Bonneville Power Administration



Integrated Program Review (IPR) Overview Workshop

May 15, 2008



Agenda

 Background, Objectives, and Schedule for the Integrated Program Review 	(Pages 2-15)
 Overview - Dave Armstrong 	(Pages 16-31)
Agency Expense Overview	
Agency Capital Overview	
Agency Services Overview	
 Power - Paul Norman 	(Pages 32-58)
• Rates	
Expense Overview	
Capital Overview	
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Transmission - Vickie VanZandt, Cathy Ehli, Robin Furrer, Larry Bekkedahl	(Pages 59-89)
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 Agency Services - Dave Armstrong 	(Pages 90-96)
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Integrated Program Review Process

Integrated Program Review Purpose

- Present all BPA's costs, Power, Transmission and Agency Services, both expense and capital, in one forum, consistent with the structure developed during the Regional Dialogue.
- Allow customers, other stakeholders and interested parties an opportunity to review, ask questions about, and comment on:
 - Proposed changes to Power FY 2009 spending levels from those determined in the 2006 Power Function Review and included in the 2007-2009 rate filing.
 - BPA's proposed spending levels for the FY 2010-2011 period for Power and Transmission.
 - Proposed capital investment levels for all programs for the FY 2009-2013 period.

Integrated Program Review Parameters

The rate case is a formal hearing process, with a Hearing Officer, which sets rates based on costs. The Integrated Program Review (IPR) is a collaborative informal process designed to lay out the major program costs and seek customer feedback and suggestions for each program area prior to BPA's decisions on program levels to be included in rates.



- Define the scope of the Integrated Program Review
- Provide an overview of the expense and capital levels that will be addressed in the Integrated Program Review process
- Review the schedule and receive input on it from participants



Integrated Program Review Scope

- The IPR is BPA's public involvement process for the costs that go into power and transmission rates, with a primary focus on the major program areas that make up the bulk of power and transmission costs.
- Input received in this process will inform BPA's decisions on the program levels that will be included in the 2009 Supplemental Power Rate Case and the upcoming 2010-2011 Power and Transmission Rate Cases. Program levels will not be revisited in the three rate cases.
- The decision processes for the following topics are in the Power and Transmission rate cases, and they will not be addressed here:
 - Loads and Resources
 - Revenue Credits including Secondary Sales Revenues
 - Billing Determinants
 - Residential Exchange Costs
 - Reserve Levels
 - Ancillary Services
 - Rate Design
 - Rate Level
- While depreciation, amortization, net interest and non-Federal debt service are described in this process, those are not decided in this process. They are results of many factors, including capital investment levels, interest rate environment, and debt management decisions.
- Residential Exchange payments are also described, but not decided in this process. The aggregated payment levels are determined by several factors, such as the Priority Firm Exchange rate and the Section 7(b)(2) Rate Test, that are developed in the Power rate case.



Integrated Program Review Background

The IPR is one part of a two-part process developed based on the Regional Dialogue Cost Review Policy.

Regional Dialogue Cost Review Objectives

• The development of this cost review process was prompted by customer requests for an approach that provides useful and detailed information on both expense and capital programs, and an opportunity to influence decisions on expense and capital program levels to be used in rate-setting before decisions are made, and by BPA's desire to assure its decision-making is open and transparent.

Focus Groups

• BPA held Focus Groups to get customer and constituent input for forming the regional cost review process (now named the Integrated Business Review or IBR) that was decided on in the Regional Dialogue. The focus group feedback and comments from customers and constituents were used to create the IBR.



Integrated Business Review

IBR Structure

- The IBR structure will be made up of two processes:
- 1. The Integrated Program Review (IPR) will address proposed program costs prior to their inclusion in a rate case. It is expected to be held every two years, and will replace the Capital Plan Review (CPR), Power Function Review (PFR), and Transmission's Programs In Review (PIR).
- 2. The second part of the IBR is the Quarterly Business Review (QBR). This will focus on cost trends for expense and capital programs and is expected to begin in November 2008.



Input from Focus Groups

- BPA listened to the input we received from the Focus Groups
- Some of the comments heard regarding the IPR were:
 - The structure of the process should be close to what we do today, e.g., PFR, PIR
 - Information on capital investments should go out 5 years
 - Keep the meetings in Portland. Meetings outside Portland make attendance difficult
 - BPA should maintain two levels of meetings technical, and General Manager meetings as needed



Input from Focus Groups

- For the QBR, we heard from customers that meetings should:
 - Address "How are we doing? How do actuals to date compare with budget? Are we on target?"
 - Be forward-thinking early warnings for anything that could affect rates
 - Discussions on decisions that affect costs
 - Program projections
 - Investment proposals/capital issues. What's on the radar?
- The participants could provide input earlier on deciding what should be assigned to Tier 1 or Tier 2, for example: Wind
- For the structure of the IBR, BPA heard:
 - Participants should help design the ongoing QBR process and structure instead of just having BPA design the look, feel and content.
 - Have agenda list processes BPA is involved in
 - Be a clearinghouse for discussions/decisions
 - Participation of customers/stakeholders is directly related to whom within BPA is presenting the information
 - Suggest annual "wrap up" meeting for managerial level beginning of each fiscal year, in addition to quarterly meetings
 - Revisit success of process Make feedback an important part of the process Be prepared to make changes in the future based on feedback.



Input from Focus Groups

- We have developed the general structure for these processes in a way we believe addresses what we heard from customers and others participating in the Focus Groups.
 - The IPR is following closely the format of the PFR and Transmission's PIR.
 - The QBR is expected to begin in November of this year. The structure has not been fleshed out, but it is expected to be a forum for providing information on such things as emerging issues that could affect expenses or changes in capital program expectations.
 - We will be asking for input for both how to structure the QBR process and how to improve the IPR process.
- BPA also expects to use the IBR web site as a forum for providing information on upcoming issues



Rate Case Timing Drives the Schedule

- Typically the focus of this year's IPR would be on expenses for the next rate period (FY 2010-2011) with capital investments out five years (to FY 2013), so decisions can be made in time for the Power and Transmission rate cases expected to start this fall.
- However, because of the recent 9th Circuit Court opinions remanding BPA's power rates, BPA is also re-setting power rates for FY 2009.
 Because proposed spending levels for FY 2009 have been updated for that case, this IPR also provides an opportunity to comment on them.
- Because of the need to file the revised FY 2009 power rates, FY 2009 power costs will be among the first to be presented for review, and comments will need to be provided earlier than those for FY 2010 and beyond.



Why Change FY 2009 Cost Projections?

- The 9th Circuit Court Opinion, *Golden NW*, found BPA's rates were not supported by substantial evidence in part because BPA had not updated its assumptions to include more current fish and wildlife cost information that was available at the time rates were set.
- BPA believes that resetting power rates for FY 2009 is a necessary step in responding to recent Ninth Circuit opinions.
- With currently-effective power rates having been developed in 2006, it would be imprudent and inconsistent with BPA's cost recovery obligations not to include significant known changes in costs for FY 2009, such as CGS operations and maintenance and fish and wildlife costs.
- Given that BPA would be developing FY 2009 spending estimates internally as the WP-07 Supplemental Final Proposal was being developed, we determined it would be prudent to include updated costs in the Proposal. Otherwise, BPA would be setting rates based on assumptions known to be outdated at the time of filing, which could be inconsistent with the Golden NW opinion.



What Can You Expect In This IPR?

- The first several workshops will focus on costs that are included in Power rates, both for FY 2009 and FY 2010-2011, with emphasis on the FY 2009 costs.
- In early June, BPA will release a draft letter describing tentative decisions on FY 2009 Power costs.
- There will be a 2-week comment period on that letter, then BPA will make decisions for FY 2009 costs. Those decisions will be announced in July.
- During June, workshops will continue on both Power costs and Transmission costs for FY 2010 and FY 2011 and capital expenditures through FY 2013.
- A draft letter on FY 2010-2011 costs will be sent out in July, and a comment period will be held. Decisions on FY 2010-2011 costs will be announced by early September.



Comment Periods

- Comment Period for FY 2009 Power Costs
 - Draft decision letter sent out June 6
 - Comment period June 6 through June 19
 - Decisions reported in a closeout letter early July
- Comment Period for FY 2010 and Beyond for Power and Transmission Costs
 - Draft decision letter sent out July 7
 - Comment period July 7 through August 15
 - Decisions reported in a closeout letter September 1



Workshop	Date	Time
Executive Welcome & Overview	Thurs. 05/15/2008	9am-3pm
FY 2009 Power Cost Overview, Misc.	Thurs. 05/15/2008	3pm-4pm
Asset Management Overview, Agency Service Costs	Tues. 05/20/2008	9am-9:30am 9:30am-12:30am
Power's Internal Operating Costs, Power's Transmission Acquisition & Residential Exchange	Tues. 05/20/2008	1:00pm-4:00pm
Fish & Wildlife Capital/Expense with emphasis on MOA costs overall and FY 2009 F&W Program Costs, and FY 2009 Columbia River Fish Mitigation Investment	Wed. 05/21/2008	9:00am-12:00pm
Corps/Reclamation – Capital/Expense Part 1 of 2	Wed. 05/21/2008	1:00pm-4:00pm
Conservation & Energy Efficiency – (Capital/Expense), Renewable Resources Program	Thurs. 05/22/2008	9:00am-12:00pm
Columbia Generating Station	Thurs. 05/22/2008	1:00pm-4:00pm
General Manager Meeting on 2009 Costs	Thurs. 06/11/2008	9:00am-12:00pm 1:00pm-2:00pm
Fish & Wildlife Capital/Expense with an emphasis on FY2010-2011 F&W Program Costs, Hydro Ops, Lower Snake River Comp. Program & Columbia River Fish Mitigation Investment & NWPCC	Thurs. 06/12/2008	9:00am-12:00pm
Corps/Reclamation – Capital/Expense Part 2 of 2	Thurs. 06/12/2008	1:00pm-4:00pm
Transmission Capital/Expenses	Thurs. 06/19/2008	9:00am-12:00pm
Depreciation, Amortization and Interest, and Debt Management	Thurs. 06/19/2008	1:00pm-4:00pm
General Manager Meeting	Thurs. 06/26/2008	9:00am-12:00pm
IPR Concluding Workshop	Thurs. 06/26/2008	1:00pm-4:00pm



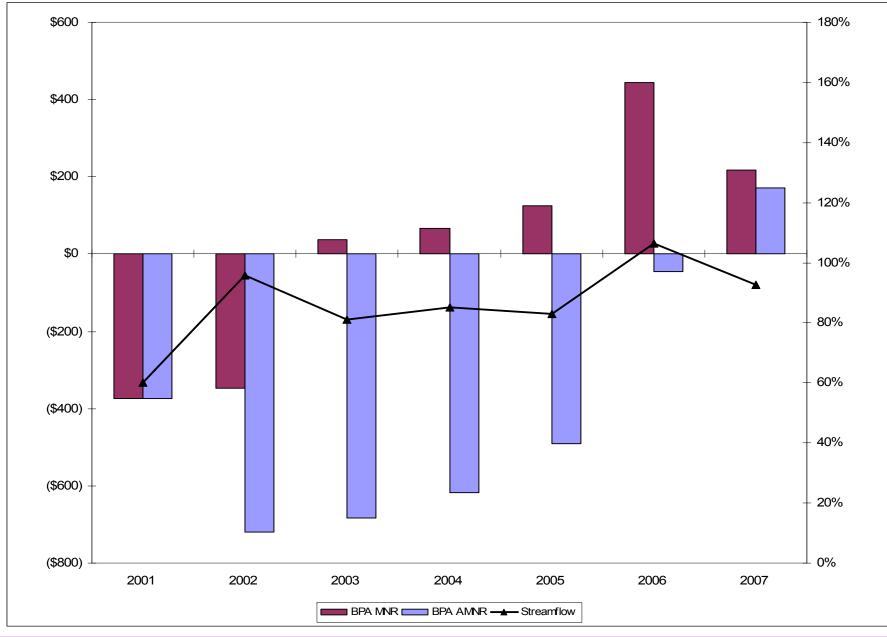
OVERVIEW



- The West Coast Energy Crisis of 2000-2001 left BPA in a deep financial hole.
- It's been a long road to recovery since 2001.
 - BPA lost over \$700 million in FY 2001 and FY 2002.
 - Costs were cut, investments were deferred, and rates were held as low as possible to mitigate the impacts of the crisis.
 - As of the end of FY 2007, BPA has recouped the losses of 2001 2002, despite mostly below-average water years.
- This recovery, and the resulting BPA reserve levels, will likely mean that little or no planned net revenues for risk will need to be included in the revenue requirements for rates.
- Being in better financial health also provides the opportunity to consider investments that have long-term value for the region.



BPA Modified Net Revenues, Annual and Accumulated, FY 2000-2007 And Annual (Water Year) Streamflow as a Percentage of Average



BPA Integrated Program Review

% of Average Water Year



- As part of its cost management efforts during this period, BPA undertook the Enterprise Process Improvement Project (EPIP).
- Eight major BPA business process were examined and redesigned for efficiency and cost savings.
- EPIP has resulted in expense and capital savings that were assumed in the development of current rates and will carry into the future.



EPIP Status

Project	Percent Complete	Cost Savings to date* (in millions)
Energy Efficiency (expense)	100%	\$1.3
Public Affairs (expense)	100%	\$5.2
Transmission O&M	50%	optimized spending & asset performance
Transmission Plan, Design, Build (capital)	60%	\$26.2
Asset Management	60%	optimized spending & asset performance
Information Technology (≈75% expense, 25% capital)	50%	\$68.8
Human Capital Management (expense)	25%	\$5.7
Supply Chain (expense)	40%	\$2.2
Marketing and Sales (expense)	60%	\$3.0
Total		\$112.4

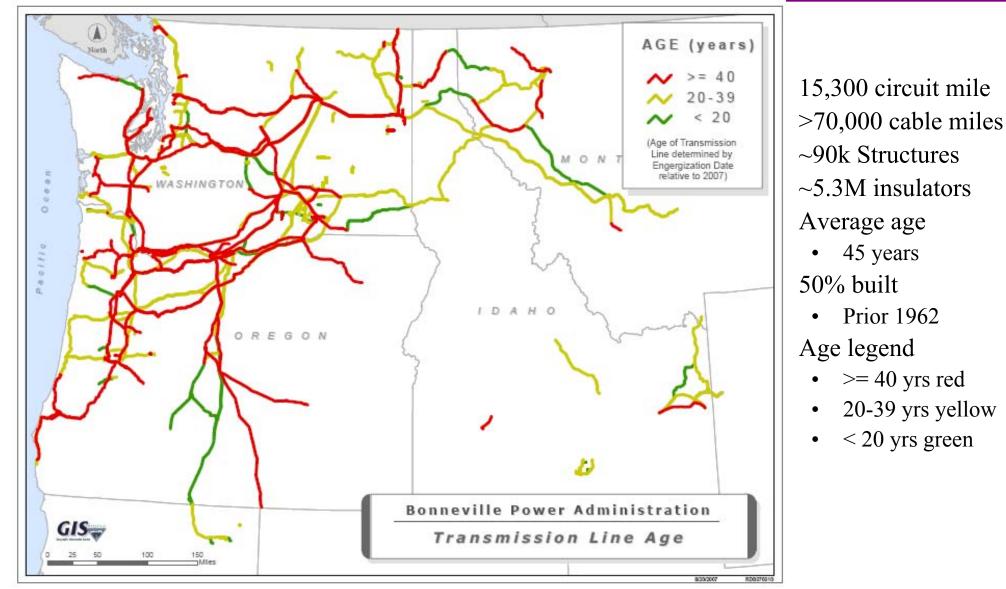
*Through FY 2007, capital and expense



- Another key outcome of the EPIP was a greater BPA focus on Asset Management.
- Asset Management provides a systematic, risk-informed approach to evaluating the current condition of existing assets, identifying the desired state for those assets to generate the maximum cost-effective value, and developing an investment and maintenance strategy to achieve that value.
- BPA sees the need for increased capital investment across the system.
- Two fundamental conditions drive this need for new investment:
 - 1. Deteriorating condition of assets as the FCRPS system ages.
 - 2. Loads and usage of the system continue to increase.



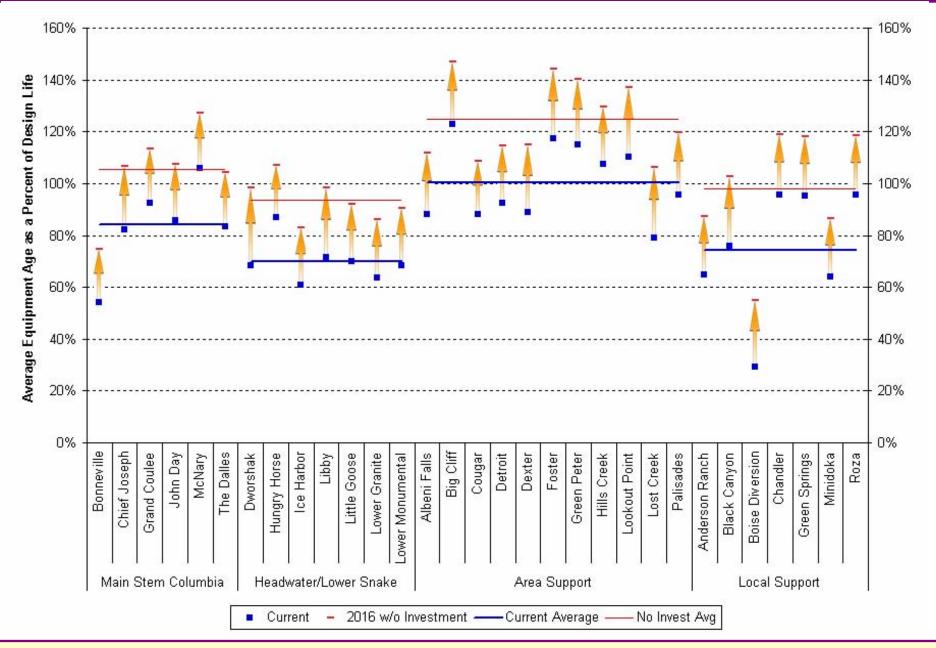
Aging Infrastructure- Transmission Lines



Note- This map is a high level overview and when there are multiple lines in a corridor, the age of the lines is averaged.



Current and Projected (2016) Average Hydro Equipment Age, by Plant





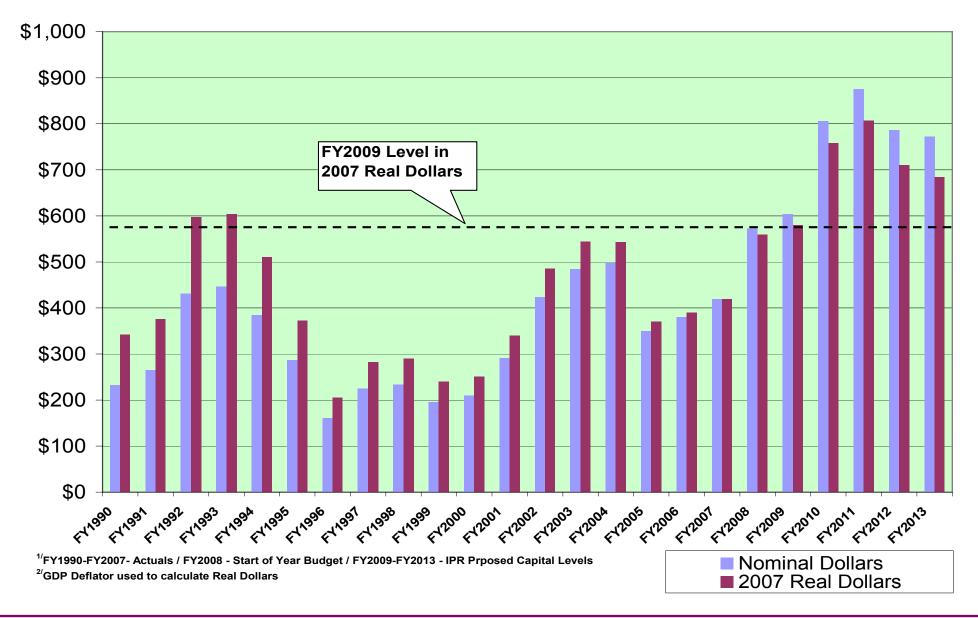
Capital

- BPA's capital investment forecast, informed by asset management strategies in major categories, is driven largely by the need to:
 - Replace deteriorating equipment as the hydroelectric and transmission system ages to ensure reliability and value are maintained.
 - Relieve congestion on the transmission system and facilitate increased commercial usage.
 - Invest in regional energy efficiency.
 - Provide information technology (IT) support for programs throughout the Agency, including EPIP initiatives.
- The capital investment forecasts included in IPR, for all programs except the Fish and Wildlife program, reflect a 15 percent "lapse factor", an assumption that in each year the investment will be 15 percent lower than the original program forecast. This recognizes the fact that not all projects are committed to and that not all projects are achieved on their original schedule.



FY 1990-FY 2013 Agency Capital ^{1/} in Nominal and FY 2007 Real Dollars

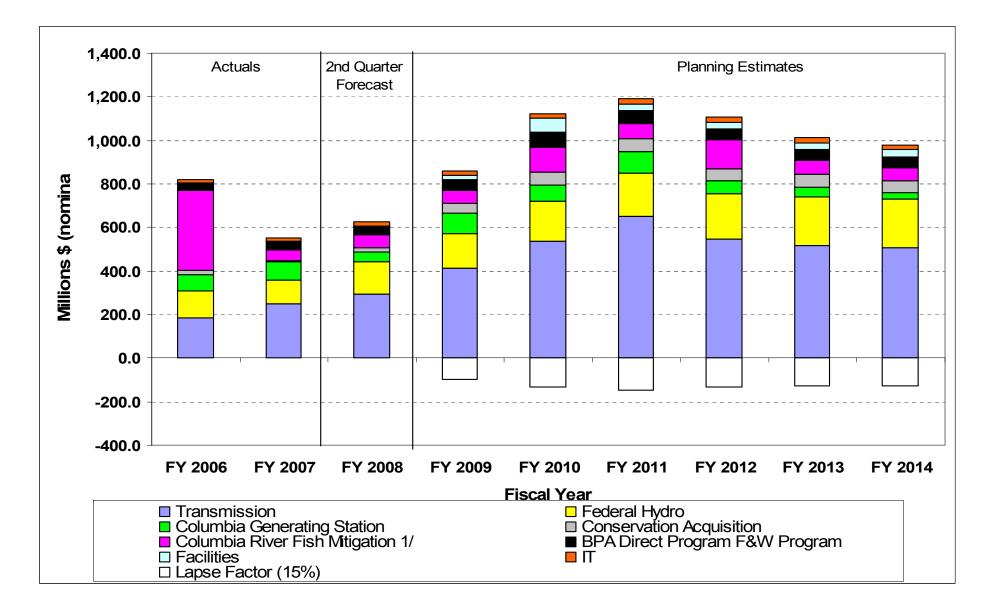
(millions)





FCRPS Capital Expenditures

Fully loaded capital cost, including AFUDC and Indirect Costs





Expense

- BPA is facing increasing pressure on its programmatic and operating expenses as well.
- Increased investment also requires adequate internal infrastructure to manage and support that investment.
 - Plan/design/build
 - Supply Chain
 - IT systems
 - Facilities, Legal, Human Capital Management, Finance
- Increased investment in the system requires capital.
 - With limited authority to borrow from the U.S. Treasury, BPA is looking to 3rd party financing to provide capital for transmission investments.
 - The processes, controls, and documentation required for 3rd party financing are much more rigorous than those required for Treasury borrowing.



Expense

- Major events over the last several years in the utility and other sectors have resulted in a significant strengthening in the regulatory/control environment for BPA and the electric industry generally.
 - Reliability regulation (Western Electricity Coordinating Council (WECC), North American Electric Reliability Corporation (NERC), etc.)
 - Federal Energy Regulatory Commission (FERC) market and rate regulation (Order 890, etc.).
 - Enron/WorldCom/Tyco, etc. fallout (Sarbanes-Oxley for private sector and Office of Management and Budget (OMB) Appendix A-123 for the Federal sector and BPA).
- Environmental obligations have continued to increase.
 - Litigation has resulted in a reexamination of the region's and BPA's obligations under the Endangered Species Act (ESA).
 - Global warming has emerged as an immediate issue.
 - Changing the mix of new generation
 - Renewable generation will put increasing pressure on the hydro system and the transmission grid.
 - More reliance on conservation as a resource

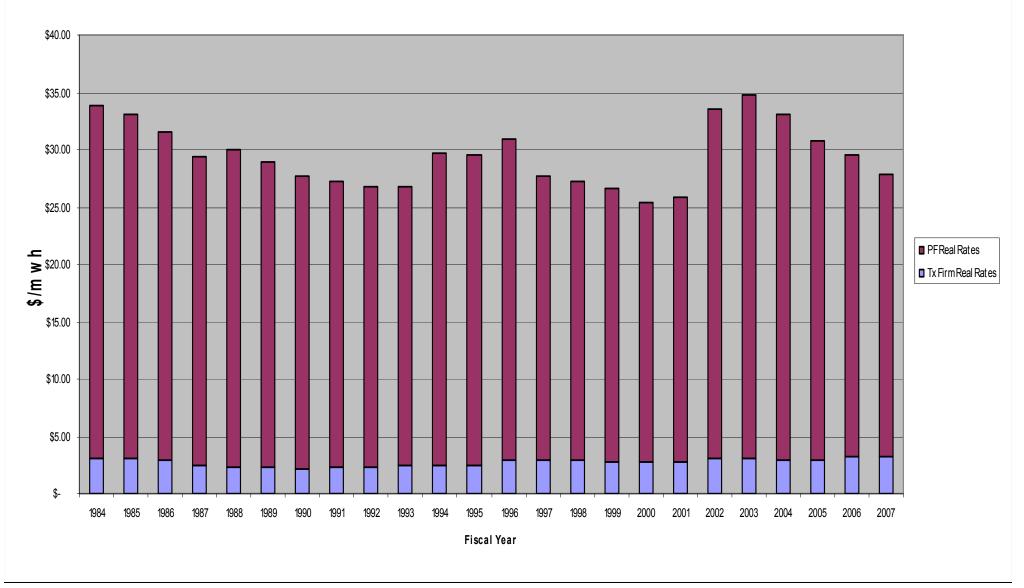


- The completion and implementation of the Regional Dialogue business model has and will continue to stress internal operations.
 - Rate proceedings
 - New long term contracts
 - Tier 2 product offerings

- Generation and Transmission operations and maintenance expenses are increasing, consistent with an Asset Management approach to an aging infrastructure.
 - Columbia Generating Station (CGS)
 - Hydroelectric System
 - Transmission System



FY 1984-2007 Wholesale Energy – Cost Components (\$/MWh)



In 2007, Transmission Firm rates are approximately 11% of the total



- As BPA looks at future costs and rates, the issues that arise for Power and Transmission are quite different.
- Expenses will be presented by business line.
 - These expenses have the most direct impact on rates, although other factors, such as secondary sales revenues, can have a significant impact on rates and will be addressed in upcoming rate proceedings.
- Business line capital will also be presented that explicitly identify planned long term investments.
- This IPR focuses on costs only.
 - Rate design, revenue, and other rate-related issues will be addressed and decided in current and upcoming rate proceedings.
 - FY 2009 Power costs are being addressed because new Power rates are being established to respond the 9th Circuit Court decision on the Residential Exchange.
 - New rates for FY 2010 and 2011 will be established for both Power and Transmission.

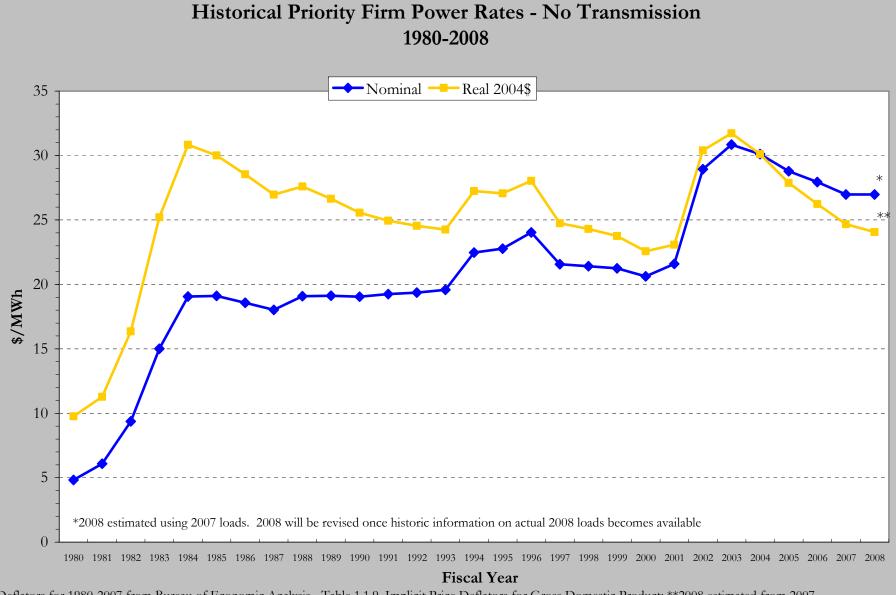


Power

Historical Review of Rates Expenses Capital Program



Historical Power Rates



Deflators for 1980-2007 from Bureau of Economic Analysis - Table 1.1.9. Implicit Price Deflators for Gross Domestic Product; **2008 estimated from 2007



- The WP-07 2009 Supplemental Rate Proposal included roughly a 4 percent rate decrease from current rates, driven by the proposed \$126 million decrease in Residential Exchange benefits.
- The changes between IPR proposed spending levels for FY 2009 and rate case forecast levels, disregarding changes in power purchases and in residential exchange benefits, are:

•\$130 million increase compared against the FY 2009 spending levels included in current rates.

•\$110 million increase compared against the FY 2009 expenses included in the WP-07 Initial Supplemental Proposal.

- It is likely that FY 2009 net secondary sales in the final FY 2009 rate proposal will be higher than those included in the Supplemental Proposal, providing an offset to the cost increases.
- Final decision on FY 2009 residential exchange benefits is still pending in the rate case.
- There is still much uncertainty about FY 2008 financial performance.
- Bottom line: FY 2009 rate level is still uncertain.



Major drivers for FY 2010-2011 include:

- Significant cost increases, excluding changes in power purchases and residential exchange:
 - \$295 million increase in FY 2010-2011 compared against FY 2009 cost in current rates
 - \$165 million increase in FY 2010-11 compared against FY 2009 costs in this IPR.
- Residential exchange benefit levels which will be determined in the FY 2010-FY 2011 rate case and will be a significant rate driver.
- Secondary revenue forecasts, which are likely to benefit from market prices that are higher than in the FY 2007-2009 rate case.
- The extended CGS outage in FY 2011 which will reduce net secondary revenues by roughly \$50 million.

The general rule of thumb to estimate the impact of changes in costs on power rates is 65-80 million = 1 Mill change in Power Rates.



Primary drivers of changes in FY 2009 costs relative to FY 2009 costs in the FY 2007-2009 Rate Proposal are:

BPA's fish and wildlife costs	\$38 million
• net of 4(h)(10)(C) credits	
Energy Northwest's Columbia Generating	
Station (CGS)GS O&M	\$51 million
(based on BPA modifications to EN Budget)	
Internal costs, both power's own internal costs	
and those Agency Services costs allocated to power	\$13 million
Hydro electric system O&M	\$13 million
Residential Exchange	-\$126 million



Drivers of Power Costs for FY 2010-2011 Compared to IPR FY 2009 Forecasts

Primary drivers of increases in FY 2010-2011 Power costs relative to FY 2009 costs in the Integrated Program Review (based on a two-year average for FY 2010-2011):

•	Interest, Depreciation and Non-Federal Debt Service due	\$62 million
	to increased capital investment	
•	BPA's fish and wildlife costs	\$33 million
	Primarily driven by Biological Opinion, Memoranda of Agreement,	
	net of 4(h)(10)(C) credits	
•	Hydro system O&M	\$27 million
•	CGS O&M *	\$23 million
•	Internal costs, both Power's internal costs and	\$12 million
	Agency Services costs allocated to power	

*Comparing a refueling year (FY 2009) to a 2-year period that includes both a refueling and a non-refueling year



Drivers of Power Costs for FY 2010-2011 Compared to WP-07 Rate Case Forecasts for FY 2009

Primary drivers of increases in FY 2010-2011 Power costs relative to FY 2009 costs in the 2007-2009 Rate Proposal (based on a two-year average for FY 2010-2011):

CGS O&M *	\$74 million
BPA's fish and wildlife costs	\$70 million
• Net of 4(h)(10)(C) credits	
Corps and Reclamation O&M	\$40 million
Internal Operations	\$25 million
Depreciation and Net Interest	\$24 million
Conservation	\$17 million
Non-Federal Debt Service	\$13 million
Regional Energy Efficiency	\$10 million
Residential Exchange	-\$116 million

*CGS costs up by approximately \$100 million per year relative to FY 2008-2009 average (non-refueling year and refueling year) from rate case.



- Internal costs forecast in the WP-07 Rate Case for FY 2007 were \$107 million, and forecasts for the rate period averaged \$109 million. The actuals for FY 2007 were at virtually the same level.
- Power internal costs have been held virtually flat for seven years.
- An increase is needed in FY 2009 because:
 - Payment to National Park Foundation for Elwha Dam \$1 million
 - Wind integration effort is bigger than expected roughly \$2 million
 - Regional Dialogue contract and tiered rates completion and implementation effort costs are greater than expected roughly \$1 million
 - Greater-than-planned resource acquisition effort for Tier 1 augmentation and Tier 2 roughly \$1 million
 - Greater Agency Corporate support roughly \$6 million (See Agency Services section in this presentation)
- Power's internal costs for FY 2009 reflected in the FY 2007-2009 rate case were \$112 million.
- Today's estimate for FY 2009 internal costs is \$125 million.
- This is a \$13 million increase over the rate case.
- FY 2010-2011 proposed internal costs increase an additional \$12 million.



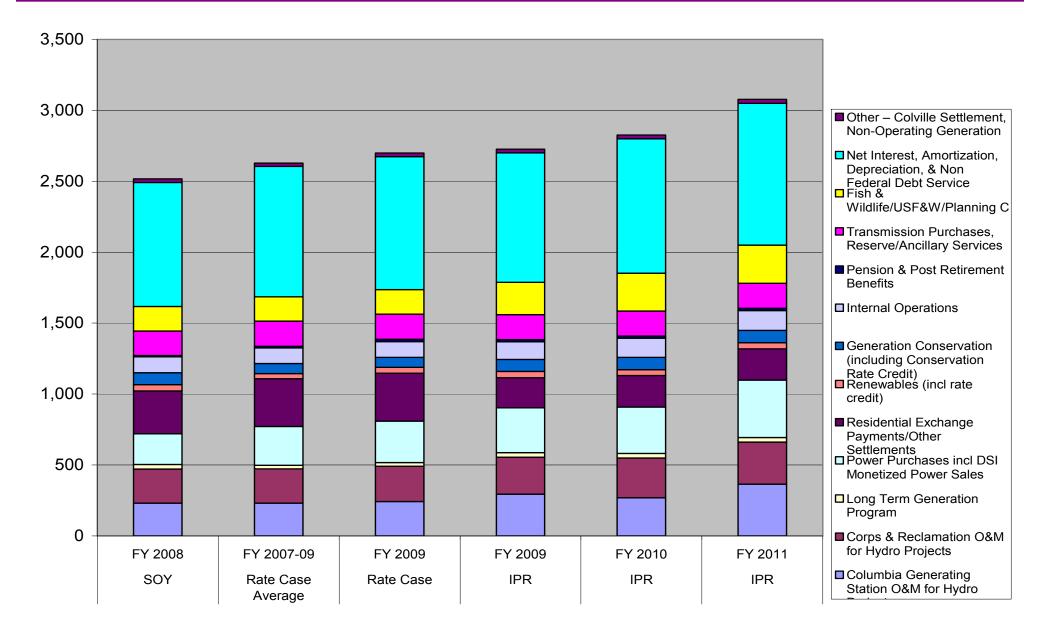
Power Expenses Actuals FY 2006-2007 & Proposed FY 2009-2011

				Rate				
\$ in Thousands	Actu	uale	SOY	Case	Rate Case	IPR	IPR	IPR
Power Program	FY 2006	FY 2007	FY 2008	Average FY 2007-09	FY 2009	FY 2009	FY 2010	FY 2011
	F12000	F1 2007	FT 2000	FT 2007-09	FT 2009	F12009	FT 2010	
Columbia Generating Station O&M	228,317	276,409	231,431	231,753	242,842	293,700	269,200	365,000
Corps & Reclamation O&M for								
Hydro Projects	209,253	225,742	240,502	240,616	248,173	261,600	280,700	296,461
Long Term Generation Program	26,395	28,247	31,858	25,332	25,751	31,613	31,889	32,343
Power Purchases incl DSI								
Monetized Power Sales	499,057	272,414	215,811	273,773	292,210	316,454	327,189	404,795
Residential Exchange	450 407	240.047	202.000	220.000	227 220	010.005	001 400	222 445
Payments/Other Settlements	156,167	340,247	303,000	336,960	337,320	212,985	221,426	220,445
Renewables (incl rate credit)	19,172	26,825	44,381	36,362	41,917	43,955	41,588	43,438
Generation Conservation								
(including Conservation Rate Credit)	74,500	72,113	82,983	71,035	70,347	84,526	87,088	86,722
Internal Operations	107,585	108,265	112,997	109,385	111,566	125,030	134,609	138,857
Pension & Post Retirement	107,000	100,200	112,007	100,000	111,000	120,000	10-1,000	100,007
Benefits	11,600	10,550	9,000	11,641	15,375	15,277	15,598	16,071
Transmission Purchases,								
Reserve/Ancillary Services	184,783	164,046	172,982	176,869	177,525	176,073	176,393	177,043
Fish & Wildlife/USF&W/Planning C	166,496	167,131	172,066	172,276	173,353	229,434	263,541	270,618
Net Interest, Amortization,								
Depreciation, & Non Federal Debt	040 440	700 404	075 400	010 000	007 000	011 040	047 004	000 000
Service	848,119	788,124	875,180	919,336	937,393	911,946	947,834	999,320
Other – Colville Settlement, Non-	18,102	21,938	21 151	21,957	24,649	27,413	25,746	28,082
Operating Generation			24,454		,		,	
Total Increase/Decrease *	2,549,546	2,502,050 (47,496)	2,516,645 14,595	2,627,295	2,698,421 181,776	2,730,006 31,585	2,822,801 92,795	3,079,195 256,394
		(-,-,-,-,-,-,-,-,-,-,-,-,-,-,-,-,-,-,-,	14,000		101,770	51,000	32,130	200,004

* for FY 2006-2008, Rate Case FY 2009, 2010 and 2011, change is from the prior year. For FY 2009 Forecast, change is calculated from "Rate Case".



Power Expenses (§ Millions)





Columbia Generating Station O&M

\$ in Thousands	Actu	als	SOY	Rate Case Average	Rate Case	IPR	IPR	IPR
	FY 2006	FY 2007	FY 2008	FY 2007-09	FY 2009	FY 2009	FY 2010	FY 2011
Program Level Spending	228,317	276,409	231,431	231,753	242,842	293,700	269,200	365,000
Increase/Decrease *		48,092	-44,978		11,411	50,858	-24,500	95,800

* for FY 2006-2008, Rate Case FY 2009, 2010 and 2011, change is from the prior year. For FY 2009 Forecast, change is calculated from "Rate Case".

Program Background:

BPA pays the costs of Energy Northwest's CGS nuclear power plant.

Drivers of Change:

- EN continued focus on equipment obsolescence and reliability. EN management believes very significant additional investments are necessary to improve safety and reliability
- The plant's performance indicators have been low when measured against criteria set by INPO, but its capacity factors have been good.
- BPA did not disapprove additions to EN budget last year \$87 million over the years 2007-2009 above budget adopted in 2006.
- EN proposed an increase of \$64 million for 2009 above the level in the FY 2007-2009 rate case for 2009. EN tentatively agreed that it is reasonable for BPA to reduce the \$65 million increase to a \$51 million increase.
- BPA has proposed some additional reductions for FY 2009.
- CGS O&M in current rates for FY 2008 and FY 2009 total \$431.6 million compared to IPR forecasts of \$634.2 million for FY's 2010-2011. A \$202.6 million increase from current rates.
- FY 2010-11 proposal does not include lost power value for additional 38-day outages for condenser replacement -- approximately \$50M cost for lost generation.

Forecast Risk:

• These forecast do not include any funding for future NRC security requirements.

Opportunities for Improvement:

BPA will continue to work with Energy Northwest to identify areas for improvement.





Corps & Reclamation O&M for Hydro Projects

				Rate Case	Rate			
\$ in Thousands	Actu	uals	SOY	Average	Case	IPR	IPR	IPR
	FY 2006	FY 2007	FY 2008	FY 2007-09	FY 2009	FY 2009	FY 2010	FY 2011
Program Level Spending	209,253	225,742	240,502	240,616	248,173	261,600	280,700	296,461
Increase/Decrease *		16,489	14,760		7,671	13,427	19,100	15,761

* for FY 2006-2008, Rate Case FY 2009, 2010 and 2011, change is from the prior year. For FY 2009 Forecast, change is calculated from "Rate Case".

Program Background:

BPA works with U.S. Army Corps of Engineers and the Bureau of Reclamation to implement funding for operations and maintenance activities at 31 hydro electric facilities throughout the Northwest.

Drivers of Change:

- WECC/NERC Compliance Requirements \$4 million per year.
- Corps Hydro Facility Drawings \$1 million per year
- Non-Routine Extraordinary Maintenance Requirements, including \$4.9 million in FY 2010 and \$12 million in FY 2011 for rehab at Grand Coulee. This rehab has been scheduled to allow for condenser work at CGS. Corps hydro projects require similar levels of extraordinary expense.
- Bi-Op Requirements, including \$2 million per year for Willamette BiOp expenses and \$6 million for Leavenworth Hatcheries work.
- Proposal is for O&M spending to rise at roughly rate of inflation, (<u>except</u> for the costs described above).

Forecast Risk:

- Increasing Forced Outages (particularly 3rd house units at Grand Coulee)
- Material Cost Increases and Availability of Material (world markets)
- Increasing Risk to Generating Capacity
- Non-Compliance Risk Reliability Standards
- Ability to Resource and Execute (staffing, contracts, engineering and design, construction management, etc.)
- Increasing Bi-Op requirements

Opportunities for Improvement:

- Costs may be less due to re-sourcing limitations
- Prioritization and further analysis of work activities and risks
- Ability to take units off system is limited (especially once work begins on Coulee 3rd power house)

Workshop Scheduled May 21, 2008 & June 12, 2008



Long Term Generation Program

				Rate Case	Rate			
\$ in Thousands	Actu	uals	SOY	Average	Case	IPR	IPR	IPR
	FY 2006	FY 2007	FY 2008	FY 2007-09	FY 2009	FY 2009	FY 2010	FY 2011
Program Level Spending	26,395	28,247	31,858	25,332	25,751	31,613	31,889	32,343
Increase/Decrease *		1,852	3,611		-6,107	5,862	276	454

* for FY 2006-2008, Rate Case FY 2009, 2010 and 2011, change is from the prior year. For FY 2009 Forecast, change is calculated from "Rate Case".

Program Background:

This program consists of output contracts for generating resources, such as Cowlitz Falls, Billing Credits Generation, Wauna, Elwah, Idaho Falls Bulb Turbine and Clearwater Hatchery Generation. Most of the expenses associated with the long term generating projects are based on energy production at the generating units, and therefore are offset by revenues.

Drivers of Change:

• The WP-07 rate proposal did not include Idaho Falls Bulb Turbine

Risks:

- Unplanned/forced outages resulting in reduced secondary sales
- Non-routine extraordinary Maintenance infrequent, high-dollar projects due to plant failure or overdue maintenance that cannot be capitalized.

Opportunities for Improvement: Little opportunity because prices are contractual



Residential Exchange/Other Settlements

\$ in Thousands	Actu	uals	SOY	Rate Case Average	Rate Case	IPR	IPR	IPR
	FY 2006	FY 2007	FY 2008	FY 2007-09	FY 2009	FY 2009	FY 2010	FY 2011
Program Level Spending ¹	156, 167 ^{1,}	340,247	303,000	336,960	337,320	212,985	221,426	220,445
Increase/Decrease *		184,080	(37,247)		34,320	(124,335)	8,441	(981)

* for FY 2006-2008, Rate Case FY 2009, 2010 and 2011, change is from the prior year. For FY 2009 Forecast, change is calculated from "Rate Case".

1/ FY 2006 includes only the 900 aMW portion and not the 1000 aMW or buyback and power sales.

Program Background:

This program is driven by BPA's strategic direction that the benefits we provide "... To IOUs for their residential and small-farm consumers is equitable based on the Northwest Power Act."

- For the current rate period, FY 2007-2009 base on the WP-07 rate case, the program expense is a result of the Residential Exchange Program Settlement agreements with the IOUs.
- Due to a ruling from the 9th Circuit Court which found these settlements beyond BPA's authority, BPA is holding a rate case to address the ruling, including re-setting rates for FY 2009.
- Residential Exchange Benefits for FY 2009 as reflected in BPA's WP-07 Initial Supplemental Rate Proposal are calculated as follows:

Eligible Residential Exchange Benefits = \$259 million (\$250 million for Investor Owned Utilities and \$9 million for Consumer Owned Utilities) Less any Deemer Balances = (\$9 million)

Less Lookback Amounts for IOUs = (\$39 million)

Plus additional staffing to support program - \$2 million

Net Residential Exchange Benefits in Initial Supplemental FY 2009 PF Rates = \$213 million

The actual Residential Exchange benefits will be determined in the formal rate case, not in this forum.

Using FY 2009 as a basis for the forecast, benefits forecast for FY 2010-2011 are calculated Eligible Residential Exchange Benefits = \$259 million (\$250 million for Investor Owned Utilities and \$9 million for Consumer Owned Utilities)

Less Lookback Amounts for IOUs = (\$39 million)

Plus additional staffing to support program - \$1.5 million

Net Residential Exchange Benefits in Initial Supplemental FY 2010-2011 PF Rates = \$221 million



Renewable Generation Program

				Rate				
				Case	Rate			
\$ in Thousands	Actu	Jals	SOY	Average	Case	IPR	IPR	IPR
	FY 2006	FY 2007	FY 2008	FY 2007-09	FY 2009	FY 2009	FY 2010	FY 2011
Program Level Spending	19,172	26,824	44,381	36,362	41,917	43,955	41,588	43,438
Increase/Decrease*		7,652	17,557		(2,464)	2,038	(2,367)	1,850

* for FY 2006-2008, Rate Case FY 2009, 2010 and 2011, change is from the prior year. For FY 2009 Forecast, change is calculated from "Rate Case". **Program Background:**

BPA's Policy goal for renewable resources is to ensure the development of its share of all cost-effective regional renewable resources at the least possible cost to BPA ratepayers. BPA's share will be based on the public power customers share of regional load growth (about 40 percent). Any renewables acquired by BPA for service to publics, acquired by publics with our without assistance from BPA, counts toward this goal.

Drivers of Change:

- FY 2009:
 - Addition of the Klondike 3 (not contemplated in the 2007 rate case). Although this addition increases rates, costs are mitigated by revenues generated from the sale of project's generation and attributes.
 - Public power is meeting the Council's forecasted renewable development without BPA facilitation spending. Therefore, BPA is ٠ proposing to reduce the FY 2009 Facilitation budget from \$13 million to \$2.5 million.

Proposed Changes for 2010-2011:

- Fourmile Hill geothermal estimated online date moved from FY 2010 to FY 2012.
- Set the facilitation budget at \$4 million per year in light of public customer progress towards meeting Council's forecasted renewables.
- Eliminate the renewable option to the conservation rate credit. The program is not forecasted to be needed to meet the Council's Workshop Scheduled May 22, 2008 forecasts due to public power's continued Renewable Portfolio Standard (RPS) requirements.

Opportunities for Improvement:

Continue to manage budget to meet Renewable Program goals and targets.



Conservation Program

				Rate Case	Rate			
\$ In Millions	Actu	uals 💦	SOY	Average	Case	IPR	IPR	IPR
	FY 2006	FY 2007	FY 2008	FY 2007-09	FY 2009	FY 2009	FY 2010	FY 2011
Program Level Spending	74,500	72,113	82,983	71,035	70,347	84,526	87,088	86,722
Less Reimbursable expenses	-17,233	-17,172	-22,000	-12,909	-12,933	-22,000	-20,500	-20,500
Plus Related Internal Operations costs	6,595	7,053	7,606	6,695	6,953	8,535	9,519	<u>10,115</u>
Net	63,862	61,994	68,589	64,821	64,367	71,061	76,107	76,337
Increase/Decrease*		-1,868	6,595		-4,222	6,694	5,046	230

* for FY 2006-2008, Rate Case FY 2009, 2010 and 2011, change is from the prior year. For FY 2009 Forecast, change is calculated from "Rate Case". **Program Background:**

BPA's conservation program (expense & capital) has a goal of delivering 52 aMW of conservation savings per year (net of any naturally occurring conservation) during the FY 2007-2009 period. This compares to and average of 44 aMW per year over the FY 2002-2006 rate period.

Drivers of Change:

Primary increases are due to providing additional acquisition and load management expense funds to support regional delivery infrastructure required to achieve accelerated conservation targets and load management work related to 2008 Resource Plan. Disregarding reimbursable expenses, FY 2009 expense is \$6 million higher than the rate case forecast. For 2010 and 2011 we are accepting the Council targets from the 5th power plan (64 aMW per year) and adding 6 aMW to each of those years (for a total of 70 aMW) per year. FY 2010 and 2011 expenses increase over the IPR forecast for FY 2009 by about \$5 million, disregarding reimbursables. These increases in expense funding are needed to ramp up our efforts to achieve the higher targets and to develop new programs in demand management.

Forecast Risk:

- Invoices from program delivery partners exceed established budget levels.
- NPCC's final conservation target (and BPA's share) could change (most likely it will end up, not down).
- The cost of acquiring the conservation change savings could change (most likely it would go up, since the conservation supply curve rises as you achieve the lower cost measures).
- Much of the low-cost conservation opportunities have been realized. Future efforts will have to penetrate the hard-to-reach markets at a much higher cost.

Opportunities for Improvement:

Continue to manage invoicing from program delivery partners such that financial targets and established budget levels are not exceeded.
 Regional coordination, leveraging with other delivery partners to take advantage of economies of scale, bulk purchases and cost sharing opportunities will help keep costs down.





Internal Operations Charged to Power

\$ In Millions	Actu	uals	SOY	Rate Case Average	Rate Case	IPR	IPR	IPR
	FY 2006	FY 2007	FY 2008	FY 2007-09	FY 2009	FY 2009	FY 2010	FY 2011
Program Level Spending	107,585	108,265	112,997	109,385	111,566	125,030	134,609	138,857
Increase/Decrease *		680	4,732		-1,431	13,464	9,579	4,248

* for FY 2006-2008, Rate Case FY 2009, 2010 and 2011, change is from the prior year. For FY 2009 Forecast, change is calculated from "Rate Case".

Program components:

BPA and contractor staffing costs, travel, training, consultant contracts, building leases, IT services and other related costs.

Drivers of change:

- FTE increase of 12 from original allocation due to:
 - Wind integration
 - Tiered rates
 - Resource acquisition

Drivers of Change:

- Higher National Park Foundation payment for generation output from Elwah Dam until deconstruction \$800,000
- FTE increases above original allocation of 267 12 above in FY 2009

Forecast Risk:

Actual staffing levels and resources could be higher due to Regional Dialogue and associated requirements by 2010-2011.
 Personnel costs could be higher due to higher cost health benefits, higher COLAs, increased training needs for new employees due to changing demographics.

Opportunities for Improvement:

• Staff reductions in forecast can mitigate growth rate increases in costs.

Workshop Scheduled May 20, 2008



Transmission Purchases, Reserve/Ancillary Services

				Rate Case	Rate			
\$ in Thousands	Actu	uals	SOY	Average	Case	IPR	IPR	IPR
	FY 2006	FY 2007	FY 2008	FY 2007-09	FY 2009	FY 2009	FY 2010	FY 2011
Program Level Spending	184,783	164,046	172,982	176,869	177,525	176,073	176,048	176,623
Increase/Decrease*		(20,737)	8,936		4,543	(1,452)	(25)	575

* for FY 2006-2008, Rate Case FY 2009, 2010 and 2011, change is from the prior year. For FY 2009 Forecast, change is calculated from "Rate Case".

Program Background:

Generally, this category represents costs associated with services necessary to deliver energy from resources to markets and loads: transmission, ancillary services, real power losses.

Drivers of Change:

- Surplus levels and shape.
- Change in Transmission's Business Practices.
- Limited access to transmission purchasing more expensive transmission products.
- Acquiring resources to meet Resource Adequacy.

Forecast Risk:

- TS rate increase.
- Change in Transmission or Ancillary Services billing factors.
- Change in Transmission's Business Practices (sheltering going away).
- Change in level of shape.

Opportunities for Improvement:

- Remarketing surplus transmission (Buy/Sells).
- Purchasing transmission from other sources at a discounted value.
- Better coordination with Trading Floor and management regarding redirecting of unused transmission inventory.





Fish & Wildlife Direct Program

				Rate Case	Rate			
\$ in Thousands	Actu	uals	SOY	Average	Case	IPR	IPR	IPR
	FY 2006	FY 2007	FY 2008	FY 2007-09	FY 2009	FY 2009	FY 2010	FY 2011
Program Level Spending	137,900	139,500	143,000	143,000	143,000	200,000	230,000	236,000
Increase/Decrease *		1,600	3,500		0	57,000	30,000	6,000

* for FY 2006-2008, Rate Case FY 2009, 2010 and 2011, change is from the prior year. For FY 2009 Forecast, change is calculated from "Rate Case".

Program Background: This program represents BPA's Direct Fish and Wildlife Program which manages projects intended to meet BPA's mitigation objectives under the Northwest Power Act, consistent with the Northwest Power and Conservation Council, as well as BPA's Endangered Species Act offsite fish and wildlife requirements under biological opinions from the U.S. Fish and Wildlife Service and National Oceanic and Atmospheric Administration (NOAA) Fisheries.

Drivers of Change:

- New Biological Opinions require increased costs for hydrosystem operations, habitat restoration, research, monitoring and evaluation.
- The 2008 Columbia Basin Accords, agreements with States and Tribes on Fish and Wildlife costs, include some costs necessary for implementing the Bi-Op, but also have incremental costs. These agreements benefit the agency and the region, by: moving key players from adversaries to partners, ending years of divisiveness; including accountability for results; including defined biological objectives, so that the actions will be measured for their effectiveness against those objectives; providing known costs which will mean more stable rates. The projects are expected to produce biological benefits and cost less than litigation.
- These increased costs are partially offset by 4(h)(10)(C) credits, which in essence reimburse BPA for the portion of these costs that are attributable to non-power purposes of the FCRPS.

Workshop Scheduled May 21, 2008 & June 12, 2008



Net Interest, Amortization, Depreciation & Non-Federal Debt Service

\$ in Thousands	Actuals		SOY	Rate Case Average	Rate Case	IPR	IPR	IPR
	FY 2006	FY 2007	FY 2008	FY 2007-09	FY 2009	FY 2009	FY 2010	FY 2011
Program Level Spending	848,119	788, 124	875,180	919,336	937,393	911,946	947,834	999,320
Increase/Decrease *		(59,995)	87,056		62,213	(25,447)	35,888	51,486

* for FY 2006-2008, Rate Case FY 2009, 2010 and 2011, change is from the prior year. For FY 2009 Forecast, change is calculated from "Rate Case".

Program Background:

- Program components
 - Net interest Comprised of interest on bonds and appropriations netted against interest credit from the Bonneville Fund.
 - Depreciation The depreciation of revenue-producing assets and on-going infrastructure investments through BPA direct funding for hydro projects, and appropriated investment for fish mitigation program at hydro projects managed by the Corps of Engineers.
 - Amortization The depreciation of non-revenue producing assets such as conservation and direct fish and wildlife capital investments (non-appropriated).

Drivers of Change:

- Increased capital investment, particularly in conservation and BPA's Fish and Wildlife Program, results in higher costs in FYs 2010-2011.
- Change in projected interest income due to change in cash balances
- Debt management actions





Power Function Capital Expenditures Actuals for FY 2006-2007, Forecasted FY 2009-2013

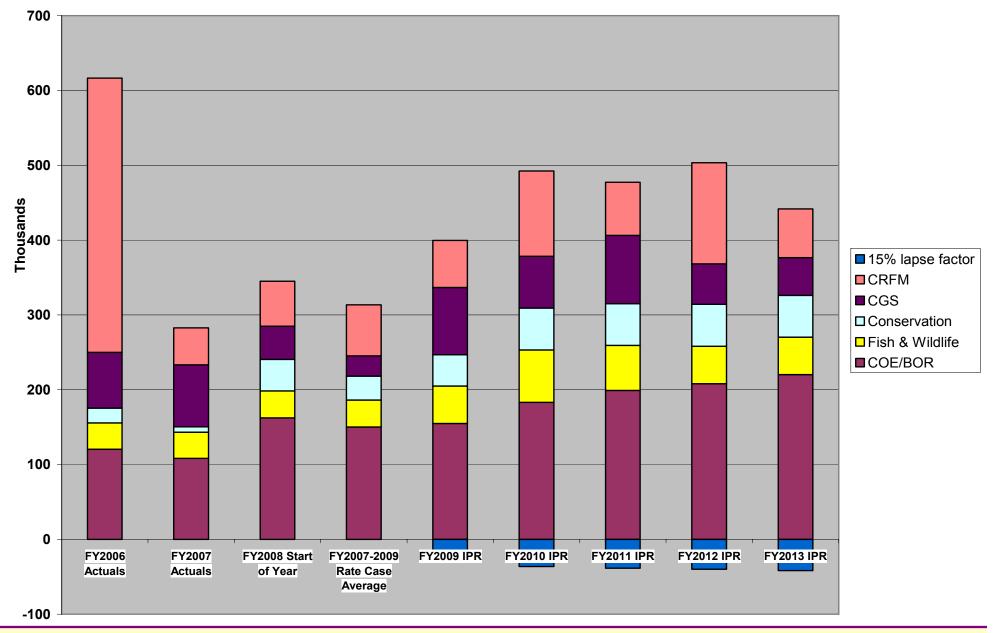
				Rate Case					
\$ in Thousands	Actuals		SOY	Average	IPR	IPR	IPR	IPR	IPR
Description	FY 2006	FY 2007	FY 2008	FY 2008-09*	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Corps of									
Engineers/Bureau of									
Reclamation	120,561	108,351	162,488	150,301	154,950	183,200	199,200	208,200	220,200
Fish & Wildlife	35,000	35,000	36,000	36,000	50,000	70,000	60,000	50,000	50,000
Conservation	20,000	7,000	42,000	32,000	42,000	56,000	56,000	56,000	56,000
CGS	74,501	82,926	44,464	26,900	96,700	73,600	99,900	55,200	47,700
CRFM	366,165	49,410	60,000	68,300	63,000	114,000	71,000	135,000	65,000
15% lapse factor ^{1/}					(29,813)	(36,150)	(38,550)	(39,900)	(41,700)
Total Capital	616,227	282,687	344,952	313,501	376,837	460,650	447,550	464,500	397,200
Total Increase/Decrease *		-333,540	62,265		31,885	83,813	(13,100)	16,950	(67,300)

^{1/}Lapse Factor does not include Fish & Wildlife, CGS, or CRFM

*Change is calculated from the prior year. The "Rate Case Average" column is not used in calculations of increases and decreases.



Power Capital Expenditures





COE/BOR Capital Expenditures

\$ in Thousands	Actu	uals	SOY	Rate Case Average	IPR	IPR	IPR	IPR	IPR
Description	FY 2006	FY 2007	FY 2008	FY 2008-09*	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
COE/BOR	120,561	108,351	162,488	150,301	154,950	183,200	199,200	208,200	220,200
Total Increase/Decrease *		-12,210	54,137		-7,538	28,250	16,000	9,000	12,000

*Change is calculated from the prior year. The "Rate Case Average" column is not used in calculations of increases and decreases.

Strategic Objective(s): This program is driven by BPA's strategic direction to insure that hydro projects' "… performance and expansion meet availability, adequacy, reliability and cost-effectiveness standards. " BPA works with the U.S. Army Corps of Engineers and the Bureau of Reclamation to ensure implementation of all regionally cost-effective system refurbishments and enhancements to federal hydro projects.

Drivers of Change: The proposed investment program increases significantly from past expenditure levels to address the condition and risk of hydro equipment. The investment program addresses trusted stewardship goals, including safety, environmental, and other non-power risks; however, the proposed increase in spending is primarily the result of the following factors related to FCRPS' goals of low cost power and power reliability:

- 1. Equipment condition is deteriorating at critical plants, which poses significant risk of increased power costs due to lost hydro generation. Of particular note are Grand Coulee, Chief Joseph, and McNary, which provide significant power production and transmission system support.
- 2. Continued investment is needed to capture economic opportunities for turbine runner efficiency improvements at Grand Coulee and Chief Joseph.
- 3. Funding is identified for a new generating unit at Libby to support flows for sturgeon habitat.

Forecast Risk: Increasing forced outages, equipment cost increases, increasing demand for equipment from more limited number of worldwide suppliers, increasing risk to generating capability, increasing environmental and fishery requirements, risk of non-compliance to reliability standards, ability to resource and execute the program, and catastrophic events causing a refocus of investment priorities.

Opportunities for Improvement: While these are not improvements per se, near-term program cost reductions may occur as a result of resource limitations, or the inability to schedule units out of service for rehabilitation; these may increase long-term costs.



Fish & Wildlife Capital Expenditures

\$ in Thousands	Actu	uals	SOY	Rate Case	IPR	IPR	IPR	IPR	IPR
Description	FY 2006	FY 2007	FY 2008	FY 2008-09*	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Fish & Wildlife	35,414	35,186	36,000	36,000	50,000	70,000	60,000	50,000	50,000
Increase/Decrease *		-228	814		14,000	20,000	(10,000)	(10,000)	0

*Change is calculated from the prior year. The "Rate Case Average" column is not used in calculations of increases and decreases.

Program Background: This program represents BPA's Direct Fish and Wildlife Program which manages projects intended to meet BPA's mitigation objectives under the Northwest Power Act, consistent with the Northwest Power and Conservation Council, as well as BPA's Endangered Species Act offsite fish and wildlife requirements under biological opinions from the U.S. Fish and Wildlife Service and National Oceanic and Atmospheric Administration (NOAA) Fisheries.

Drivers of Change:

- New Biological Opinions require increased investment in fishery production facilities and tributary fishery passage facilities, and land acquisitions for wildlife and resident fish.
- The 2008 Columbia Basin Accords, agreements with States and Tribes on Fish and Wildlife costs, include some costs necessary for implementing the Bi-Op, but also have incremental costs. These agreements benefit the agency and the region, by: moving key players from adversaries to partners, ending years of divisiveness; including accountability for results; including defined biological objectives, so that the actions will be measured for their effectiveness against those objectives; providing known costs which will mean more stable rates. The projects are expected to produce biological benefits and cost less than litigation.



Conservation Capital Expenditures

\$ in Thousands	Actu	uals	SOY	Rate Case Average	IPR	IPR	IPR	IPR	IPR
Description	FY 2006	FY 2007	FY 2008	FY 2008-09*	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Conservation	20,058	6,955	42,000	32,000	42,000	56,000	56,000	56,000	56,000
Increase/Decrease *		-13,103	35,045		0	14,000	0	0	0

*Change is calculated from the prior year. The "Rate Case Average" column is not used in calculations of increases and decreases.

Program Background: For the 1982 – 2007 period, BPA's energy efficiency programs have delivered 1,000 aMW of savings for the region at a cost of about \$2.3 billion. These savings (on a firm energy basis) are equivalent to the generation from the region's nuclear plant.

Drivers of Change: Regional energy efficiency targets (and therefore, public power's share) are increasing (from 52 aMW/year in 2009 to 64 aMW/year or more in the 2010-14 period). In addition, BPA's average cost of delivering the energy efficiency savings to achieve the higher targets will cost substantially more (from \$1.3 million/aMW to \$1.6 million/aMW). The pressure to accelerate energy efficiency continues to increase and this, coupled with the anticipated Resource Program demand for more energy efficiency and load management, drives the proposed increase in the proposed capital budget.

Forecast Risk: If public utilities don't deliver their share of energy efficiency, then BPA could have to pay more to achieve the targets. The cost of delivering the savings could significantly higher (or lower) than projected. BPA Resource Program could require a significantly higher (or lower) amount of energy efficiency than projected in this budget.

Opportunities for Improvement: Leveraging our limited funds with others (e.g., co-funding evaluations, marketing efforts, training), maximizing economies of scale opportunities (e.g., bulk purchases, manufacturers' buy-downs), and customers self-funding higher levels of energy efficiency could reduce the cost to BPA.



Columbia Generating Station Capital

\$ in Thousands	Actu	uals	SOY	Rate Case	IPR	IPR	IPR	IPR	IPR
Description	FY 2006	FY 2007	FY 2008	FY 2008-2009*	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
CGS	74,501	82,926	44,464	26,900	96,700	73,600	99,900	55,200	47,700
Increase/Decrease *		8,425	(38,462)		52,236	(23,100)	26,300	(44,700)	(7,500)

*Average FY 2008-2009 Rate Case Levels

*Change is calculated from the prior year. The "Rate Case Average" column is not used in calculations of increases and decreases.

EN capital numbers are in EN fiscal years since all the associated debt service calculations are based on that view.

Program Background: The Program is the capital projects portion of Energy Northwest's O&M costs for operating Columbia Generating Station.

Strategic Objective(s): This program supports Energy Northwest's and BPA's commitment to the long term viability and reliability of CGS and is consistent with BPA's goal that CGS be operated in a safe, reliable and cost-effective manner. The capital investments also support improvement initiatives to bring CGS into alignment with top nuclear industry performance.

Drivers of Change: FY 2009 and FY 2011 are refueling outage years for CGS. Capital costs increase during outage years. FY 2009, 2010 and 2011 include the Condenser Replacement Project. Improvement initiatives are resulting in more capital investment in the Plant.

Forecast Risk: Current project costs could increase. There may be emergent work that is identified during the refueling outages that may increase costs.

Opportunities for Improvement: Energy Northwest and BPA continue to review and evaluate projects to ensure cost effectiveness is achieved while emphasizing safety and reliability.



Columbia River Fish Mitigation Capital

\$ in Thousands	Actu	uals	SOY	Rate Case	IPR	IPR	IPR	IPR	IPR
Description	FY 2006	FY 2007	FY 2008	FY 2008-09*	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
CRFM	366,400	49,410	60,000	68,300	63,000	114,000	71,000	135,000	65,000
Increase/Decrease *		-316,990	10,590		3,000	51,000	(43,000)	64,000	(70,000)

*Average FY 2008-2009 Rate Case Levels

*Change is calculated from the prior year. The "Rate Case Average" column is not used in calculations of increases and decreases.

Program Background: This program includes the power portion of investment funded by Corps of Engineers appropriations for investment on mitigation efforts for fish and wildlife on the Federal Columbia River dams. This investment becomes BPA's obligation to repay to the U.S. Treasury at the time it is placed in service.

Drivers of Change:

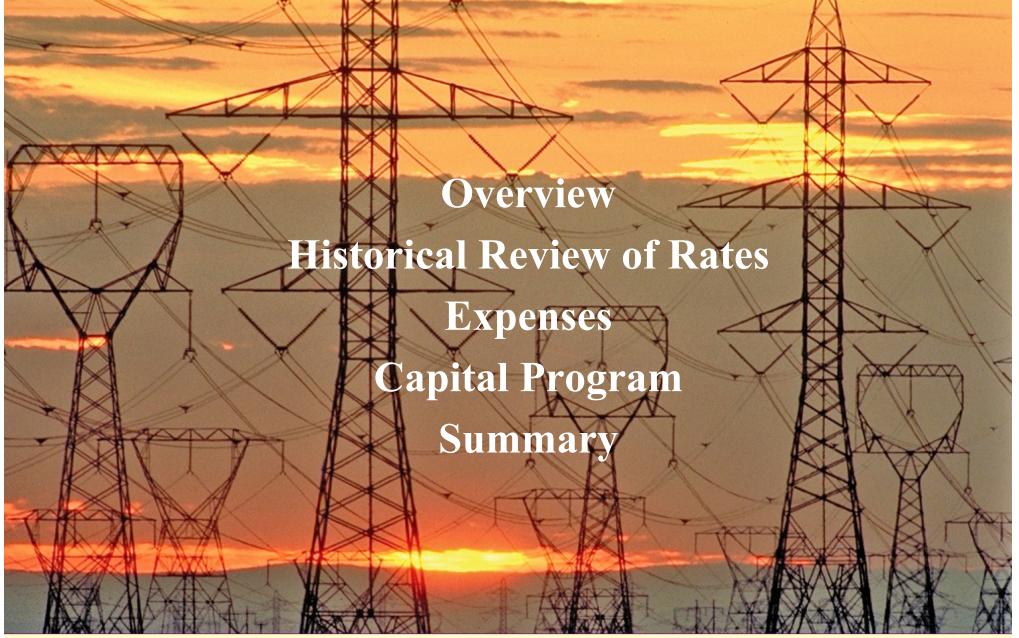
•Investments include Spill Divider Wall at the Dalles (FY 2011), Pit Tag Study, Delayed Mortality Study (FY 2011), Spillway improvements (FY 2009), Little Goose Spillway Weir

•The Corps has indicated it will fund Willamette BiOp investment through this project.

Forecast Risk: The schedule of investment and placement into service could change.



TRANSMISSION





- Although transmission operating costs are increasing at a faster rate than inflation, revenues are also accelerating due in part to a careful offering of Available Transfer Capability (ATC). With revenues exceeding projections, rate pressures are minimized.
- Why are operating costs exceeding inflation?
 - New mandatory requirements (reliability, environmental, tariff, etc.)
 - New wind resources need access to the BPA transmission system
 - Increased demand for transmission capacity
 - Need to sustain our aging transmission assets
 - Need to catch up where we have historically underinvested (control house buildings, access roads, etc.)
 - Global competition for material
- What trends are offsetting operating costs?
 - Lower than expected debt service
 - Higher than projected revenues and Treasury reserves
 - Favorable FERC ruling on reactive costs and generator withdrawal of current reactive rate
 - EPIP efficiencies with increased performance management rigor
 - Efficiency gains from business automation



Key Program Drivers- Mandatory Requirements

New Mandatory Requirements for Transmission

- Compliance -- Reliability, tariff and environmental
 - Mandatory Reliability Standards : WECC/ NERC documentation, support customer compliance, external and internal audits
 - Environmental stewardship: Clean Water Act, Toxic Substances Control Act



- Resource development: Renewable portfolio standards
 - Acquiring generation capacity to deal with wind variability
 - Expanding the grid to deliver remote wind resources
- FERC Order 890 Implementation and Tariff Compliance
 - File a new tariff in support of 890
 - Update numerous business practices, processes, and systems





Increased Demands for Transmission Capacity

- Manage Existing Facilities
 - Increased need for staff and systems to manage congestion on the existing transmission system using more precise re-dispatch and curtailments
 - Implementing conditional firm to provide service in advance of new construction
- Expanding the system
 - Building business systems and processes to support commercial system expansion
 - Evaluate and develop plans for new facilities
 - Participate in Northwest and WECC planning forums

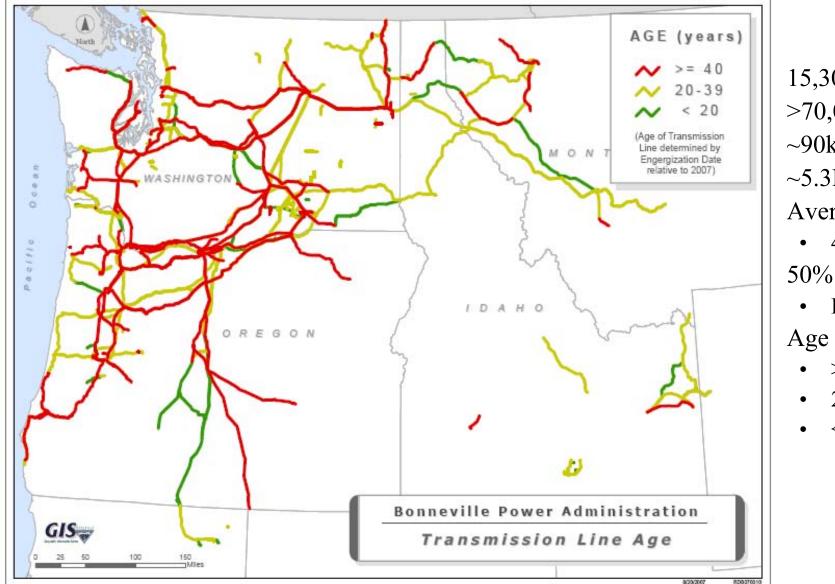


Sustaining the health of existing aging infrastructure

- A portion of BPA's electrical substation, line, and communication assets exceed both BPA's depreciable life as well as typical industry metrics for electrical equipment lifespan.
- Corrective and preventative maintenance requirements are increasing as infrastructure ages.
- New replacement/refurbishment programs needed to manage end-oflife assets. These investments are needed to maintain a reliable and available transmission system.
- Base workload and expanding infrastructure program drive FTE need.



Key Program Drivers- Aging Infrastructure-Transmission Lines



15,300 circuit mile
>70,000 cable miles
~90k structures
~5.3M insulators
Average age
45 years
50% built
Prior 1962
Age legend
>= 40 yrs red
20-39 yrs yellow

• < 20 yrs green

Note- This map is a high level overview and when there are multiple lines in a corridor, the age of the lines is averaged.



30-70 percent of Transmission's capital program dollars are for material, depending on the type of project.

Raw material price escalations and the dramatic escalation in fuel prices continue to impact all commodities. Here are some sample price increases that we have experienced.

- Wood poles, +15 percent (2007 to 2008)
- Steel structures / lattice, +21 percent (2007 to 2008)
- 500kV Power transformers, +7 percent (2006 to 2007)
- 230kV Power circuit breakers, +6 percent (2006 to 2007)
- Diesel fuel, +35 percent increase within a 5 month period (2008)



Over the past year, condition assessments were conducted on all buildings at 118 of the 430 Transmission sites.

- Determined the current condition of each building and its associated components (facility systems).
- Identified facility system deficiencies and the actions to correct them.
- Focused on critical deficiencies linked to critical facility systems at highest priority assets.

Review concluded with the following priorities:

- FY 2009: Focus on highest priority life safety and facility system reliability issues at assets most critical to personnel and transmission system
- FY 2010 and 2011: Continued focus on addressing issues related to the reliability of facility systems across sites



Key Program Drivers- EPIP

EPIP efficiencies & Performance Management

Performance Management

- Increased rigor applied to development of performance measures and metrics through application of measure standards.
- Incorporation of an automated performance management system.
- Improvements in target achievement overall for Transmission's Balanced Scorecard (BSC). In 2006 Transmission met 78 percent of their BSC targets improving to a 96 percent success rate in 2007.

Plan, Design, Build (PDB)

- Implemented 40 detailed performance metrics
- Improved Planning through a Two Year work plan and involving Project Managers earlier in the planning process
- Improved Capital Project Risk Management through funding and prioritization process
- Implemented a Standards group
- Deployed new technology:
 - Complete-- Lidar, digitization of drawings, Softcopy, etc.
 - Forthcoming-- Work Planning and Scheduling System and Transmission Asset System
- Enhanced employee cross training

Supply Chain

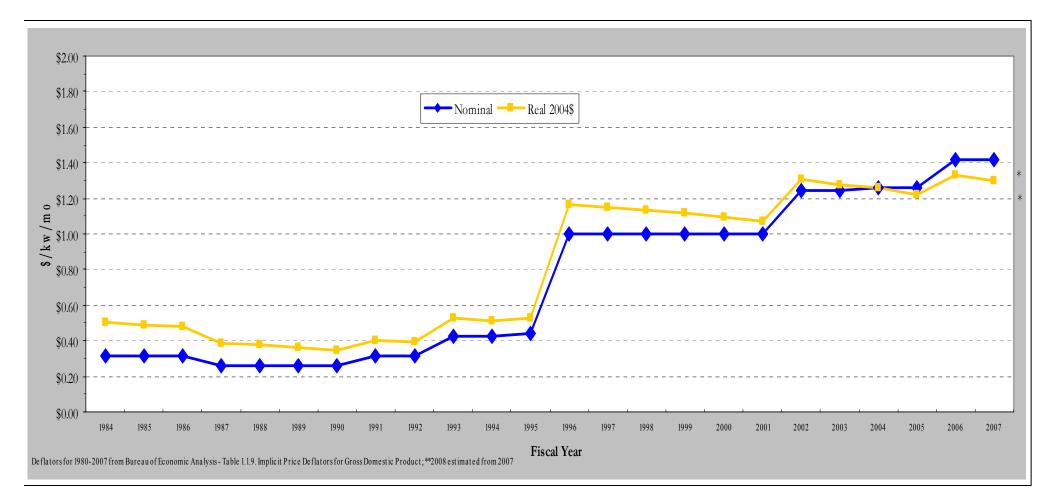
- Increased use of Strategic Sourcing for purchasing materials and developing strategic partnerships with vendors to ensure we can get materials at the best cost.
- Analysis and Optimization of inventory to reduce our inventory levels and ensure we have the right materials.



- The Commercial Business Process Improvement initiative brought on industry standard OASIS functionality.
- OASIS functionality processes Transmission transactions with more volume and speed.
- During implementation of the automation there was resolution of some long standing policy issues, resulting in additional offers of Transmission service.
- Staff required to support Transmission transactions was reduced due to automation.
- ATC (available transfer capability) is more dynamic and transparent, resulting in offers being made more expeditiously.
- Automation has reduced the potential for errors in manual processes, thereby reducing the risk of disputes.



1984-2007 Firm Tx Rates- No Power- \$/kW/mo





Transmission Expenses Actuals FY 2006-2007 & Proposed FY 2009-2011

			2nd				
\$ in Thousands	Acti	uals	Quarter Forecast	Rate Case Average	IPR	IPR	IPR
Program (Total Expenses)	FY 2006 FY 2007		FY 2008	FY 2008-2009	FY 2009	FY 2010	FY 2011
Transmission Non-Between Business Line Ancillary Services <u>1</u> /	\$ 20,058	\$ 19,397	\$ 18,517	\$ 18,844	\$ 17,844	\$ 18,359	\$ 18,901
Transmission Programs	\$ 260,287	\$ 259,458	\$ 281,703	\$ 280,099	\$ 320,534	\$ 348,863	\$ 358,369
Non-Federal Debt Service	\$ (502)	\$ 2,001	\$ 3,380	\$ 8,804	\$ 6,886	\$ 5,890	\$ 4,690
Interest Expense	\$ 136,761	\$ 133,806	\$ 125,609	\$ 160,011	\$ 138,740	\$ 151,188	\$ 166,880
Depreciation	\$ 171,310	\$ 175,513	\$ 177,900	\$ 194,382	\$ 189,182	\$ 199,067	\$ 209,366
Total Expense	\$ 587,913	\$ 590,176	\$ 607,109	\$ 662,140	\$ 673,186	\$ 723,367	\$ 758,206
Total Increase/Decrease From Prior Year		\$ 2,262	\$ 16,933		\$ 66,078	\$ 50,181	\$ 34,839

1/ Only 3rd Party Costs

Rule of Thumb

A \$6.2 million change in expense or revenue = 1% in Transmission Rates

A \$66M change in capital = 1% in Transmission Rates



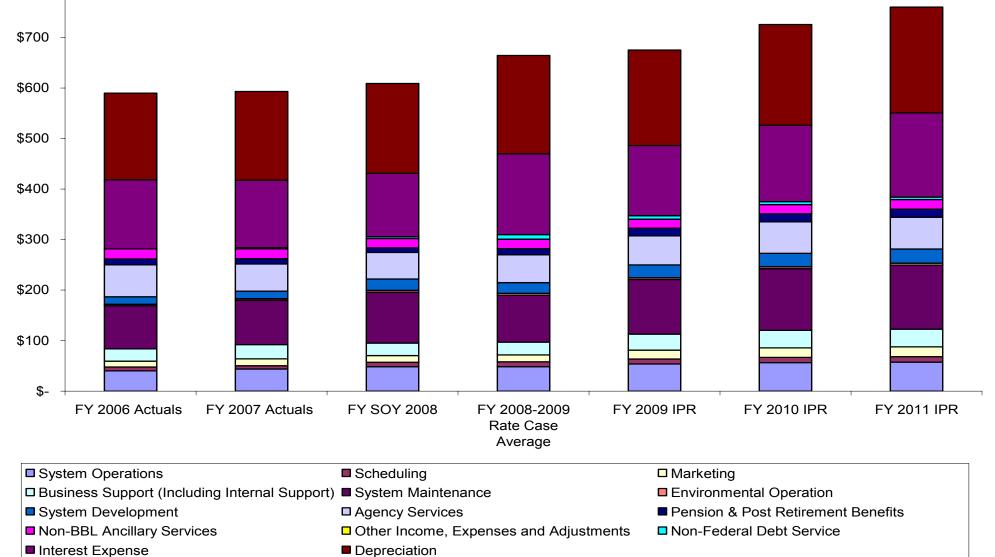
Transmission Expenses Actuals FY 2006-2007 & Proposed FY 2009-2011

						2nd		Rate						
\$ in Thousands						Quarter		Case						
	Actuals			Forecast		Average		IPR		IPR		IPR		
Transmission Description	F	Y 2006	F	FY 2007		FY 2008		FY 2008-09		FY 2009		FY 2010		Y 2011
System Operations	\$	40,232	\$	43,892	\$	48,588	\$	48,537	\$	53,655	\$	56,586	\$	57,511
Scheduling	\$	7,733	\$	6,508	\$	8,741	\$	9,673	\$	9,896	\$	10,308	\$	10,784
Marketing	\$	11,352	\$	13,712	\$	13,111	\$	13,428	\$	17,841	\$	18,836	\$	19,538
Business Support (Including Internal														
Support)	\$	24,628	\$	27,984	\$	24,724	\$	25,537	\$	31,531	\$	34,675	\$	34,828
System Maintenance	\$	85,096	\$	87,866	\$	100,878	\$	92,833	\$	108,101	\$	121,919	\$	126,691
Environmental Operation	\$	2,843	\$	3,039	\$	3,359	\$	3,440	\$	3,567	\$	3,797	\$	3,996
System Development	\$	14,775	\$	15,017	\$	22,704	\$	21,560	\$	25,140	\$	26,503	\$	28,014
Agency Services	\$	63,402	\$	53,789	\$	52,498	\$	54,953	\$	57,527	\$	62,640	\$	62,936
Pension & Post Retirement Benefits	\$	11,600	\$	10,550	\$	9,000	\$	12,139	\$	15,277	\$	15,598	\$	16,071
Non-BBL Ancillary Services <u>1/</u>	\$	20,058	\$	19,397	\$	18,517	\$	18,844	\$	17,844	\$	18,359	\$	18,901
Other Income, Expenses and Adjustments	\$	(1,377)	\$	(2,899)	\$	(1,899)	\$	(2,000)	\$	(2,000)	\$	(2,000)	\$	(2,000)
Non-Federal Debt Service	\$	(502)		2,001	\$	3,380	\$	8,804	\$	6,886	\$	5,890	\$	4,690
Interest Expense	\$	136,761	\$	133,806	\$	125,609	\$	160,011	\$	138,740	\$	151,188	\$	166,880
Depreciation	\$	171,310	\$	175,513	\$	177,900	\$	194,382	\$	189,182	\$	199,067	\$	209,366
Total	\$	587,913	\$	590,176	\$	607,109	\$	662,140	\$	673,186	\$	723,367	\$	758,206
Total Increase/Decrease From Prior Year			\$	2,262	\$	16,933			\$	66,078	\$	50,181	\$	34,839

1/ Only 3rd Party Costs









Transmission Expenses Actuals FY 2006-2007 & Proposed FY 2009-2011

\$ in Thousands	Actu	ualo	2nd Quarter	Rate Case	IPR	IPR	IPR
Transmission Description	FY 2006	FY 2007	Forecast FY 2008	Average FY 2008-09		FY 2010	FY 2011
	112000	112007	112000	112000-03	112003	112010	112011
Transmission Operations	\$ 83,946	\$ 92,096	\$ 95,164	\$ 97,175	\$ 112,922	\$ 120,405	\$ 122,661
Transmission Maintenance	\$ 87,939	\$ 90,905	\$ 104,237	\$ 96,273	\$ 111,668	\$ 125,717	\$ 130,687
Transmission Engineering	\$ 14,775	\$ 15,017	\$ 22,704	\$ 21,560	\$ 25,140	\$ 26,503	\$ 28,014
Total	\$ 186,661	\$ 198,018	\$ 222,104	\$ 215,008	\$ 249,730	\$ 272,626	\$ 281,362
Total Increase/Decrease From Prior Year		\$ 11,357	\$ 24,086		\$ 27,626	\$ 22,895	\$ 8,736

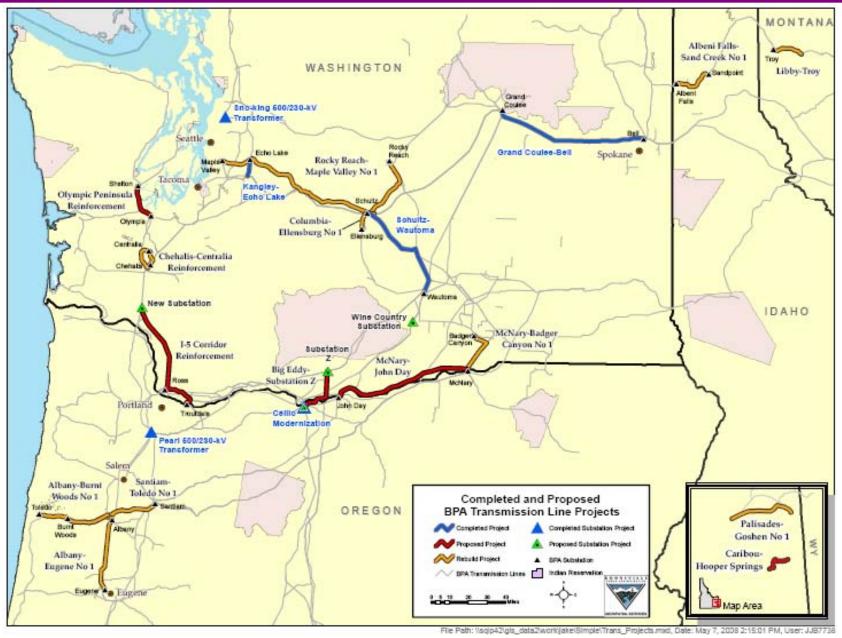
 $\underline{1}$ / Includes only 3rd Party Costs

*These are summary programs from the prior two pages. Transmission Operations contains System Operations, Scheduling, Marketing, and Business Support. Transmission Maintenance contains System Maintenance and Environmental Operations.

Additional program detail for these summary programs and their corresponding subprograms is located in the Appendix, starting on page 100.



BPA's Major Infrastructure Projects





Transmission Function Capital Expenditures Actuals FY 2006-2007, Proposed FY 2009-2013

		ale		001/		ate Case	IPR		IDD		IDD		
\$ in Thousands	Actu	_		SOY		Average		IPR		IPR		IPR	IPR
Transmission Description	FY 2006	F	FY 2007	FY 2008	F١	2008-2009		FY 2009	F	FY 2010		FY 2011	FY 2012
Main Grid	\$ 7,278	\$	17,258	\$ 31,777	\$	76,477	\$	71,832	\$	155,904	\$	221,346	\$ 199,945
Area & Customer Service	\$ 326	\$	1,240	\$ 6,099	\$	16,893	\$	19,681	\$	31,714	\$	6,256	\$ 6,322
Upgrades & Additions	\$ 38,033	\$	36,398	\$ 60,947	\$	41,854	\$	59,881	\$	91,108	\$	107,471	\$ 69,009
System Replacements	\$ 47,599	\$	63,728	\$ 62,285	\$	63,168	\$	102,717	\$	134,494	\$	138,423	\$ 109,335
Customer Financed/Credits <u>1</u> /	\$ 23,674	\$	61,336	\$ 71,775	\$	61,923	\$	84,427	\$	90,165	\$	102,287	\$ 83,904
Environment	\$ 2,602	\$	3,904	\$ 3,705	\$	5,290	\$	5,213	\$	5,530	\$	5,752	\$ 5,869
Total Direct Capital	\$ 119,512	\$	183,864	\$ 236,588	\$	265,605	\$	343,751	\$	508,915	\$	581,535	\$ 474,384
Total Indirect Capital 2/	\$ 66,944	\$	64,435	\$ 70,895	\$	77,550	\$	81,246	\$	86,100	\$	88,696	\$ 93,126
Total Capital Sub-Total	\$ 186,456	\$	248,299	\$ 307,483	\$	343,155	\$	424,997	\$	595,015	\$	670,231	\$ 567,510
15% Lapse Factor	\$ -	\$	-	\$ -	\$	-	\$	(64,021)	\$	(89,551)	\$	(101,324)	\$ (85,736)
Total	\$ 186,456	\$	248,299	\$ 307,483.0	\$	343,155	\$	360,976	\$	505,464	\$	568,907	\$ 481,774
Total Increase/Decrease From Prior Year		\$	61,843	\$ 59,184.0			\$	53,493	\$	144,488	\$	63,443	\$ (87,133)

Note $\underline{1}$ / Includes Radio Spectrum and PFIA projects Note $\underline{2}$ / Includes AFUDC





Transmission Services will prioritize projects and programs by the following criteria:

- 1. On-going assessment of Transmission system against system performance metrics
- 2. Assess current condition of assets
- 3. Identify risks to Transmission Services' long term outcomes from identified asset performance/condition gaps
- 4. Identify projects/programs with associated costs, to mitigate risks to long term outcomes
- 5. Analyze and update critical system spares

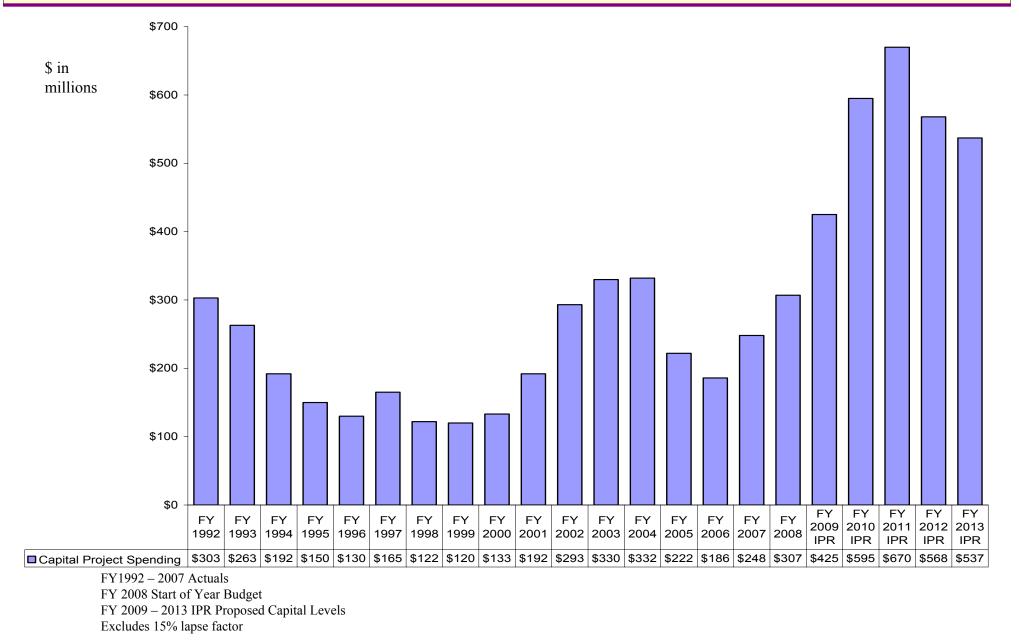


Transmission Capital Overview

- Key Drivers
 - Network Reinforcements
 - Integrating and delivering renewable resources
 - Reliability to loads
 - Sustaining health of aging assets based on the Asset Plan
- Trend FY 1992 2013 (see next slide)
 - FY 2010-2011 Capital Program largest in BPA history
 - Compare to FY 1992 (3rd AC construction)
 - Adjust \$303 million in FY 1992 to 2008 \$ \rightarrow \$552 million
 - We have accomplished this size program before
 - But with much more staff
 - Challenges: Meeting schedules for design, environmental analysis, procurement, construction



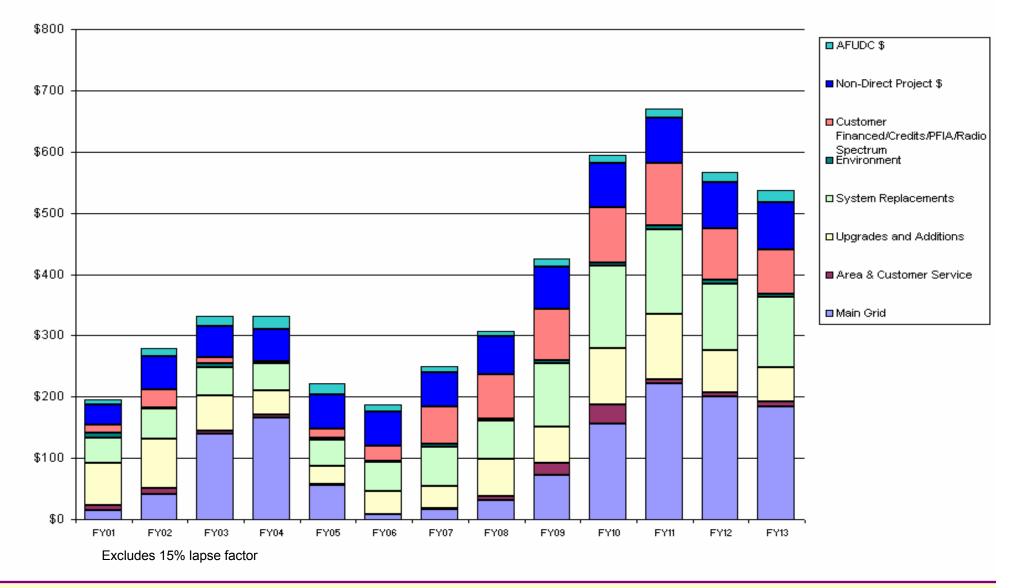
Transmission Capital: FY 1992 – FY 2013

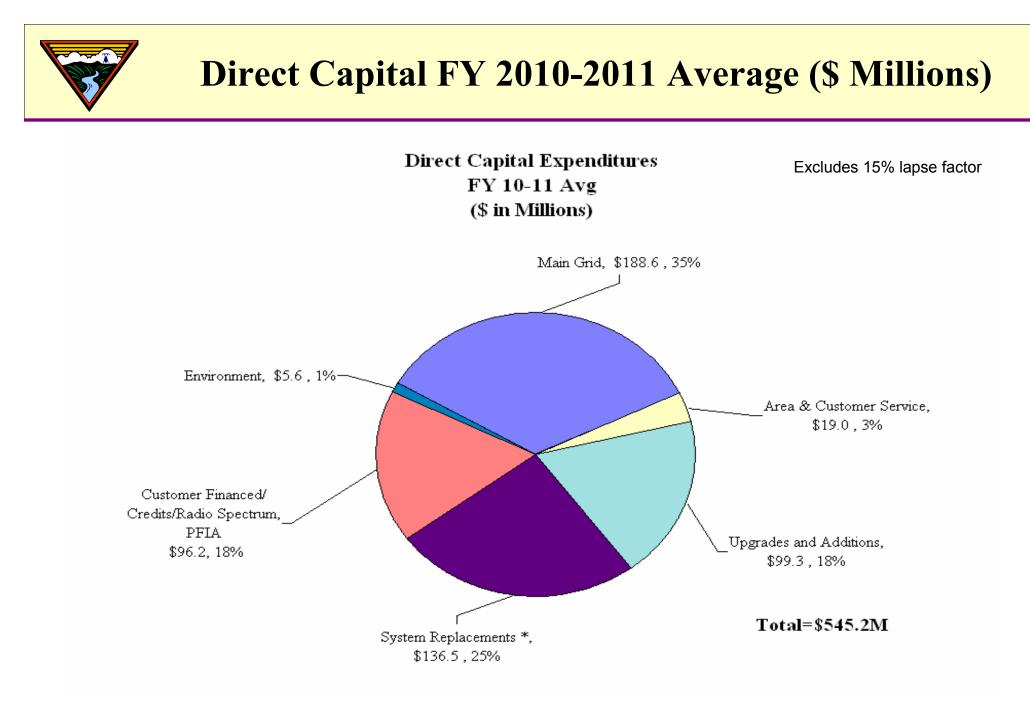




Transmission Capital Programs

\$ in Millions





• FY 2009 – 2013 Portfolios summarized on next slide

*Includes Corporate Facilities Capital



Summary by Portfolio (\$ in Thousands)

	Rate Case Average					
TRANSMISSION CAPITAL PORTFOLIOS	FY08-09	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
MAIN GRID	76,477	71,832	155,905	221,346	199,945	184,258
AREA & CUSTOMER SERVICE	16,893	19,681	31,714	6,256	6,322	7,516
UPGRADES & ADDITIONS	41,854	59,880	91,108	107,471	69,009	55,807
	62.460	402 747	424,404	400,400	400.005	444.050
SYSTEM REPLACEMENTS Note <u>1</u> /	63,168	102,717	134,494	138,423	109,335	114,659
ENVIRONMENT	5,290	5,213	5,530	5,752	5,869	5,984
	0,200	0,210	0,000	0,102	0,000	0,001
CUSTOMER FINANCED/CREDITS	1					
Generator Interconnection	40,450	49,000	49,984	51,009	52,044	53,065
Line and Load Interconnection	0	13,552	13,825	14,109	14,395	14,677
COI Addition Project	2,137	5,004	12,762	23,442	10,630	0
Radio Spectrum	0	11,871	8,592	8,726	1,834	0
Projects Funded in Advance (PFIA)	19,336	5,000	5,000	5,000	5,000	5,000
SUB TOTAL TBL CAPITAL (DIRECT)	265,604	343,750	508,915	581,535	474,384	440,967
	44 700	40.420	44.054	40.007	10.054	10 700
TS INDIRECTS	41,726	40,438	41,251	42,097	42,951	43,793
AFUDC	10,547	11,906	13,645	15,179	17,865	18,821
CORPORATE OVERHEAD	25,278	28,902	31,204	31,420	32,310	33,280
SUB TOTAL TBL CAPITAL (INDIRECT)	77,551	81,246	86,100	88.696	93,126	95,894
	11,551	01,240	00,100	00,030	33,120	33,034
15% Lapse Factor	0	(64,021)	(89,551)	(101,324)	(85,736)	(80,299)
TOTAL TRANSMISSION CAPITAL	343,155	360,976	505,464	568,907	481,774	456,562

Note 1/ - System replacements includes Corporate Facilities capital for Transmission projects



Program Discussion- Main Grid

\$ in Thousands	Act	uals	SOY	Rate Case Average	IPR	IPR	IPR	IPR	IPR
	FY 2006	FY 2007	FY 2008	FY 2008-09	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Program Level Spending	\$7,278	\$17,258	\$31,777	\$76,477	\$71,832	\$155,904	\$221,346	\$199,945	\$184,258
Total Increase/Decrease From Prior Year		\$9,980	\$14,519		\$40,055	\$84,072	\$65,442	(\$21,401)	(\$15,687)

- Major Network Reinforcements \$800 million
 - McNary-John Day FY 2012
 - Big Eddy Station Z FY 2013
 - I-5 Corridor FY 2014
- Reliability to loads
 - Olympic Peninsula Reinforcement FY 2009
 - Libby-Troy FY 2009
 - Seattle area transformer FY 2013
 - Cross Cascades FY 2013



Area & Customer Service

\$ in Thousands	Actu	uals	SOY	Rate Case Average	IPR	IPR	IPR	IPR
	FY 2006	FY 2007	FY 2008	FY 2008-09	FY 2009	FY 2010	FY 2011	FY 2012
Program Level Spending	\$326	\$1,240	\$6,099	\$16,893	\$19,681	\$31,714	\$6,256	\$6,322
Total Increase/Decrease From Prior Year		\$914	\$4,859		\$13,582	\$12,033	(\$25,458)	\$66

- Projects that assure Bonneville meets reliability standards and contractual obligations to our customers for serving load.
 - City of Centralia 2009
 - South Oregon Coast Rogue Static Var Compensator (SVC) 2009
 - Lower Valley 2010



Upgrades and Additions

			Rate Case					
Actu	uals	SOY	Average	IPR	IPR	IPR	IPR	IPR
FY 2006	FY 2007	FY 2008	FY 2008-2009	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
\$38,033	\$36,398	\$60,947	\$41,854	\$59,881	\$91,108	\$107,471	\$69,009	\$55,807
	(\$1,635)	¢24 540		(\$1,066)	¢21 227	¢16 262	(\$38,462)	(\$13,202)
	FY 2006 \$38,033	\$38,033 \$36,398	FY 2006 FY 2007 FY 2008 \$38,033 \$36,398 \$60,947	Actuals SOY Average FY 2006 FY 2007 FY 2008 FY 2008-2009 \$38,033 \$36,398 \$60,947 \$41,854	Actuals SOY Average IPR FY 2006 FY 2007 FY 2008 FY 2008-2009 FY 2009 \$38,033 \$36,398 \$60,947 \$41,854 \$59,881	Actuals SOY Average IPR IPR FY 2006 FY 2007 FY 2008 FY 2008-2009 FY 2009 FY 2010 \$38,033 \$36,398 \$60,947 \$41,854 \$59,881 \$91,108	Actuals SOY Average IPR IPR IPR FY 2006 FY 2007 FY 2008 FY 2008-2009 FY 2009 FY 2010 FY 2011 \$38,033 \$36,398 \$60,947 \$41,854 \$59,881 \$91,108 \$107,471	Actuals SOY Average IPR IPR IPR IPR IPR FY 2006 FY 2007 FY 2008 FY 2008 FY 2009 FY 2010 FY 2011 FY 2012 \$38,033 \$36,398 \$60,947 \$41,854 \$59,881 \$91,108 \$107,471 \$69,009

- Driven by reliable service to loads and Asset Plan
- Replacement of older communications and controls with newer technology.
- Albany Eugene rebuild \$10 million in 2010
- Celilo Upgrades transformers, etc \$24 million in 2010 and 2011
- Control Center (CC) Systems modernization, congestion mgmt, RAS automation, training facility, cyber security, etc
- Fiber– SONET rings, getting off analog microwave: \$10-20 million per year
- Critical spare transformers at 5 locations
- Maintaining access roads: \$10-15 million per year



System Replacements

\$ in Thousands	Actu	uals	SOY	Rate Case Average	IPR	IPR	IPR	IPR
	FY 2006	FY 2007	FY 2008	FY 2008-2009	FY 2009	FY 2010	FY 2011	FY 2012
Program Level Spending	\$47,599	\$63,728	\$62,285	\$63,168	\$102,717	\$134,494	\$138,423	\$109,335
Total Increase/Decrease From Prior								
Year		\$16,129	(\$1,443)		\$40,432	\$31,777	\$3,929	(\$29,088)

- Replacement of high-risk, obsolete and maintenance-intensive facilities and equipment to reduce the chance of equipment failure affecting the safety and reliability of the transmission system.
- Based on Asset Plan findings and recommendations
- Includes:
 - Sacajawea transformer (failed) \$10 million in FY 2009
 - Spacer/Dampers \$10 million per year
 - Wood poles \$7 million per year
 - Substation equipment spares
 - Transformer system spares
 - Celilo Control Replacements: FY 2010 2012
 - Non-electric plant (control houses, etc.): FY 2009 \$10.3M, FY 2010 \$55.6M, FY 2011 \$18.3M, FY 2012 \$18.4M, and FY 2013 \$18.5M



Customer-Financed/Credits/Radio Spectrum/PFIA

				Rate Case					
\$ in Thousands	Actu	uals	SOY	Average	IPR	IPR	IPR	IPR	IPR
	FY 2006	FY 2007	FY 2008	FY 2008-2009	FY 2009	FY 2010	FY 2011	FY 2012	FY 2013
Program Level Spending	\$23,674	\$61,336	\$71,775	\$61,923	\$84,427	\$90,165	\$102,287	\$83,904	\$72,742
Total Increase/Decrease From Prior									
Year		\$37,662	\$10,439		\$12,652	\$5,738	\$12,122	(\$18,383)	(\$11,162)

- Customer-Financed/ Credits/ Radio Spectrum/PFIA
 - Facilities and/or equipment where BPA retains control or ownership, but which are funded by a third party or with credits, either in total or in part.
 - Wind Integration three new 500/230-kV stations
 - California-Oregon Intertie additions
 - Radio Spectrum Relocation projects



Environment

\$ in Thousands	Actu	uals	SOY	Rate Case Average	IPR	IPR	IPR	IPR
	FY 2006	FY 2007	FY 2008	FY 2008-2009	FY 2009	FY 2010	FY 2011	FY 2012
Program Level Spending	\$2,602	\$3,904	\$3,705	\$5,290	\$5,213	\$5,530	\$5,752	\$5,869
Total Increase/Decrease From Prior								
Year		\$1,302	(\$199)		\$1,508	\$317	\$222	\$117

- Addresses regulatory and liability issues at facilities likely to adversely affect water and environmental resources.
- Continues the replacement of polychlorinated biphenyl (PCB) containing equipment to reduce environmental risks.
- Reduces storm water discharges and PCB reduction.
- \$5 million per year with inflation applied.



Can it be Done?

- Strategy Team
 - Supply Chain and Transmission Services are reviewing experiences from BPA's 2001-04 Infrastructure Program and other utility strategies.
 - Alternative approaches:
 - Furnish & Install contracts
 - Engineer/Procure/Construct contracts (turn-key)
- Telecommunications on the Critical Path
 - Will now be managed as a coordinated program
 - Maintenance, upgrades & additions and expansion
 - Exploring new ways of accomplishing the work
 - Reduced program by \$4 million/ year in both FY 2009 and 2010 until new practices in place
- IPR Capital Proposal
 - Based on recent capital program lapse rates, the Total Transmission Capital will show a 15% lapse factor for 2009 – 2013. The adjustments have not been made to any specific program.



Long-Term Outcomes for Transmission

BPA transmission assets meet:

- transmission reliability standards
- transmission availability requirements
- transmission adequacy guidelines
- transmission development expectations in regionally integrated plan
- environmental requirements
- other regulatory and legal requirements
- infrastructure requirements to meet generation integration and service requests
- safety and security standards
- ... at least life cycle cost.





Agency Services



- Many of the EPIP savings have been achieved in Agency Services:
 - Human Capital Management
 - Information Technology
 - Public Affairs
- Several of the EPIPs also recommended process improvements that resulted in the consolidation of many functions out of the Business Units and into Agency Services:
 - Supply Chain
 - Metering and Billing
 - Load Forecasting
 - Contract Administration



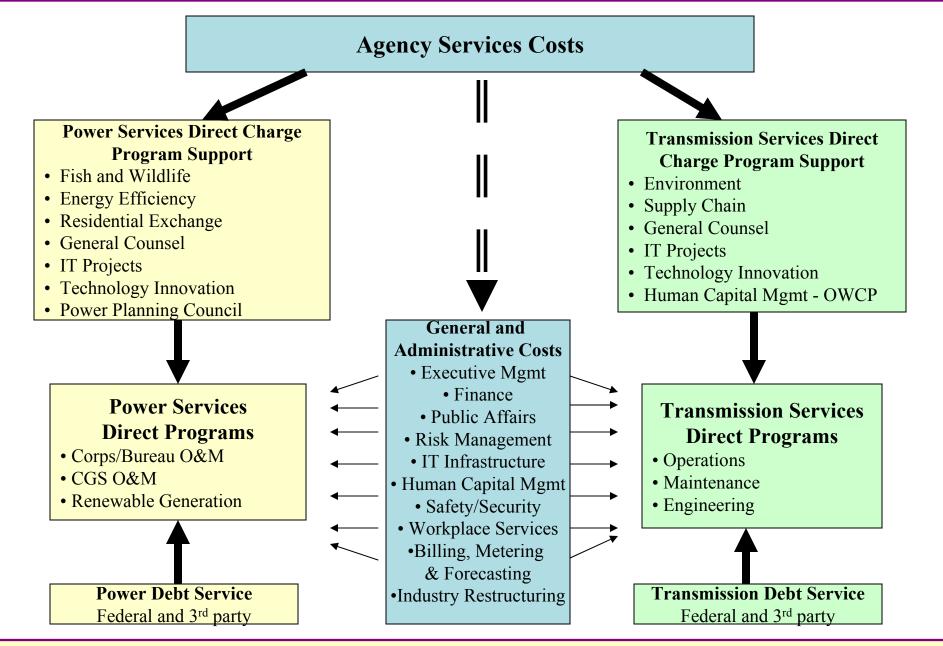
- As part of an Agency-wide reorganization at the start of FY 2006, the offices of Energy Efficiency and Environment, Fish and Wildlife were moved to Agency Services.
- This organizational shift, along with the associated spending estimates, should be considered when reviewing cost trends for Agency Services.
- The Agency Services costs in FY 2006 reflect this realignment, and a significant portion of the increases seen in FY 2006 are due to this realignment.



- Agency Services programs fall into 2 general categories:
 - 1. Direct program support
 - 2. General and Administrative
- Direct program support costs are distributed according to Business Unit usage.
- General and Administrative costs are distributed by percentages to the Business Units.



Agency Services Cost Distribution





FY 2006-2011 Agency Services Expenses

V		\$ in Tho	ousands		Workshop S	
Expenses - Direct & Allocated	Actu	ials	SOY		Max 20, 2	2008 AM
Agency Services	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Executive Office	\$882.0	\$995.1	\$1,025.8	\$1,068.9	\$1,114.0	\$1,160.6
Deputy Administrator	\$806.1	\$252.3	\$268.0	\$278.5	\$289.5	\$300.8
Chief Risk Officer	\$4,245.5	\$4,104.9	\$5,867.3	\$5,871.2	\$6,581.0	\$6,797.5
Technology Innovation & Confirmation	\$462.0	\$1,633.0	\$9,592.0	\$9,915.9	\$11,990.3	\$14,133.7
Chief Public Affairs Office	\$16,368.6	\$15,051.4	\$16,372.9	\$17,439.3	\$18,064.1	\$18,588.9
Internal Audit	\$1,629.0	\$1,762.9	\$2,163.0	\$2,383.7	\$2,353.8	\$2,354.8
Chief Financial Officer	\$10,232.6	\$12,558.0	\$15,753.6	\$15,224.2	\$17,264.7	\$16,734.3
Planning & Governance	\$0.0	\$269.4	\$1,340.8	\$303.0	\$316.5	\$330.5
Supply Chain Policy & Gov.	\$638.7	\$546.5	\$639.8	\$667.4	\$696.3	\$726.3
Regulatory Affairs	\$0.0	\$1,576.4	\$1,773.7	\$2,326.6	\$2,426.4	\$2,529.9
Strategic Planning	\$975.2	\$1,533.5	\$1,628.7	\$1,912.5	\$2,076.4	\$2,142.5
Industry Restructuring	\$3,191.9	\$3,351.9	\$6,875.6	\$7,603.7	\$7,876.5	\$8,340.2
Security & Emergency Mgmt	\$6,028.0	\$6,388.2	\$7,285.2	\$7,404.4	\$7,455.1	\$7,657.1
General Counsel	\$7,524.2	\$7,993.0	\$9,251.3	\$9,514.1	\$9,643.0	\$9,967.8
Chief Operating Officer	\$10,303.3	\$4,606.3	\$5,802.7	\$3,507.0	\$3,531.4	\$1,555.9
Customer Support Services	\$0.0	\$7,172.3	\$8,689.7	\$9,776.2	\$10,498.2	\$10,687.5
Internal Business Services	\$578.4	\$519.9	\$557.3	\$575.7	\$595.3	\$2,149.1
Business and Process Mgmt	\$0.0	\$0.0	\$0.0	\$0.0	\$406.2	\$409.6
Civil Rights	\$739.0	\$605.6	\$693.7	\$724.9	\$757.8	\$792.3
Safety	\$1,789.3	\$2,026.0	\$2,283.4	\$2,313.9	\$2,393.1	\$2,496.6
Human Capital Management	\$15,921.0	\$15,163.0	\$18,002.0	\$16,227.8	\$16,843.4	\$16,336.4
Supply Chain Services	\$19,475.0	\$15,926.0	\$17,715.3	\$18,315.2	\$21,119.5	\$20,886.7
Workplace Services	\$26,872.0	\$26,379.0	\$26,306.9	\$32,508.0	\$44,805.6	\$47,261.2
Information Technology	\$58,290.5	\$57,840.4	\$58,310.1	\$58,312.7	\$68,381.4	\$68,000.0
Total	\$186,952.4	\$188,255.0	\$218,198.8	\$224,174.8	\$257,479.6	\$262,340.1
Increase/Decrease From Prior Year		\$1,302.5	\$29,943.8	\$5,976.1	\$33,304.8	\$4,860.5



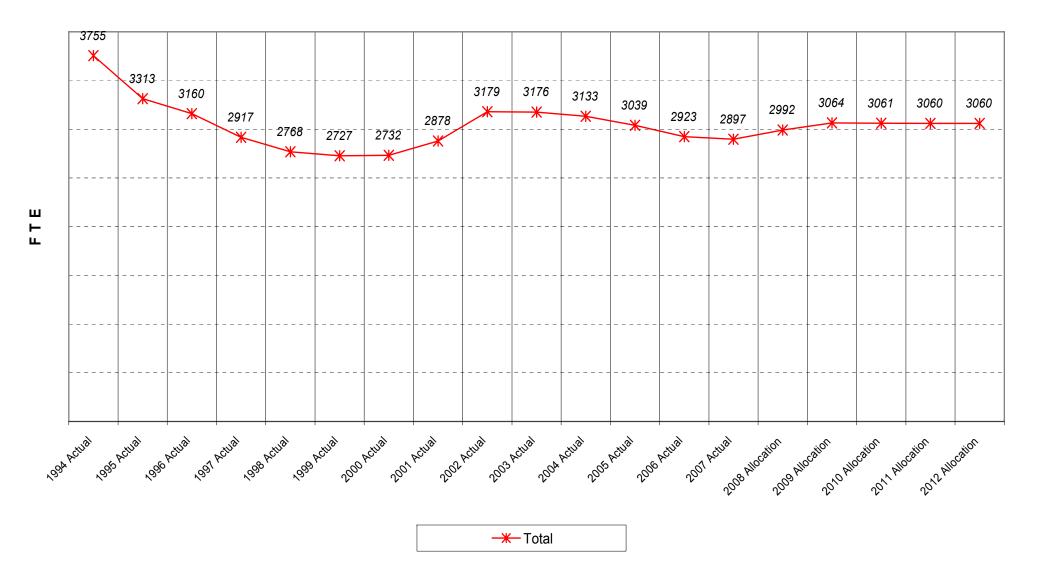
FY 2006-2011 Agency Services Capital \$ in Thousands

Capital	Actu	uals	SOY		IPR	
Agency Services	FY 2006	FY 2007	FY 2008	FY 2009	FY 2010	FY 2011
Security & Emergency Mgmt	\$75.0	\$454.1	\$571.0	\$4,989.5	\$5,101.7	\$5,813.9
General Counsel	\$46.5	\$108.4	\$136.0	\$142.1	\$148.4	\$155.1
Workplace Services	\$616.5	\$3,030.0	\$3,353.4	\$15,487.1	\$60,804.1	\$23,641.4
Information Technology	\$16,145.4	\$16,445.6	\$19,000.0	\$19,000.0	\$21,375.0	\$21,375.0
Total	\$16,883.4	\$20,038.1	\$23,060.4	\$39,618.7	\$87,429.3	\$50,985.5
Total Increase/Decrease (\$ amount)		\$3,154.7	\$3,022.3	\$16,558.3	\$47,810.6	(\$36,443.8)

Workshop Scheduled May 20, 2008 AM



Bonneville Power Administration FTE ("Full-Time Equivalent" Staffing Levels) 1994 to 2012 as of May 5, 2008





Integrated Program Review – Next Steps



Ways to Participate

- All forums are open to the public and will be noticed on the IBR external web site at: www.bpa.gov/corporate/Finance/IBR/IPR/. Staff from the Corps of Engineers, Bureau of Reclamation, and Energy Northwest will participate in presentations on costs they manage.
- All Technical and Managerial workshops will be held at BPA Headquarters.
- The comment period for the IPR opens Thursday, May 15, 2008. Close of comment for FY 2009 Power costs is June 19, 2008. Close of comment for all other costs is August 15, 2008. You have several options to provide comments to BPA:
 - 1. Attend one or more of the scheduled workshops and give BPA your comments.
 - 2. Discuss your input with your Customer Account Executive, Constituent Account Executive, or Tribal Liaison.
 - 3. Submit written comments to Bonneville Power Administration, P.O. Box 14428, Portland, OR 97293-4428.
 - 4. Submit comments via e-mail to: comment@bpa.gov or submit on line at: http://www.bpa.gov/comment.
 - 5. Comments can also be sent via fax to (503) 230-3285.



- 1. All FY 2008-2013 information was provided in May 2008 and cannot be found in BPAapproved Agency Financial Information, but is provided for discussion or exploratory purposes only as projections of program activity levels, etc. This information is a derived estimate for presentation purposes and cannot be found in BPA-approved Agency Financial Information but is provided for discussion or exploratory purposes only as "*projections of program activity levels, etc.*"
- 2. All FY 2007 and earlier information was provided in May 2008 and is consistent with audited actuals that contain BPA-approved Agency Financial Information.



Transmission Appendix: Expense Program Detail



Non-Federal Debt Service, Depreciation, Amortization & Net Interest Expense

\$ in Thousands		Actu	uals	5		SOY	_	ate Case verage				IPR		
	F	FY 2006 FY 2007		TY 2007	F	TY 2008	FY	2007-2009	F	TY 2009	F	TY 2010	F	Y 2011
Program Level Spending	\$	307,569	\$	311,320	\$	315,702	\$	363,197	\$	334,808	\$	356,145	\$	380,936
Total Increase/Decrease From Prior Year			\$	3,752	\$	4,382			\$	19,106	\$	21,337	\$	24,791

Program Background:

On average the typical program components are:

- 43 percentage Net Interest Comprised of interest on bonds and appropriations netted against interest credit from the Bonneville Fund.
- 56 percentage Depreciation The depreciation of revenue-producing assets and on-going infrastructure investments through BPA and third-party funding of transmission assets.
- 1 percentage Non-Federal Debt Service The interest and AFUDC for projects associated with the Large Generator Integration Agreements, primarily wind projects.

Drivers of Change:

- Increased capital investment
- Change in projected interest income due to change in cash balances
- Debt management actions

Included in Workshop Scheduled June 19, 2008 AM



System Operations

\$ in Thousands		Actu	Jals	6		SOY		ate Case Average									
	F	Y 2006	F	Y 2007	FY 2008		FY 2008-2009		F	Y 2009	F	Y 2010	F	Y 2011			
Program Level Spending	\$	40,232	\$	43,892	\$	48,618	\$	48,537	\$	53,655	\$	56,586	\$	57,511			
Total Increase/Decrease From Prior																	
Year			\$	3,660	\$	4,726			\$	5,119	\$	2,931	\$	925			

Program Background:

• System Operations contains expenses for technical operations, substation operations, control center support, power system dispatching, and Transmission IT costs, including Agency Services costs for IT that are allocated to Transmission Services.

Drivers of Change:

- Mandatory reliability compliance, documentation and reporting, have increased substantially.
- Increased workload to support wind integration.
- Increased demand for transmission capacity.
- Increased training needs due to constant influx of new equipment types, models, and technologies.

Forecast Risk:

• Finding qualified candidates for critical skill sets and having enough qualified staff to simultaneously train new employees and perform critical work.

Opportunities for Improvement:

- Provide tools to manage the system, e.g. automate remedial action scheme (RAS) arming, voltage control, and short-term wind forecasting.
- Increase management of conditional firm initiatives.
- Increase dynamic scheduling capability.
- Recognize opportunities to create more efficient inspection, documentation and switching processes and practices through internal and external benchmarking as well as collaboration amongst our fellow employees.
- Develop recruitment efforts that can supplement the success in the Apprenticeship Program.
- Digital communication to major federal projects and neighboring Balancing Authorities (BAs).



Scheduling

\$ in Thousands	Actuals					SOY		ate Case Average	IPR						
	F	FY 2006		FY 2007		FY 2008		FY 2008-2009		FY 2009		Y 2010	F	Y 2011	
Program Level Spending	\$	7,733	\$	6,508	\$	9,577	\$	9,673	\$	9,896	\$	10,308	\$	10,784	
Total Increase/Decrease From Prior															
Year			\$	(1,226)	\$	3,070			\$	223	\$	413	\$	475	

Program Background:

• The scheduling program contains expenses for reservations, pre-scheduling, real-time scheduling, scheduling after-the fact, and technical support.

Drivers of Change:

- Increased required knowledge of reliability expectations and proposed ATC methodology.
- Complexity of webTTrans scheduling and reservation transition.
- Numbers of customers seeking help with webTTrans conversions/compatibility for/to their systems.
- Degree of documentation needed to ensure repeatability of core scheduling processes.

Forecast Risk:

Increasing industry changes require more attention toward the future (resource and skill match issues).

Opportunities for Improvement:

- Leverage automation implementation to redirect resources to needed areas.
- Partner with Account Executives to inculcate stronger customer service (internal & external) focus.
- Leverage automation of our scheduling and reservation processes (which are the most sophisticated in OATI's portfolio) to influence industry direction in emerging policies and practices (potentially limiting the impact of proposed changes).



Marketing

\$ in Thousands	Actuals					SOY		ate Case verage	IPR							
	F	Y 2006	6 FY 2007		FY 2008		FY 2008-2009		FY 2009		FY 2010		F	Y 2011		
Program Level Spending	\$	11,352	\$	13,712	\$	16,975	\$	13,428	\$	17,841	\$	18,836	\$	19,538		
Total Increase/Decrease From																
Prior Year			\$	2,359	\$	3,264			\$	865	\$	996	\$	702		

Program Background:

• The marketing program contains expenses related to business strategy & assessment, marketing IT support, billing, finance, contract management, and internal operations.

Drivers of Change:

- Increasing knowledge requirements of Order 890 scope and implementation.
- Implementing conditional firm to provide service in advance of new construction.
- Need to re-evaluate fundamental business models to accommodate increasing industry initiatives.
- Need to assess strategy of commercial policies to meet changing customer profiles and business needs.
- Increased knowledge of complexity of reservation and ATC automation requirements and collateral business policy impacts.

Forecast Risk:

- High constant change in industry—continues to evolve.
- Resources to comprehensively address compliance and vulnerability assessments.
- Availability of skilled candidates to fill critical positions.
- Constant fast work pace results in less attention on strategic evaluation of issues.

Opportunities for Improvement:

- Great time to expose staff to different venues to learn about changing industry- need to capture these opportunities.
- Spend time assessing vulnerabilities of business processes to be proactive vs. reactive when problems arise.
- Increased investment in customer relationships to build customer capital to carry us through myriad of changes.
- Focus on internal customer service to improve all aspects of decision processes and implementation.
- Improve goodwill amongst transmission organizations to ensure broader visioning when completing our mission.



Business Support

\$ in Thousands		Actu	Jals	5		SOY		ate Case Average				IPR		
	F	Y 2006	F	Y 2007	F	Y 2008	F١	/ 2008-2009	F	Y 2009	F	Y 2010	F	Y 2011
Program Level Spending	\$	24,628	\$	27,984	\$	23,366	\$	25,537	\$	31,531	\$	34,675	\$	34,828
Total Increase/Decrease From Prior Year			\$	3,356	\$	(4,618)			\$	5,993	\$	3,144	\$	154

Program Background:

Business Support includes expenses for logistics services, aircraft services, legal services, internal general & administrative services, and executive and administrative services.

Drivers of Change:

- Increasing maintenance levels needed to support the security systems (cameras, alarms, card readers, automated gates and fencing) from Level II enhancements.
- Implementation of the 2-year work plan and an increasing Transmission capital program have caused some increases in Logistic Services workload.

Opportunities for Improvement:

- Increased use of strategic sourcing for purchasing materials and developing strategic partnerships with vendors to ensure we can get materials at the best cost.
- Analysis and optimization of inventory to reduce inventory levels and ensure we have the right materials.



System Maintenance with Environmental Operations (Page 1 of 2)

	Act	uals	SOY	Rate Case Average	IPR						
	FY 2006	FY 2007	FY 2008	FY 2008-2009	FY 2009	FY 2010	FY 2011				
Program Level Spending	\$ 87,939	\$ 90,905	\$ 98,924	\$ 96,273	\$111,668	\$125,717	\$130,687				
Total Increase/Decrease From Prior Year		\$ 2,966	\$ 8,019		\$ 15,395	\$ 14,049	\$ 4,970				

Program Background:

- System maintenance contains costs related to technical training, heavy mobile equipment maintenance, and maintenance costs for system management, joint cost, power system control, system protection control, transmission line, substation, and non-electric facilities.
- Environmental Operations consists of environmental analysis and pollution prevention and abatement.

Drivers of Change:

- Aging transmission equipment and equipment obsolescence
- Reliability, cultural and environmental compliance
- Increased maintenance costs due to global competition for materials
- Increasing numbers of emergencies requiring significant efforts to keep critical equipment in service
- Increased ROW management
- Increased training needs due to constant influx of new equipment types, models, and technologies
- System wide environmental risk assessments of oil-filled equipment have identified significant number of facilities with oil releases that pose environmental non-compliance and risk exposure resulting in the need for environmental corrective actions
- Regulatory Agency Compliance Inspections identified required corrective actions
- Development of Programmatic Agreement to address cultural resources compliance for transmission maintenance program.



System Maintenance with Environmental Operations (Page 2 of 2)

\$ in Thousands									
	Act	uals		SOY	_	te Case		IPR	
	ALI	uais		301	A	/erage		IFK	
	FY 2006	FY 2007	F	Y 2008	FY 2	2008-2009	FY 2009	FY 2010	FY 2011
Program Level Spending	\$ 87,939	\$ 90,905	\$	98,924	\$	96,273	\$111,668	\$125,717	\$130,687
Total Increase/Decrease From									
Prior Year		\$ 2,966	\$	8,019			\$ 15,395	\$ 14,049	\$ 4,970

Forecast Risk:

- Finding qualified candidates for critical skills and having enough qualified staff to train new employees and perform critical work
- Sufficient resources to accomplish needed equipment replacement and capital additions programs.
- Having adequate resources with required level of training and skill to integrate new equipment into in-service systems without jeopardizing system stability
- Failure to address environmental regulatory issues resulting in Regulatory Agency violations (increased oversight, directives, and costs to address corrective actions to achieve environmental compliance).
- Findings of non-compliance impacts BPA's environmental stewardship principles.
- Costs to address environmental compliance requirements increase over time.

Opportunities for Improvement:

- Development of Programmatic Agreements with Regulators to streamline the environmental compliance process.
- Work with Department of Justice to utilize the Federal Judgment fund to address BPA Potentially Responsible Party liabilities associated with third party superfund sites.
- Recurring equipment replacement programs that allow for a more predictable work load on both capital and expense work loads.
- Adequate staff to support recurring base workload for maintenance programs.
- Application of Work Plan and Scheduling System.



System Development (Engineering)

\$ in Thousands								Rate								
								Case								
	Actuals					SOY Average				e IPR						
	F	FY 2006		FY 2007		FY 2008		FY 2008-09		Y 2009	FY 2010		F	Y 2011		
Program Level Spending	\$	14,775	\$	15,017	\$	24,720	\$	21,560	\$	25,140	\$	26,503	\$	28,014		
Total Increase/Decrease From Prior																
Year			\$	242	\$	9,703			\$	420	\$	1,363	\$	1,510		

Program Background:

 System engineering consists of costs in support of the research and development program, transmission system planning and analysis, region association fees, including the allocated costs for industry restructuring, and costs associated with cancelled capital projects and inventory adjustments.

Drivers of Change:

- Increased analysis and planning to support repair and replacement of the aging transmission infrastructure.
- Mandatory NERC/WECC reliability compliance, as well as, cultural and environmental compliance.
- Increased training needs due to constant influx of new equipment types, models, and technologies.

Forecast Risk:

- Lack of quality assurance/control organization threatens large infrastructure programs.
- Under funding of replacement programs will increase failure rates of equipment.

Opportunities for Improvement:

- Continue to review and optimize the use of standard designs and materials.
- Implementation of a 2 year work plan (as opposed to the single year plan we used to have).
- Using a risk template for major infrastructure improvement projects.



Non BBL Acquisition & Ancillary Services

\$ in Thousands		Actu	uals	5		SOY		Rate Case Average				IPR		
	F	FY 2006 FY 2007		F	Y 2008	FY 2008-2009		FY 2009		FY 2010		F	Y 2011	
Program Level Spending	\$	20,058	\$	19,397	\$	19,250	\$	18,844	\$	17,844	\$	18,359	\$	18,901
Total Increase/Decrease From Prior														
Year			\$	(660)	\$	(147)			\$	(1,406)	\$	515	\$	542

Program Background:

 Non-BBL Transmission acquisition and ancillary services includes payments to third-parties for leased facilities, settlement agreements, and non-BBL ancillary services for contingent energy, re-dispatch, generation supplied reactive, and stability reserves.

Drivers of Change:

- Use of master lease agreements for financing capital projects.
- Increased need for staff and systems to manage congestion on the existing transmission system using more precise redispatch and curtailments.

Forecast Risk:

- Identification of capital projects qualifying for the master lease program.
- Increased costs of master leased projects due to global competition for materials.
- Fluctuation in interest assumptions associated with master leased projects.
- Uncertainty of settlement exposure.
- IPP's may file with FERC for outside the band reactive payments.
- Amount of redispatch actually used.

Opportunities for Improvement:

- Develop long-term strategies to manage lease arrangements.
- Quantify dispute exposure to predict settlement potentials.