Industry efforts to improve the reliability of the bulk power grid are placing more requirements on our workforce to implement mandatory reliability standards.
- Our highly skilled technical workforce continues to age as we compete within the electric utility industry to attract and retain the caliber of workforce needed to provide reliable power supply and transmission services.

### **Annual Performance Results and Targets**

The Department is in the process of updating its strategic plan, and has been actively engaging stakeholders including Congress. The draft strategic plan is being released for public comment concurrent with this budget submission, with the expectation of official publication this spring. The draft plan and FY12 budget are consistent and aligned. Updated measures will be released at a later date and available at the following link <http://www.mbe.doe.gov/budget/12budget/index.htm>.



**Construction, Rehabilitation, Operation and Maintenance  
Western Area Power Administration**

**Funding by Site by Program**

(dollars in thousands)

	FY 2010 Current Appropriation	FY 2012 Request
Western Area Power Administration	899,317	863,469
Total, Construction, Rehabilitation, Operation and Maintenance	899,317	863,469

**Site Description**

Western’s service area covers 1.3 million square miles in 15 States. Western markets and delivers energy to about 687 wholesale power customers. These customers, in turn, provide retail electric service to millions of consumers in the following central and western States: Arizona, California, Colorado, Iowa, Kansas, Minnesota, Montana, Nebraska, Nevada, New Mexico, North Dakota, South Dakota, Texas, Utah and Wyoming.

Western annually markets and transmits about 10,000 megawatts of power from 56 hydropower plants, which represents about 40 percent of the region’s hydroelectric generation. Western also markets the United States’ entitlement from the coal-fired Navajo Generating Station near Page, Arizona.

Western operates and maintains an extensive and complex high-voltage transmission system made up of 17,107 circuit-miles to deliver power to its customers throughout most of the western United States.

The power facilities are made up of 14 multipurpose water resource projects and one transmission project. These facilities include Western’s transmission and power generation facilities that are owned and operated primarily by the U.S. Bureau of Reclamation, the U.S. Army Corps of Engineers and the U.S. Section of the International Boundary and Water Commission.

Power sales, transmission operations, and engineering services for Western’s system are performed by its employees at 51 duty stations located throughout its service area. These duty stations include the Corporate Services Office in Lakewood, CO, and four customer service regional offices in Billings, MT; Loveland, CO; Phoenix, AZ; and Folsom, CA. The Colorado River Storage Project Management Center in Salt Lake City, UT, also provides customer support.

**Falcon and Amistad Operating and Maintenance Fund  
Western Area Power Administration**

**Funding by Site by Program**

(dollars in thousands)

	FY 2010 Current Appropriation	FY 2012 Request
Western Area Power Administration	2,568	4,169
Total, Falcon and Amistad Operating and Maintenance Fund	2,568	4,169

**Site Description**

The Falcon-Amistad Project consists of two international dams located on the Rio Grande River between Texas and Mexico. The United States and Mexico operate separate powerplants on each side of the Rio Grande River. The power output is divided evenly between the two countries. The Department of State's International Boundary and Water Commission (IBWC) owns and operates the U.S. portion of the projects. The federal staff funded under this program continues to be allocated to the U.S. Section of IBWC by the Department of State.

Falcon Dam is located about 130 miles upstream from Brownsville, Texas. The United States' portion of construction, operation and maintenance was authorized by Congress in 1950. Construction started in 1950 and was completed in 1954. The United States' share of Falcon powerplant capacity is 31.5 megawatts (MW).

Amistad Dam is located about 300 miles upstream from Falcon Dam in Del Rio, Texas. The Amistad powerplant was constructed by the U.S. Army Corps of Engineers, as the agent for the IBWC. The United States' portion of construction, operation and maintenance was authorized by the Mexican-American Treaty Act of 1950. Amistad Dam was completed in 1969 and the generating units came on line in 1983. The United States' share of the two generating units' capacity is 66.0 MW.

Project power is marketed to a cooperative in south Texas via Central Power and Light Company's transmission system. There is no Federal transmission associated with these two projects.

**Colorado River Basins Power Marketing Fund  
Western Area Power Administration**

**Funding by Site by Program**

(dollars in thousands)

	FY 2010 Current Appropriation	FY 2012 Request
Western Area Power Administration	261,723	220,397
Total, Colorado River Basins Power Marketing Fund	261,723	220,397

**Site Description**

The Colorado River Basins Power Marketing Fund Program is comprised of three power systems: the Colorado River Storage Project, including the Dolores and Seedskadee Projects; the Fort Peck Project; and the Colorado River Basin Project. Western is responsible for construction, maintenance, and operation of facilities for transmitting and marketing the electrical energy generated in these power systems.

The **Colorado River Storage Project (CRSP)** was authorized in 1956. It consists of four major storage units: Glen Canyon, on the Colorado River in Arizona near the Utah border; Flaming Gorge, on the Green River in Utah near the Wyoming border; Navajo, on the San Juan River in northwestern New Mexico; and Wayne N. Aspinall, on the Gunnison River in west-central Colorado.

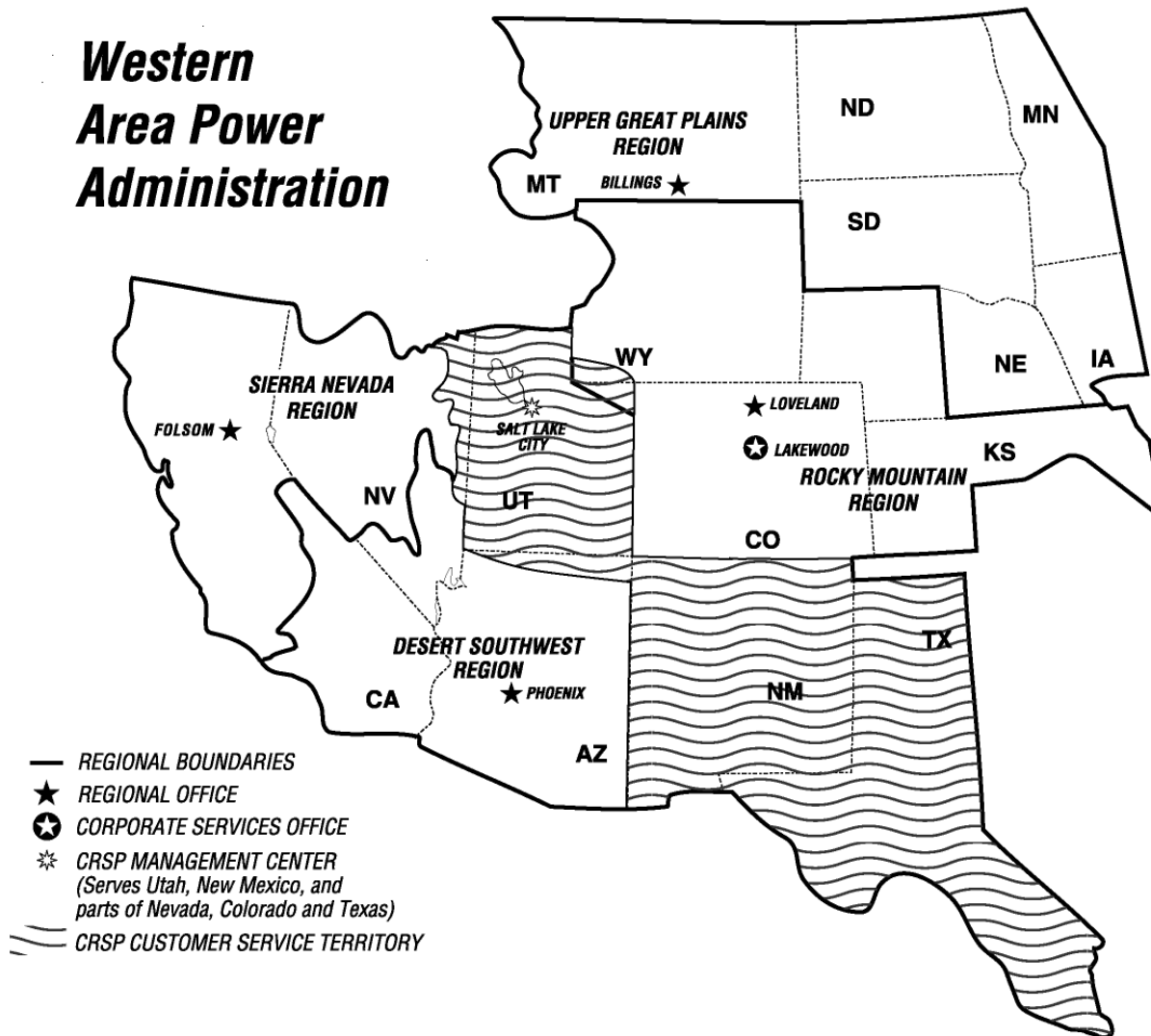
CRSP has a combined storage capacity that exceeds 33.5 million acre-feet. Five Federal powerplants associated with the project, with 16 generating units, have an operating capacity of 1,710 MW. CRSP provides for the electrical needs of more than 1 million people spread across Colorado, Utah, New Mexico and Arizona, as well as portions of Nevada and Wyoming.

The **Dolores Project**, located in Montezuma and Dolores counties in southwestern Colorado, and the **Seedskadee Project**, located in southwestern Wyoming, were authorized as participating projects of CRSP. Dolores, a multipurpose project, provides 12.8 MW of installed power generating capacity along with municipal and industrial water, irrigation water, and recreation and fish and wildlife enhancement. The Dolores Project powerplants at McPhee Dam and the Towaoc Canal produce 1.3 and 11.5 MW, respectively. Seedskadee's power facilities, associated with the project's Fontenelle Dam, include an 11.5 MW powerplant, switchyard, and necessary transmission lines to interconnect with the CRSP transmission system at Flaming Gorge Powerplant.

The **Fort Peck Project**, located on the Missouri River in northeastern Montana, was initiated under an Executive Order in October 1933 as part of the Public Works Administration. The Fort Peck Project Act of 1938 authorized the completion, maintenance and operation of the project, and the Flood Control Act of 1944 authorized operational integration of the project with the Pick-Sloan Missouri Basin Program to serve a common market area. Installed generating capacity of the 5 units is 218 MW, which is delivered primarily to customers in eastern Montana and western North Dakota.

The Central Arizona Project (CAP) was authorized as an element of the **Colorado River Basin Project** to furnish irrigation and municipal water supplies to Arizona and New Mexico, and for other purposes. For financing, Western uses reimbursable arrangements to provide for its CAP expenses in lieu of revolving fund authorities.

# Western Area Power Administration



**Construction, Rehabilitation, Operation and Maintenance  
Funding Profile by Subprogram**

(dollars in thousands)

	FY 2010 Current Appropriation	FY 2012 Request
Construction, Rehabilitation, Operation and Maintenance Account (CROM)		
Operation and Maintenance <sup>a</sup>	57,159	72,863
Construction and Rehabilitation <sup>b</sup>	104,971	110,449
Purchase Power and Wheeling <sup>c</sup>	548,847	471,535
Program Direction <sup>d</sup>	180,756	205,247
Utah Mitigation and Conservation	7,584	3,375
Total, CROM (Operating Expenses)	899,317	863,469
Use of Alternative Financing	-288,920	-266,207
Offsetting Collections from Colorado River Dam Fund	-3,879	-4,821
Offsetting Collections, annual Operation and Maintenance and Program Direction expenses	-147,530	-189,932
Offsetting Collections, Purchase Power and Wheeling	-349,807	-306,541
Total, CROM (Budget Authority)	109,181	95,968

**Public Law Authorizations:**

Public Law 57-161, "The Reclamation Act of 1902"  
 Public Law 78-534, "Flood Control Act of 1944"  
 Public Law 95-91, "Department of Energy Organization Act" (1977)  
 Public Law 102-486, "Energy Policy Act of 1992"  
 Public Law 66-389, "Sundry Civil Appropriations Act" (1922)  
 Public Law 76-260, "Reclamation Project Act of 1939"  
 Public Law 80-790, "Emergency Fund Act of 1948"  
 Public Law 102-575, "Reclamation Projects Authorization and Adjustment Act of 1992"  
 "Economy Act" of 1932, as amended (41 stat. 613)  
 "Interior Department Appropriation Act of 1928" (44 stat. 957)  
 Public Law 70-642, "Boulder Canyon Project Act" (1928)  
 Public Law 75-756, "Boulder Canyon Project Adjustment Act" (1940)  
 Public Law 98-381, "Hoover Power Plant Act of 1984"

<sup>a</sup> O&M funding amounts include activities of the Boulder Canyon Project which are funded through receipts from the Colorado River Dam Fund via a reimbursable agreement with the Department of Interior as authorized in P.L. 98-381. By year, the amounts are \$867,000 and \$1,033,000 for FY 2010 and FY 2012, respectively. Funding also includes use of alternative financing methods in the amount of \$400,000 and \$4,600,000 for FY 2010 and FY 2012, respectively.

<sup>b</sup> Construction and Rehabilitation funding includes use of alternative financing methods in the amount of \$83,760,000 and \$93,313,000 for FY 2010 and FY 2012, respectively.

<sup>c</sup> PPW program includes use of receipts from the recovery of PPW expenses of \$349,807,000 and \$306,541,000 in FY 2010 and FY 2012, respectively. In addition, alternative financing methods are included in the amounts of \$199,040,000 and \$164,994,000 for FY 2010 and FY 2012, respectively.

<sup>d</sup> Program Direction funding amounts include activities of the Boulder Canyon Project funded through the Colorado River Dam Fund via a reimbursable agreement in the amounts of \$3,012,000 and \$3,788,000 for FY 2010 and FY 2012, respectively. Funding also includes use of alternative financing methods in the amount of \$5,720,000 and \$3,300,000 for FY 2010 and FY 2012, respectively.

**Mission**

Western markets and delivers reliable, cost-based Federal hydroelectric power and related services.

**Benefits**

Western delivers reliable power and related services across a 1.3 million square mile area to a diverse group of about 687 customers, including municipalities, cooperatives, public utility and irrigation districts, Federal and State agencies, and Native American tribes. Western's marketing efforts and delivery capability provide for recovery of annual operational costs, including the generating agencies' hydropower related costs, and repayment of taxpayer investment in the Federal hydropower program. Western repays the Federal investment for which it is responsible within the timeframes established by law and regulations.



## Operation and Maintenance Funding Schedule by Activity

(dollars in thousands)

	FY 2010 Current Approp	FY 2012 Request
Operation and Maintenance <sup>a</sup>		
Regular Operation and Maintenance	38,305	39,573
Replacements and Additions	18,854	33,290
Total, Operation and Maintenance	57,159	72,863
Alternative Financing	-400	-4,600
Use of Receipts from Colorado River Dam Fund	-867	-1,033
Offsetting Collections	-37,038	-33,323
Total, O&M Budget Authority	18,854	33,907

### Benefits

Western's O&M subprogram supports the Department of Energy and Western's missions by emphasizing replacement and upgrading of existing electrical system infrastructure to sustain reliable power delivery to our customers, to support a stable and reliable interconnected power system, to contain annual maintenance expenses, and to retain the value of our assets. Western ensures reliable electric power in a safe, cost-effective manner, and achieves continuity of service throughout its 15-state service territory by maintaining its power system at or above industry maintenance standards, rapidly restoring service following any system disturbance, mitigating adverse environmental impacts, performing clean-up activities, and maximizing revenues gained from non-firm energy and transmission sales.

### Detailed Justification

Supplies and materials, such as wood poles, instrument transformers, meters and relays must be procured to provide the necessary resources to respond to routine and emergency situations in Western's high-voltage interconnected transmission system. Western has implemented reliability-centered maintenance (RCM) scheduling to contain costs. RCM focuses on identifying critical components in a system and uses preventive and predictive maintenance practices to repair or replace equipment as needed. Technical services, such as waste management disposal, environmental impact analyses, and pest and weed control are used as needed.

Western's planned replacements and additions activity is based on an assessment of condition and criticality of equipment, maintenance/frequency of problems for individual pieces of equipment, availability of replacement parts, safety of the public and Western's personnel, environmental concerns,

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<sup>a</sup> Program descriptions and funding amounts include activities of the Boulder Canyon Project. These activities are funded through receipts from the Colorado River Dam Fund via a reimbursable agreement with the Department of Interior as authorized in P.L. 98-381.

and an orderly work plan. The work plans, coordinated with Western’s power customers who ultimately bear the burden of all Western expenses, reflect an overall sustainable level of effort with shifts in emphasis between categories (i.e., electrical versus communication equipment) in any given year.

Electrical equipment replacements, such as circuit breakers, transformers, insulators, revenue meters, switches, control boards, relays and oscillographs must be made to assure reliable service to Western’s customers. System component age, availability of spare parts, environmental concerns, and risk to system reliability necessitate orderly replacement before significant problems develop.

Replacement, upgrade and installation of fiber optics, Supervisory Control and Data Acquisition (SCADA) systems, and other communication and control equipment continues to provide increased system reliability and to reduce maintenance and equipment costs.

Capitalized movable equipment, such as special purpose vehicles (e.g., cranes, auger trucks, manlifts), special purpose equipment (e.g., pole trailers, industrial tractors, brush chippers), specialized test equipment (e.g., motion analyzers and relay test equipment), computer-aided engineering equipment, office equipment, and IT equipment and software, must be upgraded and replaced.

Personnel expenses and personnel performance accomplishments associated with the O&M subprogram are combined with those of the Construction and Rehabilitation subprogram and are reflected in the Program Direction subprogram of Western’s budget request.

(dollars in thousands)

FY 2010 Current Appropriation	FY 2012 Request
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**Regular Operation and Maintenance**

**38,305      39,573**

Supplies and materials necessary to respond to routine and emergency situations in Western’s high-voltage interconnected transmission system will be purchased. This includes miscellaneous equipment and software used for power billing, transmission planning, e-tagging, and energy scheduling, as well as supplies and materials such as wood poles (individual pole replacement only; excludes whole line replacements), instrument transformers, meters, relays, etc. The request includes \$1 million for activities in the Boulder Canyon Project, funded directly through receipts from the Colorado River Dam Fund.

The continuing maintenance of Western’s transmission system at or above industry standards supports DOE and Western missions by minimizing sudden failure, unplanned outages, and possible regional power system disruptions. Safe working procedures are discussed before work begins to optimize safety for the public, Western’s staff, and equipment. The request is based on projected work plans for activities funded from this account. Estimates are based on historical data of actual supplies needed to operate and maintain the transmission system and recent procurement of similar items. This request includes approximately \$617 thousand for appropriated O&M annual expenses that are required to fund Western’s Salinity and Levee non-reimbursable power systems.

(dollars in thousands)

FY 2010 Current Appropriation	FY 2012 Request
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Western's planned replacements and additions activity is based on an assessment of condition and criticality of equipment, maintenance/frequency of problems on individual items of equipment, availability of replacement parts, safety of the public and Western's personnel, environmental concerns, and an orderly work plan. Replacement of aged power system components maximizes the reliability and availability of Western's system by reducing the risk of equipment failure, unplanned outages, and possible regional power system disruptions. Removing environmental hazards and replacement of aged equipment eliminates safety hazards for the public and Western's personnel. Planned activity is detailed by category below.

Cost estimates are based on analysis of system operation/maintenance requirements and concerns, customer-coordinated work plans, actual costs of recent similar projects, and bottom-up budgeting techniques.

▪ **Electrical Equipment** **7,801**      **14,468**

Electrical equipment, such as circuit breakers, transformers, relays, batteries and chargers, reactors, meters, buses, surge arresters, capacitor banks and disconnect switches, will replace obsolete equipment at facilities throughout Western's 15-state area. Test equipment used by maintenance crews, such as metering and relaying test sets, pentameters, Ohm testers, oil dielectric testers, battery load testers, and specialized communication and environmental control test equipment is also included. Examples of specific requests include the equipment required for the Emergency Control Center in support of Western's Operation Control Center; replacement of a DV power transformer; replacement of transformers at Pleasant Valley and Willow Creek, and relocation and rewinding of transformers at Granby Pumping Plant Switchyard. Included in this request is the Charlie Creek – Beulah - Garrison 115-kV wood pole rebuild, an additional 8-10 miles on the Jamestown - Grand Forks 230-kV wood pole rebuild and Edgeley - Forman 69/115-kV line upgrade, and the Mead – Phoenix 500-kV line upgrade. Also included in this request is funding for Western's wood pole replacement program. This is a continuing program to replace aging wood transmission line structures, line hardware, and repair damaged conductors and static wires.

▪ **Communications Equipment** **2,783**      **5,050**

Key to system reliability, replacement of remote terminal units, telephone systems, microwave links, and aged 7 Ghz analog radio systems with digital radio and fiber optics continues. Manufacturers have discontinued support of the obsolete analog equipment and there is inadequate channel capacity to support Western's needs. The staged movement to narrowband communications for UHF radios as directed by the National Telecommunications and Information Administration (NTIA) continues. Western's communication systems are currently made up of approximately 8 percent fiber optics, 80 percent fixed radio, and 12 percent mobile radio. Western currently has 1,357 radio frequency authorizations for fixed radio bands, of which 366, or 27 percent, are analog. This funding will not be used to replace equipment impacted by the Spectrum Relocation initiative.

In addition, Western will continue to upgrade its existing SCADA systems which control Western's electric power system. These hardware and software upgrades improve grid reliability by allowing the main computer to communicate with remote terminal units in over 300 substations across

(dollars in thousands)

FY 2010 Current Appropriation	FY 2012 Request
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Western's territory, thus allowing the dispatcher to operate a device in any of these substations to make changes rapidly to respond to power industry requirements or system emergencies. Other specific examples requested in this estimate include the replacement of ground wire on the Sterling to Sidney Converter Station with optical ground wire; installation of fiber optic duct cable between Erie, Loveland, and Cheyenne along Interstate 25; replacement of existing ground wire with optical ground wire fiber cable between Gering and Stegall; replacement of old Telco multiplexers with newer channel banks; provision of high speed, reliable communication with Lawrence Livermore National Laboratory substation by replacing current wire with optical ground wire; SCADA hardware and software for Western's Operations Consolidation Project; replacement of communication facilities as necessary to maintain reliability; replacement of phone lines with VoIP technology; replacement of communication generators; and, installation of fiber multiplex equipment.

▪ **Spectrum Relocation Equipment** 0            0

The Commercial Spectrum Enhancement Act (CSEA, Title II of P.L. 108-494) of 2004, created the Spectrum Relocation Fund (SRF) to streamline the relocation of Federal systems from specific radio spectrum bands. These spectrum bands will accommodate commercial users and the SRF will facilitate reimbursement to affected agencies for relocation costs. The Federal Communications Commission has allocated this spectrum for Advanced Wireless Services. Funds have been made available to agencies from the crediting of auction receipts to the SRF during fiscal year 2007 and system relocation efforts are underway. Western received \$108.2 million for this effort. This amount includes Western's estimated relocation costs, as approved by the Office of Management and Budget, and as reported to the Congress by the Department of Commerce in December 2005. Since receipt of these funds, Western has completed the preliminary and final design work including radio path analysis, tower load analysis, communication building upgrades and replacements, acquiring radio frequency authorizations, and completing a majority of the radio and other communication equipment purchases. Structural loading analyses for both radio and fiber optic systems were completed in FY 2009. The first construction year for the Spectrum Relocation Fund was during FY 2008 with the beginning of building replacement installations. The phased replacement of 2 GHz radio systems is anticipated to continue into FY 2011. System clean-up, which includes removal of old equipment, buildings, and all associated systems, is anticipated to continue in FY 2012 and 2013, with project closing activity in FY2015. The funding for the Spectrum Fund is mandatory and will remain available until expended, and agencies will return to the SRF any amounts received in excess of actual relocation costs. No appropriations are being requested for this activity.

▪ **Capitalized Movable Equipment** 8,270            13,772

The majority of these funds will be used to purchase and lease the fleet of standard and specialized vehicles required for Western's O&M activities. Although Western prefers to lease its vehicles from GSA, GSA cannot always provide the necessary specialized vehicles, especially in the Upper Great Plains Region and the Desert Southwest Region, where they must be equipped for extreme weather conditions. In these instances, Western is forced to purchase its specialized vehicles. This request

(dollars in thousands)

FY 2010 Current Appropriation	FY 2012 Request
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includes special equipment such as pole trailers, road graders, bucket trucks, rough terrain crane, warehouse forklifts, digger trucks, truck trailer with knuckle boom, snow tractors, utility trucks, skid-steer loaders, man lifts, snow cats, front-end loaders, and caterpillars. All sedans, vans, SUVs, and light trucks are leased from GSA. Western uses 733 vehicles, 429 (59 percent) of which are leased from GSA. Western replaces government-owned vehicles according to the Federal Management Regulations guidelines, the same guidelines used by GSA. Other capitalized movable equipment in this estimate includes substation test equipment, brush chipper, map board replacement; security equipment such as perimeter intrusion detection devices, card readers and associated software, security cameras and recording devices at various sites throughout Western's service area; Information Technology equipment such as server and router replacements, firewalls, cyber security upgrades, encryptors for the operation offices, LAN upgrades, network equipment replacements, business tape backup library, disaster recovery redundancy site for critical systems equipment, Operation Training Simulator to be used as a tool to train dispatchers off-line on the operation of Western's power grid which will ensure continued compliance with NERC requirements related to dispatch training, and the second of a two year funding request for life cycle replacement of a region's scheduling settlements system; and helicopter equipment replacements that add value to the helicopter or extend the service life, such as engine, rotor blades, avionics, airframe, and other major components.

Replacement needs are based on age, reliability, and safety of equipment, customer-coordinated review, cost analysis of rebuild versus replacement, availability of replacement parts, and obsolescence of diagnostic maintenance tools. Estimates are determined using actual costs of similar items.

<b>Total, Operation and Maintenance</b>	<b>57,159</b>	<b>72,863</b>
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## Explanation of Funding Changes

FY 2012 vs. FY 2010 Current Approp (\$000)
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### Regular Operation and Maintenance

- The overall increase in regular O&M is attributed to inflationary factors, and an increase to service contracts, and non-capitalized equipment and structures, offset by a slight decrease to miscellaneous supplies. +1,268

### Replacements and Additions

- The increase in replacements and additions of electrical equipment (+\$6.7 million) is primarily attributed to line upgrades and rebuilds of Western's aging infrastructure. Increased requirements also include replacements for aged and failing transformers, and protective equipment to aid in voltage control. This request also includes an increase for wood pole transmission line structures and associated capitalized supplies. The increase in communication equipment (+\$2.2 million) is requested for SCADA, an HP server, structures to house the communication equipment, and disaster recovery redundancy site critical systems. The increased requirements of moveable capital equipment (+\$5.5 million) includes replacement and purchases of rough terrain cranes, snow cats, man lifts, utility trucks, cyber security equipment, maintenance test equipment, and truck trailers required for the maintenance of Western's transmissions lines and substations. +14,436

### Total Funding Change, Operation and Maintenance

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+15,704

**Construction and Rehabilitation**  
**Funding Schedule by Activity**

(dollars in thousands)

	FY 2010 Current Appropriation	FY 2012 Request
Construction and Rehabilitation		
Transmission Lines and Terminal Facilities	43,224	67,087
Substations	43,157	36,115
Other <sup>a</sup>	18,590	7,247
Subtotal, Construction & Rehabilitation	104,971	110,449
Alternative Financing <sup>b</sup>	-83,760	-93,313
Total, Construction & Rehabilitation (Budget Authority)	21,211	17,136

**Benefits**

Western’s Construction and Rehabilitation (C&R) subprogram supports the Department of Energy and Western’s missions by emphasizing the replacement and upgrade of aging electrical system infrastructure to sustain reliable power delivery to our customers, support a stable and reliable interconnected power system, contain annual maintenance expenses, and retain the value of its assets. Replacement and upgrade of aged power system components are crucial to system reliability, and communications improvements maintain vital control over system operations. Both contribute to attaining or exceeding monthly control performance standards established by the North American Electric Reliability Corporation (NERC) by reducing the risk of equipment failure, unplanned outages, and possible local and regional power system disruptions. C&R subprogram activities support the repayment of Federal power investment by promoting a well-planned C&R program with a relatively stable budget over the long term, by avoiding additional costs of emergency “breakdown maintenance,” and by preventing outages which could impact power deliveries, purchase power costs, and power revenues. Reducing the hazards associated with worn or aging equipment, correcting design deficiencies, and replacing deteriorated wood poles which present a serious climbing hazard to linemen, minimizes Western’s exposure to unsafe conditions. The C&R program also contributes to public safety by avoiding or minimizing the dangers involved in unplanned outages and downed transmission lines.

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<sup>a</sup> Other includes communication equipment, maintenance facilities, power facility developmental costs, and minor unscheduled jobs.

<sup>b</sup> Alternative financing for Construction and Rehabilitation is dependent on cash advances from customers.

## Detailed Justification

(dollars in thousands)

FY 2010 Current Appropriation	FY 2012 Request
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The C&R request incorporates the most current information to identify and schedule necessary C&R projects. Western assigns the highest program priority to those situations that pose the highest risk to safety and system reliability, while meeting the mandates for open access to our transmission system. If conditions change, Western will shift funding as necessary to ensure the highest program priorities continue to be met to maintain the reliability and integrity of Western’s power transmission system.

Western has a 17,107 circuit-mile transmission system and 302 substations. Of the 8,038 miles of wood poles, 5,917, or 74 percent, exceed the normal service life of 40 years, with 4,708 miles, or 59 percent, exceeding 50 years. Western is continually testing, treating, and replacing individual wood poles and hardware to delay the need for replacing an entire transmission line. As substation equipment (such as power transformers, circuit breakers, and control equipment) ages, maintenance costs increase, replacement parts become unavailable, risk of outages increase, and system reliability declines. The normal service life for power transformers and circuit breakers is 40 years and 35 years, respectively. While replacement of this equipment is systematically planned over 10 years, actual replacement varies depending on condition and criticality. All replacement and rehabilitation plans are coordinated with customers to help establish the timing and scope of work at specific substations. When upgrades or additional capacity are required, Western actively pursues opportunities to partner with neighboring utilities to jointly finance activities, which result in realized cost savings and increased efficiencies for all participants.

Western's FY 2012 C&R request is above prior year levels because of the aging power system infrastructure, backlog of rehabilitation needs, increasing industry requirements (FERC, NERC, WECC), and greater reliability concerns resulting from increasing loads and the need for integrating new generation sources to meet those loads.

Financing of the FY 2012 C&R budget at target will continue to rely heavily on customer participation in alternative financing methods. Approximately 84 percent of the program, or \$93.3 million, will be requested from customers.

Personnel costs and related expenses for the workforce to plan, collect field data, write specifications, design facilities, award construction contracts, and purchase government-furnished equipment for the C&R activity are combined with those of the O&M activity and are reflected in the Program Direction section of Western’s budget request.

Costs incurred within the C&R program are generally capitalized and recovered with interest over the useful life of the asset. In rare cases where a C&R project is abandoned, associated costs are expended.

<b>Transmission Lines and Terminal Facilities</b>	<b>43,224</b>	<b>67,087</b>
▪ <b>Transmission Lines and Terminal Facilities, Continuing Work</b>	<b>24,957</b>	<b>30,324</b>

This activity funds the continuation of modifications and rehabilitation of Western’s transmission lines (TL) to ensure power system reliability and stability. The FY 2012 request includes \$5 million in appropriations to continue the following ongoing rehabilitation work:

**Construction, Rehabilitation, Operation and Maintenance/  
Western Area Power Administration/  
Construction and Rehabilitation**

**FY 2012 Congressional Budget**



(dollars in thousands)

FY 2010 Current Appropriation	FY 2012 Request
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- Davis-MEC Kingman Tap - Rebuild existing 27.3-mile Davis Switchyard to MEC Kingman Tap transmission line (Arizona). The 60 year old line is well beyond its engineered life span and is showing significant deterioration. The line lacks overhead groundwire protection from lightning strikes which are common in the area. The condition of the line, operated radially from Davis Substation, is a reliability concern for several utilities; it's also a safety concern for maintenance crews and residential and commercial areas encroaching on the existing right-of-ways.

Western will pursue alternative financing from its customers to fund the remaining on-going transmission line rehabilitation efforts estimated at \$25.3 million in FY 2012. Funding for these projects is not guaranteed, however, because alternative financing is voluntary. The ongoing activities dependent on customer financing are:

- Black Point-Mesa-Parker-Blythe #1 (Arizona) - Re-route a half mile section of the 60-year old 161-kV transmission line to preserve a historic, culturally sensitive area at Black Point-Mesa and improve reliability and public safety in the area. Many of the deteriorating wood poles have signs of dry rot and need to be replaced.
- Casa Grande-Empire (Arizona) – Rebuild the 13.2 mile section of the 61-year old 115-kV Casa Grande-Empire transmission line from Thornton Road to the Empire Substation. The bulk of the wood structures are well beyond their lifespan and are showing significant signs of deterioration, including advanced shell rot and large cracks. Replacement is needed to improve public and worker safety, and improve the reliability of this line segment.
- Electrical District No. 5-Empire (Arizona) – Rebuild this 9.2 mile, 61-year old, 115-kV transmission line from Electrical District No. 5 to Empire Substation. The line runs through agricultural and urban areas so environmental and right-of-way work will be required. The wood structures are well beyond their lifespan and are showing significant signs of deterioration, including advanced shell rot, large cracks, and weathering. Replacement is needed to improve public and worker safety, and improve the reliability of this line segment.
- Oracle-Saguaro (Arizona) – Rebuild the 19.1 mile Oracle-Saguaro 115-kV transmission facilities, built in the late 1950s. The line passes through a variety of terrain in western Arizona, including desert, cultivated fields, hilly terrain, and residential. The bulk of the wood structures are well beyond their engineered lifespan and are showing signs of deterioration, including advanced external shell rot, weathering, and large cracks. The transmission line is a critical component of Western's system. The rebuild is necessary to maintain reliability and safety.
- Flatiron-Estes (Colorado) – Rebuild the 16.7 mile, 60-year old, 115-kV transmission line from Estes to Flatiron Substation and coordinate right-of-way with the Estes-Pole Hill transmission line for improved maintenance and vegetation management. The aging transmission structures are unsafe due to core rot and cracking. A failure would critically overload the only other transmission line into the substation.
- Lovell-Yellowtail (Wyoming) – Rebuild a 32-mile section of the Lovell-Yellowtail No. 1 and

(dollars in thousands)

FY 2010 Current Appropriation	FY 2012 Request
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No. 2 115-kV transmission lines outside the National Park Service boundary. The rebuild of the 55- and 45-year old lines, respectively, are needed to improve reliability and system capability in the northern Wyoming service area. Inspections show an increasing percentage of deteriorating structures.

The funding level is determined by estimating the cost to complete each project and breaking out these costs by fiscal year. The estimates are based on recent actual costs to complete similar projects, updated individual project requirements, and past experience.

▪ **Transmission Lines and Terminal Facilities,**

**Rehabilitation Starts**

**18,267**

**36,763**

This activity funds Western’s transmission line and terminal facility rehabilitation starts to address specific system reliability risks or operational problems. The FY 2012 request includes \$2.0 million in appropriations for the following:

- Pinnacle Peak-Rodgers (Arizona) – Renew right-of-way for operation and maintenance of the Pinnacle Peak-Rogers 230-kV transmission line across the Salt River Pima-Maricopa Indian Community. The lack of easement rights would restrict Western’s ability to maintain this portion of the line, create a reliability issue, and constrain the delivery of electrical power south of the Pinnacle Peak Substation.
- Elverta (California) – Realignment of the O’Banion-Elverta #2, and the Elverta-Roseville #2 transmission lines with each other to insure that one of the lines servicing load and providing generation will be in service during an east or west bus outage at Elverta substation. Under the current configuration, a catastrophic event at Elverta substation could trigger a larger scale power outage and/or load diversion event within the greater Sacramento and western Placer counties. The realignment improves long term reliable service and transfer capability, conforms to applicable mandatory NERC and WECC reliability standards, and avoids the potential for significant service interruptions to residential and industrial customers.
- Shasta-Flanagan-Keswick (California) – Replace the existing conductor on the 8.7 mile, 61-year old Shasta-Flanagan-Keswick 230-kV transmission line with a larger, higher capacity conductor and replace the associated substation equipment necessary to accommodate the increase in power flows. The reconductoring allows for maximum hydropower generation at the Shasta Powerplant during periods of high energy demand and high power flows. Without reconductoring, a remedial action scheme must be deployed under demanding operating conditions that would idle two of the Shasta generator units and lead to increased purchase power costs for Western’s customers.

Western will pursue alternative financing from its customers to fund the remaining new transmission line rehabilitation efforts estimated at \$34.8 million in FY 2012. Funding for these projects is not guaranteed, however, because alternative financing is voluntary. The new transmission line rehabilitation activities dependent on customer financing are:

- Big Bend-Lower Brule (South Dakota) – Construction of a new 2.5 mile 230-kV transmission line between Big Bend Dam and the proposed Lower Brule Substation. The transmission line

(dollars in thousands)

FY 2010 Current Appropriation	FY 2012 Request
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is required to support increased pump station loads in the Witten, SD area, and to improve reliability of a customer's 69-kV system near Reliance, SD.

- Blythe-Headgate Rock (Arizona) – Rebuild the 52-mile, 161-kV transmission line. The 60-year-old line is well beyond its engineered lifespan, and is exhibiting deterioration, including shell rot, weathering, and cracking. The condition of the line is a significant reliability and safety concern. A major portion of the line is located on Colorado River Indian Tribe lands, including several structures on a tribal historic site called Black Point Mesa.
- Coolidge-Oracle (Arizona) – Rebuild the 45-mile, 115-kV Coolidge-Oracle transmission line. The 65-year-old line is also deteriorating. Shell rot, excessive weathering and cracking are a serious reliability concern to Western's 115-kV system and a safety concern for the maintenance personnel. Other issues affecting the line are raked and bowed poles, vehicle strikes, lightning and fire damage, water damage, flashover indications, broken and/or damaged insulators, and loose/missing hardware. Access constraints to these remote desert areas make addressing these problems through increased maintenance efforts lengthy and costly.
- Dome Tap-Kofa (Arizona) – Rebuild the 66-year old, 7.3 mile, 161-kV transmission line. The line is showing serious signs of deterioration consistent with the age of the line and the low desert environment. Symptoms include advanced shell rot, large cracks, raked, bowed, and leaning poles, vehicle strikes, lightning, and fire and water damage.
- Gila-Knob (Arizona) – Rebuild the aging 20 mile, 161-kV transmission line that runs through urban terrain in western Arizona. The line was built in 1943 and helps to provide power from Parker Dam to Wellton-Mohawk Irrigation and Drainage District, the U.S. army, and other entities. Rebuild is needed to improve reliability, safety, and to reduce maintenance costs.

Estimates are based on actual costs of recent similar projects, expected costs of needed equipment and services, cost estimating guides, and past experience.

<b>Substations</b>	<b>43,157</b>	<b>36,115</b>
▪ <b>Substations, Continuing Work</b>	<b>26,028</b>	<b>23,589</b>

This activity funds the continuation of modifications and rehabilitation of Western's substations to ensure power system reliability and stability. The FY 2012 request includes \$7.1 million in appropriations to continue the following ongoing rehabilitation work:

- Sioux Falls Substation (South Dakota) – Replace the Sioux Falls transformers KV3A (230/115 33.3 MVA) and KV5A (230/115 33.3 MVA) with 250 MVA 3-phase autotransformers to improve system reliability. System studies identify capacity deficiencies in the existing transformers as a result of significant commercial and residential load growth.
- Spencer Substation (Iowa) – Replace two aging transformers KY1A and KY1B at the Spencer Substation (Iowa) and install two shunt capacitor banks. The replacements will increase the capacity to 100 MVA as the current loading conditions exceed the operating capability of the existing 54 and 57-year-old transformers.

(dollars in thousands)

FY 2010 Current Appropriation	FY 2012 Request
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- Bouse Tap (Arizona) – Rebuild the Bouse Tap as a three breaker ring bus to improve system reliability by restoring remote operating and emergency line-break capability to this segment of the Parker-Kofa 161-kV transmission line. The existing switchyard, constructed in the early 1950’s, has exceeded its useful life and can no longer support remote operations.
- Coolidge Substation (Arizona) - Renewal of the transmission line Right-of-Way between the Rogers and Coolidge Substations was agreed to by Western and the Gila River Indian Community. The agreement requires Western to provide and install a 230/69-kV transformer in the Coolidge Substation to serve the Gila River Indian Community.
- Hayden Substation (Colorado) – One of two transformers failed catastrophically at the Hayden Substation as a result of age and increasing loading conditions. Replace the failed transformer and the operating, but undersized, transformer and associated control and protection equipment to restore the transmission system capability, improve reliability, and provide greater operational flexibility.
- O’Neill Substation (California) - Rebuild the 43 year old substation to improve the reliability of the electrical supply facilities for the O’Neil pump/generating station. The substation is the sole source of power to six large pump/generation units operated by the U.S. Bureau of Reclamation as part of the San Luis Water Project. The aging equipment requires excessive manpower and resources to assure the facility continues to operate reliably. Replacement of the aging and environmentally-hazardous oil-filled breakers which are in close proximity to one of California’s main water export facilities will remove a significant threat to the water supply of millions of water users.

Western will pursue alternative financing from its customers to fund the remaining on-going substation rehabilitation efforts estimated at \$16.5 million in FY 2012. Funding for these projects is not guaranteed, however, because alternative financing is voluntary. The ongoing activities dependent on customer financing are:

- Bismarck Substation (North Dakota) – Replace two aging transformers, 47-year old KU3A and 50-year old KU4A, at the Bismarck Substation with 200 MVA units and construct a dedicated 230-kV bay for KU4A to provide increased reliability required by the addition of another interconnection and significant commercial and residential load growth in the area.
- Creston Substation (Iowa) – Replace the 47-year old transformer and install improved protection equipment at the Creston Substation to address increased loads in the area and reduce potential for widespread outages with the current overload conditions.
- Edgeley Substation (North Dakota) – Replace the aging 1952 transformer KY1A at Edegely Substation and add equipment for improved protection, reliability, and operating flexibility.
- Elliot Switching Station (North Dakota) – Construct a 115-kV switching station near Elliot, ND, on the Forman-Valley City transmission line to provide greater reliability and system protection in response to area load growth.
- Leeds Substation (North Dakota) – Replacement of the aging 1952 transformer KY1A and

(dollars in thousands)

FY 2010 Current Appropriation	FY 2012 Request
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associated control and protection equipment at Leeds Substation to improve reliability and meet increased load in the area.

- Davis Switchyard (Arizona) – Rebuild aging Davis Switchyard built in the late 1940s to provide increased reliability. The bulk of the equipment in the yards is operating beyond its useful service lives. Problems include failing circuit breakers, unreliable regulating transformer, broken disconnects, oil leaks, and abandoned equipment. The rebuild will provide a more effective bus arrangement, replace oil-filled circuit breakers with SF6 gas breakers to eliminate over 140,000 gallons of oil from the site adjacent to the Colorado River, and construct a control building to house the relays, control equipment, and battery systems.
- Electrical District No. 5 Switchyard (Arizona) – Rebuild the aging ED5 switchyard with an upgraded bus arrangement to improve reliability. Constructed in 1952, the existing motor-operated disconnects have not been upgraded, are deteriorating, and are a reliability concern. They are not capable of interrupting load or fault current, making maintenance difficult and costly. Spare parts are obsolete and difficult to replace.
- Gila Substation (Arizona) – Rebuild the 1940s vintage Gila 34.5-kV/69-kV Switchyard that provides station power and service to the Yuma Area Irrigation District pumping loads. The advanced age of this equipment is impacting system reliability. Aging symptoms include broken disconnects, oil leaks, and disintegrating foundations. Over 10,000 gallons of oil reside in the old transformers and circuit breakers at the facility which sits immediately adjacent to an irrigation canal. Rebuilding the facility is necessary to ensure reliability, safety, and to reduce hazards to the environment.
- Mead Substation (Nevada) – Replace the 345-kV transformer at Mead Substation south of Boulder City that provides the sole feed from Mead Substation to the heavily loaded Mead-Peacock 345-kV transmission line. Testing on this 45-year old transformer indicates both internal and external deterioration, including leaking, bushing and insulation degradation. Replacement will improve reliability of this critical component of the Mead to Peacock system, dramatically reducing the risk of failure and line outage.
- Liberty Substation (Arizona) – Replace the 345-kV transformer at Liberty Substation in western Phoenix supporting the critical 345-kV Liberty to Peacock transmission line. Testing on the 43-year old transformer indicates both internal and external deterioration, including extensive leaking from several areas of the transformer. Replacement is necessary to avoid catastrophic failure and/or lengthy outage on the heavily loaded Liberty-Peacock transmission line.

The funding level is determined by estimating the cost to complete each project and breaking out these costs by fiscal year. The estimates are based on recent actual costs to complete similar projects, updated individual project requirements, and past experience.

- **Substations, Rehabilitation Starts** **17,129** **12,526**  
Several substation rehabilitation activities are planned to begin in FY 2012. The FY 2012 request includes \$0 in appropriations for these activities.

**Construction, Rehabilitation, Operation and Maintenance/  
Western Area Power Administration/  
Construction and Rehabilitation**

**FY 2012 Congressional Budget**

(dollars in thousands)

FY 2010 Current Appropriation	FY 2012 Request
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Western will pursue alternative financing from its customers to fund all the substation rehabilitation starts estimated at \$12.5 million in FY 2012. Funding for these projects is not guaranteed, however, because alternative financing is voluntary. The new substation rehabilitation activities dependent on customer financing are:

- Belfield Substation (North Dakota) – Addition of a second 345/230-kV transformer, shunt capacitor bank, reactor, and associated control and protection equipment to the Belfield Substation is required due to increasing loads at this major interconnection point for the high-voltage transmission system serving eastern Montana and western North Dakota. The additions will improve reliability and operating flexibility.
- Granite Falls Substation (North Dakota) – Replace the aging 1959 115/69-kV transformer KY2A at the Granite Falls Substation to support increased load growth in the area. The transformer is at increased risk for near term overloading conditions and needs to be replaced to ensure continued reliability.
- Max Substation (North Dakota) – Construct new 115-kV interconnection near Max, ND to support increased load associated with a water pipeline in the area. The new interconnection will improve reliability along the Garrison-Mallard transmission line.
- Rapid City Substation (South Dakota) – Addition of a customer-furnished 115/69 kV transformer to Western’s Rapid City Substation to provide greater reliability and operating flexibility necessary to meet substantial load growth in the area.
- Electrical District No. 4 Switchyard (Arizona) – Upgrade the ED4 Switchyard bus configuration to provide for greater operational flexibility and system protection. The transmission lines from ED4 to ED2 and ED5 have reliability problems due to the age and condition of the connecting transmission lines.
- Tucson Substation (Arizona) – Upgrade the obsolete 1952 vintage Tucson Substation bus structure and antiquated equipment to increase reliability, safety, and maintainability of the Parker-Davis Power System.
- Cheyenne Substation (Wyoming) – Addition of redundant 230/115-kV transformer at Cheyenne Substation is necessary to mitigate voltage deviations arising from the loss or maintenance of the primary transformer. The addition provides for greater reliability of the transmission system in southeastern Wyoming.
- Lingle Substation (Wyoming) – Addition of a new 69-kV switchyard, including 115/69-kV transformer and associated control and protection equipment is required at or near Lingle Substation to combat severe low voltage problems in the Platte Valley area.
- Torrington Substation (Wyoming) – Addition of a new 69-kV switchyard, including 115/69-kV transformer, 69/34.5-kV transformer and associated control and protection equipment is needed to improve reliability impacted by severe low voltage problems in the Platte Valley area.

The funding level is determined by estimating the cost to complete each project and breaking out

(dollars in thousands)

FY 2010 Current Appropriation	FY 2012 Request
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these costs by fiscal year. The estimates are based on recent actual costs to complete similar projects, updated individual project requirements, and past experience.

<b>Other</b>	<b>18,590</b>	<b>7,247</b>
▪ <b>Communications Systems</b>	<b>2,982</b>	<b>3,667</b>

This activity funds work to replace, modernize, and expand communication systems (microwave, fiber optic, global information system, and telecommunication) in the Central Valley Project and the Pick-Sloan Missouri Basin Program to operate and control the transmission system. The FY 2012 request includes \$1.2 million in appropriations for installation of 54.7 miles of optical ground wire from Hedge Substation to Tracy Substation. The project completes the fiber optic communication link between Elverta and Tracy substations, improving the reliability of service to all Central Valley Project customers.

Replacement parts for obsolete communications systems are often difficult to obtain. With technological advances in the communications field, increased use of remote control of facilities, and the need for greater integration of the Federal system with the rest of the grid, maintaining secure and reliable communications is crucial to Western's mission.

Note: the equipment requested here is not included in the Spectrum Relocation Fund initiative.

Western will pursue alternative financing from its customers in order to complete additional planned communication system (microwave, fiber optic, global information system, and telecommunication) improvements in the Central Valley Project and the Pick-Sloan Missouri Basin Program estimated to cost approximately \$2.5 million.

▪ <b>Miscellaneous</b>	<b>15,608</b>	<b>3,580</b>
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The FY 2012 request includes \$1.8 million to:

- Replace the Mead Substation (Nevada) domestic water and fire protection supply system. Corrosion in the system has raised concerns of limited life expectancy for certain water system elements. Replacing the aging and defective components will improve the reliability and robustness of this critical substation.
- Continue Western's power facility development activities that provide technical products in support of the construction and rehabilitation program activities.

Western will pursue alternative financing from its customers to fund the remaining miscellaneous efforts estimated at \$1.8 million in FY 2012. Funding for these projects is not guaranteed, however, because alternative financing is voluntary.

- Mead Substation (Nevada) – Repair one-mile of Buchanan Boulevard from the edge of Boulder City to the junction at the entrance of Western's Mead Substation. The road has been washed out on numerous occasions blocking access to a crucial substation. Western has serious concerns regarding the current condition of the roadway, accessibility to the substation, and safety of maintenance crews.
- Mesa Substation (Arizona) – Continue the demolition and clean-up of the decommissioned Mesa Substation built in the early 1940s. Clean-up is complicated by existence of

**Construction, Rehabilitation, Operation and Maintenance/  
Western Area Power Administration/  
Construction and Rehabilitation**

**FY 2012 Congressional Budget**

(dollars in thousands)

FY 2010 Current Appropriation	FY 2012 Request
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underground rooms, storage, conduit tunnels, and piping.

**Total, Construction and Rehabilitation**

**104,971**

**110,449**

**Explanation of Funding Changes**

FY 2012 vs. FY 2010 Current Approp (\$000)
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**Transmission Lines and Terminal Facilities**

- The increase in Transmission Lines and Terminal Facilities reflects the continued aging of Western’s transmission infrastructure which was primarily constructed in the 1940s-1960s and the area load growth in the regions it serves. Thousands of miles of transmission line already exceed their design life. For FY 2012 specifically, there is continued focus on replacement and upgrade of aging infrastructure across Western’s service area, with increasing emphasis on deteriorating transmission lines in the Parker-Davis systems in Arizona. In addition, activities are underway to address voltage support problems in the growing Sacramento area, the Colorado front-range, and growing loads in the Pick-Sloan Missouri Basin service territory. +23,863

**Substations**

- The decrease in substation related construction and rehabilitation work is a result of ongoing efforts that will be moving closer to completion and one prior year project being deferred. However, several new substation rehabilitation efforts will still begin in FY 2012 to address the aging infrastructure across Western’s service territory and the increasing demand on the Federal transmission facilities. -7,042

**Other**

- The decrease in funding for Other reflects significant prior year funding in this category for environmental remediation work at a decommissioned 1940s era facility originally constructed to support World War II supply efforts. FY 2012 funding provides for enhancement of communication systems, replacement of aging water and fire protection, reliable access to the critical Mead Substation, and continued clean up of other decommissioned facilities. -11,343

**Total Funding Change, Construction and Rehabilitation**

**+5,478**



**Purchase Power and Wheeling  
Funding Schedule by Activity**

(dollars in thousands)

	FY 2010 Current Appropriation	FY 2012 Request
Purchase Power and Wheeling		
Central Valley Project	284,441	300,584
Pick-Sloan Missouri Basin and Other Programs	264,406	170,951
Subtotal, Purchase Power and Wheeling (Gross)	548,847	471,535
Use of Alternative Financing <sup>a</sup>	-199,040	-164,994
Subtotal, Purchase Power and Wheeling	349,807	306,541
Offsetting Collections Realized	-349,807	-306,541
Total, Purchase Power and Wheeling (Budget Authority)	0	0

**Benefits**

The Purchase Power and Wheeling (PPW) subprogram supports Western’s mission to market and deliver reliable, cost-based hydroelectric power and related services. These services are marketed at rates sufficient to recover expenses and Federal investment as established by law. To maximize the marketability of Western’s products, Western has entered into long-term contracts with customers of the Central Valley Project (CVP), Pick-Sloan Missouri Basin Program, as well as other projects, to deliver power based on the normal (average over the long-term) amount of power and/or capacity available from each of the power systems. By its nature, hydropower is a variable resource; it is affected by reservoir storage, drought conditions, powerplant maintenance and other project purposes. Variations occur between load and the hydro-generation hour-by-hour or even minute-by-minute. Western buys power and related transmission services to fulfill its firm power-sale contractual commitments. Western also buys transmission services, as needed, to provide the benefits of the Federal hydropower resource to numerous Federal, state, municipal, and other preference customers not directly connected to Western’s system. Contracting for transmission services encourages the widespread use principle of the Flood Control Act of 1944 and avoids unnecessary Federal duplication of available transmission resources. The acquisition of non-Federal power and transmission services meets Western’s power marketing contract provisions which place responsibilities on Western to provide firm power to customers of the Central Valley Project, Pick-Sloan Missouri Basin Program-Eastern Division, Loveland Area Projects and Parker-Davis Project.

The FY 2012 request provides for continuation of PPW receipt funded activities at the estimated level necessary to meet contractual firming needs. No appropriated budget authority is necessary. The lower request for receipt authority reflects improving water conditions in the drought-stricken Pick-Sloan Missouri River Basin.

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<sup>a</sup> Alternative financing for purchase power and wheeling anticipates \$177,565,000 and \$154,489,000 in net billing and/or bill crediting in FY 2010 and FY 2012, respectively. Alternative financing also includes reimbursable customer funding planned at \$21,475,000 and \$10,505,000 in FY 2010 and FY 2012, respectively. In addition, Western’s Continuing Fund is available as necessary to respond to below normal hydropower generation conditions.

## Detailed Justification

(dollars in thousands)

FY 2010 Current Approp	FY 2012 Request
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**Central Valley Project**

**122,361      147,965**

No appropriations are requested. This is authority to use offsetting collections only.

▪ **Central Valley Project, Program Requirement** **284,441      300,584**

In FY 2012, Western continues to deliver on its contractual power commitments to customers under the Central Valley Project’s Post 2004 Marketing Plan. The budget request assumes current full load service customers will continue to choose service from Western through “Custom Product” contractual arrangements. Western also purchases power to support variable resource customers on a pass-thru basis. If project net generation is not sufficient, Western may also purchase to support project use load, First Preference Customer load, and sub-control area reserve requirements.

▪ **Central Valley Project, Alternative/Customer Financing** **-162,080      -152,619**

Contractual arrangements have been made with customers providing opportunities for alternative financing of the purchase power requirements. Alternative financing methods include net billing, bill crediting, energy exchanges, and direct customer funding.

**Pick-Sloan Missouri Basin and Other Programs** **227,446      158,576**

No appropriations are requested. This is authority to use offsetting collections only.

▪ **Pick-Sloan Missouri Basin and Other Programs, Program Requirement** **264,406      170,951**

In FY 2012, the request continues to support long-term firm power commitments to customers of the Eastern and Western divisions of the Pick-Sloan Missouri Basin Program, the Fryingpan-Arkansas Project, and the Parker-Davis Project commensurate with the levels of average firm hydroelectric energy marketed by Western. The request also provides transmission support for the Pacific Northwest-Southwest Intertie Project. The total program estimates shown for FY 2012 are based primarily on market pricing of short-term firm energy, negotiated transmission rates, and Western and generating agency’s forecasts. The FY 2012 program forecasts reduced purchases.

▪ **Pick-Sloan Missouri Basin and Other Programs, Alternative/Customer Financing** **-36,960      -12,375**

Western will use alternative financing methods negotiated with customers to provide this offset to the total program receipt financing requirement. Alternative financing methods include net billing, bill crediting, energy exchanges, and direct customer funding.

**Total, Purchase Power and Wheeling** **349,807      306,541**

## Explanation of Funding Changes

FY 2012 vs. FY 2010 Current Approp (\$000)
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### Central Valley Project

- The gross PPW requirement of \$300.6 million in FY 2012 increases 2.8 percent year-over-year from the \$284.4 million level anticipated in FY 2010 providing for a slight increase in anticipated purchases to meet marketed requirements.
- Note: The PPW amounts are for offsetting collection authority and alternative financing; no direct appropriations are necessary.

+16,143

### Pick-Sloan Missouri Basin and Other Programs

- The gross PPW requirement of \$170.9 million in FY 2012 decreases \$93.5 million from the \$264.4 million estimated for FY 2010 in anticipation of improving water conditions in the drought stricken Pick-Sloan Missouri Basin region.
- Note: The PPW amounts are for offsetting collection authority and alternative financing; no direct appropriations are requested for this activity.

-93,455

### Total Funding Change, Purchase Power and Wheeling

-77,312



**Program Direction**  
**Funding Profile by Category**

	(dollars in thousands)	
	FY 2010 Current Appropriation	FY 2012 Request
Program Direction <sup>a</sup>		
Salaries & Benefits	123,197	134,016
Travel	8,684	10,500
Support Services	26,552	30,830
Other Related Services	22,323	29,901
Total, Program	180,756	205,247
Less Use of Alternative Financing	-5,720	-3,300
Use of Receipts from Colorado River Dam Fund	-3,012	-3,788
Offsetting Collections, Other Expenses	-110,492	-156,609
Total, Program Direction Budget Authority	61,532	41,550
Full Time Equivalents	1,134	1,118

**Mission**

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

The Program Direction subprogram supports DOE and Western missions. To attain reliability performance, dispatchers match generation to load minute-by-minute to meet or exceed performance levels established by NERC. Energy schedulers maximize revenues from non-firm energy sales and power rates are reviewed and adjusted to support repayment of the Federal investment. Western trains its employees on a continuing basis in occupational safety and health regulations, policies and procedures, and conducts safety meetings at employee, supervisory and management levels to keep the safety culture strong. Accidents are reviewed to ensure lessons are learned and proper work protocol is in place.

The Program Direction subprogram further supports Western's Human Capital Management (HCM) Workforce Plan. HCM Workforce Plan activities include: exploring ways to increase Human Resource efficiency through consolidation; the development and/or expansion of intern/apprenticeship programs

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<sup>a</sup> Program descriptions and funding amounts include activities of the Boulder Canyon Project. These activities are funded through receipts from the Colorado River Dam Fund via a reimbursable agreement with the Department of the Interior, as authorized by P.L. 98-381.

in the occupations of energy marketing, dispatcher, lineman, and electrician; introduction of an under-study program in Power Marketing, prior to an incumbent retiring; rotational training programs for engineers; strategic use of knowledge sharing and training events in critical occupations; and, succession planning development programs for mid- to upper-level graded Federal positions. Western's 50/5/5 Trainee Program is part of its succession planning, which trains employees in critical positions in areas soon to be vacated by retiring employees. By design, costs for these HCM programs will be minimal as local area expertise and facilities are used to the maximum extent possible. The HCM Workforce Plan noted that no new A-76 studies were required and/or anticipated at this time.

Western actively supports the Department's initiative to enhance the quality of mathematics, science, and engineering education as authorized in the Department of Energy Science Education Enhancement Act (Science Education Act), 42 U.S.C. 7381. This includes Western's participation in sponsoring Regional Science Bowl competitions underlying the National Science Bowl, which is administered by the Department of Energy.

In concert with its customers, Western reviews required replacements and upgrades to its existing infrastructure to sustain reliable power delivery to its customers and to contain annual maintenance expenses. The timing and scope of these replacements and upgrades are critical to assure that Western's facilities do not become the "weak link" in the interconnected system. Western pursues opportunities to join with neighboring utilities to jointly finance activities, which avoid redundant facilities and result in realized cost savings and/or increased efficiencies for all participants.

### Detailed Justification

(dollars in thousands)

FY 2010 Current Approp	FY 2012 Request
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**123,197      134,016**

#### Salaries and Benefits

This activity funds the salaries and benefits for the majority of Western's skilled Federal employees who market and deliver Federal hydropower and related services by operating and maintaining Western's interconnected power system with its associated facilities. The funding level for salaries is derived from the actual salaries, planned promotions, anticipated increases to benefit costs, and within-grade-increases. Approximately 38.7 percent of Western's salaries and benefits are determined through wage surveys and union negotiations (craft workers, power system dispatchers, schedulers, and marketers) and become effective at the beginning of a fiscal year. Craft workers rapidly restore the transmission system following any disturbance, and routinely maintain and/or replace equipment to assure capability for reliable delivery of power. Dispatchers provide 24-hour-a-day operation of four dispatching centers and one reliability coordination center. Dispatchers respond to minute-by-minute changes to load and generation to meet or exceed NERC and industry averages for system reliability and performance. Engineers and craft workers maintain the interconnected system at or above industry standards to reduce transmission outages. Energy schedulers maximize revenues from non-firm energy sales. Staff provides continuing services such as system operations, power billing and collection, power marketing, rate setting, energy services, environmental, safety, security and emergency management. Due to the extreme hazards associated with a high-voltage electrical system, staff makes safety a priority in each and every task. Staff inspects construction activities in progress (identified in the

(dollars in thousands)

FY 2010 Current Approp	FY 2012 Request
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Construction and Rehabilitation activity) to ensure quality results and safe working methods. General power resources planning and preconstruction activities continue, including planning, environmental clearance, collection of field data, design of facilities, and issuance of specifications for future rehabilitation and upgrades of existing transmission lines and the review/coordination of requests for transmission system interconnections. Staff evaluates general power resources, collaborating and planning with customers and other members of the interconnected transmission system, to identify the most effective transmission system improvements to maximize benefits to all participants. Western participates in public meetings with customers and initiatives supported by the Department, to include local and Regional Science Bowl competitions.

Western's total FTE figure of 1,118 for the CROM account includes 18 for the Boulder Canyon Project (BCP). These FTE are funded by receipts from the Colorado River Dam Fund under a reimbursable agreement with the Department of Interior's Bureau of Reclamation rather than appropriations. FTE reflected for CROM account activities total 1,134 for FY 2010, which includes the FTE associated with BCP activities of 17.

**Travel** **8,684**      **10,500**

This activity funds all Western personnel travel and per diem expenses for mission-related activities, including \$211,000 for the Boulder Canyon Project. Travel expenses can vary throughout Western's 15-state service area because there tends to be less competitive pricing in some of the remote and rural areas. The request includes estimates for the rent/lease of GSA vehicles and other transportation. Estimates are based on historical costs and an assessment of planned activity.

**Support Services** **26,552**      **30,830**

This activity funds support services including information processing, warehousing, job related training and education, engineering, miscellaneous advisory and assistance services, and general administrative support. The request includes \$376,000 for Boulder Canyon.

**Other Related Expenses** **22,323**      **29,901**

Other related expenses include rental space, utilities, supplies and materials, telecommunications, personal computers, printing and reproduction, training tuition, full-cost recovery distribution for DOE's Working Capital Fund, and miscellaneous supplies and services provided in support of the DOE's Regional Science Bowl competitions. The Boulder Canyon portion of these expenses totals \$596,000. Rental space costs assume the General Services Administration's (GSA) inflation factor. Other costs are based on historical usage and actual cost of similar items.

**Total, Program Direction** **180,756**      **205,247**

## Explanation of Funding Changes

FY 2012 vs. FY 2010 Current Approp (\$000)
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### Salaries and Benefits

- The increase to salary and benefits includes those salaries determined through negotiation as well as an increase of FTE financed in this account. Also included in this request are increases for benefits and planned promotions for Western's General Schedule employees. +10,819

### Travel

- The increase is attributable to inflation and an increase of planned travel in support of Western's mission-related operation and maintenance activities to service over 17 thousand miles of Western's interconnected transmission system. This increase is offset by a slight decrease in travel requirements for administrative training and conferences. +1,816

### Support Services

- The increase to this activity is primarily attributable to an increase in ADP support to Western's systems which include the continued efforts of Western's financial system upgrade. Also increasing is economic and environmental analysis in support of Western's planned capital mission needs. General administrative services increase in support of Western's mission requirements in financial, clerical, compliance, and analysis assistance. +4,278

### Other Related Expenses

- The increase is primarily attributable to architectural and engineering services required to support Western's mission capital requirements and an increase in the Department's Working Capital Fund (WCF) distribution to this account. The WCF increase is related to a change in the Department's policy in FY 2012 to budget salary and benefit expenses related to federal employees who administer the Working Capital Fund business lines through the Department's Program Offices to enable full-cost recovery. Other increases are primarily attributable to inflationary factors including printing, rental space, software procurements and maintenance activities, and miscellaneous expenses. This increase is offset by a slight decrease to the estimated reimbursement of college tuition courses and purchases from other Government accounts. Also included as a decrease in this request is a permanent target transfer of \$100 thousand to DOE, Energy Efficiency and Renewable Energy, for those estimates previously budgeted by Western in support of the Department's Inspector General program. +7,578

### Total Funding Change, Program Direction

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+24,491



## Support Services by Category

		(dollars in thousands)	
		FY 2010 Current Appropriation	FY 2012 Request
Technical Support			
Economic and Environmental Analysis		3,981	5,200
Test and Evaluation Studies		0	0
Total, Technical Support		3,981	5,200
Management Support			
Management Studies		0	0
Training and Education		1,161	1,523
Automated Data Processing		6,444	7,865
Reports and Analyses Management and General Administrative Services		14,966	16,242
Total, Management Support		22,571	25,630
Total, Support Services		26,552	30,830

## Other Related Expenses by Category

		(dollars in thousands)	
		FY 2010 Current Appropriation	FY 2012 Request
Training			
		288	86
Working Capital Fund			
		1,159	1,427
Printing and Reproduction			
		118	126
Rental Space			
		2,303	2,451
Software Procurement/Maintenance Activities/Capital Acquisitions			
		3,695	3,779
Purchases from Government Accounts			
		976	431
Architectural and Engineering Services			
		2,961	8,057
Other Miscellaneous Expenses			
		10,823	13,544
Total, Other Related Expenses		22,323	29,901



**Utah Mitigation and Conservation  
Funding Schedule by Activity**

(dollars in thousands)

	FY 2010 Current Appropriation	FY 2012 Request
Utah Mitigation and Conservation Budget Authority	7,584	3,375
<b>Total, Utah Mitigation and Conservation Budget Authority</b>	<b>7,584</b>	<b>3,375</b>

**Benefits**

The Reclamation Projects Authorization and Adjustment Act of 1992, Title IV, established the Utah Reclamation Mitigation and Conservation Account (Account) in the Treasury of the United States. The purpose of this Account is to ensure that the level of environmental protection, mitigation, and enhancement achieved in connection with projects identified in the Act and elsewhere in the Colorado River Storage Project in the State of Utah is preserved and maintained. Western’s Administrator is authorized to deposit funds into the Account each year, through FY 2014. Such expenditures are to be considered non-reimbursable and non-returnable. The Utah Reclamation Mitigation and Conservation Commission established under Title III of the Act, is authorized to administer all funds deposited into this Account.

**Detailed Justification**

(dollars in thousands)

	FY 2010 Current Appropriation	FY 2012 Request
<b>Utah Mitigation and Conservation</b>	<b>7,584</b>	<b>3,375</b>
Western will deposit \$3.4 million to this Account.		
<b>Total, Utah Mitigation and Conservation</b>	<b>7,584</b>	<b>3,375</b>

**Explanation of Funding Changes**

	FY 2012 vs. FY 2010 Current Approp (\$000)
<b>Utah Mitigation and Conservation</b>	
DOE has identified the Utah Mitigation and Conservation Program as a low-priority program because it does not directly support Western’s mission, and has subsequently reduced its funding request.	-4,209
<b>Total Funding Change, Utah Mitigation and Conservation</b>	<b>-4,209</b>



**Falcon and Amistad Operating and Maintenance Fund**  
**Funding Profile by Subprogram**

(dollars in thousands)

	FY 2010 Current Appropriation	FY 2012 Request
Western Area Power Administration		
Falcon and Amistad Operating and Maintenance Fund	2,568	4,169
Offsetting Collections	-2,348	-3,949
Total, Falcon and Amistad Operating and Maintenance Fund	220	220

**Public Law Authorization:**

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

**Mission**

The Falcon and Amistad Operating and Maintenance Fund (Maintenance Fund) was established in the Treasury of the United States as directed by the Foreign Relations Authorization Act, Fiscal Years 1994 and 1995. The Maintenance Fund is administered by Western's Administrator for use by the Commissioner of the U. S. Section of the International Boundary and Water Commission (IBWC) to defray administrative, O&M, replacement, and emergency costs for the hydroelectric facilities at the Falcon and Amistad Dams.

**Benefits**

The Falcon-Amistad Project supports Western's program goals by providing power to rural electric cooperatives through Western. With the exception of monies received from the Government of Mexico, all revenues collected from the sale of electric power generated at the Falcon and Amistad Dams are credited to the Maintenance Fund. Monies received from the Government of Mexico are credited to the General Fund of the U.S. Treasury. Revenues collected in excess of operating expenses are used to repay, with interest, the cost of replacements and original investments. Full funding will support 24-hour/day operation and maintenance of the two power plants to ensure response to ever-changing water conditions, customer demand, and continual coordination with operating personnel of the Government of Mexico.

## Falcon and Amistad Operating and Maintenance Fund

### Funding Schedule by Activity

(dollars in thousands)

	FY 2010 Current Appropriation	FY 2012 Request
Falcon and Amistad Operating and Maintenance Fund		
Salaries and Benefits	2,019	2,662
Routine Services	392	1,272
Miscellaneous Expenses	142	219
Marketing, Contracts, Repayment Studies	15	16
Subtotal, Falcon and Amistad Operating and Maintenance Fund	2,568	4,169
Offsetting Collections	-2,348	-3,949
Total, Falcon and Amistad Operating and Maintenance Fund	220	220

### Detailed Justification

(dollars in thousands)

	FY 2010 Current Appropriation	FY 2012 Request
<b>Salaries and Benefits</b>	<b>2,019</b>	<b>2,662</b>
This activity funds the salaries and benefits for 45 positions in the U.S. Section of the IBWC who operate and maintain the two power plants on a 24-hour/day basis, including planned maintenance activities, required safety services, and emergency response to flood operations and/or equipment failure.		
<b>Routine Services</b>	<b>392</b>	<b>1,272</b>
This activity funds routine services such as inspection and service of the HVAC and air compressor systems, fire suppression systems, elevators, self-contained breathing apparatus, recharge and hydro-testing of fire extinguishers, calibration of test equipment, rebuild of electric motors, and repair of obsolete equipment when replacement parts are no longer available. The request includes \$220 thousand to partially fund capital requirements.		
<b>Miscellaneous Expenses</b>	<b>142</b>	<b>219</b>
This activity funds travel, training, communications, utilities, printing, and office supplies and materials for IBWC employees and technical advisors. The request includes essential training for employees to comply with standards of the Interagency Commission on Dam Safety, Occupational and Health Administration (OSHA), and the National Dam Safety Act.		
<b>Marketing, Contracts, Repayment Studies</b>	<b>15</b>	<b>16</b>
This activity funds power marketing, administration of power contracts, and preparation of rate and repayment studies. Based on accurate studies, staff ensures power revenues are set at an appropriate level to recover annual expenses and meet repayment schedules.		
<b>Total, Falcon and Amistad Operating and Maintenance Fund</b>	<b>2,568</b>	<b>4,169</b>

## Explanation of Funding Changes

FY 2012 vs. FY 2010 Current Approp (\$000)
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**Salaries and Benefits**

The increase is due to the addition of ten positions, including security guards and maintenance workers at both the Falcon and Amistad power plants, promotions, and within grade increases.

+643

**Routine Services**

The increase is due to a rise in required operations and maintenance activities charged to this account.

+880

**Miscellaneous Expenses**

The increase is due to inflation, a growth in utility cost estimates to include WAN services, an increase in participation at industry safety conferences, and Training/Technical Certifications of employees.

+77

**Marketing, Contracts, Repayment Studies**

The increase is due to inflation.

+1

**Total Funding Change, Falcon and Amistad, Operating and Maintenance Fund**

+1,601





**Colorado River Basins Power Marketing Fund**  
**Funding Profile by Subprogram**

(dollars in thousands)

	FY 2010 Current Appropriation	FY 2012 Request
Colorado River Basins Power Marketing Fund		
Equipment, Contracts and Related Expenses	212,766	164,502
Program Direction	48,957	55,895
Total, Operating Expenses from new authority	261,723	220,397
Offsetting Collections Realized	-284,723	-243,397
Total, Obligational Authority	-23,000	-23,000

**Public Law Authorizations:**

Public Law 75-529, "The Fort Peck Project Act of 1938"  
Public Law 84-484, "The Colorado River Storage Project Act of 1956"  
Public Law 90-537, "The Colorado River Basin Project Act of 1968"  
Public Law 95-91, "Department of Energy Organization Act" (1977)

**Mission**

Western operates and maintains the transmission system for the projects funded in this account to ensure an adequate supply of reliable electric power in a clean and environmentally safe, cost-effective manner.

**Benefits**

Western achieves continuity of service by maintaining its power systems at or above industry standards, rapidly restoring service following any system disturbance, mitigating adverse environmental impacts, performing clean-up activities, and maximizing the revenues gained from non-firm energy sales. In concert with its customers, Western reviews required replacements to its existing infrastructure to sustain reliable power delivery to its customers and to contain annual maintenance expenses.

Revenues from the sale of electric energy, capacity and transmission services replenish the fund and are available for expenditure for operation, maintenance, replacements, power billing and collection, program direction, purchase power and wheeling, interest, emergencies, and other power marketing expenses. Power sales and other revenues, which are collected in excess of expenses, are used to repay Federal investments to the U.S. Treasury.

**Equipment, Contracts and Related Expenses**  
**Funding Schedule by Activity**

(dollars in thousands)

	FY 2010 Current Appropriation	FY 2012 Request
Equipment, Contracts and Related Expenses		
Supplies, Materials, and Services	13,897	22,868
Purchase Power Costs	175,561	122,041
Capitalized Equipment	18,169	9,876
Interest/Transfers	5,139	9,717
Total, Equipment, Contracts and Related Expenses	212,766	164,502

**Benefits**

The Colorado River Basins Power Marketing Fund Program is comprised of three power systems: the Colorado River Storage Project, including the Dolores and Seedskaadee Projects; the Fort Peck Project; and the Colorado River Basin Project. Western is responsible for construction, maintenance, and operation of facilities for transmitting and marketing the electrical energy generated in these power systems.

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

Supplies and materials, such as wood poles, instrument transformers, meters and relays, must be procured to provide necessary resources to respond to routine and emergency situations in the high-voltage interconnected transmission system. Technical services, such as waste management disposal and pest/weed control, are used as needed.

Western's planned replacement and addition activity is based on an assessment of age and the maintenance frequency/problems of individual items of equipment, availability of replacement parts, safety of the public and Western's personnel, environmental concerns, and an orderly work plan. The work plans, coordinated with Western's customers who ultimately bear the burden of all Western expenses, reflect an overall sustainable level of effort, with shifts in emphasis between categories (i.e. electrical versus communication equipment) in any given year.

Electrical equipment replacements, such as circuit breakers, transformers, insulators, revenue meters, switches, control boards, relay and controls must be acquired to assure reliable service to Western's customers. System age and environmental concerns necessitate orderly replacement before significant problems develop.

Replacement and upgrade of microwave, SCADA, and other communication and control equipment continues to provide increased system reliability, and reduce maintenance and equipment costs.

Capitalized movable equipment such as special purpose vehicles (e.g., trucks, tractors, diggers), special purpose equipment (e.g., pole trailers, brush chippers), specialized test equipment (e.g., motion analyzers and relay test equipment), computer-aided engineering equipment, office equipment, IT equipment and software must be upgraded and replaced.

Electrical resources and transmission capability to firm up the Federal hydropower supplies needed to meet Western’s contractual obligations will continue to be obtained. Transmission wheeling services are also purchased when a third party’s transmission lines are needed to deliver Federal power to Western’s customers.

Reimbursements to the U.S. Army Corps of Engineers for operation and maintenance of the Fort Peck Powerplant and planned interest payments to the U.S. Treasury are also included in this section.

### Detailed Justification

(dollars in thousands)

FY 2010 Current Appropriation	FY 2012 Request
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#### Supplies, Materials, and Services

**13,897                      22,868**

This activity funds the procurement of supplies, materials, and services necessary to respond to routine and emergency situations in the transmission system, and the continuation of reimbursements to the U.S. Army Corps of Engineers for operation and maintenance of the Fort Peck Powerplant. Estimates are based on recent actual costs for supplies needed to maintain transmission system reliability.

#### Purchase Power Costs

**175,561                      122,041**

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

#### Capitalized Equipment

**18,169                      9,876**

This activity funds the procurement of capitalized equipment including circuit breakers, transformers, relays, switches, transmission line equipment, microwave, SCADA, and other communication and control equipment to assure reliable service to Western’s customers. Replacement and upgrade of aged power system components are crucial to system reliability and transmission services. Planned communications equipment purchases increase slightly and include the continuation of microwave upgrades from Phoenix to Mexican Hat and facilities repairs and replacements for Montrose to Mexican Hat, including the spur to Shiprock. This work is the result of a 6-year program to identify communications facilities that are 20-25 years old and are in need of repair or replacement. This request also includes funding to install underground fiber optic duct cable between Erie, Loveland, and Cheyenne along Interstate 25, and install fiber multiplex equipment as fiber optic cables are installed on key backbone routes. Included also is funding for the continuation of the project to replace analog

**Colorado River Basins Power Marketing Fund/  
Western Area Power Administration/  
Equipment, Contracts and Related Expenses**

**FY 2012 Congressional Budget**

(dollars in thousands)

FY 2010 Current Appropriation	FY 2012 Request
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microwave with fiber optic ground wire and fiber optic terminal. Cost comparisons have shown that fiber optics have a significant lower life cycle cost and higher bandwidth capacity than digital microwave.

Transmission line estimates increase slightly and include the purchase of poles, crossarms, conductors, fusion splicers, line switches, overhead ground wire and hardware for the continued transmission line rebuilds. This estimate includes line rebuilds for the Harve-Rainbow line as the equipment has reached the end of its expected life and is in need of replacement. Western anticipates the completion of 10 miles a year.

Planned substation estimates decreased due to cyclical capital maintenance scheduling. The funding request includes the replacement of oil breakers in Crossover and Conrad with gas breakers. Parts are worn out due to the high numbers of operations. Also included is the upgrade of the 230kV transformer equipment at Glen Canyon substation, replacement of a 230kV switch at Archer substation, replacement of transformer monitors at various substations, and a vehicle storage building at Fort Peck. This building is necessary to provide adequate facilities for housing motorized and moveable equipment along with a storage area for protection from severe weather conditions. Western is beginning the sixth year of a 10-year program to replace older electro-mechanical relays with microprocessor relays. The microprocessor relays will assist in finding faults faster in order to more efficiently restore service to customers. Other miscellaneous items required for substation replacements include surge arrestors, batteries and chargers, and monitoring equipment.

Planned movable capitalized property estimates decrease slightly and include the replacement of a 26-year-old crane for Mile City, a special purpose truck that has mechanical problems and has reached the mileage limit for replacement, and a 20-year-old electric forklift for Fort Peck due to a multitude of maintenance issues and having reached the end of its life cycle. Other heavy equipment will be replaced as they become inoperable. Other estimates include the replacement of outdated test equipment, and test equipment to troubleshoot the new digital microwave radio system. Ongoing replacement is also planned for aging information technology support systems and routers. Other requests include funding for the continuation of the SCADA Upgrade program, SCADA system software and hardware procurements for the Operations Consolidation Project, as well as other minor enhancements that provide for the ease of maintenance, protection of equipment and materials, and environmental compliance.

<b>Interest/Transfers</b>	<b>5,139</b>	<b>9,717</b>
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This activity funds interest payments to the U.S. Treasury. Estimates are based on Power Repayment Studies for the Projects funded in this account.

<b>Total, Equipment, Contracts and Related Expenses</b>	<b>212,766</b>	<b>164,502</b>
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## Explanation of Funding Changes

FY 2012 vs. FY 2010 (\$000)
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### Supplies, Materials, and Services

- The increase is due to cyclical maintenance requirements and includes procurements of non-capitalized substation equipment, durable equipment, and miscellaneous services. These increases are offset slightly by decreases to general supplies and ADP equipment maintenance. +8,971

### Purchase Power Costs

- Purchase power costs decrease in FY 2012 as a result of the anticipated improvement of water conditions and a decrease in the costs of purchase power. -53,520

### Capitalized Equipment

- The decrease in capitalized equipment purchases is primarily attributed to a decreased level of purchases associated with planned replacement of structural substations and a decrease in capitalized movable property. -8,293

### Interest

- The projected interest payment increases in FY 2012 are primarily due to an increase in investment and a reduction in principal payments made from the prior years' estimated Power Repayment Study. +4,578

<b>Total Funding Change, Equipment, Contracts and Related Expenses</b>	<hr/> <b>-48,264</b>
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**Program Direction**  
**Funding Profile by Category**

(dollars in thousands)		
	FY 2010 Current Appropriation	FY 2012 Request
Program Direction		
Salaries and Benefits	34,845	37,356
Travel	2,990	2,756
Support Services	5,653	7,775
Other Related Expenses	5,469	8,008
Total, Program Direction	48,957	55,895
Full Time Equivalents	274	290

**Mission**

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

**Detailed Justification**

(dollars in thousands)		
	FY 2010 Current Appropriation	FY 2012 Request
<b>Salaries and Benefits</b>	<b>34,845</b>	<b>37,356</b>

This activity funds salaries and benefits for 290 FTE who market and deliver Federal hydropower and related services in the CRBPMF Program’s service area through the operation and maintenance of the integrated transmission system and its associated facilities. Engineers and craft workers rapidly restore the transmission system, comprised of approximately 4,000 circuit-miles of transmission lines and associated substations, switchyards, communication, control and general plant facilities, following any disturbance. Staff routinely maintain and/or replace equipment to assure capability for reliable power delivery. Dispatchers respond to minute-by-minute changes to load and generation to meet or exceed the NERC and industry averages. Energy schedulers maximize revenues from non-firm energy sales, and power rates are reviewed and adjusted, thereby supporting the repayment of Federal investment. Staff provides continuing services such as system operations, power billing and collection, power marketing, energy services, technology transfer, environmental, safety, security and emergency management activities. Due to the extreme hazards associated with a high-voltage electrical system, staff makes safety a priority in each and every task. Staff evaluates general power resources,

(dollars in thousands)

FY 2010 Current Appropriation	FY 2012 Request
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collaborating and planning with customers and members of the interconnected transmission system to identify the most effective transmission system improvements to maximize benefits to all participants.

The 290 FTE supported in this account reflect both direct and indirect funding (portions of administrative and general expense employees). The funding level is based on planned work associated with facilities funded through this Account rather than on specific positions; therefore, FTE numbers may vary from year to year.

As authorized in P.L. 99-141, Western annually establishes pay rates and compensation policy for some employees (craft workers, power system dispatchers, schedulers, and marketers) based on prevailing rates in the electric utility industry. Due to recruitment/retention issues for those occupations across the Nation and increased staff in these categories to meet the additional workload requirements attributed to FERC Order Nos. 888 and 889, Western's Federal salary/benefit costs for the dispatching/scheduling functions increase at varying rates.

**Travel** **2,990** **2,756**

This activity funds personnel travel and per diem expenses for mission-related activities, including the maintenance of transmission facilities. The request includes estimates for the rent/lease of GSA vehicles and other transportation. Estimates are based on historical travel costs, adjusted for inflation and planned activity. The slight decrease in this activity reflects a decrease in the overhead activities charged to this account, offset by a slight increase for inflation.

**Support Services** **5,653** **7,775**

Support services funded in this category include ADP support, warehousing, computer-aided drafting/engineering, and general administrative support. The increase is attributed to inflationary factors and an increase in ADP support and administrative support.

**Other Related Expenses** **5,469** **8,008**

Other related expenses include, but are not limited to, DOE's working capital fund distribution, space, utilities and miscellaneous charges, printing and reproduction, training tuition, maintenance of office equipment, supplies and materials, telecommunications, personal computers, and multi-project costs. Intermittent specialized services, not included in on-going support service contracts, are also included. Rental space costs assume the GSA inflation factor. Other costs are based on historical usage and actual cost of similar items. The request reflects inflationary increases, as well as increases in contractual support for critical infrastructure compliance requirements.

**Total, Program Direction** **48,957** **55,895**



## Explanation of Funding Changes

FY 2012 vs. FY 2010 (\$000)
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### Salaries and Benefits

- The increase in salaries and benefits supports the FTE charged to this account, including salaries determined by prevailing rates in the electric utility industry. +2,511

### Travel

- The decrease is attributable to a slight decrease in anticipated planned travel, offset by inflationary factors. -234

### Support Services

- The increase is primarily attributed to an increase in ADP and administrative support, as well as a slight increase in educational support services. +2,122

### Other Related Expenses

- The request reflects inflationary increases, as well as increases in architectural and engineering contractual services, the DOE Working Capital Fund distribution to this account, software procurements and maintenance activities, training, and rental space. +2,539

**Total Funding Change, Program Direction** **+6,938**

### Support Services by Category

		(dollars in thousands)	
		FY 2010 Current Appropriation	FY 2012 Request
Technical Support			
Economic and Environmental Analysis		0	0
Test and Evaluation Studies		0	0
Total, Technical Support		0	0
Management Support			
Management Studies		0	0
Training and Education		297	358
ADP Support		1,290	2,447
Administrative Support		4,066	4,970
Total, Management Support		5,653	7,775
Total, Support Services		5,653	7,775

### Other Related Expenses by Category

		(dollars in thousands)	
		FY 2010 Current Appropriation	FY 2012 Request
Training		30	46
Working Capital Fund		268	301
Printing and Reproduction		29	30
Rental Space		806	979
Software Procurement/Maintenance Activities/Capital Acquisitions		545	1,516
Other Services		3,791	5,136
Total, Other Related Expenses		5,469	8,008

## Estimate of Gross Revenues <sup>a</sup>

(dollars in thousands)

	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Boulder Canyon Project	88,079	88,884	96,010	95,554	93,415	97,376	103,096
Central Valley Project	361,850	406,130	417,827	431,326	444,261	444,261	444,261
Central Arizona Project <sup>b</sup>	130,589	130,589	130,589	130,589	130,589	130,589	130,589
Falcon-Amistad Project	4,904	5,383	5,382	5,380	5,379	5,378	5,376
Fryingpan-Arkansas Project	18,678	19,067	18,610	18,610	18,610	18,570	18,570
Pacific Northwest-Southwest Intertie Project	29,538	31,017	31,447	32,306	33,166	34,025	34,880
Parker-Davis Project	60,200	60,251	60,528	60,536	60,543	60,538	60,532
Pick-Sloan Missouri Basin Program	555,741	529,138	501,667	524,219	546,324	535,975	536,295
Provo River Project	298	312	293	300	308	316	316
Washoe Project	1,238	605	605	605	600	600	600
Salt Lake City Area Integrated Projects	194,744	205,067	204,490	204,621	204,854	205,576	205,583
<b>Total, Gross Revenues</b>	<b>1,445,859</b>	<b>1,476,443</b>	<b>1,467,448</b>	<b>1,504,046</b>	<b>1,538,049</b>	<b>1,533,204</b>	<b>1,540,098</b>

<sup>a</sup> For most power systems, amounts are based on the FY 2009 Final Power Repayment Studies (PRS). The Central Arizona Project (CAP) amounts shown are estimated projections.

<sup>b</sup> Western has contracted with the Salt River Project (SRP) to act as the scheduling entity and operating agent for CAP's portion of the Navajo Generating Station's output (547 MW). In return, as Western retains marketing responsibility, SRP agreed to pay monthly costs to cover annual expenses.

## Estimate of Energy Sales<sup>a</sup>

(in gigawatthours)<sup>b</sup>

	FY 2010	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
Boulder Canyon Project	3,733	3,811	3,714	3,776	3,773	3,741	3,756
Central Valley Project	9,053	9,091	9,427	9,668	9,920	10,185	10,464
Central Arizona Project	4,290	4,290	4,290	4,290	4,290	4,290	4,290
Falcon-Amistad Project	181	181	181	181	181	181	181
Loveland Area Projects <sup>c</sup>	2,123	2,123	2,123	2,123	2,123	2,123	2,123
Pacific Northwest-Southwest Intertie Project <sup>d</sup>	0	0	0	0	0	0	0
Parker-Davis Project	1,425	1,425	1,425	1,425	1,425	1,425	1,425
Pick-Sloan Missouri Basin Program, Eastern Division	8,742	8,763	8,763	8,763	8,763	8,763	8,763
Provo River Project	24	24	24	24	24	24	24
Washoe Project	12	12	12	12	12	12	12
Salt Lake City Area Integrated Projects <sup>e</sup>	5,428	5,364	5,361	5,359	5,365	5,426	5,397
<b>Total</b>	<b>35,011</b>	<b>35,084</b>	<b>35,320</b>	<b>35,621</b>	<b>35,876</b>	<b>36,170</b>	<b>36,435</b>

<sup>a</sup> For most power systems, sales amounts are based on FY 2009 Power Repayment Studies (PRS). The estimates for Central Arizona, Falcon-Amistad, and Provo River projects are typically based on average sales over the prior five years.

<sup>b</sup> One gigawatthour (GWh) equals one million kilowatt-hours (kWh).

<sup>c</sup> Loveland Area Projects include Fryingpan-Arkansas Project and the Western Division of the Pick-Sloan Missouri Basin Program.

<sup>d</sup> Pacific Northwest-Southwest Intertie shows no energy sales, but reflects revenues from the transmission of energy (refer to the Estimate of Revenues table). The Intertie Project is for transmission of energy only.

<sup>e</sup> Salt Lake City Area Integrated Projects include the Colorado River Storage Project, Collbran Project, Rio Grande Project, Seedskaadee Project, and Dolores Project.

## Estimate of Proprietary Receipts

(dollars in thousands)

	FY 2010 Actual	FY 2011	FY 2012	FY 2013	FY 2014	FY 2015	FY 2016
<b>MANDATORY</b>							
Falcon Amistad Maintenance Fund, 89517810	969	220	220	220	220	220	220
Sale and transmission of electric power, Falcon and Amistad Dams, 89224500	1,500	1,098	1,213	1,060	859	601	271
Sale of Power and Other Utilities Not Otherwise Classified, 89224900	68,633	30,000	30,000	30,000	30,000	30,000	30,000
Sale of Power–Western–Reclamation Fund, 89500027	173,086	94,241	130,721	173,423	179,084	146,357	96,333
<b>Total, Mandatory Receipts</b>	<b>244,188</b>	<b>125,559</b>	<b>162,154</b>	<b>204,703</b>	<b>210,163</b>	<b>177,178</b>	<b>126,824</b>
<b>DISCRETIONARY</b>							
Offsetting Collections from the recovery of power related expenses – Western – 895068	164,894	—	306,541	311,813	324,626	331,094	344,216
Less Purchase Power and Wheeling expenses	-164,894	—	-306,541	-311,813	-324,626	-331,094	-344,216
<b>Subtotal, 895068</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Offsetting Collections from the recovery of annual expenses – Western - 895068	147,530	—	189,932	193,753	199,323	205,207	211,276
Less Operating and Maintenance expenses	-37,038	—	-33,323	-33,567	-34,233	-34,976	-35,735
Less Program Direction expenses	-110,492	—	-156,609	-160,186	-165,090	-170,231	-175,541
<b>Subtotal, 895068</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
Offsetting Collections from the recovery of power related expenses – Falcon Amistad Maintenance – 895178	2,348	—	3,949	4,100	4,300	4,557	4,885
Less Operating and Maintenance expenses	-2,348	—	-3,949	-4,100	-4,300	-4,557	-4,885
<b>Subtotal, 895178</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>Subtotal, Discretionary Receipts</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>	<b>0</b>
<b>TOTAL, PROPRIETARY RECEIPTS</b>	<b>244,188</b>	<b>125,559</b>	<b>162,154</b>	<b>204,703</b>	<b>210,163</b>	<b>177,178</b>	<b>126,824</b>

## Status of Treasury Borrowing

(dollars in millions)

	Direct Financing with Treasury		
	FY 2010	FY 2011	FY 2012
Total Legislated Treasury Borrowing Authority	3,250	3,250	3,250
Start-of-Year – Total Borrowing Authority Available	3,250	3,110	3,013
Annual Activity			
Annual Borrowing Plan	-140	-97	-59
Repayment	0	0	10
Subtotal, Annual Activity	-140	-97	-49
Total, Remaining Treasury Borrowing Authority	3,110	3,013	2,964

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

Western’s estimate for the use of borrowing authority includes funding for the construction of projects selected to date, as impacted by interest rates and other cash management factors. In executing its mandate under the Recovery Act, Western will update estimates in subsequent reporting periods as projects are added to reflect an accurate balance of legislated borrowing authority.

Borrowing authority will fund the construction of infrastructure by external partners(s) or Western. When its partners perform the work, Western will report only the direct financing with Treasury. When work is performed internally, Western will use existing financial system and related accounting and business rules to isolate project obligations and expenditures, and will expand the table to incorporate this information. Western will also isolate project revenues in the same manner. Any and all reporting will be available at the individual project level, but reported cumulatively in the table above.



# **Bonneville Power Administration**



# **Bonneville Power Administration**



## **Bonneville Power Administration**

### **Proposed Appropriations Language**

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

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

### ***Explanation of Changes***

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

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

BPA finances its operations with a business-type budget under the Government Corporation Control Act, 31 U.S.C 9101-10, on the basis of the self-financing authority provided by the Federal Columbia River Transmission Act of 1974 (Transmission Act) (Public Law 93-454) and the U.S. Treasury borrowing authority provided by the Transmission Act, the Pacific Northwest Electric Power Planning and Conservation Act (Pacific Northwest Power Act) (Public Law 96-501) for energy conservation, renewable energy resources, capital fish facilities, and other purposes, the American Recovery and Reinvestment Act of 2009 (Public Law 111-5), and other legislation. Authority to borrow from the U.S. Treasury is available to the BPA on a permanent, indefinite basis. The amount of U.S. Treasury borrowing outstanding at any time cannot exceed \$7.70 billion. BPA finances its approximate \$4.7 billion annual cost of operations and investments primarily using power and transmission revenues and borrowing from the U.S. Treasury at rates comparable to borrowings at open market sales for similar issues.

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

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

## Bonneville Power Administration

### Overview

#### Summary by Program

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

#### Outyear Summary

(accrued expenditures in thousands of dollars)								
	FY	2013	FY	2014	FY	2015	FY	2016
CAPITAL INVESTMENTS								
Power Services		384,807		393,625		427,798		465,707
Transmission Services		577,020		560,489		423,405		356,437
Capital Equipment & Bond Premium		43,904		43,175		54,108		44,160
Total, Capital Investments		1,005,731		997,289		905,311		866,304
Accrued expenditures will require budget obligations of		1,005,731		997,289		905,311		866,304
Operating Expenses		3,376,932		3,462,596		3,618,538		3,770,632
Projects Funded in Advance <sup>1/</sup>		53,198		44,057		38,493		41,460
Total, Obligations		4,435,861		4,503,942		4,562,342		4,678,396
Capital Transfers (cash)		192,969		102,120		89,780		78,285
BPA Total		4,628,830		4,606,062		4,652,122		4,756,681
BPA Net Outlays		(10,000)		(10,000)		(10,000)		(10,000)
BPA Staffing (FTE)		3,175		3,175		3,175		3,175

## Overview

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

<sup>1/</sup> PFIA for Transmission Services paid by customers.

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

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

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

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

FTE outyear data are estimates and may change.

## **Preface**

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

The organization of Bonneville's FY 2012 Budget reflects Bonneville's business services basis for utility enterprise activities. Bonneville's two major areas of activity on a consolidated budget and accounting basis include Power Services (PS) and Transmission Services (TS) with administrative costs included. The PS includes line items for Fish and Wildlife, Conservation and Energy Efficiency, Residential Exchange Program (REP), Associated Projects O&M Costs, and Northwest Power and Conservation Council (Planning Council, Council).

## **Mission**

The mission of Bonneville as a public service organization is to create and deliver the best value for its customers and constituents as it acts in concert with others to assure the Pacific Northwest:

- An adequate, efficient, economical and reliable power supply;
- An open access transmission system that is adequate for integrating and transmitting power from Federal and non-Federal generating units, providing service to BPA's customers, providing interregional interconnections, and maintaining electrical reliability and stability; and
- Mitigation of the Federal Columbia River Power System (FCRPS) impacts on fish and wildlife.

Bonneville is legally obligated to provide cost-based rates and public and regional preference in its marketing of power. Bonneville will set its rates as low as possible consistent with sound business principles and sufficient to ensure the full recovery of all of its costs, including timely repayment of the Federal investment in the system.

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

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

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

## **Benefits**

Bonneville provides electric power (about one third of the electricity consumed in the region), transmission (about three-fourths of the region's high voltage transmission capacity), and energy efficiency throughout the Pacific Northwest. The Pacific Northwest is a 300,000 square mile service area that includes a population of about 12.3 million people. Bonneville markets the electric power produced from 31 operating Federal hydro projects in the Pacific Northwest owned by the U.S. Army

Corps of Engineers (Corps) and the U.S. Department of Interior, Bureau of Reclamation (Reclamation). Bonneville also acquires non-Federal power, including the power from the Columbia Generating Station (CGS), to meet the needs of its customer utilities. Bonneville owns and operates over 15,000 circuit miles of transmission lines, 259 substations and associated power system control and communications facilities over which this electric power is delivered. Bonneville has capital leases for certain transmission facilities. Bonneville also supports the protection and enhancement of fish and wildlife, and provides leadership in conservation and renewables development, as part of its efforts to preserve and balance the economic and environmental benefits of the FCRPS.

### **American Recovery and Reinvestment Act of 2009**

In the American Recovery and Reinvestment Act of 2009 (ARRA), Section 401 provides for an increase in the amount of BPA's Treasury bonds that may remain outstanding at any given time under the Federal Columbia River Transmission System Act (Transmission System Act). This \$3.25 billion increase in the limit on BPA's available Treasury bonds gives BPA the certainty of sufficient access to capital to proceed with planned new projects and ensures that existing capital projects will be able to proceed as planned.

BPA has identified up to \$2 billion in major projects for which it will use bonds authorized under ARRA and through FY 2010 has spent \$333 million on these projects. The projects will enhance transmission and hydro system infrastructure, create hundreds of new jobs, implement energy efficiency and construct fish hatcheries. The projects identified for ARRA financing are being developed now or are scheduled to be initiated or undergo environmental review in the next two years.

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

### **Annual Performance Results and Targets**

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

### **Program Perspectives**

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

### **Introduction**

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

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

The Bonneville Project Act of 1937 provided the statutory foundation for Bonneville's utility responsibilities and authorities. In 1974, passage of the Federal Columbia River Transmission System Act (Transmission Act) placed Bonneville under provisions of the Government Corporation Control Act (31 U.S.C. §§ 9101-9110). The Transmission Act legislation provided Bonneville with "self-financing" authority, established the Bonneville Fund (a permanent, indefinite appropriation) allowing Bonneville to use its revenues from electric power and transmission ratepayers to directly fund all programs, and authorized Bonneville to sell bonds to the Treasury to finance the region's high-voltage electric transmission system requirements.

In 1980, enactment of the Pacific Northwest Electric Power Planning and Conservation Act (Northwest Power Act) expanded Bonneville's obligations and responsibilities to: encourage electric energy conservation to meet regional electric power loads placed on Bonneville; develop renewable energy resources; and protect, mitigate and enhance the fish and wildlife of the Columbia River and its tributaries. In support of these responsibilities, Bonneville's Treasury borrowing authority was expanded to allow the sale of bonds to finance conservation and other resources and to carry out fish and wildlife related capital improvements.

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

Bonneville's program is treated as mandatory and nondiscretionary. Bonneville is "self-financed" by the ratepayers of the Pacific Northwest and is not annually appropriated by Congress. Under the Transmission Act, Bonneville funds the expense portion of its budget and repays the Federal investment with revenues from electric power and transmission rates. Bonneville's revenues fluctuate primarily in response to market prices for fuels and stream flow variations in the Columbia River System due to weather conditions and fish recovery needs. Through FY 2010, Bonneville has returned approximately \$26.4 billion to the Treasury for payment of FCRPS O&M and other costs (about \$3.1 billion), interest (about \$13.3 billion), and amortization (about \$10 billion) of appropriations and bonds.

In this FY 2012 Budget, the term BPA "bonds" refers to all bonds issued by BPA to and advances received from the Treasury. This reference is consistent with section 13(a) of the Transmission Act (PL Law 93-454), which defines BPA bonds as all bonds, notes, and other evidences of indebtedness issued and sold to the Treasury.

Bonneville and Treasury completed negotiations in April 2008 on an agreement to establish a new, more formal and detailed banking arrangement that meets key aims of each agency. The comprehensive arrangement covers BPA's short- and long-term Federal borrowings and establishes a phased-in approach to a market-based investing program. This adds flexibility for BPA's federal borrowings and provides BPA the ability to borrow for Northwest Power Act-related operating expenses. This ability provides BPA with much needed liquidity to help manage within-year cash flow needs and mitigate risk. Access to this use of borrowing authority has been incorporated into and relied upon in BPA's rate-setting process.

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

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

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

Estimates of interest and amortization levels for outyear Treasury payments are based on estimates from the 2010 final transmission and power rate case proposals. Bond and Appropriations Interest will continue to be revised based on upcoming capital investments and debt management actions. These estimates may change due to revised capital investment plans and actual Treasury borrowing. In recent years, BPA has made amortization payments in excess of those scheduled in its FERC-approved rate filings resulting in a balance of advance repayment. The cumulative amount of advance amortization payments as of the end of FY 2010 is about \$2,574 million. Amortization estimates in this FY 2012 Budget include planned amortization in advance of scheduled amortization (due to earlier EN debt optimization refinancing) in FYs 2011 and 2012 of \$70 million and \$53 million, respectively, consistent with rate case documentation.

Starting in FY 1997, Bonneville began direct funding the Reclamation's Pacific Northwest power O&M costs, and in FY 1999, Bonneville began direct funding the Corps' Pacific Northwest power O&M costs. Bonneville began direct funding the U.S. Fish and Wildlife Service (USFWS) in FY 2001 to pay for O&M costs of the Lower Snake River Compensation Plan facilities. Bonneville's direct funding arrangement includes a portion of power O&M and capital investments. Direct funded capital costs, previously funded through appropriations, are now being paid through BPA borrowing from the Treasury. BPA's total direct funding, including the small capital program, was \$277 million in FY 2010.

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



transfers in FY 2012. The budget has been prepared on the basis of Bonneville's major areas of activity, power and transmission. This reporting structure arose as a response to FERC Orders requiring BPA to employ separate repayment studies for its generation and transmission functions to determine the repayment requirements for each.

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

### **Current Financial Status**

- BPA is striving to enhance its competitive, cost-effective delivery of utility products and services and continued delivery of the public benefits of its operations, while ensuring its ability to make its payments to the Treasury on time and in full. BPA utilizes a strategic planning process using the balanced scorecard model to align all business units around specific goals and align resources to achieve these goals. Results from these efforts include continued efficiency gains, performance integration improvements, and a high assurance for repayment of Treasury borrowing.
- After many years of sustained effort, BPA recovered from the financial effects of the 2000-2001 west coast power crisis. Continued cost management efforts helped BPA regain adequate reserve levels despite mostly below-average water years. These gains are helping BPA continue its efforts to assure full recovery of its costs and to assure long-term financial stability while meeting its overall responsibilities to the Pacific Northwest and the U.S. taxpayer. In 2010, BPA experienced low water conditions and the effects of an economic downturn. BPA did not achieve its modified net revenue target for the year, but the financial reserves BPA established resulted in BPA's still making the annual scheduled Treasury repayment in full.
- Power and transmission rates for FY 2010 and 2011 received final approval from FERC on August 6, 2010.
- Bonneville released its Long-Term Regional Dialogue Policy and Record of Decision (Regional Dialogue Policy) in July 2007. The Regional Dialogue Policy helped define how Bonneville will market its wholesale power after FY 2011 and to ensure it does so in a way that meets key regional and national energy goals and ensures BPA's ability to meet its Treasury obligations.
- Bonneville and 135 of its Northwest utility customers signed new power sales contracts in 2008 under which power deliveries will begin in October 2011. BPA is currently preparing a Resource Program to identify any gaps in its power supply and suggest types and amounts of resources to fill those gaps, as guided by the Council's Northwest Power Plan.

### **Infrastructure Investment**

- Bonneville is planning infrastructure investments in the Pacific Northwest to meet Northwest transmission needs that will also continue to support a competitive wholesale market in the Western Interconnection, which encompasses 14 western states, two Canadian provinces and one Mexican State. Construction of the 79 mile McNary-John Day line and three additional proposed

transmission lines would add more than 220 miles of lines to the Northwest transmission grid, improving reliability and allowing BPA to provide service to about 3,881 MWs of requests for BPA transmission, including service for 3,138 MWs of additional green energy. The proposed transmission lines include BPA's recently announced I-5 Corridor Reinforcement Project, which is currently undergoing environmental review. If built, that project would meet growing local and regional energy demands and help bolster the BPA transmission system to accommodate energy deliveries, including wind power.

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

### **Budget Estimates and Planning**

- This FY 2012 Budget includes capital and expense estimates based on BPA's Integrated Program Review (IPR) draft decisions. FY 2010 costs are based on BPA's FY 2010 audited actual financial results.
- Capital funding levels reflect BPA's capital asset management process and external factors such as the significant changes affecting the West Coast power and transmission markets, along with planned infrastructure investments designed to address the long-term needs of the region and national energy security goals.
- Capital investment levels in this FY 2012 Budget reflect executive management decisions from BPA's Capital Allocation Board (CAB) and the associated capital review process. BPA utilizes a

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

- The FYs 2011-2016 revenue estimates in this budget, included in the Net Outlay formulation, are calculated consistent with cash management goals. The revenue estimates reflect assumed adjustments, which include the use of a combination of tools; for example, upcoming rate adjustment mechanisms, reduced cost estimates, a net revenue risk adjustment, debt management strategies, and/or short-term financial tools to manage net revenues and cash. The revenue estimates also include depreciation and Treasury repayment credit assumptions. These repayment credits offset, among other things, BPA's fish and wildlife program costs allocable to the non-power project purposes of the FCRPS, consistent with the Northwest Power Act. Net Outlay estimates reflect current cost saving actions taken to date and anticipated cash management goals. Net Outlay estimates are expected to reflect anticipated management decisions throughout the rate period that, along with actual market conditions, will impact revenues and expenses.
- The REP was created by the Northwest Power Act to extend the benefits of low-cost Federal power to the residential and small farm customers of Pacific Northwest electric utilities that meet certain conditions. In 2000, BPA and the region's six investor-owned utilities (IOUs) signed agreements that attempted to settle the REP for 10 years and discontinued implementation of a traditional REP. In May 2007, the U.S. Court of Appeals for the Ninth Circuit held that the REP Settlement Agreements reached with IOUs were not consistent with the Northwest Power Act. The WP-07 Supplemental rate case was conducted in 2008 to respond to the court's rulings and revise power rates for FY 2009. The 2007 Supplemental Wholesale Power Rate Case Administrator's Final Record of Decision, studies and documentation for the WP-07 Supplemental rate case determined the amount by which the Preference Customers were overcharged in FYs 2002-2006 as a result of the REP settlements, the PF and PF Exchange rates for FY 2009, as well as the magnitude of the initial amount to be returned to the Preference Customers in FY 2009 for overcharges during FYs 2002-2006. See the BPA/Power Services-Operating Expense section of this FY 2012 Budget for a more complete discussion of REP.
- The Energy Policy Act of 2005 authorized FERC to approve and enforce mandatory electric reliability standards with which users, owners and operators of the bulk power system, including BPA, are required to comply. These standards became enforceable on June 18, 2007, and compliance is monitored by NERC and the regional reliability organizations. DOE has taken the position that financial penalties may not be imposed on federal agencies for violations of electric reliability standards.
- BPA estimates full time equivalent (FTE) to increase somewhat from 3,043 FTE in FY 2010 to 3,175 during the FY 2013 thru FY 2016 time period. BPA continues to consider various authorities, including the use of Voluntary Early Retirement Authority (VERA) to help achieve targeted levels.

## **Fish and Wildlife Program Overview**

- Bonneville is committed to continue funding its share of the region's efforts to protect listed Columbia Basin fish and wildlife. To the extent possible, Bonneville is integrating the actions implemented in response to the FCRPS Biological Opinions (BiOps), including the National Oceanic and Atmospheric Administration (NOAA) Willamette River BiOp and the United States Fish and Wildlife Service's (USFWS) 2006 Libby Dam BiOp, with projects implemented under the Council's Fish and Wildlife Program. Sub-basin plans that include prioritized strategies for mitigation actions will help guide project selection to meet both BPA's ESA and Northwest Power Act responsibilities.
- Bonneville's Fish and Wildlife program provides for extensive protection, mitigation, and enhancement of Columbia River Basin fish and wildlife adversely affected by the development and operation of Federal hydroelectric projects on the Columbia River and its tributaries from which Bonneville markets power. Bonneville satisfies a major portion of its fish and wildlife responsibilities by funding projects and activities consistent with the Council's Fish and Wildlife Program (Program) developed pursuant to Section 4(h) of the Northwest Power Act. Through the Program BPA also implements measures addressed to the protection of fish in the Columbia River and its tributaries, listed as threatened or endangered under the ESA. Bonneville pursues a comprehensive approach to integrate the ESA requirements of the FCRPS BiOps with the broad resource protection, mitigation and enhancement objectives of the Program.
- BPA, the Corps and Reclamation signed historic 10-year agreements, known as the Columbia Basin Fish Accords, with five Columbia Basin Indian tribes and two states in 2008. In 2009, an agreement was signed with the state of Washington and federal agencies (the state of Washington Estuary agreement). These agreements provide specific hydro, habitat, hatchery and other measures that will address protection needs and provide measurable biological benefits for fish. The agreements set a course of action for protection of salmon and steelhead listed for protection under the ESA and other important non-listed populations.
- Included with the budget schedules section of this budget document is the current tabulation of Bonneville's fish and wildlife costs from FY 2000 through 2010.

## **Overview of Detailed Justifications**

Bonneville's Detailed Justification Summaries, included in this FY 2012 Budget, follow present budget requirements for budget line items on the basis of accrued expenditures. Accrued expenditure is the basis of presenting Bonneville's program funding levels in the power and transmission rate making processes and the basis upon which Bonneville managers control their resources to provide products and services. Accrued expenditures relate period costs to period performance. Traditional budget obligation requirements for Bonneville's budget are assumed on the Program and Financing Summary Schedule prepared in accordance with OMB Circular A-11.

The organization of BPA's FY 2012 Budget and these performance summaries reflect Bonneville's business services basis for utility enterprise activities. Bonneville's major areas of activity on a consolidated budget and accounting basis include power and transmission with administrative costs

included. PS includes line items for Fish and Wildlife, Conservation and Energy Efficiency, REP, Associated Projects O&M Costs, and the Council. Environmental activities are shown in the relevant PS and TS sections, as are reimbursable costs. Bonneville's interest expenses, pension and post-retirement benefits and capital transfers to the Treasury are shown by program.

The first section of performance summaries, Capital Investments, includes accrued expenditures for investments in electric utility and general plant associated with the FCRPS generation and transmission services, conservation and energy efficiency services, fish and wildlife, and capital equipment. These capital investments will require budget obligations and expected use of \$937 million in bonds to be sold to the U.S. Treasury in FY 2012.

The near-term forecast capital funding levels have undergone an extensive internal review as a result of the capital asset management strategy. These capital reviews encompass project cost management initiatives, capital investment assessments, and categorization of capital projects to be funded based on risk and other factors. Consistent with BPA's near-term capital funding review process and BPA's standard operating budget process, this FY 2012 Budget includes updated capital funding levels for FY 2011. Utilizing this review process helps Bonneville in its efforts to compete in the deregulated wholesale energy market. Bonneville will continue to work with the Corps and Reclamation to optimize the best mix of projects.

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

Bonneville's second section of the performance summaries, entitled Annual Operating Expenses, includes accrued expenditures for services and program activities financed by power sales revenues, transmission services revenues and projects funded in advance. For FY 2012, budget expense obligations are estimated at \$3,195 million. The total program requirements of all Bonneville programs include estimated budget obligations of \$4,185 million in FY 2012.



## Bonneville Power Administration

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

(accrued expenditures in thousands of dollars)

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

#### Public Law Authorizations include:

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

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

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

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

## Outyear Funding Profile by Subprogram 1/

(accrued expenditures in thousands of dollars)

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

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

- <sup>1/</sup> This budget has been prepared in accordance with the Budget Enforcement Act (BEA) of 1990. Under the BEA all BPA budget estimates are treated as mandatory and are not subject to the discretionary caps included in the BEA. These estimates support activities which are legally separate from discretionary activities and accounts. Thus, any changes to BPA estimates cannot be used to affect any other budget categories which have their own legal dollar caps. Because BPA operates within existing legislative authority, BPA is not subject to BEA "pay-as-you-go" test regarding its revision of current-law funding estimates.
- <sup>2/</sup> Original estimates reflect BPA's FY 2011 Congressional Budget Submission. Revised estimates, consistent with BPA's annual near-term funding review process, provide notification to the Administration and Congress of updated capital and expense funding levels for FY 2011.
- <sup>3/</sup> 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.
- <sup>4/</sup> Power Services includes Fish & Wildlife, Residential Exchange Program, Planning Council, Conservation & Energy Efficiency and Associated Project Costs which have been shown separately for display purposes.
- <sup>5/</sup> This FY 2012 budget includes capital and expense estimates based on preliminary IPR forecasted data for FYs 2011-2016.
- <sup>6/</sup> PFIA for Transmission Services paid by customers.

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

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



## **Major Outyear Considerations**

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

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



## Power Services - Capital

### Funding Schedule by Activity

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

### Outyear Funding Schedule

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

#### **Description**

Associated Project Costs provide for direct funding of additions, improvements and replacements of existing Reclamation and Corps hydroelectric projects in the Pacific Northwest that provide for increased performance and availability of generating units. The FCRPS hydro projects produce electric power that is marketed by Bonneville.

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

Since the beginning of direct funding, Bonneville, along with these joint operating partners, has improved system performance. In 1999, at the direction of Congress, Bonneville issued a report that it soon began to implement called the “Asset Management Strategy for the FCRPS.” Bonneville concluded in this report that it needed to invest nearly \$1 billion in the projects over the ensuing 12-15 years. Without these investments, which are focused on restoring and maintaining the reliability of the system, history indicates that unit availability may initially decline at a rate of about 1.5 percent per year. Supplementary analyses and experience with the system have revealed additional investment needs above and beyond the levels originally planned under the Asset Management Strategy for this and the next several rate periods. In late 2008, BPA completed a System Asset Plan that effectively updated the 1999 Asset Management Strategy and refined the long-term capital investment needs to preserve the performance of the system.

These planned investments, included in the FY 2012 Budget estimates, will maintain the generation performance of the FCRPS. Moving forward with the cost-effective opportunities to expand the generation and to preserve and enhance the capability of the Federal system is a smart economic and environmental decision when compared to purchasing power from the market to serve growing Pacific Northwest electricity needs.

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

The 1996 Energy and Water Appropriations Act added section 4(h)(10)(D) to the Northwest Power Act, directing the Council to appoint an Independent Scientific Review Panel (ISRP) "to review a sufficient number of projects" proposed to be funded through Bonneville's fish and wildlife budget "to adequately ensure that the list of prioritized projects recommended is consistent with the Council's program." The Northwest Power Act further states that "... in making its recommendations to Bonneville, the Planning Council shall consider the impact of ocean conditions on fish and wildlife populations; and shall determine whether the projects employ cost effective measures to achieve program objectives." Today, most mitigation projects funded by Bonneville receive ISRP review as part of the Council recommendation process. The Council has shifted to a multi-year project review cycle during which the ISRP will review categories of projects grouped together; e.g., all terrestrial wildlife projects were recently reviewed. The Council plans to continue this review cycle in 2011.

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

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

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

The ESA measures are part of the most recent BiOps issued by the National Oceanic and Atmospheric Administration Fisheries Service (NOAA) and the USFWS.

- In February 2006, USFWS issued a new BiOp for Libby Dam for the Kootenai River white sturgeon and bulltrout.
- In May 2008, NOAA issued a new FCRPS BiOp for salmon and steelhead, augmented in a 2010 Supplemental BiOp and Adaptive Management Implementation Plan, which continue to be challenged in Oregon District Court. A court decision is expected in 2011.
- In July 2008, USFWS and NOAA issued Willamette River BiOps to address impacts from 13 federal dams on salmon, steelhead, Oregon chub, and bull trout.

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

In addition to the 2008 NOAA FCRPS BiOp, the action agencies also signed the 2008 Columbia Basin Fish Accords (Fish Accords) with five Northwest Tribes, and the states of Idaho and Montana. In 2009, an agreement was signed with the state of Washington and federal agencies (the state of Washington Estuary agreement). The Fish Accords supplement the activities encompassed within the 2008 BiOp and the Council's Program by providing firm commitments to mitigation actions and securing funding for the next 10 years. As a result of the new BiOp and the Accords, as discussed below, expenditures above and beyond those planned in FY 2009 are required in FY 2011 and beyond.

These BiOps and Fish Accord commitments, and other projects undertaken to implement the Columbia Basin Fish and Wildlife Program pursuant to the Northwest Power Act, are the basis for BPA Environment, Fish and Wildlife division's planned capital investment.

Conservation is an important part of Bonneville's diverse portfolio of resources that provides a reliable approach to meeting Bonneville's load obligations. When acquiring resources to meet planned future loads, the Northwest Power Act requires the Administrator to first consider and acquire cost-effective conservation that the Administrator determines is consistent with the Northwest Power and Conservation Council's Power Plan. The Council's 6<sup>th</sup> Power Plan,

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

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

### Detailed Justification

(dollars in thousands)

FY 2010	FY 2011	FY 2012
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#### Associated Project Costs

**148,103    170,252    209,329**

BPA will work with both the Corps and Reclamation to reach mutual agreement on those capital improvement projects that need to be budgeted and scheduled, are cost-effective and provide system or site-specific enhancements, increase system reliability, or provide generation efficiencies.

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

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

**FY 2010:** Continued hydro optimization investigations and equipment installations at selected projects through the power plant efficiency improvements project and continued pursuing governor design and replacement at multiple plants.

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

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

(dollars in thousands)

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

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

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

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

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

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

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

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

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

(dollars in thousands)

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

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

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

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

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

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

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

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

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

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

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



(dollars in thousands)

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

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

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

For Dworshak, complete emergency notification upgrade and elevator upgrades.

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

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

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

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

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

**FY 2012:** Continue hydro optimization investigations and equipment installations at selected projects through the power plant efficiency improvements project.

For Bonneville, complete protective relay replacements, governor replacements, headgate refurbishment/replacements and additional crane and deck refurbishments, and continue main unit breakers and fire protection upgrades.

(dollars in thousands)

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

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

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

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

For Libby, complete exciter replacement.

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

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

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

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

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

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

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

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

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

(dollars in thousands)

FY 2010	FY 2011	FY 2012
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replacements, third power plant exciter replacements, third power plant governor replacement, left power plant spare transformer purchases, third power plant high voltage cable replacement, units 19-20 upgrades including winding replacements, purchase of another left and right powerhouse spare winding, third power plant crane rehabilitation, fixed wheel gate chamber

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

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

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

For Palisades, continued turbine runner replacement.

For Chandler, continued exciter replacement and transformer replacement.

For Roza, completed exciter replacements.

For Green Springs, continued transformer replacement. .

**FY 2011:** For Grand Coulee, complete units 1-18 turbine runner replacements, 11.95 kV switchgear replacement, and fixed wheel gate chamber modification. Continue SCADA replacement, 500 kV switchyard relay replacements, air housing cooler replacements, several transformer replacements, third power plant exciter replacements, third power plant governor replacement, left power plant spare transformer purchases, third power plant high voltage cable replacement, units 19-20 upgrades including winding replacements, purchase of another left and right powerhouse spare winding, third power plant crane rehabilitation, third power plant elevator rehabilitation, construction of a material storage building, and hydro optimization investigations with related equipment installations.

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

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

For Palisades, continue turbine runner replacement.

For Chandler, complete exciter replacement and continue transformer replacement.

For Green Springs, complete transformer replacement.

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

(dollars in thousands)

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

material storage building. Continue SCADA replacement, air housing cooler replacements, third power plant transformer replacement, third power plant exciter replacements, third power plant governor replacements, left power plant spare transformer purchases, units 19-20 upgrades including winding replacements, third power plant crane rehabilitation, and hydro optimization investigations with related equipment installations. Start right power plant station service upgrades and units 19-24 wear ring replacements.

For Hungry Horse, continue SCADA replacement.

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

For Palisades, continue turbine runner replacement.

For Chandler, complete transformer replacement.

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

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

The following fish facilities have been submitted for Congressional approval for FY 2012 as authorized by the Pacific Northwest Electric Power Planning and Conservation Act for new fish and wildlife facilities of at least \$1 million and an economic life greater than 15 years (PL 96-501, sec.4.(H)(10)(B)): The Kootenai River Native Fish Conservation Aquaculture Program, Lolo Creek Permanent Weir Facility, and Improving Anadromous Fish production on the Warm Springs Reservation. See Proposed Appropriations Language included earlier in this FY 2012 Budget.

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

**Bonneville Power Administration/  
Power Services - Capital**

**FY 2012 Congressional Budget**

(dollars in thousands)

FY 2010	FY 2011	FY 2012
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provide high priority mitigation and recovery actions for fish and wildlife populations as affected by the construction and operation of the FCRPS power facilities, under the auspices of the Northwest Power Act and the Endangered Species Act, and other laws. Projects and facilities listed below deliver direct on-the-ground benefits to both ESA listed and non-listed fish and wildlife throughout the Columbia River Basin and have been evaluated and coordinated with the Northwest Power and Conservation Council, state, Federal and tribal fish and wildlife resource managers, local governments, watershed and environmental groups and other interested parties

FY 2010-2012 efforts include continued implementation of the Council's program in an integrated fashion, in particular proceeding with high priority ESA-related projects and activities associated with the currently operative NOAA and USFWS BiOps and Fish Accords. These capital facilities are typically planned in the Council's 3-Step process, which includes development of a Master Plan, environmental compliance, and review by the Independent Science Review Panel, among other analysis.

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

Although not subject to the Northwest Power Act's section 4(h)(10)(B), 16 U.S.C. § 839b(h)(10)(B), for capital construction projects, Bonneville may include capitalization of investment in some fish and wildlife habitat acquisitions provided such investment provides a creditable and quantifiable benefit against a defined obligation for Bonneville and follows Bonneville's Capitalization Policy.

The five types of capital projects as defined by the FY 2009 Power Rate Case are as follows:

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

(dollars in thousands)

FY 2010	FY 2011	FY 2012
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wetland and riparian habitat and provide credit to Bonneville, such as habitat units (HUs) for wildlife or instream miles for resident fish to fulfill the legal obligation of Bonneville to mitigate the impacts from construction and operation of the FCRPS power facilities.

Anadromous fish supplementation, production and related facilities, and juvenile and adult passage improvement projects that may require capital funds in FY 20122011 include the following:

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

Proposed facilities include dual water supplies and filtration, incubation rooms, juvenile rearing tanks and ponds, spawning channels, administrative/ biological support facilities and staff housing. The Tribe is also proposing the experimental use of remote streamside incubation and early rearing facilities to imprint Kootenai sturgeon upstream of the new hatchery site. The improvements the Tribe is proposing for the existing Tribal Sturgeon Hatchery near Bonners Ferry would enhance sturgeon handling and rearing capabilities. A new spawning room would eliminate the need to relocate large fish from one building to another. A safer means to transport large adults to and from the river would be provided, in addition to a number of measures to improve fish culture practices and program efficiency and success.

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

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

(dollars in thousands)

FY 2010	FY 2011	FY 2012
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sustainable, harvestable populations of wild spring Chinook in the Deschutes River Basin in perpetuity.

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

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

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

- Yakima River Spring Chinook Supplementation Facility (Located in Cle Elum, Washington): The central facilities for this project in Cle Elum are complete. The remaining work under this project is for final design and construction of a monitoring and evaluation building at the Nelson Springs site near Yakima, Washington, for on-going fisheries research and data analysis. The Nelson Springs M&E facilities construction is expected to be completed in FY 2011.

- Snake River Spring Chinook Salmon artificial propagation facilities (known as the Northeast Oregon Hatchery or NEOH): to be located on the Upper Grande Ronde River near La Grande, Oregon, on Catherine Creek near Union, Oregon, and on Lostine River near Enterprise, Oregon. While design has been ongoing for this project for several years, the decision to proceed with

(dollars in thousands)

FY 2010	FY 2011	FY 2012
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construction is pending ESA consultations and approval by NOAA Fisheries of a Hatchery and Genetic Management Plan for the facility. This project, as a measure in the Council's Fish & Wildlife Program, would also identify and develop artificial propagation facilities to protect and enhance salmon and steelhead native to the Imnaha and Grande Ronde River Basins.

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

-Nez Perce Tribal Hatchery: Additional rearing and acclimation facilities are requested as part of the existing Nez Perce Tribal Hatchery in Clearwater County, Idaho, for reintroduction of up to 700,000 coho smolts into the Clearwater River in Idaho. The Clearwater Coho Restoration Project is designed to address the absence of coho in the Clearwater subbasin where, historically, coho salmon were one of the species making up a complex multi-species anadromous ecosystem. The project goal is to restore coho salmon to the Clearwater sub-basin measured by 14,000 adults at Lower Granite Dam annually. Plans are to develop an integrated management plan to optimize the use of hatchery fish to meet recovery and harvest objectives. The sponsor, the Nez Perce Tribe, intends to seek an additional round of review for the Master Plan by the Council in 2011 with a goal of receiving a final recommendation to initiate environmental planning and design development in late 2011. Final design and construction approval could follow in late 2011 with possible construction starting in 2012.

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

- Chief Joseph Dam Hatchery: BPA is funding the construction of Chief Joseph Dam Hatchery Program, primarily a comprehensive management program for supplementing Chinook salmon to increase the abundance, productivity, distribution, and diversity of naturally spawning populations of summer/fall Chinook in the Okanogan River and in the Columbia River below Chief Joseph Dam, Washington (between the confluence of the Okanogan River and Chief



(dollars in thousands)

FY 2010	FY 2011	FY 2012
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Joseph Dam). Project includes a new hatchery facility (at the base of the Chief Joseph Dam). In addition, the Colville Tribes as sponsor will use the facility to reintroduce extirpated spring Chinook back into the Okanogan Subbasin. This Accord project includes a new hatchery facility (at the base of the Chief Joseph Dam) and acclimation ponds (throughout the Okanogan River sub-basin), broodstock collection, egg incubation, rearing, release, and selective broodstock collection method development. Planned production levels are 2 million summer/fall chinook and 0.9 million spring chinook smolts. BPA has entered into an agreement with one public utility where that utility will pay a portion of the capital and operation and maintenance costs associated with this hatchery. In addition, BPA has agreed in principle with two other public utilities to pay a portion of the operation and maintenance costs. Construction on the hatchery facility was initiated in 2010.

Additionally, BPA is considering the efficacy of a weir on the lower Okanogan River. The weir would ensure cost-effective collection of hatchery broodstock, as well as provide significant benefits to management and conservation of steelhead and other salmon species in the Okanogan River by managing the proportion of hatchery fish allowed to spawn in the wild.

- Klickitat Production Expansion: The Klickitat River Master Plan was completed by the Yakama Nation, reviewed by the ISRP, recommended by the Council, and approved by BPA in 2008. The plan's goal is to protect and increase naturally producing populations of spring chinook and steelhead that support harvest while protecting the biological integrity and the genetic diversity of indigenous fish stocks in the sub-basin. The Klickitat Master Plan includes three main elements: Lyle Falls Fishway replacement, Castile Falls passage improvements, and upgrades to the Klickitat hatchery with the potential for also and constructing a new facility to accommodate the ongoing production of coho and fall Chinook. In early 2009 BPA completed the Lyle Falls Environmental Impact Statement (EIS) and ROD. In 2009, final designs for construction of the Lyle and Castile Falls passage improvements, the enumeration and collection facilities at Lyle and Castile, as well as certain Klickitat hatchery upgrades necessary for maintenance of existing program activities and hatchery safety concerns were completed. Limited hatchery upgrades started in late 2009, and construction at Lyle and Castile Falls began in the spring of 2010. The work at Castile and Klickitat Hatchery is scheduled for completion fall of 2010, with completion of Lyle Falls construction anticipated in for winter 2011. A new Klickitat Hatchery EIS was initiated in July 2009 that will examine options for the development and operation of new supplementation facilities and acclimation alternatives, and additional upgrades to the existing hatchery facility.

- Hood River Production Facility: This project includes expansion of existing Parkdale fish facility to accommodate spring chinook rearing, construction of new Hood River adult salmonid trapping facilities, and development of alternative adult trapping sites. The Powerdale Dam Fish Trap has provided the foundation for many of the activities associated with implementation of the Hood River Production Program. These include: monitoring escapement, collecting life history characteristics, and broodstock acquisition. Powerdale Dam, which is

(dollars in thousands)

FY 2010	FY 2011	FY 2012
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owned and operated by PacifiCorp, began to be decommissioned during the summer of 2010. The dam formed an integral part of the Powerdale Dam Fish Trap, as fish are shunted into the fish trap as they ascend the fish ladder at the facility. Removal of the dam will also remove the fish trapping facility. In order to continue implementing the production program, alternative trapping sites will need to be developed. The Hood River Production Program has four primary goals: 1) re-establish naturally sustaining runs of spring chinook in the Hood River; 2) re-build naturally sustaining runs of summer and winter steelhead in the Hood River; 3) maintain genetic characteristics of Hood River fish populations; and 4) provide fish for sustainable harvest by both sport and tribal fishers.

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

- Walla Walla Hatchery: Hatchery planning and design, based on the Hatchery Master Plan, is near completion. The next phase of the project, pre-design and permitting (environmental compliance) is underway. Construction for the proposed facility is scheduled to begin in FY2011. When complete, the facility will hold, spawn, incubate and rear spring Chinook on the South Fork Walla Walla River near Milton-Freewater, Oregon.

-Yakama Coho restoration: The goal of this restoration project, including associated facilities, is to restore extirpated coho salmon to the Yakima River basin at biologically sustainable levels. Before the ocean and lower Columbia exploitation of salmon and steelhead in the late 19th century and early 20th century, and before the Yakima River valley was developed with extensive agricultural irrigation systems, the Yakima Sub-basin supported large runs of spring, summer and fall Chinook, summer steelhead, coho and sockeye. Historical returns of coho to the Yakima River Basin have been estimated in the range of 44,000 to more than 100,000 fish annually. Cumulative effects from the disruption of the Yakima Sub-basin ecosystem functions and processes, out of sub-basin impacts, and harvest of salmon have resulted in a significant decline of fish and wildlife abundance from historic levels. Construction of proposed coho facilities may begin in FY 2013.

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

(dollars in thousands)

FY 2010	FY 2011	FY 2012
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- Grand Coulee and Chief Joseph Wildlife Habitat Acquisitions
- Albeni Falls Wildlife Mitigation
- Palisades and Minidoka Wildlife Habitat Acquisitions
- Black Canyon, Boise Diversion, Anderson Ranch Wildlife Habitat Acquisitions
- Willamette Wildlife Habitat Acquisitions
- Libby and Hungry Horse Reservoirs Resident Fish Acquisition

**Conservation and Energy Efficiency** **57,899** **80,000** **104,000**

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

BPA's conservation budgets reflect a ramp-up in regional conservation goals and the increasing cost of the conservation measures that must be implemented to achieve the targets. Specifically, BPA's conservation targets have increased from about 280 aMW under the Northwest Power and Conservation Council's 5<sup>th</sup> Power Plan (2005-09) to approximately 504 aMW under its 6<sup>th</sup> Power Plan (2010-14), the Northwest Power and Conservation Council's 6<sup>th</sup> Power Plan calls for the region to acquire approximately 1,200 aMW of conservation in 2010 to 2014. The cost of conservation is also increasing as the cost-effectiveness threshold increases and as market penetration is reached for some low-cost measures. Due to anticipated changes in federal lighting standards, for example, standard twister compact fluorescent lamps (CFLs), which were the largest single contributor to past savings, will not count towards the target beginning in 2012. The shift away from this particularly low-cost measure increases overall conservation costs. That cost increase is reflected in these budgets.

**Total Power Services – Capital**

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

## Explanation of Funding Changes

FY 2012 vs. FY 2010 (\$000)
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### Associated Project Costs

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

### Fish and Wildlife

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

### Conservation and Energy Efficiency

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

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**Total Funding Change, Power Services - Capital** **+116,221**

## Transmission Services – Capital

### Funding Schedule by Activity

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

### Outyear Funding Schedule

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

#### **Description**

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

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

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

In 2005, with the Congressional approval of wind tax credits, a number of potential wind generation companies made requests for interconnection to the BPA transmission grid. In 2007, BPA built facilities to connect up to 2,500 MW of wind generation and connected 650 MW. In 2008, 659 MW was connected and in 2009, 795 MW was connected to the FCRPS grid. Bonneville has more than 10,000 MW in additional wind project interconnection requests, many interconnecting in the 2010 through 2015 timeframe. BPA added 837 MW in 2010 and expects 1,370 MW in 2011. BPA plans a major construction phase in 2011-2013, building several new large substations to meet the interconnection requests. Current projections exceed 1,000 additional MW to interconnect in each of the years 2012 through 2015. Also in the interconnection queue is approximately 1,000 MW of natural gas, bio-mass and geothermal fueled generation proposed for connection between 2012 and 2015. Much of the wind generation demand is a result of the Renewable Portfolio standards enacted by Oregon and Washington that require an estimated 5,000 MW of renewable generation by 2015. Export to California could add another 2,000-3,000 MW during the same time period.

In June 2008, Bonneville's first Network Open Season (NOS) received 153 requests from 28 customers for 6,410 MW of new service, about three-fourths for wind energy integration. BPA subsequently offered 1,782 MW of new transmission service on its existing system. Bonneville identified four new Main Grid capital projects from the 2008 NOS: (1) McNary-John Day 500 kV transmission line (part of West of McNary Reinforcements Group 1), (2) Big Eddy-Knight 500 kV transmission line and substation (part of West of McNary Reinforcements Group 2), (3) Central Ferry- Lower Monumental 500 kV Reinforcement (formerly Little Goose Area Reinforcement), and (4) I-5 Corridor 500 kV Reinforcement. Construction of the McNary- John Day 500 kV transmission line is already underway and BPA is currently conducting NEPA review of the other three projects. If all four projects are constructed they will provide almost 3,881 MW of new transmission service.

BPA's second NOS window for new transmission service requests in 2009 resulted in 82 service requests resulting in 34 contracts totaling 1,553 megawatts. Of that, approximately 923 megawatts represent wind project interconnection requests. BPA is currently conducting cluster studies for the latest NOS. These requests total 3,759 megawatts, of which 2,993 megawatts is wind.

As noted, Bonneville's capital program for Transmission Services includes a wide variety of specific investments that are determined after internal review and, in some cases, external review. On occasion, capital investments must be made on short notice because of unexpected needs, because of the identification of obsolete, worn out, failed, failing, or at risk systems and facilities, because of system reliability requirements, and because near-term opportunities to install or construct facilities arise as outages occur or as schedules for outages change. For these and other reasons, Transmission Services capital program is fluid and subject to change. Thus, Bonneville is unable to predict with specificity many of the new capital investments in the transmission system. Nonetheless the types of investments can be identified in general. These items may include but are not limited to: arrestor, bus and bus pedestal, circuit breaker, circuit switcher, communication tower, concrete pole, control center mapboard and video wall displays, control house, converter grading capacitors, converter harmonic filters, converter smoothing

reactors, converter transformers, current limiting reactor, current limiting resistor, current transformer, digital fault locator, digital cross-connect system (DCS), disconnect switch, engine generator, engineered steel pole, fiber optic cable, fiber terminal, fuel dispensing facility, grounding system, grounding transformer, microwave multiplex transmitter, network management system (NMS), overhead conductor, overhead ground wire, power transformer, radio multiples transmitter, relay, revenue meter, series capacitor, shunt capacitor, shunt reactor, station service transformer, station service inverter, substation dead end tower, substation perimeter fence, switchyard lighting, thyristor, transfer switch, transmission steel tower, voltage regulator, voltage transformer, water/sewer system, wood pole and cross-arm, and other similar items consistent with Bonneville's capitalization policy determinations (such as spacer damper replacements).

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

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

In December 2004, the Congress passed and the President signed the Commercial Spectrum Enhancement Act (CSEA, Title II of P.L. 108-494), creating the Spectrum Relocation Fund (SRF) to streamline the relocation of Federal systems from certain spectrum bands to accommodate commercial use by facilitating reimbursement to affected agencies of relocation costs. The Federal Communications Commission has auctioned licenses for reallocated Federal spectrum, which will facilitate the provision of Advanced Wireless Services to consumers. Funds were made available to agencies in FY 2007 for relocation of communications systems operating on the affected spectrum. These funds are mandatory and will remain available until expended, and agencies will return to the SRF any amounts received in excess of actual relocation costs. The estimated BPA cost of this relocation is \$48.7 million.

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

In order to eliminate leases on multiple, separately located facilities, and meet the evolving needs of Bonneville's Transmission staff, BPA has begun preliminary study and design of a new Transmission Services Facility to be located on BPA's Ross Campus. Although the future costs

of this building are mentioned in the budget narrative, this building will be the subject to continuing conversations with BPA’s customers and regional stakeholders.

### Detailed Justification

(dollars in thousands)

FY 2010	FY 2011	FY 2012
<b>113,944</b>	<b>136,846</b>	<b>259,565</b>

#### Main Grid

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

- FY 2010: (1) Continued environmental analysis and preliminary engineering design for the I-5 Corridor Reinforcement project; (2) Continued construction of the Libby-Troy 115 kV transmission line upgrade; (3) Continued construction of the Olympic Peninsula Reinforcement project; (4) West of McNary Reinforcements Group 1 (WOMR 1)- completed design, procurement of materials, and continued construction; (5) West of McNary Reinforcements Group 2 (WOMR 2)- continued environmental review and preliminary design; (6) Completed the design and began construction for the Redmond 230/115 kV Bank #2; (7) Continued planning studies to identify needed infrastructure additions; (8) Central Ferry- Lower Monumental 500 kV Reinforcement (formerly Little Goose Area Reinforcement)- continued environmental review and preliminary design; (9) Continued planning studies and design to identify projects driven by NERC/ WECC Reliability standards; (10) Continued planning studies to identify system reactive needs to mitigate unacceptable low or high voltage problems and other system additions; (11) Continued planning studies to relieve transmission system congestion and for integrating potential new generation facilities; (12) Continued planning studies and design for projects related to the NOS.
  
- FY 2011: (1) Continue environmental analysis and continue design for the I-5 Corridor Reinforcement project (2) West of McNary Reinforcements Group 1 (WOMR 1)-continue construction; (3) West of McNary Reinforcements Group 2 (WOMR 2)- complete environmental review and preliminary design; (4) Complete construction for the Redmond 230/115 kV Bank #2; (5) Central Ferry- Lower Monumental 500 kV Reinforcement (formerly Little Goose Area Reinforcement)- complete environmental review and begin preliminary design; (6) Begin the planning and design to add a second 500/230 kV transformer at Ponderosa substation; (7) Continue planning studies to identify needed infrastructure additions; (8) Continue planning studies and design to identify projects driven by NERC/ WECC reliability standards; (9) Continue planning studies to



(dollars in thousands)

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

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

**Area & Customer Services**

**18,157**

**5,094**

**9,550**

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

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

(dollars in thousands)

FY 2010	FY 2011	FY 2012
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**Upgrades & Additions**

**78,548**

**96,492**

**123,041**

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

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

- FY 2010: (1) Negotiated and drafted agreement(s) for joint use fiber project from SnoKing to Bellingham; (2) Continued planning for upgrading two miles of fiber between Bonneville Power House and Bonneville Control House; (3) Continued planning, design, material acquisition and construction of special remedial action control schemes required for interconnecting new generation projects and mitigating immediate constrained paths; (4) Continued planning, design, material acquisition and construction of various system additions and upgrades necessary to maintain a reliable system for BPA’s service area; (5) Continued construction of secondary fiber related projects and digital radio system upgrades to improve the operational telecommunication system; (6) Continued design and began material procurement and construction to upgrade the main fiber optic backbone system (#KC and #NC systems); (7) Began planning and preliminary design for VHF Radio System upgrade; (8) Began planning and studies associated with a new Synchrophasor project; (9) Continued planning and technical studies for upgrade of the Pacific DC Intertie from 3100 to 3800 MW.
  
- FY 2011: (1) Complete joint use fiber project from SnoKing to Bellingham; (2) Begin design of upgrading 2 miles of fiber between Bonneville Power House and Bonneville Control House; (3) Continue planning, design, material acquisition and construction of special remedial action control schemes required for interconnecting new generation projects and mitigating immediate constrained paths; (4) Continue planning, design, material acquisition and construction of various system additions and upgrades necessary to maintain a reliable system for BPA’s service area; (5) Continue construction of secondary fiber related projects and digital radio system upgrades to improve the operational telecommunication system; (6) Continue design and begin material procurement and construction to upgrade the main fiber optic backbone system (#KC and #NC systems); (7) Continue design and construction of the VHF Radio System upgrade; (8) Begin design of Synchrophasor project as well as construction at some of the multiple

(dollars in thousands)

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

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

### **System Replacements**

**93,871**

**122,080**

**134,526**

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

### **Non-Electric Replacements:**

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

(dollars in thousands)

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

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

#### Electric Replacements:

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

(dollars in thousands)

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

**Projects Funded in Advance**

**158,726      113,224      52,470**

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

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

(dollars in thousands)

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

**Total, Transmission Services – Capital**

**463,246**

**473,736**

**579,152**

## Explanation of Funding Changes

FY 2012 vs. FY 2010 (\$000)
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### Main Grid

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

### Area & Customer Services

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

### Upgrades & Additions

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

### System Replacements

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

### Projects Funded in Advance

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

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





## Capital IT & Equipment/Capitalized Bond Premium

### Funding Schedule by Activity

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

### Outyear Funding Schedule

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

### Description

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

BPA continues to move its IT infrastructure to a more efficient architecture. This FY 2012 Budget supports this effort. IT continues to eliminate redundancies in tools and applications, establish an agency-wide IT architecture with standardized IT purchasing criteria, standardize software licensing processes and minimize agency liabilities through stronger contracts, apply continuous improvement practices to IT project management, and implement an agency IT portfolio cost management strategy. The IT estimates in this FY 2012 Budget, under Capital Information Technologies and Equipment include all IT functions within the agency except TS grid operations. See the Capital Program – Transmission Services section of this budget for additional discussion of transmission-related IT requirements acquisitions.

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

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

**Detailed Justification**

(dollars in thousands)

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

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.

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

<b>Total, Capital IT &amp; Equipment/Capitalized Bond Premium</b>	<b>51,964</b>	<b>51,615</b>	<b>47,185</b>
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**Explanation of Funding Changes**

FY 2012 vs. FY 2010 (\$000)
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**Capital Information Technology & Equipment**

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

**Capitalized Bond Premium**

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

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

### Funding Schedule by Activity

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

### Outyear Funding Schedule

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

#### **Description**

Production includes all Bonneville non-Federal debt service (including Energy Northwest debt service), O&M costs for power system generation resources, including a large nuclear plant, business operations, short- and long-term power purchases, electric utility marketing of power, and oversight of hydro and nuclear projects. BPA develops products and services to meet the needs of Bonneville customers and stakeholders, and acquires resources as needed. This FY 2012 Budget includes anticipated expenses for new long-term power purchases to meet the needs of Bonneville customers, that may include no more than 30 MW of waste energy recovery power acquired through a demonstration project testing the effectiveness of a “standard offer” approach to acquiring certified Clean Energy projects as defined in the Energy Independence and Security Act of 2007 (Public Law 110-140 December 19, 2007).

In FY2010, BPA completed a long-term Resource Program to guide potential future resource acquisitions needed to meet customer loads. In the event that BPA does acquire a resource, BPA will modify its budget to reflect the acquisition.

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

Associated Projects represents funding for operation and maintenance costs for the FCRPS, minor additions, improvements and replacements, and liabilities of the Corps and Reclamation hydroelectric projects in the Pacific Northwest, which serve many purposes. All agencies emphasize efficient power production from existing facilities and improvement of the performance and availability of power generating units. Bonneville pays additional financing costs of the

FCRPS facilities through its Interest Expense and Capital Transfer budget programs. Bonneville provides funding for the operations and maintenance costs that are part of the Lower Snake River Compensation Plan (LSRCP) hatcheries. Bonneville is responsible for annual payments to the Confederated Tribes of the Colville Reservation for their claims concerning their contribution to the production of hydropower by the Grand Coulee Dam in accordance with the Settlement Agreement between the United States and the Tribes (April 1994).

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

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

- In May 2008, NOAA issued a new FCRPS BiOp for salmon and steelhead, augmented in a 2010 Supplemental BiOp and Adaptive Management Implementation Plan, which continue to be challenged in Oregon District Court. A court decision is expected in 2011.
- In February 2006, USFWS issued a new BiOp for Libby Dam for the Kootenai River white sturgeon and bulltrout.
- In July 2008, USFWS and NOAA issued Willamette River BiOps to address impacts from 13 federal dams on salmon, steelhead, Oregon chub, and bull trout.

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

In addition, in 2008, the FCRPS Action Agencies signed agreements, the Fish Accords with five Northwest Tribes and the states of Idaho and Montana. In 2009, an agreement was signed with the state of Washington and federal agencies (the state of Washington Estuary Agreement). The Fish Accords support the 2008 and 2010 Supplemental BiOp and provide firm commitments to mitigation actions and secure funding for the next 10 years. BPA also signed a Willamette Wildlife Agreement with the State of Oregon in 2010 settling mitigation responsibilities for all wildlife impacts from the Federal dams in the Willamette Basin.

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

- increase survival of ESA-listed and non-listed fish at FCRPS dams and reservoirs;
- increase survival of ESA-listed and non-listed fish throughout their life cycle by protecting and enhancing important habitat areas;

- reform hatchery practices that affect ESA-listed populations and use hatcheries to contribute to conservation and recovery of ESA-listed and non-listed fish;
- provide for offsite mitigation projects for habitat, passage, and other improvements that address limiting factors for target species;
- reduce harvest-related mortality on ESA-listed and non-listed fish and support sustainable fisheries; and
- support a focused and well-coordinated research, monitoring, and evaluation program.

To the extent possible, Bonneville is integrating the actions implemented in response to the FCRPS BiOps with projects implemented under the Council's Fish and Wildlife Program. Sub-basin plans that include prioritized strategies for mitigation actions will help guide project selection that meets both BPA's ESA and Northwest Power Act responsibilities. In order to address the *in lieu* provision of the Northwest Power Act, which prohibits BPA from funding mitigation that other entities are authorized or required to undertake, BPA continues its ongoing work with the Council and the regional fish and wildlife managers, customers, and Tribes to review projects to ensure ratepayers fund appropriate mitigation. For example, BPA established a cost sharing MOU with the U.S. Forest Service in 2005 that requires a programmatic 30 percent cost share for FYs 2007-2009 for fish mitigation projects funded by BPA on U.S. Forest Service lands. BPA continues to operate in a cooperative manner with the U.S. Forest Service.

The Energy and Water Development Appropriations Act of 1996 added section 4(h)(10)(D) to the Northwest Power Act, directing the Council to appoint an Independent Science Review Panel (ISRP) "to review a sufficient number of projects" proposed to be funded through Bonneville's fish and wildlife budget "to adequately ensure that the list of prioritized projects recommended is consistent with the Council's program." The Northwest Power Act further states that "in making its recommendations to Bonneville, the Council shall consider the impact of ocean conditions on fish and wildlife populations and shall determine whether the projects employ cost effective measures to achieve program objectives." Today, most mitigation projects funded by Bonneville receive ISRP review as part of the Council recommendation process. The Council has shifted to a multi-year project review cycle during which the ISRP will review categories of projects grouped together; e.g., all terrestrial wildlife projects were recently reviewed.

The REP was created through the Northwest Power Act to extend the benefits of low-cost Federal power to the residential and small farm customers of Pacific Northwest electric utilities that meet certain conditions. The region's six Investor Owned Utilities have been the most active utilities participating in the REP. Payments made under the REP are based on the difference between BPA's utility-specific PF Exchange rates and each utility's average system cost (ASC), times the utility's residential and small farm loads. The process and calculation of ASCs are governed by the Average System Cost Methodology (ASCM) and established in a public process that occurs prior to a rate case. Then, the subsequent rate case uses those ASCs and determines the utility-specific PF Exchange rates. Payments are made monthly based on the actual exchange loads.

The Council's major activities include the periodic preparation of a Northwest Conservation and Electric Power Plan (a 20-year electric energy demand and resources forecast and energy conservation program) and a Columbia River Basin Fish and Wildlife Program of loss mitigation and resource enhancement actions. The Northwest Power Act directs that expenses of the Council, subject to certain limits based on forecasted Bonneville power sales, shall be included in

Bonneville’s annual budget to Congress. Funding for the Council is provided by Bonneville and is recovered through Bonneville power rates.

BPA will acquire conservation resources consistent with the Council’s Power Plan and act as a catalyst for energy efficiency. Such action will: 1) meet conservation targets; 2) achieve a least cost resource mix; 3) lessen the cost impacts of power purchases; 4) avoid the costs of ramping programs and infrastructure up and down; 5) extend the value of the FCRPS to customers; and 6) build the region’s resource portfolio with conservation. Bonneville is also exploring how best to integrate demand-side management, distributed generation, and other leading edge technologies (i.e., Energy Web and Smart Grid applications) into its generation and transmission planning processes.

### Detailed Justification

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

- **Power Purchases:** Includes purchased power to cover power supply obligations as well as balancing the hydro system. These purchases can be made in the form of long-term purchases to meet supply obligations based on long-term planning requirements or they can be made within the year due to the monthly shape of the loads and the monthly shape of the hydro electric generation. Also, purchases can be made within the month and within the day to fill shortages due to fluctuations in the hydro system and load changes.
- **Power Scheduling/Marketing:** Schedule and market (buy/sell) electric energy with Bonneville customers and the Pacific Northwest’s interconnected utilities. Scheduling includes PS’s implementation of physical and memo power schedules and associated transmission schedules, implementation of Electronic Tagging (ETag) in accordance with NERC and in accordance with FERC, implementation of electronic scheduling and the Columbia Grid as it evolves.
- **Trojan:** Decommissioning activities are complete and the Trojan operating license has been terminated by the NRC. BPA’s 30 percent share of the operation and maintenance costs for the Independent Spent Fuel Storage Installation facility continues.
- **Columbia Generating Station (formerly WNP-2):** Continue to acquire full capability of Columbia Generating Station (CGS). CGS is on a 24-month fuel and outage cycle. A maintenance and refueling outage is planned for the spring of FY 2011.

(dollars in thousands)

FY 2010	FY 2011	FY 2012
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### Generation and Oversight:

FY 2010: Provided oversight of all signed contracts including oversight of large thermal generating plants from which Bonneville purchases capability to ensure that all Bonneville approval rights are protected; coordinated, communicated, and administered agreements, issues, and programs between Bonneville and the project owners. Continued to provide wind resource integration services for customer wind generation.

FY 2011: Continue to provide oversight of all contracts signed to date. Pursue cost-effective means to mitigate capacity demands associated with interconnecting large amounts of wind into the BPA system. Pursue acquisition of additional cost-effective renewable generation to meet load growth. Continue to provide oversight on the wind resource integration services currently purchased by public power customers and offer additional renewable resource shaping services to such customers using wind generation to serve their load.

FY 2012: Continue to provide oversight of all contracts signed to date. Pursue cost-effective means to mitigate capacity demands associated with interconnecting large amounts of wind into the BPA system. Pursue acquisition of additional cost-effective renewable generation to meet load growth. Continue to provide oversight on the wind resource integration services currently purchased by public power customers and offer additional renewable resource shaping services to such customers using wind generation to serve their load.

<b>Associated Project Costs</b>	<b>314,416</b>	<b>334,777</b>	<b>378,400</b>
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- Support FCRPS project costs and work to strengthen interagency and regional relationships to improve project performance, supporting functions, and to better understand project resource requirements and costs. This helps to maintain FCRPS reliability and system performance, as well as to attain BPA's strategic business objectives.
- Bureau of Reclamation:  
FY 2010: Continued direct funding Reclamation O&M power activities.  
FY 2011: Continue direct funding Reclamation O&M power activities.  
FY 2012: Continue direct funding Reclamation O&M power activities.
- Corps of Engineers:  
FY 2010: Continued direct funding Corps O&M power activities.  
FY 2011: Continue direct funding Corps O&M power activities.  
FY 2012: Continue direct funding Corps O&M power activities.

FY 2010	FY 2011	FY 2012
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**Fish and Wildlife** **199,590**      **236,000**      **250,394**

- Specific project solicitation recommendations were made by the Council in late 2006 followed by BPA review and funding decisions completed in early 2007 for the period FY 2007 through 2009. BPA, in coordination with the Council, reviews all on-going projects and reaffirms project-specific funding commitments annually, including projects under the Biological Opinions, Fish Accords, and Washington Estuary Agreement. Bonneville bases its funding decisions on the management objectives and priorities in the Program, Sub-basin Plans, and the Accords as it integrates their implementation with actions necessary to fulfill ESA responsibilities as described in the NOAA Fisheries and U.S. Fish and Wildlife Service’s Biological Opinions. BPA’s fish and wildlife activities have been selected to help fulfill the Northwest Power Act purpose stated in section 2(6) to “protect, mitigate and enhance fish and wildlife including related spawning grounds and habitat on the Columbia River and its tributaries.” 16 U.S.C. § 839(6). Coordination continues among BPA, Council, Federal resource management agencies, states, tribes and others to plan for additional projects to fill the few specific gaps remaining in BPA’s mitigation portfolio through targeted solicitations.
- Anadromous Fish: Continue implementing both ongoing and new projects that support ESA-listed species and other measures called for under the 2008 and 2010 FCRPS BiOps, the Fish Accords, the Washington Estuary Agreement, and the Willamette Agreement. Prioritize projects that address the factors that limit mitigation success as identified in the Sub-basin Plans and that fulfill BPA’s responsibility for mitigating the impacts from the FCRPS power facilities. Implement and develop activities that protect and enhance tributary and estuary habitat; improve mainstream habitat on an experimental basis; reduce potentially harmful hatchery practices on ESA-listed populations; and contribute to sustainable fisheries.
- Resident Fish: Implement activities to determine the impacts of the FCRPS on lamprey and bull trout and mitigate for those impacts, and promote the reproduction and recruitment of Kootenai River white sturgeon. These activities have been selected in response to the 2006 BiOp, the Program, and the Fish Accords.
- Continue mitigation using resident fish to offset anadromous fish losses (substitution); mitigate for reservoir power operation impacts to resident fish; and continue to refine, quantify, and delineate the difference between the two. Those resident fish habitat acquisition projects that meet BPA’s Capitalization Policy will be funded under the capital portion of Bonneville’s Fish and Wildlife budget.



(dollars in thousands)

FY 2010	FY 2011	FY 2012
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- **Wildlife:** Use existing Bonneville policies to continue the current effort to mitigate wildlife in a manner consistent with Council’s 2009 Fish and Wildlife Program and fulfill commitments in wildlife agreements such as the Willamette Wildlife Agreement. These activities have been selected in response to the Northwest Power Act requirement to protect, mitigate and enhance fish and wildlife including related spawning grounds and habitat on the Columbia River and its tributaries. Those wildlife projects that meet BPA’s Capitalization Policy will be funded under the capital portion of Bonneville’s Fish and Wildlife budget and credited according to BPA’s crediting policy and applicable mitigation contracts.
- **Habitat protection and enhancement:** Continue to protect and enhance habitat for fish and wildlife using fee acquisition, conservation easements, habitat improvement projects, and other techniques in a manner consistent with the Program. BPA seeks cost effective ways to implement the Program, including the Biological Opinions and Accords, and tries to emphasize planning and management in each habitat project to reasonably integrate the mitigation needs for anadromous fish, resident fish, and wildlife.

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

<b>Northwest Power and Conservation Council</b>	<b>9,305</b>	<b>9,934</b>	<b>10,356</b>
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- Continue support of the Council activities, as directed under the Northwest Power Act, including regional power plan development and maintenance, and fish and wildlife program activities.

<b>Conservation and Energy Efficiency</b>	<b>76,497</b>	<b>91,989</b>	<b>90,542</b>
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- Continue close-out of the legacy conservation resource acquisition contracts, which support Bonneville’s contractual obligation to serve customer load growth.
- Provide credible, unbiased information, and technical and financial support to conservation purposes. As an agency with independent responsibilities based on its authorizing legislation, Bonneville has a statutory responsibility to encourage and support the development of conservation in the Pacific Northwest. Bonneville is participating with other regional entities to support market transformation and development activities that meet the needs of Bonneville customers and create business opportunities for the private sector in the Pacific Northwest. Toward that end, BPA has been helping create a delivery infrastructure to ensure conservation savings are installed efficiently and effectively throughout the region.

<b>Total, Power Services – Operating Expense</b>	<b>2,198,434</b>	<b>2,369,886</b>	<b>2,410,304</b>
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## Explanation of Funding Changes

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

## Transmission Services - Operating Expense

### Funding Schedule by Activity

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

### Outyear Funding Schedule

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

### Description

This activity provides for the transmission system services of engineering, operations, and maintenance for Bonneville's electric transmission system, consisting of over 15,238 circuit miles (24,523 circuit kilometers) of lines, 259 substations, and the associated power system control and communication facilities, with an invested cost of more than \$6.0 billion. Primary strategies of this program are: 1) maintain the safety and reliability of the transmission system; 2) increase the focus on meeting customers' needs; 3) optimize the transmission system; 4) provide open and nondiscriminatory transmission access; and 5) improve Bonneville's cost effectiveness.

### Detailed Justification

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

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

(dollars in thousands)

FY 2010	FY 2011	FY 2012
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- **Asset Management:** Continue deploying the Asset Management approach to sustain the existing assets and expanding the system to meet Agency objectives. Prepare for certification to Publicly Available Specifications (PAS)-55 over three to five years.
- **R&D:** Conduct research focused on technologies related to business challenges BPA faces including reliability, energy efficiency, and integration of renewable energy resources. Technologies of interest are identified in BPA's Technology Roadmaps. A portfolio of research is selected every year through BPA's Portfolio Decision Framework.
- **Technical Support:** Provide technical support activities, such as transmission system planning and studies to optimize portions of the system. Provide support for non-wires solutions studies and pilot projects.
- **Capital-to-Expense Adjustments:** Conduct annual analysis of Bonneville's outstanding capital work orders to assess whether they should be expensed. As obsolete inventory is identified and disposed of, it is expensed.
- **Regulatory Fees:** Western Electricity Coordinating Council (WECC) dues and loop flow payments, DOE licensing costs for radio frequencies and North American Electric Reliability Corporation (NERC) Critical Infrastructure Protection CIP compliance program costs. Includes membership in Columbia Grid.
- **Reimbursable Transactions:** Enter into written agreements with Federal and non-Federal entities that have work or services to be performed by Bonneville staff at the expense of the benefiting entities. The projects must be beneficial, under agreed upon criteria, to Bonneville operations and to the Federal or non-Federal entity involved or otherwise be aligned with or supportive of BPA's strategic objectives. Additionally, these activities generally contribute to more efficient or reliable construction of the Federal transmission system or otherwise enhance electric service to the region.
- **Leased and Other Costs:** Includes leases and other costs of financing transmission, delivery and voltage support facilities when such arrangements are operationally feasible and cost effective to deliver power. Capitalized leases enable BPA to continue to invest in infrastructure to support a safe and reliable system for the transmission of power. Other costs included are the accrued interest costs associated with Large Generator Interconnection Agreements (LGIA).

(dollars in thousands)

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

- FY 2010: Continued to operate within parameters of regional transmission authorities. Supported new compliance activities related to the reliability of the transmission system including cyber security. Developed facilities, policies, procedures and implementing systems to support the integration of high levels of wind generation into the transmission grid. Prepared for increased complexity of power system operations and dispatching including congestion management and outage scheduling as well as increased complexities in transmission scheduling. Addressed succession planning issues across key functions. Continued development and implementation of business systems and tools.
- FY 2011: Continue to operate within parameters of regional transmission authorities. Continue support of increased compliance activities related to the reliability of the transmission system including cyber security. Continue developing facilities, policies, procedures and implementing systems to support the integration of high levels of wind generation into the transmission grid. Continue preparation for increased complexity of power system operations and dispatching including congestion management and outage scheduling as well as increased complexities in transmission scheduling. Continue to address succession planning issues across key functions. Continue development and implementation of business systems and tools.
- FY 2012: Continue to operate within parameters of regional transmission authorities. Continue support of compliance activities related to the reliability of the transmission system including cyber security. Further expand facilities and refine policies and procedures and implementing systems to support the integration of high levels of wind generation into the transmission grid. Continue preparation for increased complexity of power system operations and dispatching including congestion management and outage scheduling as well as increased complexities in transmission scheduling. Continue to address succession planning issues across key functions. Continue development and implementation of business systems and tools.
- Substation Operations: Perform operations functions necessary to provide electric service to customers and to protect the Federal investment in electric equipment and other facilities. Includes equipment adjustments, switching lines and equipment during emergencies or maintenance, isolating damaged equipment, restoring service to customers, and inspecting equipment, reading meters, etc.

(dollars in thousands)

FY 2010	FY 2011	FY 2012
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- **Power System Dispatching and Supporting Functions:** Perform central dispatching, control, and monitoring of the electric operation of the Federal transmission system. Also includes load, frequency and voltage control of Federal generating plants, and coordinating long and short term outages of system equipment. In addition, provides technical engineering support of dispatching function and provides all technical and systems support for Dittmer Control Center (DCC) and Munro Control Center (MCC) power system control centers.
- **Marketing and Sales:** Provide management and direction of transmission rates, and provide business strategy in marketing of transmission and ancillary products and services of Transmission Services. Involve customers and constituents in the process of product and rate development. Maintain accurate and complete historical records of current and past transmission agreements. Provide guidance for current and future transmission contract negotiations. Provide financial analysis of market strategies. Monitor and report on the financial health of Transmission Services. Support cost management by effective reporting and analysis of current expenditures. Ensure official budget submittals reflect current management financial strategies and adequately fund transmission programs.
- **Transmission Scheduling:** Provide open access to the BPA transmission system consistent with the transmission tariff. Schedule and market transmission capacity to eligible Bonneville customers, including the Pacific Northwest's interconnected utilities. Manage the reservations and scheduling of all transmission services associated with the BPA transmission tariff. Update practices, policies and systems to accommodate large amounts of wind generation.

**Maintenance** **164,735**      **206,502**      **212,917**

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

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

(dollars in thousands)

FY 2010	FY 2011	FY 2012
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achieve the SAIFI and SAIDI targets of no control chart violations for circuit importance categories 1-2 (highest importance), and not more than one violation for category 4. Control charts are statistically based graphs that illustrate variability in performance. Continued to improve availability performance by utilizing more efficient and cost-effective maintenance work practices and outage coordination. Used recruitment incentives to ensure succession of the current work force and remain competitive as an employer in the utility industry. Assured a safe work environment through safety awareness and improved work practices. Increased outage scheduling planning to increase customer satisfaction. Continued high levels of vegetation management and increased access road work to provide reliable access to facilities and ensure environmental compliance. Deployed new technologies such as LiDAR to reliably and cost effectively manage vegetation.

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

(dollars in thousands)

FY 2010	FY 2011	FY 2012
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transmission EHV (extra-high voltage). Maintenance of EHM lines is two and one-half times more labor-intensive than maintenance of lower transmission voltages, although more efficient in transmission of power. This responsibility includes maintaining transmission rights-of-way to ensure system reliability, safety, and environmental compliance. Adopt work practices that improve system availability, reliability, and compliance.

- **Right-of-Way Maintenance:** Maintain and manage vegetation from over 8,500 of Bonneville's right-of-way miles. This responsibility includes vegetation management, danger tree management, and access road maintenance to ensure system reliability, safety, and environmental compliance. Adopt procedures and processes that improve system availability, reliability, environmental compliance, and reliability compliance. Continue to deploy new technologies such as LiDAR to reliably and cost effectively manage vegetation.
- **Substation Maintenance:** Maintain and repair the transmission system power equipment located in Bonneville's 259 substations. Work includes inspections, diagnostic testing and predictive and condition based maintenance.
- **System Protection Maintenance:** Maintain relaying metering and remedial action scheme equipment used to control and protect the electrical transmission system and to meter energy transfers for the purpose of revenue billing. Additionally, field-engineering services provide technical advice and assure the correct operation of power system relaying and special control systems used to support interregional energy transmission capabilities.
- **Power System Control Maintenance:** Test, repair, and provide field engineering support of Bonneville's highly complex equipment, communications, and control systems, including seven major microwave systems, fiber optic systems, and other critical communications and control equipment that support the power system.
- **Non-Electric Plant Maintenance:** Maintain and manage Bonneville's non-electric facilities. Includes site, building, and building utility maintenance; custodial services; station utility; and other maintenance service activities, as well as, facilities asset management on Bonneville-owned or Bonneville-leased non-electric facilities.
- **Maintenance Standards and Engineering:** Establish, monitor, and update system maintenance standards, policies, and procedures, and review and update long-range plans for maintenance of the electric power transmission system.

<b>Total, Transmission Services - Operating Expense</b>	<b>333,682</b>	<b>391,266</b>	<b>401,671</b>
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## Explanation of Funding Changes

FY 2012 vs. FY 2010 (\$000)
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### Engineering

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

### Operations

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

### Maintenance

- Primarily reflects implementation of the facilities asset management plans, implementation of a new bare-handing crew, NERC/WECC compliance activities related to land rights and vegetation management, continuing maintenance program activities, including system protection, right-of-way, line maintenance, and performance improvements. +48,182

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### Total Funding Change, Transmission Services – Operating Expense

+ 67,989



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

**Funding Schedule by Activity**

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

**Outyear Funding Schedule**

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

**Operating Expense**

**Description**

Interest expense provides for the payment of interest due on Federal debt. This consists of capital investment in FCRPS hydroelectric generating and transmission facilities of Bonneville, the Corps and Reclamation. Investments were financed by Congressional appropriations and Bonneville borrowings from the Treasury. Bonneville repays Federal debt through its power sales and transmission services revenues.

Since receiving Treasury borrowing authority in 1974 under the Transmission System Act, all Bonneville borrowing has been at market rates. As of October 1, 1996, all of Bonneville's repayment obligations on FCRPS appropriated investment (Corps and Reclamation FCRPS investment and Bonneville investment) financed with appropriations prior to the Transmission System Act that were unpaid as of September 30, 1996, were restructured and assigned new current-market interest rates. The Bonneville Appropriations Refinancing Act of 1996 called for resetting (reducing) the unpaid principal of FCRPS appropriations and reassigning (increasing) interest rates. New principal amounts were established as of the beginning of FY 1997 at the present value of the principal and annual interest

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

**FY 2012 Congressional Budget**

payments Bonneville would make to the Treasury for these obligations in the absence of the legislation, plus \$100 million. The new principal amounts were assigned prevailing market interest rates as of October 1, 1996. Bonneville's outstanding repayment obligations on appropriations at the end of FY 1996 were \$6.6 billion with a weighted average interest rate of 3.4 percent. The refinancing reduced the principal amount to \$4.1 billion with a weighted average interest rate of 7.1 percent. Implementation of the refinancing took place in 1997 after audited actual financial data was available. As called for in the legislation, Bonneville submitted its calculations and interest rate assignments implementing the Bonneville Appropriations Refinancing Act to Treasury for its review and approval. Treasury approved the implementation calculations in July 1997. The Act also calls for all future FCRPS appropriations to be assigned prevailing Treasury yield curve interest rates.

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

Bonneville has been paying its unfunded liability of the CSRS and potentially the FERS and post-retirement benefits into the General Fund of the Treasury (receipt account 892889) since FY 1998. These payments are consistent with the FY 2001 Administration's budget which assumed Bonneville would prospectively cover the full unfunded liability that accrues in fiscal years after FY 1997 of the Civil Service Retirement and Disability Fund (Disability Fund), the Employees Health Benefits Fund (Health Fund), and the Employees Life Insurance Fund (Insurance Fund) that it had not covered prior to FY 1998. Cost estimates include pension and post-retirement benefits for Bonneville and the power-related portion of the Corps, Reclamation, and USFWS.

## Capital Transfers

### Funding Schedule by Activity

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

### Outyear Funding Schedule

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

<sup>/1</sup> BPA "Bond(s)" in this FY 2012 Budget refers to all bonds issued by BPA to and advances received from the U.S. Treasury. This reference is consistent with section 13 (a) of the Transmission Act (PL Law 93-454), which defines BPA bonds as all bonds, notes, and other evidences of 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 11-Feb-11

**BP-1 SUMMARY**

1,3/

	2010		2011		2012		2013	2014	2015	2016
	Oblig.	Outlays	Oblig.	Outlays	Oblig.	Outlays	Oblig.	Oblig.	Oblig.	Oblig.
1 Residential Exchange Program	180	180	189	189	189	189	189	189	189	189
2 Power Services 2/	1,732	1,732	1,843	1,843	1,870	1,870	1,997	2,008	2,068	2,157
3 Transmission Services	639	639	752	752	929	929	987	983	857	801
4 Conservation & Energy Efficiency	134	134	172	172	195	195	203	211	240	275
5 Fish & Wildlife	241	241	326	326	300	300	304	304	325	317
6 Interest/ Pension 4/	395	395	354	354	383	383	424	483	547	607
7 Associated Project Cost - Capital	148	148	170	170	209	209	224	227	233	236
8 Capital Equipment	52	52	50	50	45	45	42	41	52	42
3 Planning Council	9	9	10	10	10	10	11	11	11	11
10 Misc. Accounting Adjs.	0	0	0	0	0	0	0	0	0	0
11 Projects Funded in Advance	159	159	113	113	52	52	53	44	38	41
12 Capitalized Bond Premiums	0	0	2	2	2	2	2	2	2	2
<b>TOTAL OBLIGATIONS/ OUTLAYS 3/</b>	<b>3,689</b>	<b>3,689</b>	<b>3,981</b>	<b>3,981</b>	<b>4,184</b>	<b>4,184</b>	<b>4,436</b>	<b>4,503</b>	<b>4,562</b>	<b>4,678</b>

**REVENUES AND REIMBURSEMENTS**

Current Services  
(in millions of dollars)

FISCAL YEAR

**BP-1 SUMMARY**

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

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

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

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

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

- 2/ Power Services includes Fish & Wildlife, Residential Exchange Program, Planning Council, Conservation & Energy Efficiency and Associated Project Costs which have been shown separately for display purposes.
- 3/ This budget has been prepared in accordance with the Budget Enforcement Act (BEA) of 1990. Under the BEA all BPA budget estimates are treated as mandatory and are not subject to the discretionary caps included in the BEA. These estimates support activities which are legally separate from discretionary activities and accounts. Thus, any changes to BPA estimates cannot be used to affect any other budget categories which have their own legal dollar caps. Because BPA operates within existing legislative authority, BPA is not subject to BEA "pay-as-you-go" test regarding its revision of current-law funding estimates.
- 4/ See Interest Expense, Pension and Post-retirement Benefits and Capital Transfers section of this budget for a complete discussion of these cost estimates.
- 5/ Revenues, included in the Net Outlay formulation, are calculated consistent with cash management goals and assume a combination of adjustments. Assumed adjustments include the use of a combination of tools, including upcoming rate adjustment mechanisms, a net revenue risk adjustment, debt service refinancing strategies and/or short-term financial tools to manage net revenues and cash. Some of these potential tools will reduce costs rather than generate revenue, causing the same Net Outlay result. Adjustments for depreciation and 4(h)(10)(C) credits of the NW Power Act are also assumed.
- 6/ BPA received \$49 million of additional budget authority in FY 2007 to accommodate the work necessary to relocate the radio spectrum consistent with the Commercial Spectrum Enhancement Act (P.L. 108-494). In subsequent years, per the assumed expenditures developed as part of BPA's work plans, outlays for the work performed are assumed.
- 7/ Net Outlay estimates are based on current cost savings to date and anticipated cash management goals. They are expected to follow anticipated management decisions throughout the rate period that, along with actual market conditions, will impact revenues and expenses. Actual Net Outlays are volatile and are reported in Report on Budget Execution and Budgetary Resources (SF-133). Estimated Net Outlays could change due to changing market conditions, streamflow variability, and continuing restructuring of the electric industry.

**EXPENSED OBLIGATIONS/OUTLAYS 1,4/**

**Current Services**

(in millions of dollars)

**FISCAL YEAR**

BP-2

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



**CAPITAL OBLIGATIONS/OUTLAYS**

Current Services

(in millions of dollars)

**FISCAL YEAR**

BP-2 continued

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

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

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

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

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

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

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

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



**PROGRAM & FINANCING SUMMARY**

Current Services  
(in millions of dollars)

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

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

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

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

For purposes of this table, this FY 2012 budget reflects, for FY 2010, actual third party financing expense only for PFIA.

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

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

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

**Program and Financing (continued)**

Current Services  
(in millions of dollars)

est.

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

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

5/ Reflects estimated cost for radio spectrum fund.

- 6/ The Permanent Authority: Authority to borrow (indefinite) from Treasury amounts reflect both BPA's capital program financing needs and either the use of, or creation of, deferred borrowing. Deferred borrowing is created when, as a cash and debt management decision, BPA uses cash from revenues to liquidate capital obligations in lieu of borrowing from Treasury. This temporary use of cash on hand instead of borrowed funds creates the ability in future years to borrow money, when fiscally prudent. The FY 1989 Energy and Water Development Appropriations Act (P.L. 100-371 Of 7/19/88) clarified that BPA has authority to incur obligations in excess of Treasury borrowing authority and cash in the BPA fund.
- 7/ Net Outlay estimates are based on current cost savings to date and anticipated cash management goals. They are expected to follow anticipated management decisions throughout the rate period that, along with actual market conditions, will impact revenues and expenses. Actual Net Outlays are volatile and are reported in Report on Budget Execution and Budgetary Resources (SF-133). Estimated Net Outlays could change due to changing market conditions, streamflow variability, and continuing restructuring of the electric industry.

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

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

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

BP-4A

	Fiscal Year							
	2010				2011			
	Net Capital Obs	Net Capital Subject to BA	Net Capital Expend.	Bonds Out- Standing	Net Capital Obs	Net Capital Subject to BA	Net Capital Expend.	Bonds Out- Standing
<b>Start-of-Year: Total</b>	1,526	1,332	2,425	2,513	1,874	1,680	2,773	2,861
<b>Plus: Annual Increase</b>								
Cum.-Annual Treasury Borrowing Treasury Borrowing (Cash)	603	603	603	603	753	753	753	753
<b>Less:</b>								
BPA Bond Amortization	255	255	255	255	275	275	275	275
<b>Net Increase/(Decrease):</b>	348	348	348	348	478	478	478	478
Cum.-End-of-Year: Total	1,874	1,680	2,773	2,861	2,352	2,158	3,251	3,339
<b>Total Remaining Treasury Borrowing Amount</b>				4,839				4,361
<b>Total Legislated Treasury Borrowing Amount</b>				7,700				7,700

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

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

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

In this FY 2012 budget, BPA "bond(s)" refers to all bonds issued by BPA to and advances received from the U.S. Treasury. This reference is consistent with section 13 (a) of the Transmission Act (PL Law 93-454), which defines BPA bonds as all bonds, notes, and other evidences of indebtednesses issued and sold to the U.S. Treasury.

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

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

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

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

BP-4B

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

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

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

In this FY 2012 budget, BPA "bond(s)" refers to all bonds issued by BPA to and advances received from the U.S. Treasury. This reference is consistent with section 13 (a) of the Transmission Act (PL Law 93-454), which defines BPA bonds as all bonds, notes, and other evidences of indebtedness issued and sold to the U.S. Treasury.

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

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

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

BP-4C

	Fiscal Year							
	2014				2015			
	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
<b>Start-of-Year: Total</b>	4,007	3,813	4,906	4,994	4,960	4,766	5,859	5,947
<b>Plus: Annual Increase</b>								
Cum.-Annual Treasury Borrowing	997	997	997		905	905	905	
Treasury Borrowing (Cash)				997				905
<b>Less:</b>								
Total BPA Bond Amortization	44	44	44	44	65	65	65	65
<b>Net Increase/(Decrease):</b>								
Total	953	953	953	953	840	840	840	840
Cum.-End-of-Year: Total	4,960	4,766	5,859	5,947	5,800	5,606	6,699	6,787
<b>Total Remaining Treasury Borrowing Amount</b>				<u>1,753</u>				<u>913</u>
<b>Total Legislated Treasury Borrowing Amount</b>				7,700				7,700

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

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

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

In this FY 2012 budget, BPA "bond(s)" refers to all bonds issued by BPA to and advances received from the U.S. Treasury. This reference is consistent with section 13 (a) of the Transmission Act (PL Law 93-454), which defines BPA bonds as all bonds, notes, and other evidences of indebtedness issued and sold to the U.S. Treasury.

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

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



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

BP-4D

	Fiscal Year			
	<b>2016</b>			
	Net Capital Capital Obs	Obs Subject to BA	Net Capital Expend.	Bonds Out- Standing
<b>Start-of-Year: Total</b>	5,800	5,606	6,699	6,787
<b>Plus: Annual Increase</b>				
Cum.-Annual Treasury Borrowing	866	866	866	
Treasury Borrowing (Cash)				866
<b>Less:</b>				
Total BPA Bond Amortization	31	31	31	31
<b>Net Increase/(Decrease):</b>				
Total	835	835	835	835
Cum.-End-of-Year: Total	6,635	6,441	7,534	7,622
<b>Total Remaining Treasury Borrowing Amount</b>				<u>78</u>
<b>Total Legislated Treasury Borrowing Amount</b>				7,700

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

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

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

In this FY 2012 budget, BPA "bond(s)" refers to all bonds issued by BPA to and advances received from the U.S. Treasury. This reference is consistent with section 13 (a) of the Transmission Act (PL Law 93-454), which defines BPA bonds as all bonds, notes, and other evidences of indebtedness issued and sold to the U.S. Treasury.

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

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

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

BP-5

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

**Federal and Non-Federal Funding**

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

**Scenario**

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

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

The table above shows both the potential use of Treasury borrowing authority for transmission capital projects based on this FY 2012 budget and the use adjusted for potential third-party financing to fund appropriate capital expenditures when feasible in lieu of Treasury borrowing. Estimates included in this FY 2012 budget are uncertain and may change due to revised capital investment plans, changing economic conditions, and an evolving financial market environment. The estimates of third-party financing included in the table show a reduction in the use of Treasury borrowing and do not reflect the actual notional third party financing commitment BPA may enter into in that particular year. The difference of reduction in use of Treasury borrowing and the actual notional third party financing commitment is primarily due to the difference in the timing of financing transactions between Treasury and third-party financing for capital projects with multi-year construction schedules.

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

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

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

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

(in millions of dollars)

	Fiscal Year						
	2010	2011	2012	2013	2014	2015	2016
Start-of-Year: Total Bonds Outstanding	2,513	2,861	3,309	4,054	4,908	5,830	6,647
Plus:							
Treasury Borrowing (Cash)	603	753	937	1,006	997	905	866
Less:							
<b>Potential Third Party Financing</b>	NA	30	27	29	31	23	34
BPA Bond Amortization	255	275	165	123	44	65	31
<b>Net Increase/(Decrease) Bonds Outstanding:</b>	<b>348</b>	<b>448</b>	<b>745</b>	<b>854</b>	<b>922</b>	<b>817</b>	<b>801</b>
<b>Cum.-End-of-Year: Total</b>	<b>2,861</b>	<b>3,309</b>	<b>4,054</b>	<b>4,908</b>	<b>5,830</b>	<b>6,647</b>	<b>7,448</b>
<b>Total Remaining Treasury Borrowing Amount</b>	<b>4,839</b>	<b>4,391</b>	<b>3,646</b>	<b>2,792</b>	<b>1,870</b>	<b>1,053</b>	<b>252</b>
Total Legislated Treasury Borrowing Amount	7,700	7,700	7,700	7,700	7,700	7,700	7,700

**TREASURY PAYMENTS**

(in millions of dollars)

	FISCAL YEAR						
	2010	2011	2012	2013	2014	2015	2016
<b>A. INTEREST ON BONDS &amp; APPROPRIATIONS</b>							
<b>Bonneville Bond Interest</b>							
1 Bonneville Bond Interest (net)	73	76	108	159	213	277	336
2 AFUDC <sup>1/</sup>	33	39	45	50	56	54	52
<b>Appropriations Interest</b>							
3 Bonneville	35	29	23	11	6	2	0
4 Corps of Engineers <sup>2/</sup>	163	158	161	161	170	174	177
5 Lower Snake River	17	16	16	16	16	16	16
6 Bureau of Reclamation <sup>3/</sup>	43	43	43	43	43	43	43
<b>7 Total Bond and Approp. Interest</b>	<b>364</b>	<b>361</b>	<b>396</b>	<b>440</b>	<b>504</b>	<b>566</b>	<b>624</b>
<b>B. ASSOCIATED PROJECT COST</b>							
8 Bureau of Reclamation Irrigation Assistance	0	0	1	59	52	52	61
9 Bureau of Rec. O & M <sup>4/</sup>	0	0	0	0	0	0	0
10 Corps of Eng. O & M <sup>4/</sup>	9	0	0	0	0	0	0
11 L. Snake River Comp. Plan O & M <sup>4/</sup>	0	0	0	0	0	0	0
<b>12 Total Assoc. Project Costs</b>	<b>9</b>	<b>0</b>	<b>1</b>	<b>59</b>	<b>52</b>	<b>52</b>	<b>61</b>
<b>C. CAPITAL TRANSFERS</b>							
<b>Amortization</b>							
13 Bonneville Bonds <sup>6/</sup>	255	275	165	123	44	65	31
14 Bureau of Reclamation Appropriations	1	0	0	0	0	0	0
15 Corps of Engineers Appropriations	129	27	53	0	7	0	40
16 Lower Snake River Comp. Plan	0	0	0	0	0	0	0
17 Bonneville Appropriations	75	85	165	70	51	25	8
<b>Total Capital Transfers</b>	<b>460</b>	<b>387</b>	<b>383</b>	<b>193</b>	<b>102</b>	<b>90</b>	<b>79</b>
<b>D. OTHER PAYMENTS</b>							
18 Additional Pension & Post Retirement Benefits <sup>5/</sup>	31	31	32	33	34	35	35
<b>21 TOTAL TREASURY PAYMENTS</b>	<b>864</b>	<b>779</b>	<b>812</b>	<b>725</b>	<b>692</b>	<b>743</b>	<b>799</b>

The accompanying notes are an integral part of this table.

- <sup>1/</sup> This interest cost is capitalized and included in BPA's Transmission System Development, System Replacements, and Associated Projects Capital programs. AFUDC is financed through the sale of bonds.
- <sup>2/</sup> Includes interest on construction funding for Corp of Engineers (Corps) fish bypass facilities at Corps dams in the Columbia River Basin, including Lower Monumental, Ice Harbor, and The Dalles.
- <sup>3/</sup> Includes payments paid by Reclamation to Treasury on behalf of Bonneville.
- <sup>4/</sup> Costs for power O&M is funded directly by Bonneville as follows (in millions)
- | FISCAL YEAR                  | 2010 | 2011 | 2012 | 2013 | 2014 | 2015 | 2016 |
|------------------------------|------|------|------|------|------|------|------|
| Bureau of Reclamation        | 82   | 96   | 114  | 122  | 119  | 123  | 128  |
| Corps of Engineers           | 192  | 192  | 214  | 221  | 231  | 237  | 244  |
| Subtotal Bureau and Corps    | 274  | 288  | 328  | 343  | 350  | 360  | 372  |
| Lower Snake River Comp. Plan | 23   | 24   | 29   | 30   | 27   | 29   | 30   |
| Total                        | 297  | 312  | 357  | 373  | 377  | 389  | 402  |
- <sup>5/</sup> See Interest Expense, Pension and Post-retirement Benefits and Capital Transfers section of this budget for a complete discussion of these cost estimates.
- <sup>6/</sup> In this FY 2012 budget, BPA "bond(s)" refers to all bonds issued by BPA to and advances received from the U.S. Treasury. This reference is consistent with section 13 (a) of the Transmission Act (PL Law 93-454), which defines BPA bonds as all bonds, notes, and other evidences of indebtedness issued and sold to the U.S. Treasury.

Does not include Treasury bond premiums on refinanced Treasury bonds.

## Treasury Repayment Table

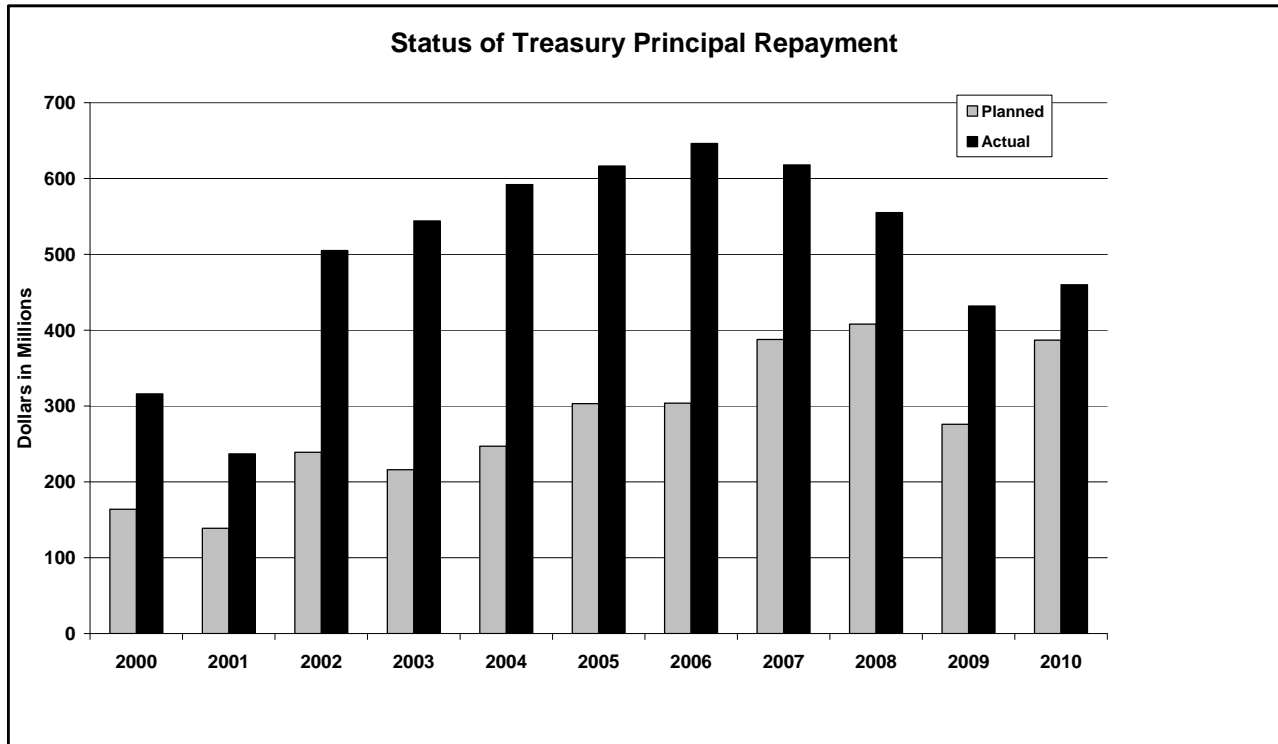


Chart Notes

- <sup>1/</sup> This chart displays principal repayment only.
- <sup>2/</sup> Treasury payment outyear estimates for planned amortization of principal are based on rate case estimates when available and planned amortization for future rate case periods. These estimates may change due to revised capital investment plans, actual Treasury borrowing, and advanced amortization payments. Bonneville made its full scheduled FY 2010 payment responsibility to the Treasury. Bonneville's aggregate Treasury payment was \$864 million, comprised of \$460 million in amortization (of which \$38.5 million was unscheduled advanced amortization), \$364 million in interest, and \$40 million of unfunded CSRS liabilities and other costs.
- <sup>3/</sup> FYs 2000 - 2010 payments include portions of future planned amortization amounts consistent with BPA's capital strategy plan and the BPA/Energy Northwest debt optimization program.
- <sup>4/</sup> Advance amortization due to sale of low-voltage transmission facilities includes \$13 million and \$5.3 million in FYs 2003 and 2006, respectively.
- <sup>5/</sup> For FYs 2007 - 2009, the planned repayment of principal of Federal power investment reflects the amounts calculated in Bonneville's 2007 Power Rate Case and 2006 and 2008 Transmission Rate Cases that were scheduled to be the lowest level of amortization satisfying the repayment requirements. The rate case projections also included some amount of advanced repayment of principal to the U.S. Treasury that resulted from BPA's debt optimization program, which involved restructuring Energy Northwest (EN) debt, the cost of which BPA is obligated to pay.

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

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

**ESTIMATES**

	<b>2010</b>	<b>2011</b>	<b>2012</b>
11.1 Full-time permanent	122	132	135
11.3 Other than full-time permanent	55	59	61
11.5 Other personnel compensation	11	11	12
<b>11.9 Total personnel compensation</b>	<b>188</b>	<b>202</b>	<b>208</b>
12.1 Civilian personnel benefits	55	59	60
13.0 Benefits for former personnel	26	29	29
21.0 Travel and transportation of persons	15	16	16
22.0 Transportation of things	1	2	2
23.1 Rental payments to GSA	0	0	0
23.2 Rents, other	0	0	0
23.3 Communication, utilities & misc. charges	9	10	10
25.1 Consulting Services	393	424	430
25.2 Other Services	2,388	2,576	2,639
25.3 Purchases from Government Accounts	0	0	0
25.4 O&M of Facilities	0	0	0
25.5 R & D Contracts	9	9	12
26.0 Supplies and materials	273	295	390
31.0 Equipment	0	0	0
32.0 Lands and structures	53	57	59
41.0 Grants, subsidies, contributions	49	53	51
43.0 Interest and dividends	230	249	278
<b>99.0 Total obligations</b>	<b>3,689</b>	<b>3,981</b>	<b>4,184</b>

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

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

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

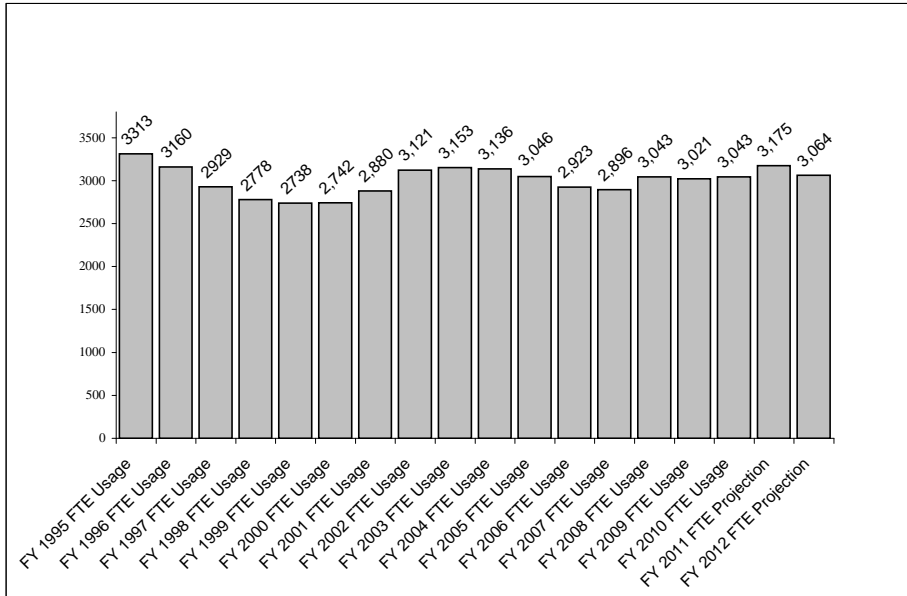
1/ Includes amortization of appropriations and irrigation assistance, and interest costs for Reclamation. The cost of power O&M for Reclamation is no longer included in Proprietary Receipts due to Direct Funding by Bonneville. Represents transfer to Account #895000.26

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

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

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

**BONNEVILLE FTE**  
(revised January 2011)



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

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

Actual FTE data is consistent with DOE personnel reports.

FTE outyear data are estimates and may change.

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

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

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

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

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

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

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



## GENERAL PROVISIONS

*SEC. 301. The unexpended balances of prior appropriations provided for activities in this Act may be available to the same appropriation accounts for such activities established pursuant to this title. Available balances may be merged with funds in the applicable established accounts and thereafter may be accounted for as one fund for the same time period as originally enacted.*

*SEC. 302. None of the funds in this or any other Act for the Administrator of the Bonneville Power Administration may be used to enter into any agreement to perform energy efficiency services outside the legally defined Bonneville service territory, with the exception of services provided internationally, including services provided on a reimbursable basis, unless the Administrator certifies in advance that such services are not available from private sector businesses.*

*SEC. 303. When the Department of Energy makes a user facility available to universities or other potential users, or seeks input from universities or other potential users regarding significant characteristics or equipment in a user facility or a proposed user facility, the Department shall ensure broad public notice of such availability or such need for input to universities and other potential users. When the Department of Energy considers the participation of a university or other potential user as a formal partner in the establishment or operation of a user facility, the Department shall employ full and open competition in selecting such a partner. For purposes of this section, the term "user facility" includes, but is not limited to: (1) a user facility as described in section 2203(a)(2) of the Energy Policy Act of 1992 (42 U.S.C. 13503(a)(2)); (2) a National Nuclear Security Administration Defense Programs Technology Deployment Center/User Facility; and (3) any other Departmental facility designated by the Department as a user facility.*

*SEC. 304. Funds appropriated by this or any other Act, or made available by the transfer of funds in this Act, for intelligence activities are deemed to be specifically authorized by the Congress for purposes of section 504 of the National Security Act of 1947 (50 U.S.C. 414) during fiscal year 2012 until the enactment of the Intelligence Authorization Act for fiscal year 2012.*

*SEC. 305. Not to exceed 5 per centum, or \$100,000,000, of any appropriation, whichever is less, made available for Department of Energy activities funded in this Act or subsequent Energy and Water Development and Related Agencies Appropriation Acts may hereafter be transferred between such appropriations, but no appropriation, except as otherwise provided, shall be increased or decreased by more than 5 per centum by any such transfers, and any such proposed transfers shall be submitted to the Committee on Appropriations of the House and Senate.*

*SEC. 501. None of the funds appropriated by this Act may be used in any way, directly or indirectly, to influence congressional action on any legislation or appropriation matters pending before Congress, other than to communicate to Members of Congress as described in 18 U.S.C. 1913.*

*SEC. 502. To the extent practicable funds made available in this Act should be used to purchase light bulbs that are "Energy Star" qualified or have the "Federal Energy Management Program" designation.*

Note.—A full-year 2011 appropriation for this account was not enacted at the time the budget was prepared; therefore, this account is operating under a continuing resolution (P.L. 111–242, as amended). The amounts included for 2011 reflect the annualized level provided by the continuing resolution.

