Overview Workshop

2010 Integrated Program Review (IPR)

May 10, 2010

Agenda

	Topic	Slide #	Presenter
9:00	Background, Objectives and Schedule	2	Claudia Andrews
9:15	BPA Overview • Asset Management Overview • BPA Capital Overview • BPA Expense Overview	3-34	Claudia Andrews
10:00	Power Overview • Expense & Capital Overview	35-49	Mark Gendron
11:00	Break		
11:15	Transmission Overview • Expense & Capital Overview	50-70	Brian Silverstein
12:15	Agency Services Overview	71-78	Claudia Andrews
1:00	Next Steps	79-83	Mary Hawken
~	Appendix 1 – Power Expense & Capital Detail	84-120	~
~	Appendix 2 – Transmission Expense & Capital Detail	121-159	~
~	Appendix 3 – Agency Services Expense & Capital Detail	160-246	~

Background, Objectives and Schedule

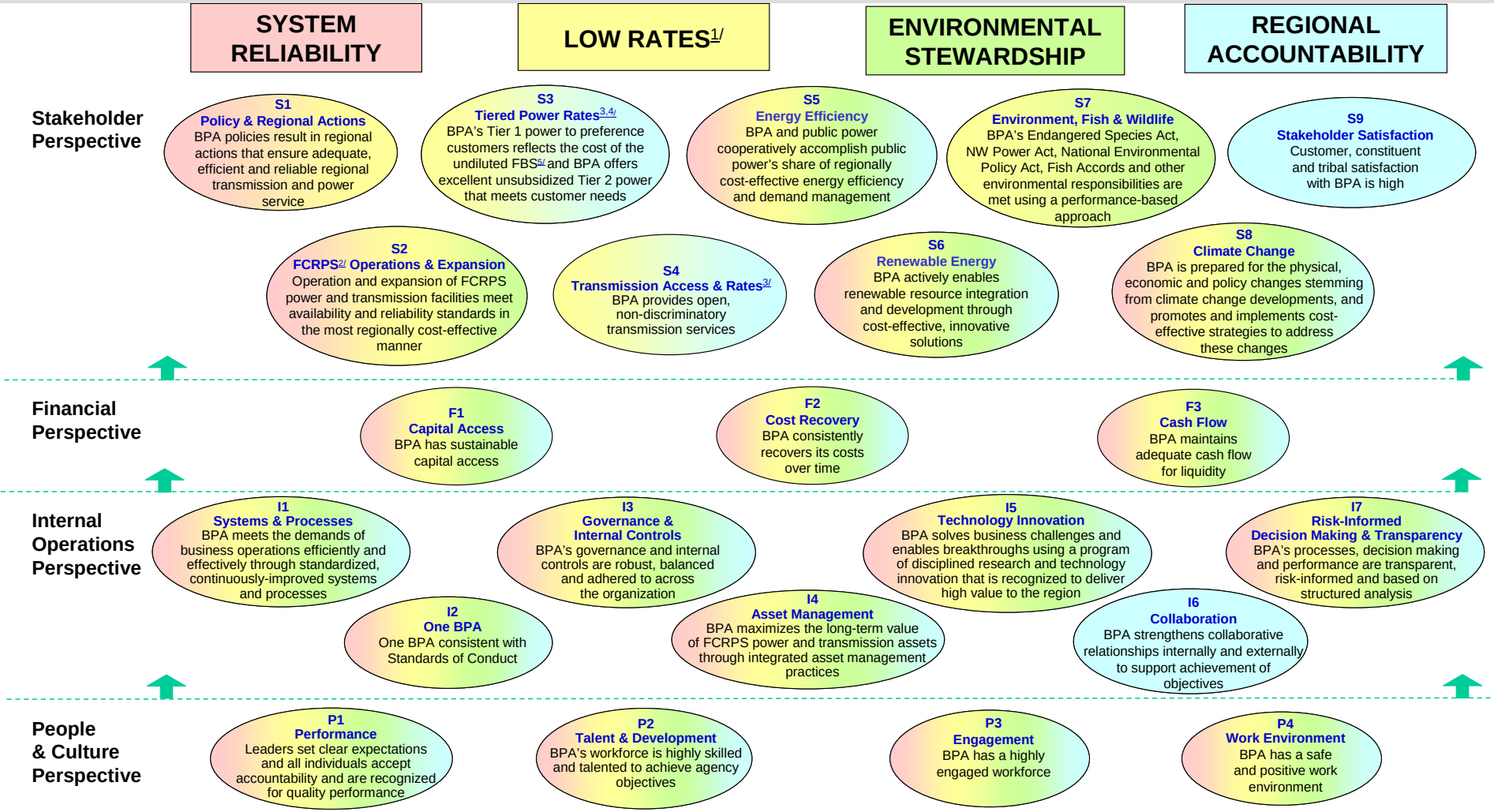
BPA's Mission

The Bonneville Power Administration's mission as a public service organization is to create and deliver the best value for our customers and constituents as we act in concert with others to assure the Pacific Northwest:

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

BPA is committed to cost-based rates, and public and regional preference in its marketing of power. BPA will set its rates as low as possible consistent with sound business principles and the full recovery of all its costs, including timely repayment of the federal investment in the system.

Agency Strategy Map (2010-2016)



1/ Consistent with sound business principles.

2/ Federal Columbia River Power System (FCRPS): The transmission system constructed and operated by BPA, the hydroelectric dams constructed and operated by the U.S. Army Corps of Engineers and the Bureau of Reclamation in the Northwest, and nonfederal generation capability acquired by BPA under long-term arrangements. The transmission and power systems are separately managed and financed, but as much as possible, the facilities are operated as an integrated power system.

3/ Power and transmission rates are kept as low as possible consistent with sound business principles while achieving BPA's objectives.

4/ Tier 1 power rates are below market for comparable products.

5/ Federal Base System.

Integrated Business Review Background

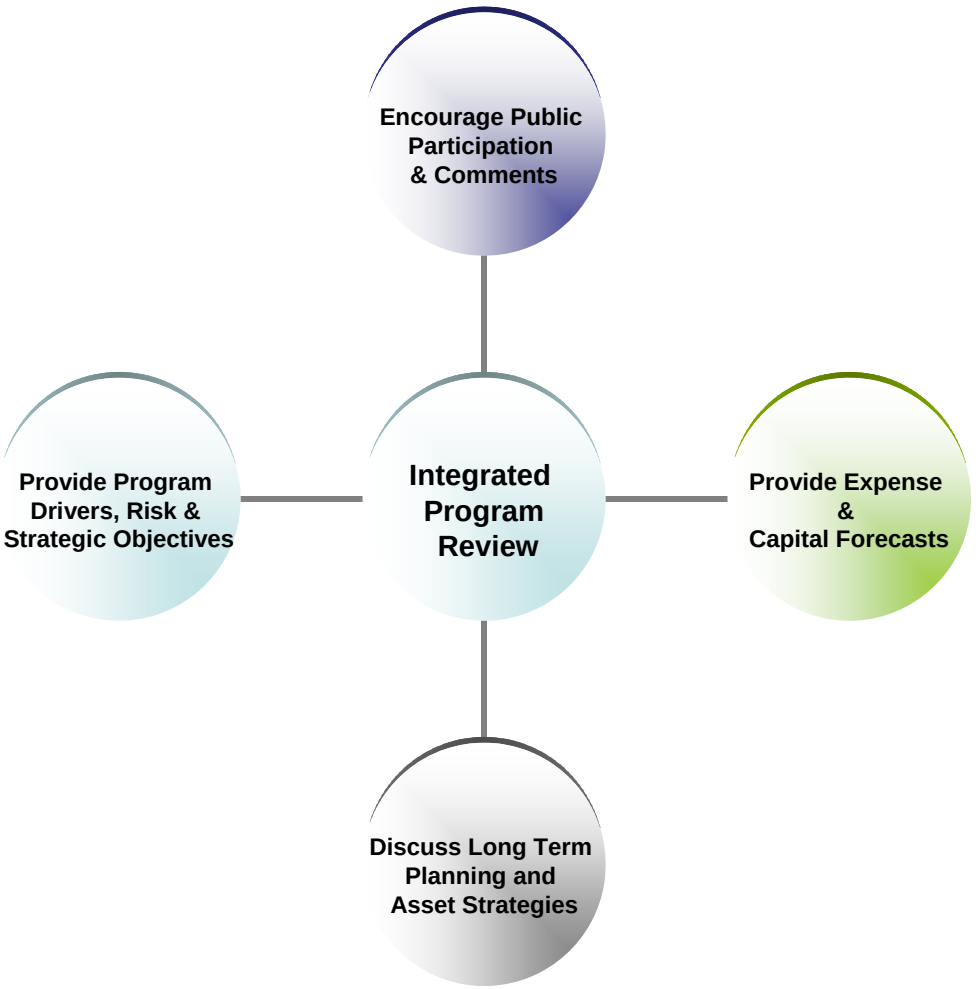
- BPA established the Integrated Business Review (IBR) in order to address the regional cost control portion of the Regional Dialogue Policy. The Regional Dialogue Policy states that:
  - BPA will, in a separate process, establish a Regional Cost Review cost control process which will, among other things, address agency capital and expense costs (replacing Capital Planning Review (CPR), Power Function Review (PFR), and Transmissions Programs in Review (PIR)) and examine major anticipated policy decisions that affect costs and explore potential alternatives; and
  - BPA is committed to ensuring regular access to clear and transparent financial information and frequent opportunities for meaningful input into program decisions.
- The IBR consists of two processes addressing program costs and strategy. The Quarterly Business Review (QBR) provides an ongoing opportunity to review BPA's program spending levels and the periodic Integrated Program Review (IPR) addresses how strategy and long term planning influences program spending levels.
- The IPR was first initiated in May 2008, providing a combined Agency review of all FY 2009-2011 expense and capital forecasts and including a follow-up process in March 2009, referred to as the IPR2.
- The IPR continues to be an evolving process committed to improving transparency and providing opportunities for meaningful and thorough input to proposed spending levels.

IPR Goals

1. Present BPA's costs by business unit, both expense and capital, in one forum, consistent with the structure developed during the Regional Dialogue.

2. Allow customers, other stakeholders and interested parties an opportunity to review, ask questions and comment on BPA program costs before rates are set to recover those cost.

3. Identify how BPA's program spending forecasts support agency-level long term objectives outlined in the Agency Strategy map (2010-2016) shown on slide 5.



IPR Parameters

- The IPR is BPA's public involvement process for reviewing proposed program spending levels that will form the basis for Initial Rate Proposal revenue requirements for power and transmission. The primary focus is on major program areas that make up the bulk of power and transmission costs.
- Input received in this process will be considered prior to setting spending levels that form the basis for the upcoming Power and Transmission rate cases for FY 2012-2013. Program levels will not be revisited in the rate cases.
- Risk mitigation and liquidity tools will not be discussed in the 2010 IPR process. However, we will have a separate discussion on the use of risk mitigation tools.
- Decisions on the following topics are outside the scope of the IPR and will be addressed in the Power and Transmission Rate Cases:
  - Loads and Resources
  - Cash Reserve Levels
  - Rate Design
  - Residential Exchange Costs
  - Revenue Credits including Net Secondary Sales/Power Purchases
  - Billing Determinants
  - Transmission Acquisition and Ancillary Services
  - Rate Levels

IPR Parameters

- Residential Exchange payments are also described but not decided in this process. The aggregated payment levels are determined by several factors, such as Priority Firm Exchange rate and the Section 7(b)(2) Rate Test.

- Transmission Acquisition and Ancillary Services are described but will not be decided in this process.

- Depreciation, Amortization, Net Interest and Non-Federal Debt Service are shown in this process, however, a separate series of workshops will be held to address Debt Management issues in greater detail.

- The WP-12 and TR-12 Rate Cases kicked off in early March 2010. Rate Case workshops have been scheduled alongside the IPR workshops. 2012 BPA Rate Case related material can be accessed at http://www.bpa.gov/corporate/ratecase/2012/meetings.cfm

Regional Conversations

- FY 2010 has unmasked a combination of new challenges for BPA. As a result, BPA will be sponsoring three concurrent processes in support of regional conversations with customers and interested parties. These concurrent processes include:
  - 2010 IPR,
  - Risk Mitigation, and
  - Debt Management
- Comparable to the 2009 IPR2, Risk Mitigation workshops will offer interested parties an opportunity to examine, discuss and provide feedback on potential risk mitigation tools for use in the upcoming rate case.
- Unlike previous IPR processes, Debt Management will be addressed in a separate process in FY 2010. BPA believes this will provide a greater opportunity for the region to participate in an exclusive discussion of debt management tools that could potentially be used to help minimize a potential rate impact in the 2012 rate case.
  - A 7-week public comment period will occur beginning June 8, 2010 and ending July 29, 2010 for the Debt Management process.
- All IPR, Debt Management and Risk Mitigation workshops will occur throughout late Spring and early Summer, please see the following slide for a current timeline.

Regional Conversations Timeline

Debt Management, IPR Proposed Spending Levels, and Risk Mitigation

This schedule is subject to change as necessary

	May_6	May_10	Late May	June	July	August	September
IPR		May 10 (9am-1pm) **IPR Kickoff** **CFO/Senior VP's** Introduce 3 Part Process and Schedule	May 13-25 **IPR Workshops**	June 8 (9am-12pm) **General Manager Workshop** **Administrator, Power, Transmission VPs, CFO** IPR Spending Levels			Late September **IPR Close-Out Letter & Report**
Debt Management	**Public Power Council & Customer Collaborative Meeting** **Steve Wright** • Debt Extension • IPR Spending • Managing Risk		**Engage Energy Northwest Executive Board** Discuss EN Debt Restructuring	**Engage Participants Review Board (PRB)** Discuss EN Debt Restructuring June 8 (1pm-4pm) **Debt Management Technical Workshop** Discuss EN Debt Restructuring June 18 (9am-12pm) **Debt Management Technical Workshop** Discuss Other Debt Management Tools	July 13 (9am-12pm) **General Manager Workshop** **Administrator, Power VP, Transmission VP, CFO** Discuss IPR Proposed Spending Levels, Debt Management Tools & Managing Risk **Engage Energy Northwest Executive Board** Potential Decision regarding EN Debt Restructuring	Early August **Debt Management "Close-Out" Letter**	
Risk Mitigation			May 26 **Risk Mitigation Workshop** Conceptual level of risk tools and how we analyze risk				
		May 10 - July 29 **IPR Comment Period**		**June 8 - July 29** **Debt Management Comment Period**			

Last Updated 5/5/2010

Feedback from Customers on the 2008-2009 IPR process

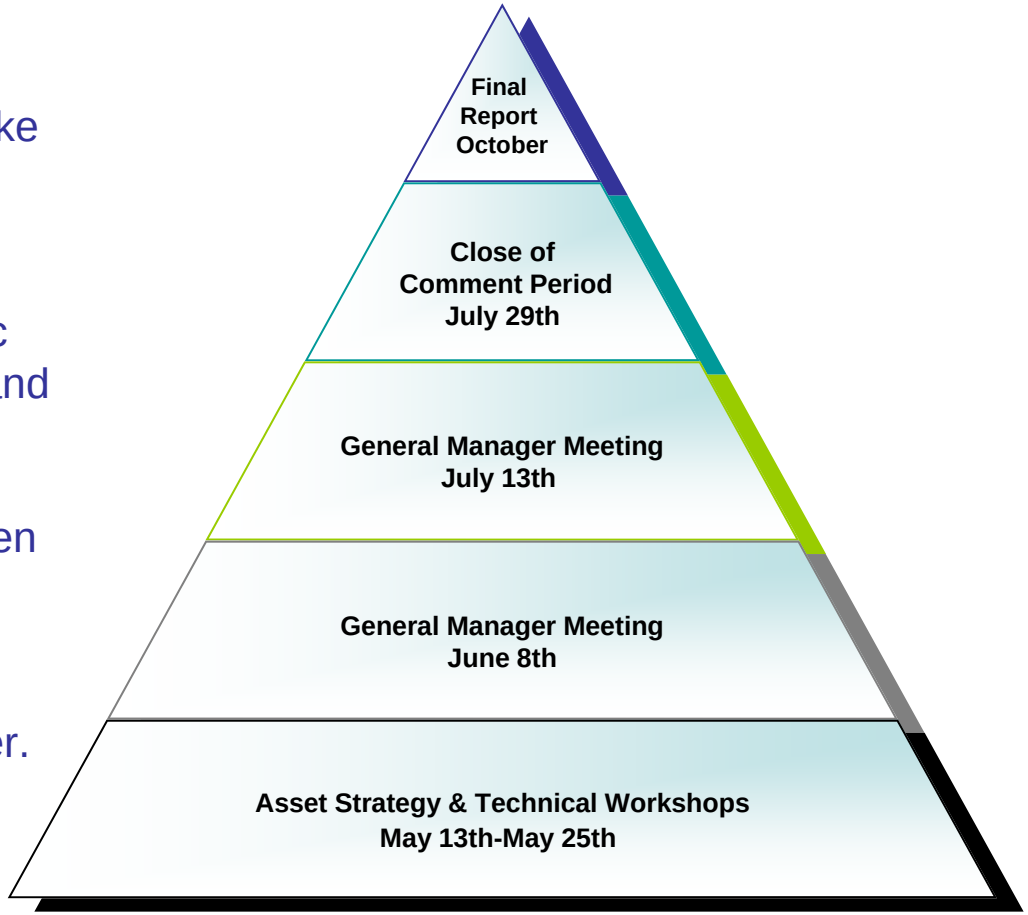
- A half day workshop to discuss Transmission Expense and Capital was not enough time for review and discussion. Providing a day or two would be helpful in future processes.
- Posting presentation material a few days prior to scheduled workshops would be helpful in future processes.
- Holding technical and managerial workshops proved useful.
- Customers would like an opportunity to comment on Columbia Generating Station's (CGS) Long Range Plan (LRP) prior to the Energy Northwest (EN) Board approving and finalizing proposed spending levels. Furthermore, participants would like to see EN align their budget with BPA fiscal years.
- Reduction Scenarios:
  - The optional 10% reduced funding level report and follow up session for discussion was an improvement from prior processes. Additional detail provided in the scenario exercise was helpful in assessing what would not be accomplished if the 10% reduction was implemented.
  - Customers appreciated BPA's effort to provide a scenario exercise and suggest more alternatives be provided for discussion in future processes.
  - A couple of changes would help in evaluating BPA's proposals; first, BPA should provide alternative packages of spending proposals for evaluation… BPA made a responsible first start at this… looking at the effects of a 10% cost decrease by function.
  - The scenario report was useful, customers would like to see a similar report in the 2010 IPR.

What You Can Expect in this IPR Process

- The 2010 IPR process is designed to provide customers and interested parties an opportunity to review, discuss, and provide meaningful comment on:
  - 2010 Draft Long Term Asset Strategies for Transmission, Federal Hydro, Information Technology (IT) and Facilities.
  - Current proposed expense spending levels for FY 2012-2013.
  - Current proposed capital investment levels for FY 2012-2017.
  - Updated FY 2011 proposed program spending level forecasts.
  - Reduction scenarios addressing the impacts of lower expense spending levels for major programs for FY 2012-2013.
- Based on feedback received during the 2008 IPR, the 2010 IPR process will, again, consist of a series of technical and managerial workshops covering the major program categories for Power, Transmission and Agency Services
- We have expanded our discussion of asset strategies in this IPR and adjusted the timing to take place at the beginning of the process. We think it is important to have this context prior to discussing proposed capital spending levels.

What You Can Expect in this IPR Process

- Most technical workshops will take place beginning the week of May 17th. Transmission technical workshops will take place the first two days, then Power, and finally Agency Services will follow.
- The process will include a 12 week public comment period opening May 10, 2010 and closing July 29, 2010.
- Two general manager meetings have been scheduled for June 8th and July 13th.
- Decisions on FY 2012-2013 costs are scheduled to be announced early October.



Workshop Schedule

2010 Integrated Program Review (IPR) Workshop Schedule

All workshops are subject to change as necessary

	Workshop Topic	Date	Time
-	**Asset Management Overview** *Pre-IPR meeting held at the Quarterly Business Review*	**May 3, 2010**	**3:00-4:00 PM**
1	**Executive Welcome and Overview**	**May 10, 2010**	**9:00-1:00 PM**
2	**Federal Hydro Asset Strategy & Capital Discussion**	**May 13, 2010**	**9:00-12:00 PM**
3	**Transmission Asset Strategies & Capital Discussion**	**May 17, 2010**	**9:00-4:00 PM**
4	**Transmission Expense**	**May 18, 2010**	**9:00-12:00 PM**
5	**Transmission Overflow**		**1:00-4:00 PM**
6	**Power Internal Operating Costs, Acquisition/Ancillary Services & Residential Exchange**	**May 19, 2010**	**9:00-12:00 PM**
7	**Columbia Generating Station (CGS)**		**1:00-4:00 PM**
8	**FCRPS Hydro Operation & Maintenance Program and Cultural Resources**	**May 20, 2010**	**9:00-12:00 PM**
9	**Fish & Wildlife, Lower Snake River Comp (LSRC), Northwest Power Planning Council (NWPPC) and Columbia River Fish Mitigation (CRFM)**		**1:00-4:00 PM**
10	**Power Overflow**	**May 24, 2010**	**9:00-12:00 PM**
11	**Energy Efficiency & Renewable Resources**		**1:00-4:00 PM**
12	**Facilities Asset Strategy**	**May 25, 2010**	**9:00-10:30 AM**
13	**Information Technology (IT) Asset Strategy**		**10:30-12:00 PM**
14	**Agency Services Workshop**		**1:00-4:00 PM**
15	**General Manager Meeting**	**June 8, 2010**	**9:00-12:00 PM**
16	**General Manager Meeting**	**July 13, 2010**	**9:00-12:00 PM**

BPA Overview

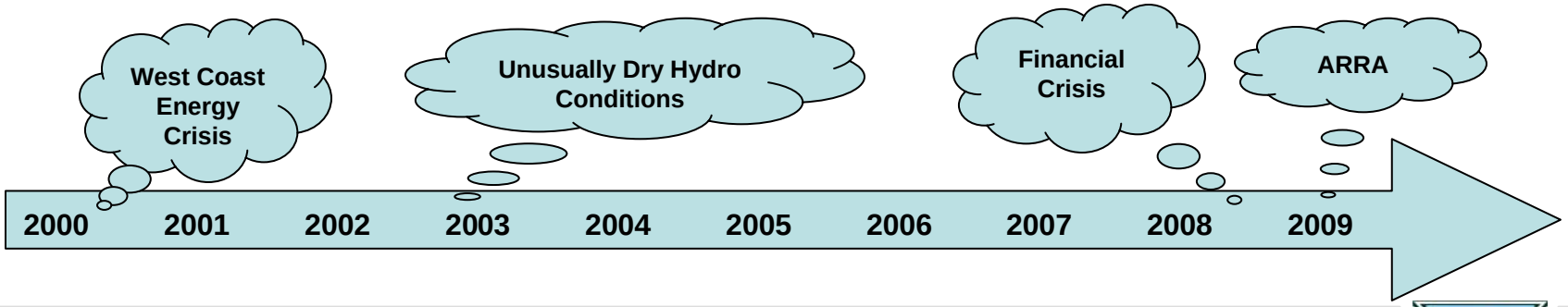
BPA Profile

- BPA markets wholesale electrical power from 31 federal hydro projects in the Columbia River Basin, one nonfederal nuclear plant and several other small nonfederal power plants.
  - About one-third of the electric power used in the Northwest comes from BPA.
- BPA also operates and maintains approximately three-fourths of the high-voltage transmission throughout the region.

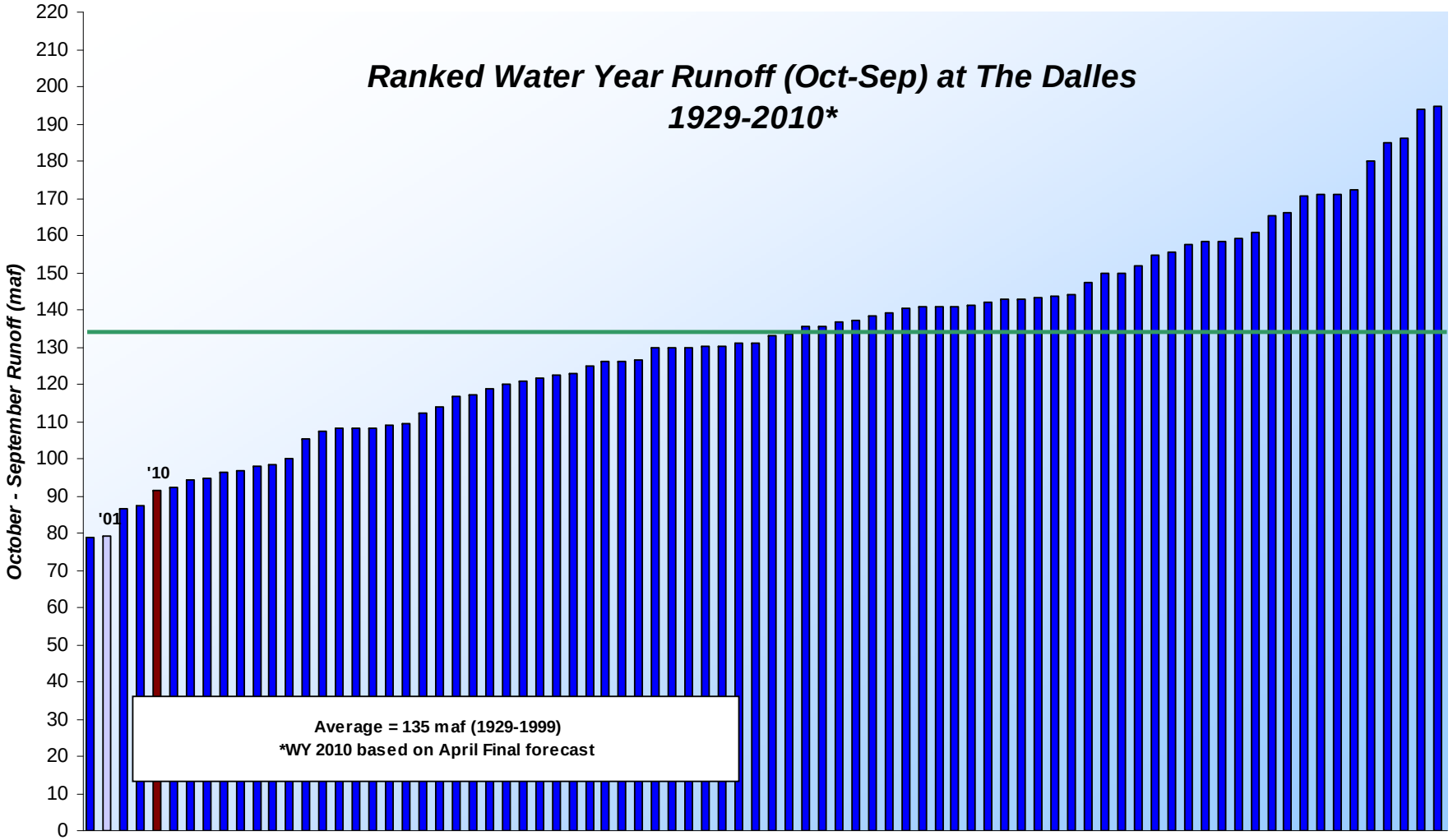
- The Agency supports energy efficiency, renewable resources, new technologies and fish and wildlife initiatives.
- BPA is committed to cost-based rates, and public and regional preference in its marketing of power. BPA will set its rates as low as possible consistent with sound business principles and the full recovery of all of its costs, including timely repayment of the federal investment in the system.

The Last Ten Years

- The West Coast Energy Crisis of 2000-2001 left BPA in a deep financial hole. With losses totaling approximately $700 million in FY 2001-2002. BPA cut costs, deferred investments and held rates as low as possible.
- As of FY 2007, BPA made a full recovery from the West Coast Energy Crisis despite mostly below-average water years.
- Unfortunately, the Agency has not escaped the recent national and regional economic distress. BPA saw a significant drop in FY 2009 net revenues compared to prior years and deteriorating hydro conditions continue to erode net revenues for FY 2010.
- On the other hand, economic stimulus legislation in response to the Financial Crisis resulted in the American Recovery and Reinvestment Act (ARRA). This new legislation authorized a $3.25 billion increase in BPA's borrowing authority, a major milestone in extending future access to capital.
- In addition, BPA continues to manage its costs to committed levels and strives to maintain healthy financial reserves.
    - In the 2009 IPR2 BPA made significant cost reductions to 2010 IPR proposed spending levels, totaling approximately $56.2 million. BPA continues to manage to these reduced levels in FY 2010.

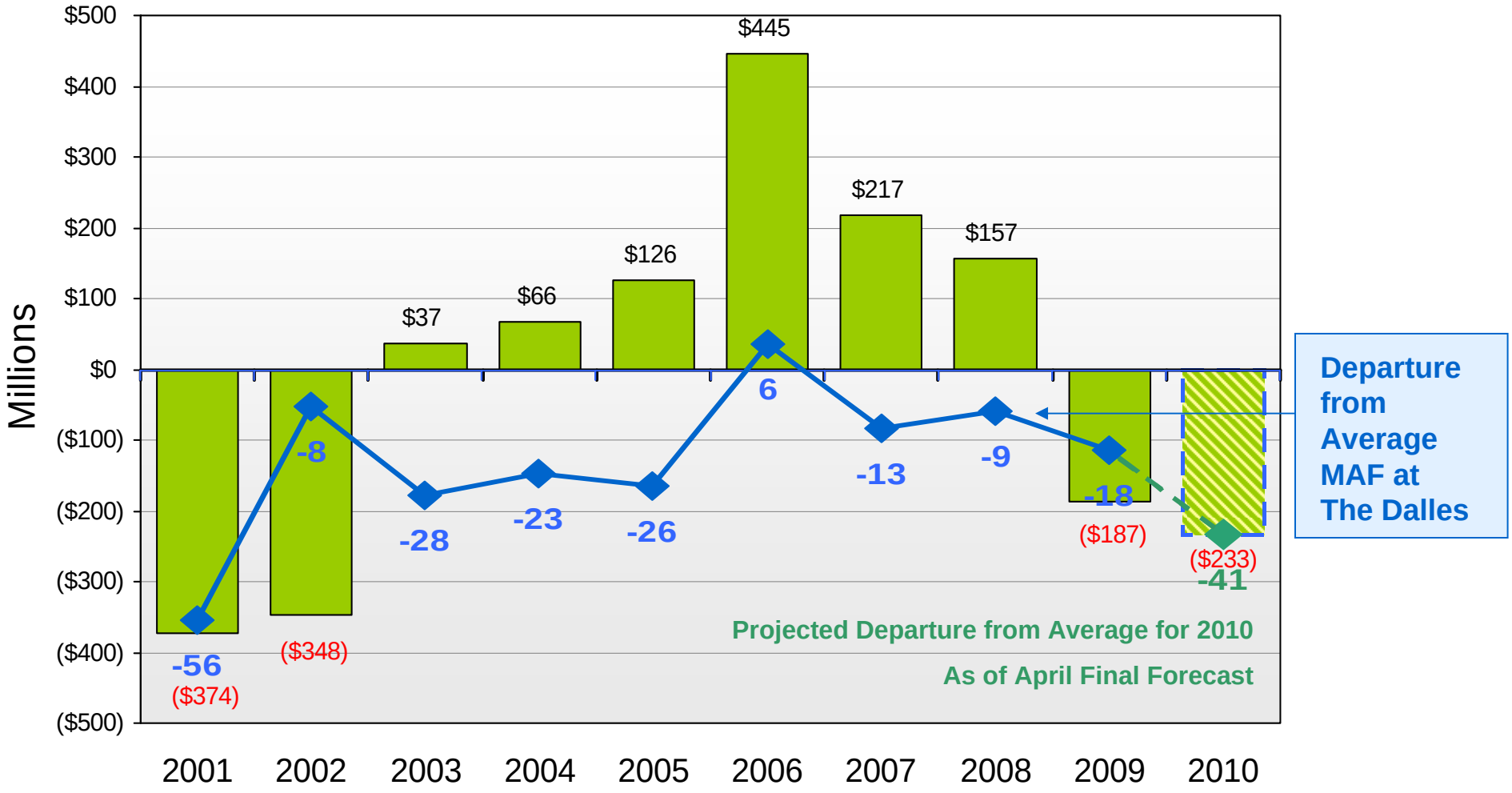


Water Year Runoff – Historical Ranking

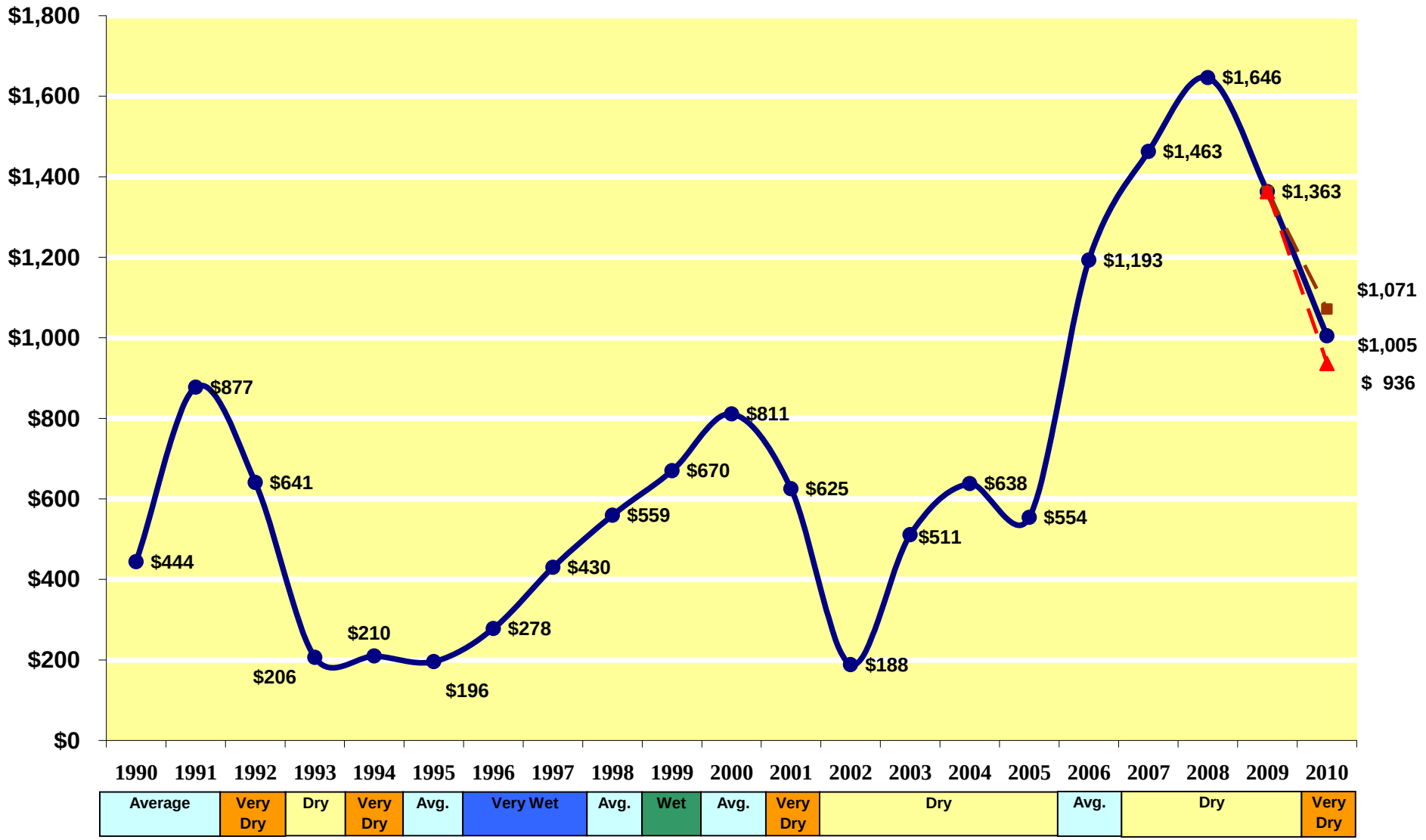


- If the 2010 forecast holds, FY 2010 will be the 5th lowest water year on record.

FY 2001-2010 BPA Annual Modified Net Revenues (MNR) and Annual Streamflow



Year-End BPA Financial Reserves & Runoff, FY 1990-2009 Actuals, 2nd Quarter FY 2010 Forecast Ranging from 25th Percentile to 75th Percentile



Forecasted Regional Economic Situation

Employment recovers differently by state. Employment growth happens more quickly in Washington and Idaho. Washington and Idaho return to pre-recession employment levels in early 2012, Montana late 2012, Oregon 2014.

Total Employment (thousands)

Calendar Year	2007	2008	2009	2010	2011	2012	2013
ID	654.9	648.7	609.7	606.4	620.2	641.6	660.3
MT	444.8	445.7	429.2	426.9	431.4	440.1	447.7
OR	1,731.2	1,718.5	1,612.9	1,591.7	1,614.2	1,660.3	1,699.7
WA	2,933.6	2,959.1	2,825.8	2,808.1	2,863.0	2,941.0	3,003.7

Despite job growth, unemployment remains high longer, impacting consumers and state growth.

Unemployment Rate (%)

Calendar Year	2007	2008	2009	2010	2011	2012	2013
ID	3	4.9	8	8.9	8	7.3	6.7
MT	3.5	4.6	6.2	6.6	6.2	5.9	5.5
OR	5.1	6.5	11.0	10.6	10.0	8.6	7.5
WA	4.5	5.4	8.9	9.1	7.9	7.1	6.7

Global Insights - April 2010 forecast

BPA Drivers

- The recent global financial market crisis and deterioration of the U.S. economy resulted in high unemployment and severe financial circumstances for many in the Northwest.
- In response to this crisis, BPA directed staff to identify cost-saving opportunities and approach spending decisions conservatively as the nation and region struggle to restore economic stability.
- As FY 2010 plays out, BPA's financial situation continues to be negatively impacted by poor hydro conditions.
- As BPA reviews future cost estimates, cost pressures arise from a variety of sources. Power and transmission have some similar cost drivers such as:
  - Aging infrastructure requiring additional capital investments.
  - Ongoing increases in regulatory compliance requirements, environmental obligations (National Environmental Policy Act [NEPA], Endangered Species Act [ESA], National Historic Preservation Act [NHPA]) and escalation of complex business operations (Wind Integration, Regional Dialogue, etc) continues to put tremendous pressure on expense and capital programs.
- Other drivers affect business units differently:
  - The biological opinion and 2008 Fish Accords have provided certainty regarding the proposed spending levels, however, Fish and Wildlife costs continue to escalate.
  - Fish and Wildlife costs are escalating but are somewhat certain due to Generation operation costs are escalating due to increases from the US Army Corps of Engineers (Corps), U.S. Bureau of Reclamation (Bureau), and Columbia Generating Station (CGS).
  - Maintenance of a growing transmission system, including fiber.
  - Increasing emphasis on cyber and physical security for transmission assets.

Development of Proposed Spending Levels

- In response to the state of the Northwest economy and our operational excellence drive towards continued efficiency improvements, we developed the 2012 and 2013 proposed spending levels using the following assumptions:
  - With a few exceptions we started with the FY 2011 spending levels established in IPR2 for the 2010 power and transmission rate cases.
  - We reduced inflation and cost-of-living adjustments applied to BPA Power, Transmission and Agency Services proposed spending levels by a 1.3 percent “efficiency factor”. This efficiency factor reflects the expectation that ongoing efforts around operational excellence will result in efficiencies and cost savings that will allow us to absorb a portion of the cost increases associated with expected inflation. This factor is based on historical data on productivity in the energy sector.
  - The result is a net cost-of-living adjustment of 1.34 percent per year applied to Federal annual employees and 2.2 percent per year applied to Federal hourly employees. The Federal cost-of-living adjustment is determined by the President and Congress for the government as a whole shortly before each new calendar year. The assumption we use is 2.64 percent (before the efficiency reduction), significantly below the 3.55 percent average of the past 10 years, reflecting an assumption of lower adjustments due to economic factors nationwide.
  - For non-personnel costs, the proposed spending levels assume an inflation rate of 0.8 percent in FY 2012 and 1.0 percent in FY 2013. These inflation rates also incorporate the efficiency improvement factor.
  - Most proposed BPA spending levels reflect these assumptions. During the IPR discussions, presenters will discuss deviations from these basic assumptions and the reasons for the deviations. Senior executives reviewed the proposals that deviated from the agency assumption very closely before approving those proposals.

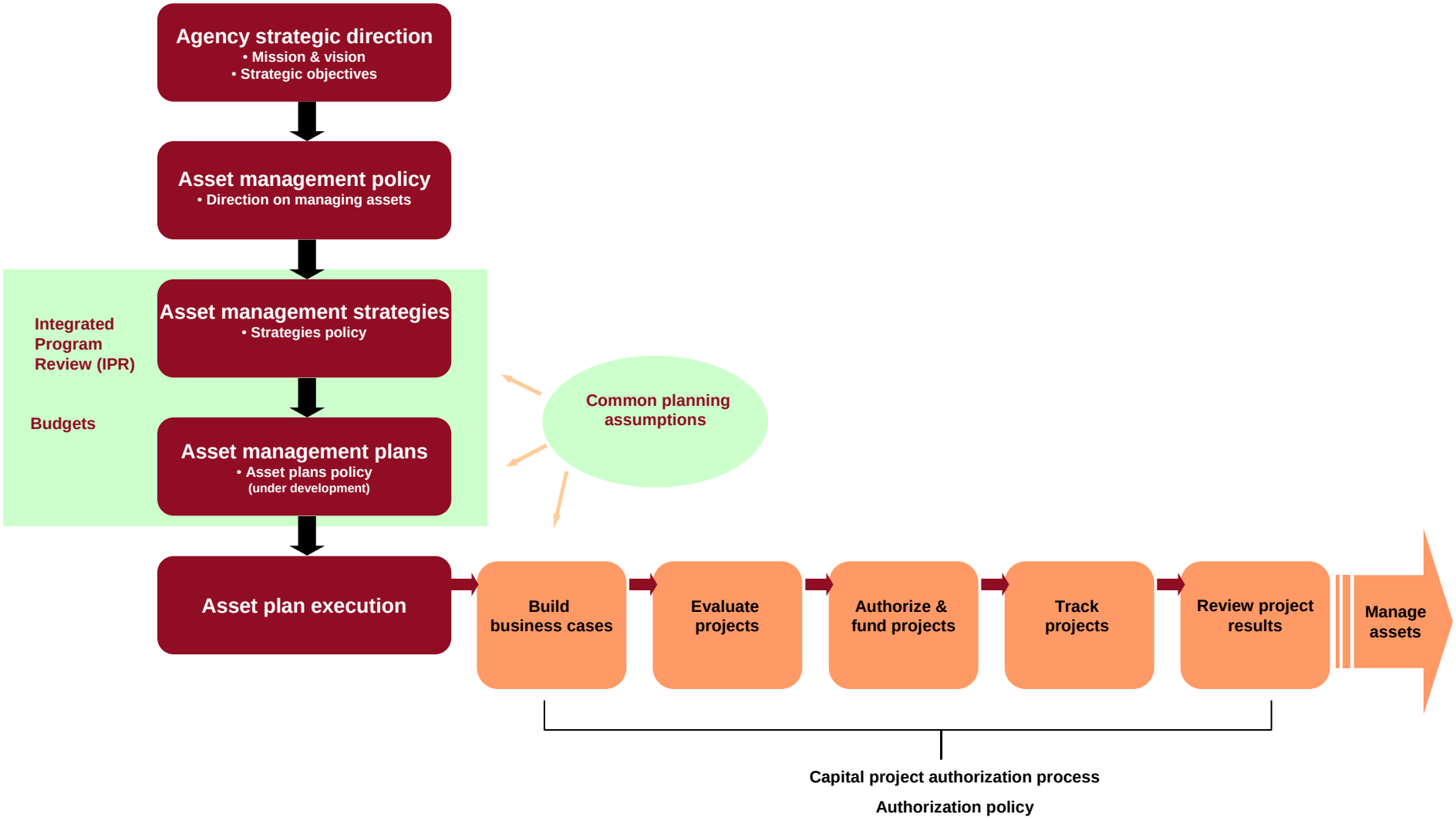
Development of Proposed Spending Levels

- The appendix material includes detail on BPA's programs. For each program we display FY 2009 actual spending, FY 2010 start-of-year budget consistent with the 2009 IPR2, FY 2011 forecasts (both from IPR2 and current forecasts), and FY 2012 and FY 2013 proposed spending based on assumptions described on the last slide.
- BPA programs are striving to stick to the IPR2 spending levels for FY 2010 and FY 2011 when feasible.
- In some cases FY 2009 amounts are quite a bit lower than the budget levels for FY 2010 and FY 2011. During FY 2009, recognizing the extreme impact that the recession had on the Northwest economy, we implemented significant, near-term cost reduction measures. The 2009 results reflect:
  - severely restricted travel and training.
  - no awards for BPA employees.
  - delayed hiring.
- We don't think these reductions reflect a prudent way to run a business on an ongoing basis and have not integrated these assumptions in proposed spending levels going forward.
- In some cases there are additional reasons for differences between 2009 and 2010/11. If there are additional differences, each presenter will address them in their workshops.

Capital Lapse Factor

- **In the 2008 IPR BPA began applying a 'lapse factor' to specific capital programs. Lapse factor reflects an assumption that a percentage of planned capital investment will be delayed into the subsequent rate period. The following lapse factors were used in the 2008 IPR process and applied to proposed capital spending for FY 2009-13.**
  - Transmission ~ 17%
  - Federal Hydro ~ 15%
  - Conservation/Energy Efficiency ~ 15%
  - Information Technology ~ 15%
  - Facilities ~ 15%
- **BPA is assuming continued use of a lapse factor with some minor modifications from the 2008 IPR.**
  - Transmission ~ 15%
    - Actual Transmission capital spending is occurring at levels closer to planned spending.
  - Federal Hydro ~ 15%
  - Conservation/Energy Efficiency ~ none
    - The 6th Power Plan requires larger investments in energy efficiency and higher $/Mw targets.
  - Information Technology ~ none
    - IT is ramping up significantly to support efforts across the agency and all planned spending is expected to be implemented.
  - Facilities ~ 15%

BPA's Asset Management System



Asset Management and Asset Management Strategies

- 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 management strategy to achieve that value.

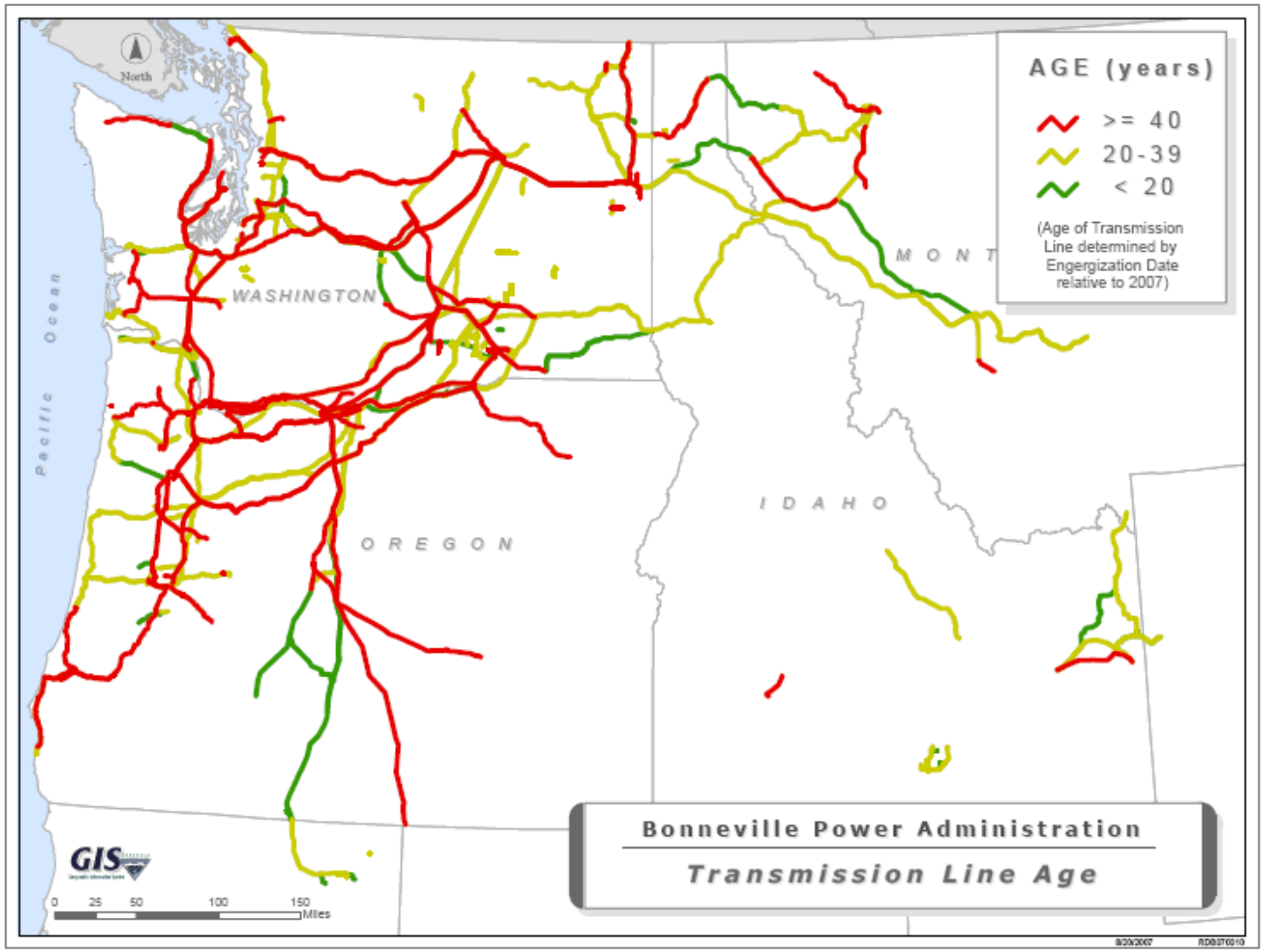
- Asset Management Strategies result from BPA's Asset Management system and seek to serve the following purpose:
  - Convert the agency's mission, vision, and strategic objectives into long-term investment and maintenance strategies.
  - Ensure that critical assets operate reliably, meet availability requirements, and provide adequate capacity in the future,
  - Assure long-term costs will be prudent and economic.

- Asset Management Strategies:
  - Draft Asset Management Strategies have been developed for Facilities, IT, Transmission and Federal Hydro investments.
  - Span a 10-year (or longer) planning horizon.
  - Provide an integrated approach to maintenance, equipment sparing, and replacements that seek to minimize life cycle costs.
  - Are directed at achieving asset performance objectives.
  - Assign priority to the most critical assets at greatest risk.
  - Focus on transmission, federal hydro, facilities and information technology assets, this cycle.
  - Drive the development of:
    - Planning levels for capital investment and maintenance.
    - Detailed Asset Plans.

Drivers of Investment

- **BPA sees the need for increased capital investment across the system. Key drivers of investment for Transmission, Federal Hydro, Facilities and IT include:**
  - Transmission
    - Aging system (some equipment has exceeded expected lives).
    - Critical equipment at risk of failure.
    - Ramp up in wind and other generating resources.
    - Compliance requirements.
    - Advances in technology/efficiency opportunities.
  - Federal Hydro
    - Deteriorating conditions of assets.
    - Critical equipment at risk of failure.
    - Expanded assessments of equipment.
    - Needed equipment refurbishment/replacement.
  - Facilities
    - Assessment of all-BPA owned buildings began in April 2007.
    - Significant amounts of deferred maintenance resulting in non-compliance with safety codes.
    - Non-electric facilities rated in poor condition.
  - Information Technology (IT)
    - Consists of Network, Data Center, Office Automation and Applications.
    - Ensure reliable and available resources.
    - Maintain compliance with North American Electric Reliability Corporation (NERC), Critical Infrastructure Protection (CIP) and Financial Services and Markets Act (FSMA).

Aging Infrastructure – Transmission Lines



15,300 circuit mile

>70,000 cable miles

~90k Structures

~5.3M insulators

Average Age

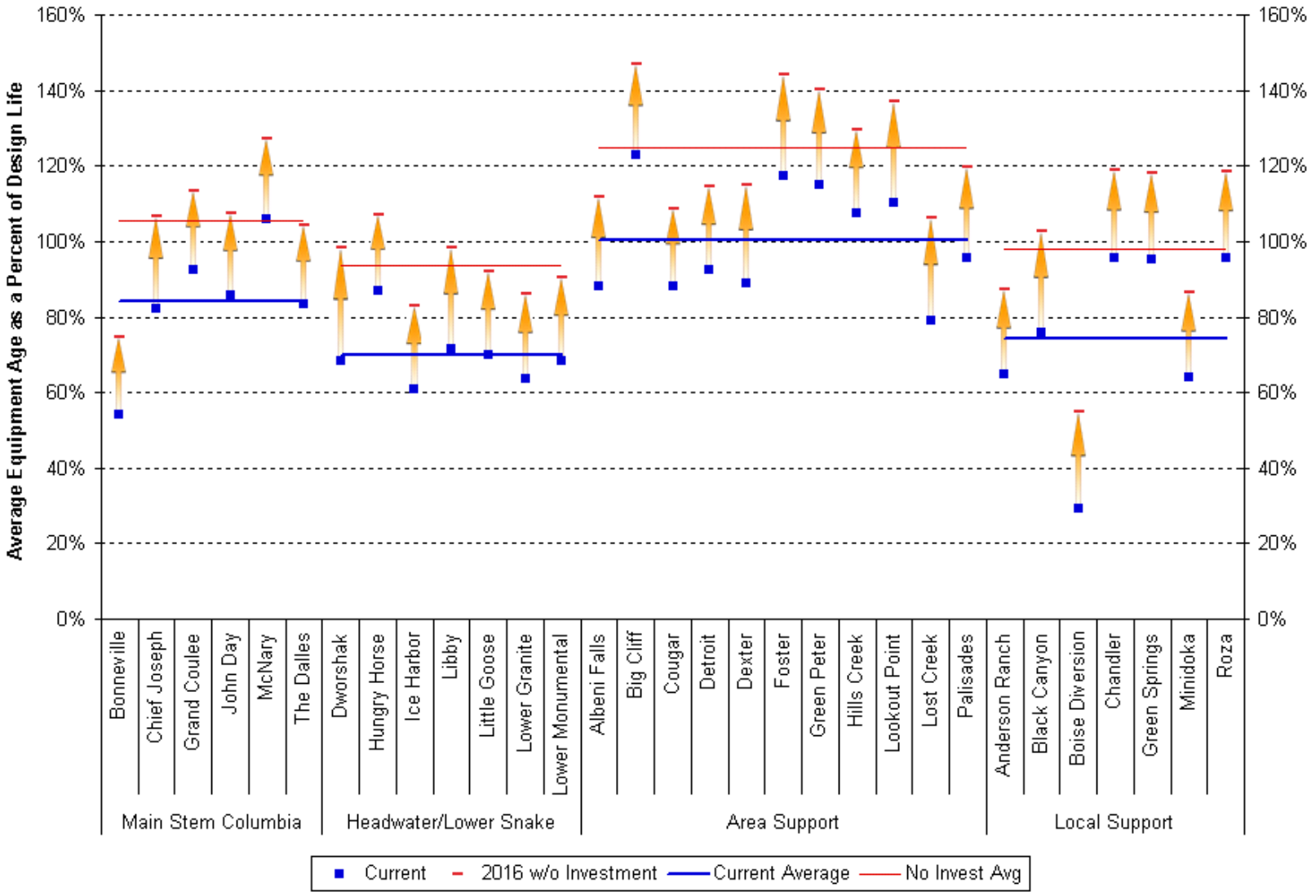
- 45 years

50% Built

- Prior 1962

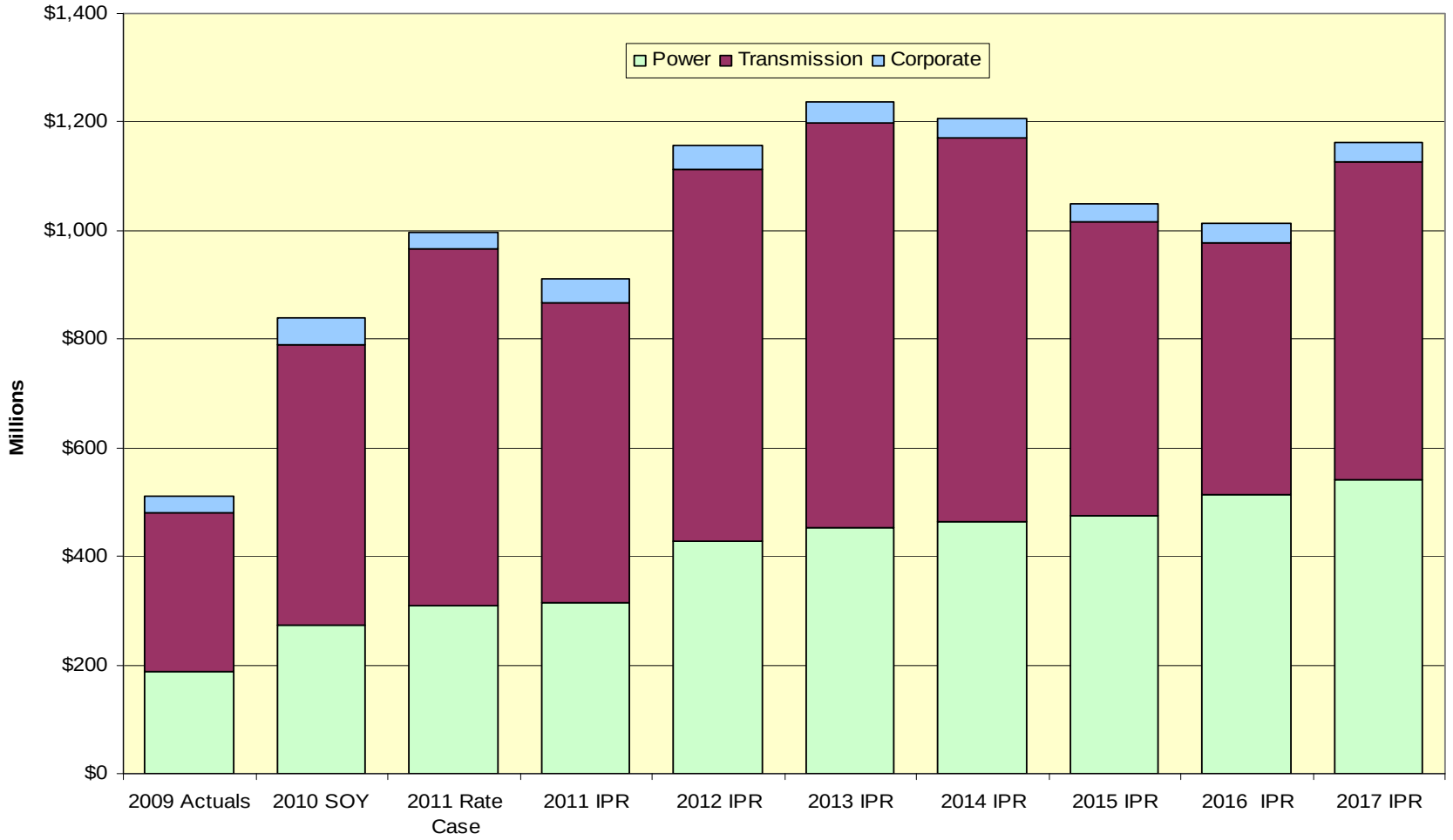
Last updated 2008

Current and Projected Average Hydro Equipment age, by Plant



Last updated 2008

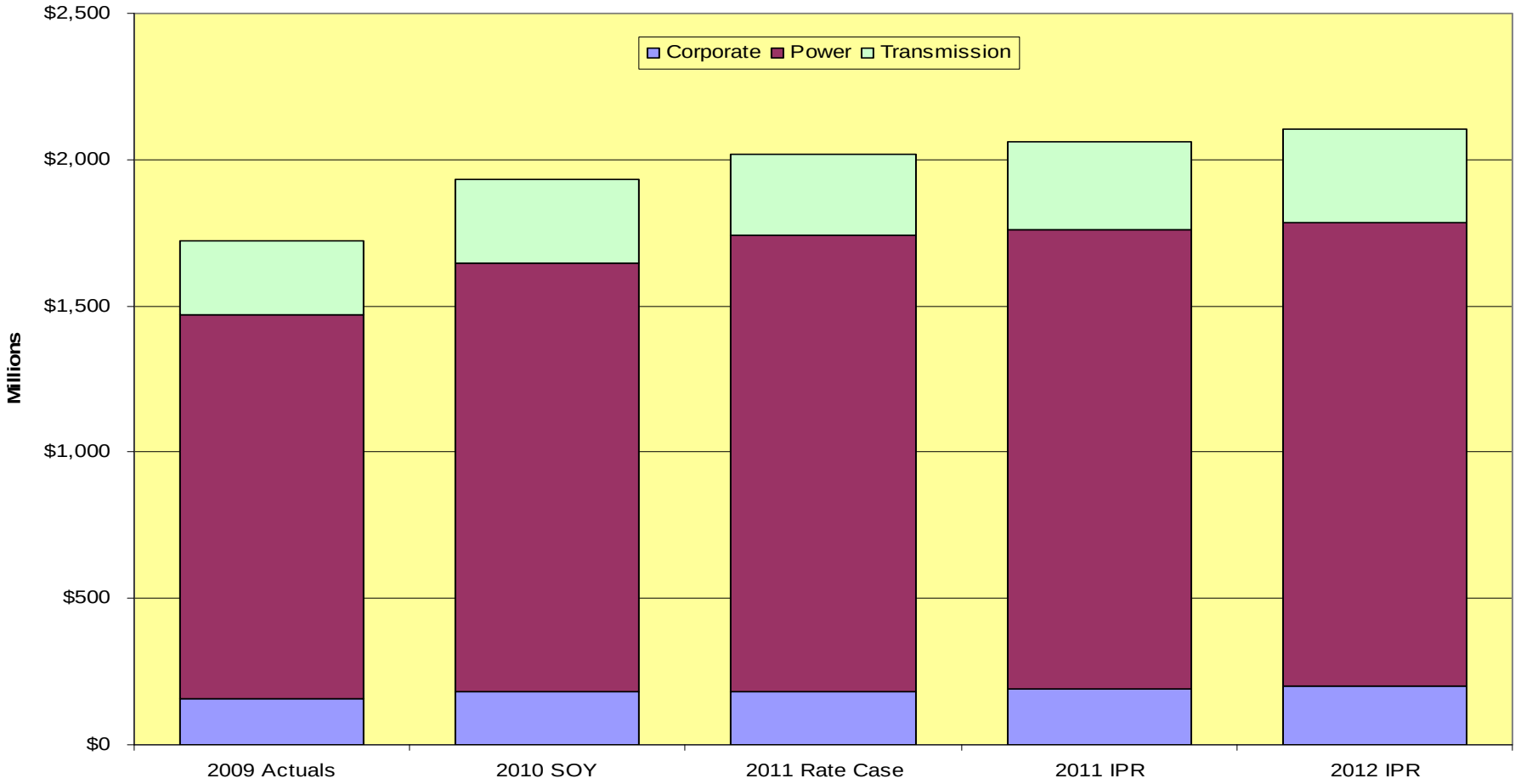
BPA Capital Spending and Forecast [1]



Business Unit	2009 Actuals	2010 SOY	2011 Rate Case	2011 IPR	2012 IPR	2013 IPR	2014 IPR	2015 IPR	2016 IPR	2017 IPR
Power	186,403,715	273,000,000	308,000,000	315,626,000	426,899,000	452,102,000	463,588,000	476,020,001	514,612,000	540,283,999
Transmission	294,719,514	517,780,318	658,760,662	551,876,262	686,907,762	747,198,219	706,827,984	538,941,572	463,404,329	585,621,284
Corporate	30,023,167	47,704,775	29,798,750	44,447,116	42,473,792	38,280,388	37,091,919	34,906,405	35,635,871	36,366,330
Total Capital	511,146,396	838,485,093	996,559,412	911,949,378	1,156,280,554	1,237,580,607	1,207,507,903	1,049,867,978	1,013,652,200	1,162,271,613

[1] Proposed Capital spending levels do not include adjustment for lapse factor. Program levels include all capital overhead costs associated with IPR program.

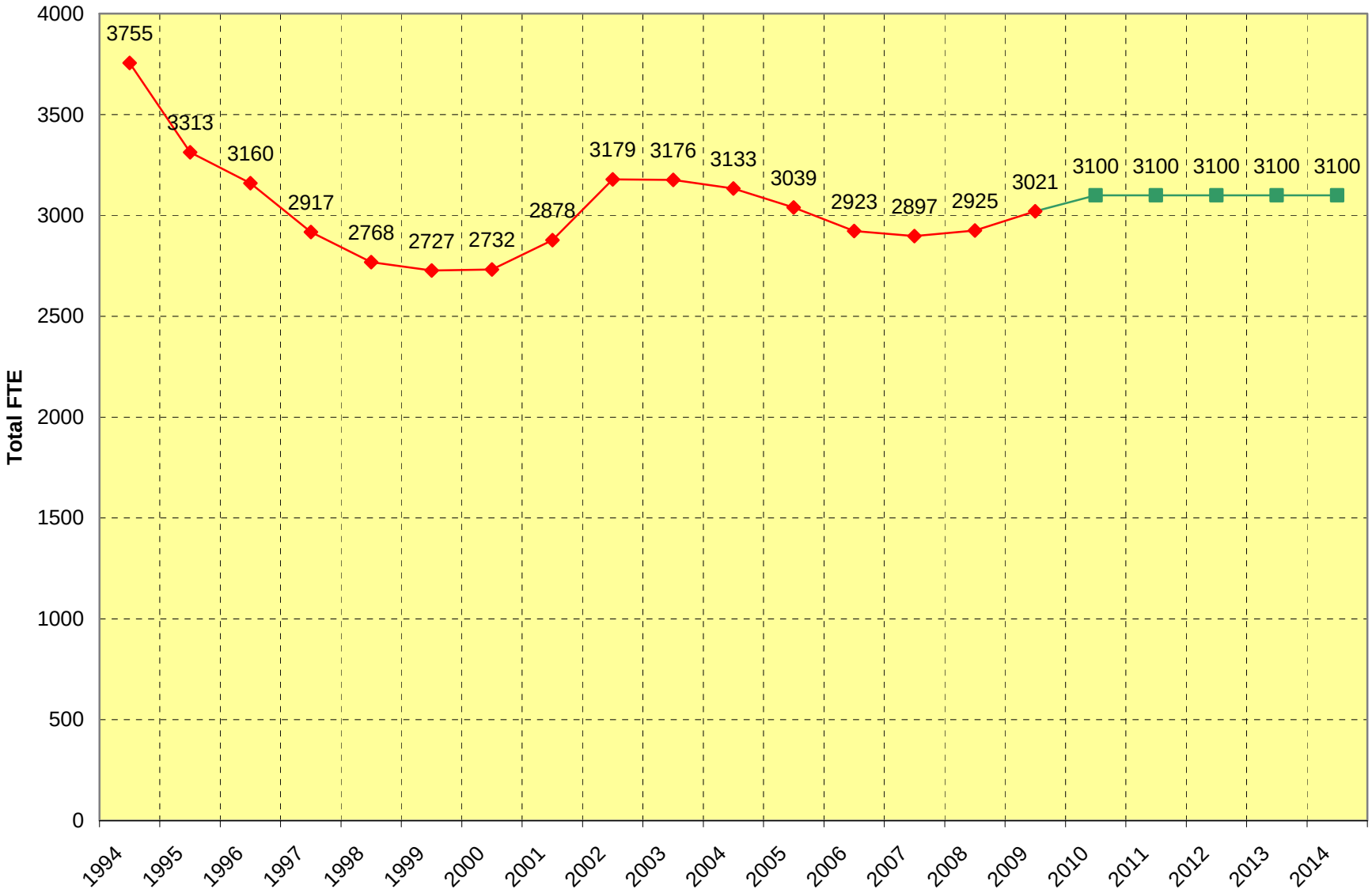
BPA Expense Spending and Forecast[1]



Summary of IPR Expenses	2009 Actuals	2010 SOY	2011 Rate Case	2011 IPR	2012 IPR
Corporate	159,806,943	181,016,493	178,946,274	191,490,118	201,259,553
Power	1,311,209,636	1,467,106,754	1,563,605,085	1,569,073,204	1,584,641,805
Transmission	249,782,725	284,962,944	276,218,076	299,591,324	317,167,193
Total	1,720,799,305	1,933,086,191	2,018,769,435	2,060,154,646	2,103,068,550

[1] Power and Transmission Expenses do not include G&A or direct business support charges. Summary includes programs identified on the Power, Transmission and Agency Services Summary of Proposed Expense Spending Level slides.

BPA Full Time Equivalent (FTE) Levels

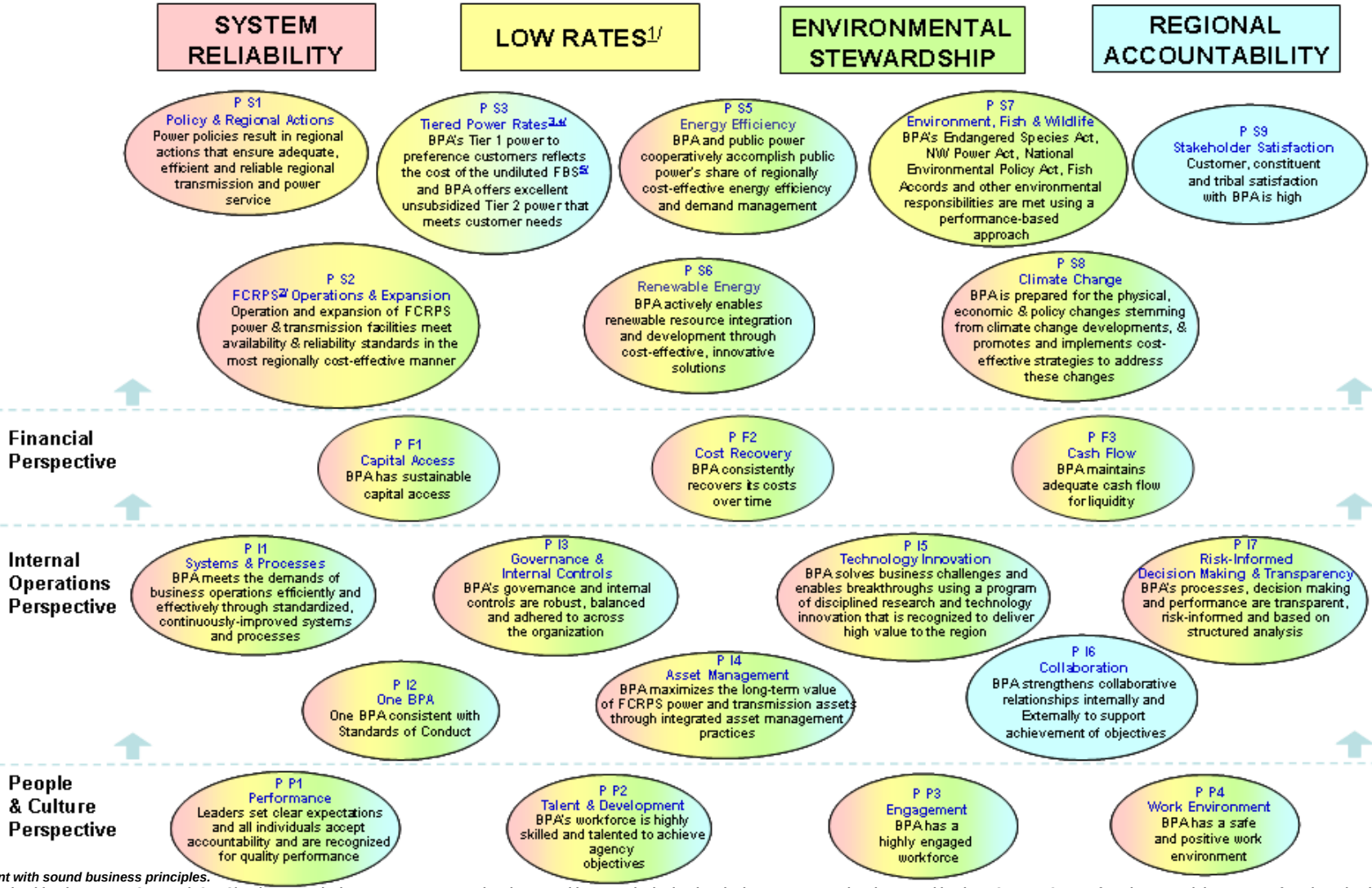


1994-2009 are actuals and 2010-2014 are forecasts.

Power Overview

2010 Integrated Program Review (IPR)

Power Services Strategy Map (2010-2016)



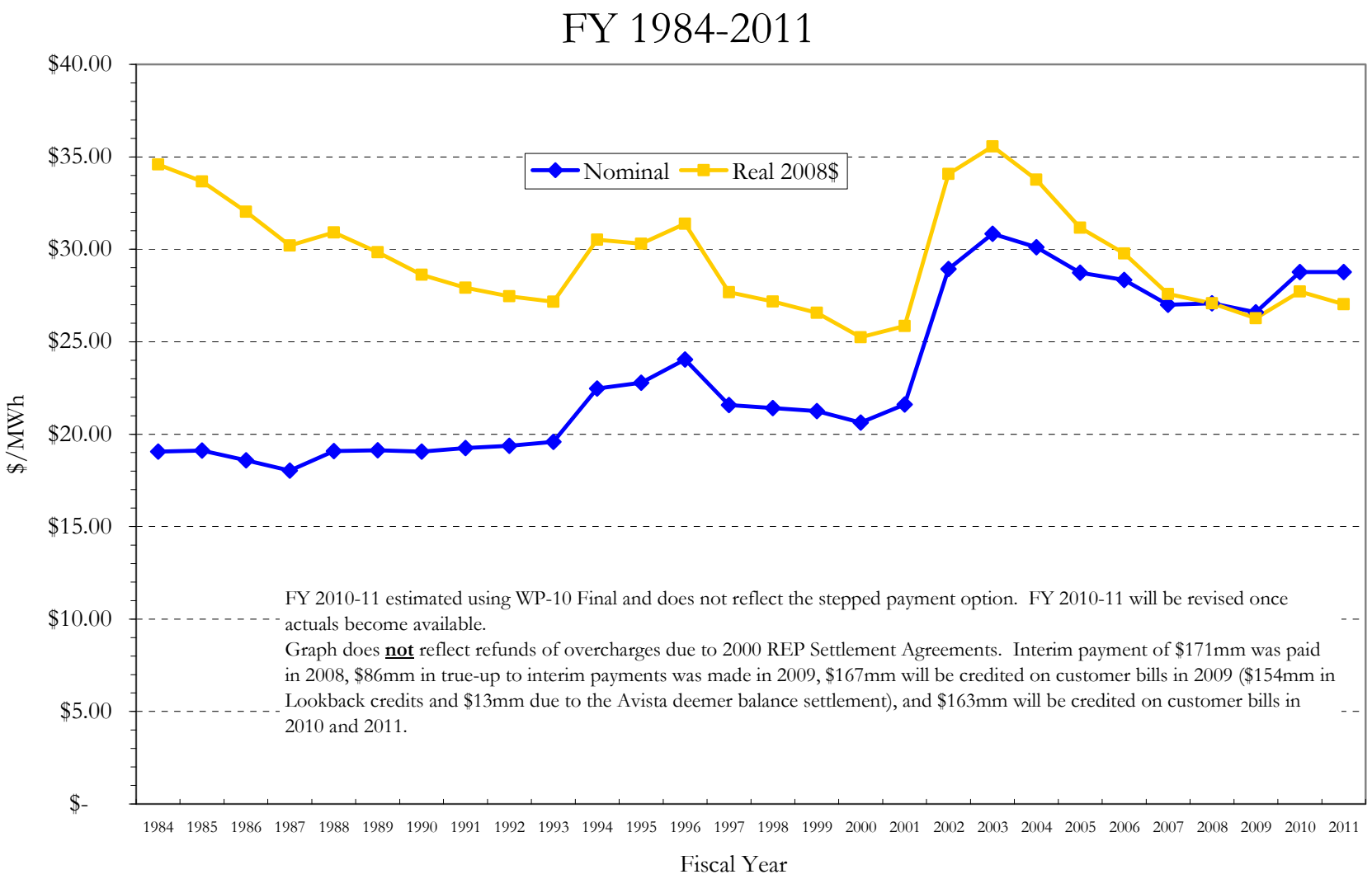
1/ Consistent with sound business principles.
2/ Federal Columbia River Power System (FCRPS): The transmission system constructed and operated by BPA, the hydroelectric dams constructed and operated by the U.S. Army Corps of Engineers and the Bureau of Reclamation in the Northwest, and nonfederal generation capability acquired by BPA under long-term arrangements. The transmission and power systems are separately managed and financed, but the facilities are operated as an integrated power system.
3/ Power and transmission rates are kept as low as possible consistent with sound business principles while achieving BPA's objectives.
4/ Tier 1 power rates are below market for comparable products.
5/ Federal Base System.

Power Services Program Descriptions

Program	Description
Renewable Resources	Costs in this category include purchase costs for 248MW from seven wind projects, the renewables and conservation rate credit, renewables R&D, and efforts by BPA's Wind Integration Team to integrate wind reliably and efficiently into the BPA system.
Energy Efficiency	To meet public power share of the Northwest Power and Conservation Council's 6th Power Plan target, BPA will capture non-programmatic savings (i.e., codes and standards, ARRA funding, etc.), support market transformation through the Northwest Energy Efficiency Alliance (NEEA), and undertake the full range of activities needed to design, market, support, implement and evaluate conservation measures. BPA will also support utility and third party programs that implement conservation measures in homes, on farms, and at commercial, industrial and governmental facilities throughout the region.
Columbia Generating Station	BPA acquires 100% of CGS generation and funds 100% of its costs plus directly funds the Decommissioning Trust Fund and NEIL insurance premiums.
Bureau of Reclamation and Corps of Engineers	BPA works with U.S. Army Corps of Engineers and the Bureau of Reclamation to implement funding for operations and maintenance activities, non-routine extraordinary maintenance projects, and Fish and Wildlife and Cultural Resources mitigation activities at 31 hydro electric facilities throughout the Northwest
Long Term Generating Projects	This program consists of output contracts for generating resources, such as Cowlitz Falls, Billing Credits Generation, Wauna, Elwah and Glines, 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.
Colville Generation Settlement (Operating Generation Settlement)	On April 24, 1994, the Confederated Tribes of the Colville Reservation and the United States of America entered into a Settlement Agreement, resulting in an annual payment amount to the Colville Tribes, for their share of revenue from the Grand Coulee project. Not later than March 1 of each succeeding year, BPA pays to the Tribe for the preceding BPA fiscal year, a sum computed per the calculation outlined in the Settlement Agreement. The calculation is based on inputs from BPA power sales revenue and MWh, the Consumer Price Index (CPI), and the Grand Coulee Net Generation amounts.
Residential Exchange	The REP was established in Section 5(c) of the Power Act of 1980. The goal of the program has been to provide rate relief to Northwest residential and small-farm customers served by high-cost investor-owned utilities, as well as high-cost utilities with preference rights. Under the REP, BPA "purchases" power from each participating utility at that utility's Average System Cost (ASC). The Administrator then offers, in exchange, to "sell" an equivalent amount of electric power to the utility at BPA's PF Exchange rate. The amount of power purchased and sold is the qualifying residential and small farm load of each utility participating in the REP. These benefits are passed on to the residential and small farm customers of the utility.
Non-Operating Generation	BPA is responsible for EWEB's 30% share of the Trojan Nuclear Plant costs. Trojan was terminated in 1993. Demolition and decontamination of the site were completed in PGE FY 2008. These forecasts are for operating and maintaining the on-site spent fuel storage facility (ISFSI) and maintaining the remaining Trojan facilities. BPA is responsible for WNP-1 and WNP-4 site costs. WNP-1 was terminated in 1994. BPA agreed to fund WNP-4 restoration costs in 1996. This funding is supporting activities at the WNP-1/4 site that focus on minimal maintenance, economic development and reuse of the site.
Power Services Transmission Acquisition & Ancillary Services	Generally, this program includes costs associated with transmission services necessary to deliver energy from resources to markets and loads (transmission, ancillary services, real power losses); and Transfer Services which represent costs associated with the transmission of power over third party systems to preference customer loads.
Environment, F&W and Lower Snake River Compensation Plan (LSRCP)	BPA's Integrated Program implements projects that meet BPA's fish and wildlife mitigation objectives under the Northwest Power Act, consistent with the Program adopted by 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, and the commitments encompassed within the Columbia Basin Fish Accords.
Northwest Power and Conservation Council	The Northwest Power and Conservation Council was authorized by Congress as part of the Power Act of 1980. The principal duties of the Council are: 1) develop a regional power plan, 2) develop a fish and wildlife program, 3) provide for broad public participation in these processes. BPA provides the funding for the Council.
Non-Generation Operations	Internal Operations charged to Power Rates consist of the direct costs of managing and operating Power Services (Power Non-Generation Operations) and the Power share of Agency Services, both direct and allocated.

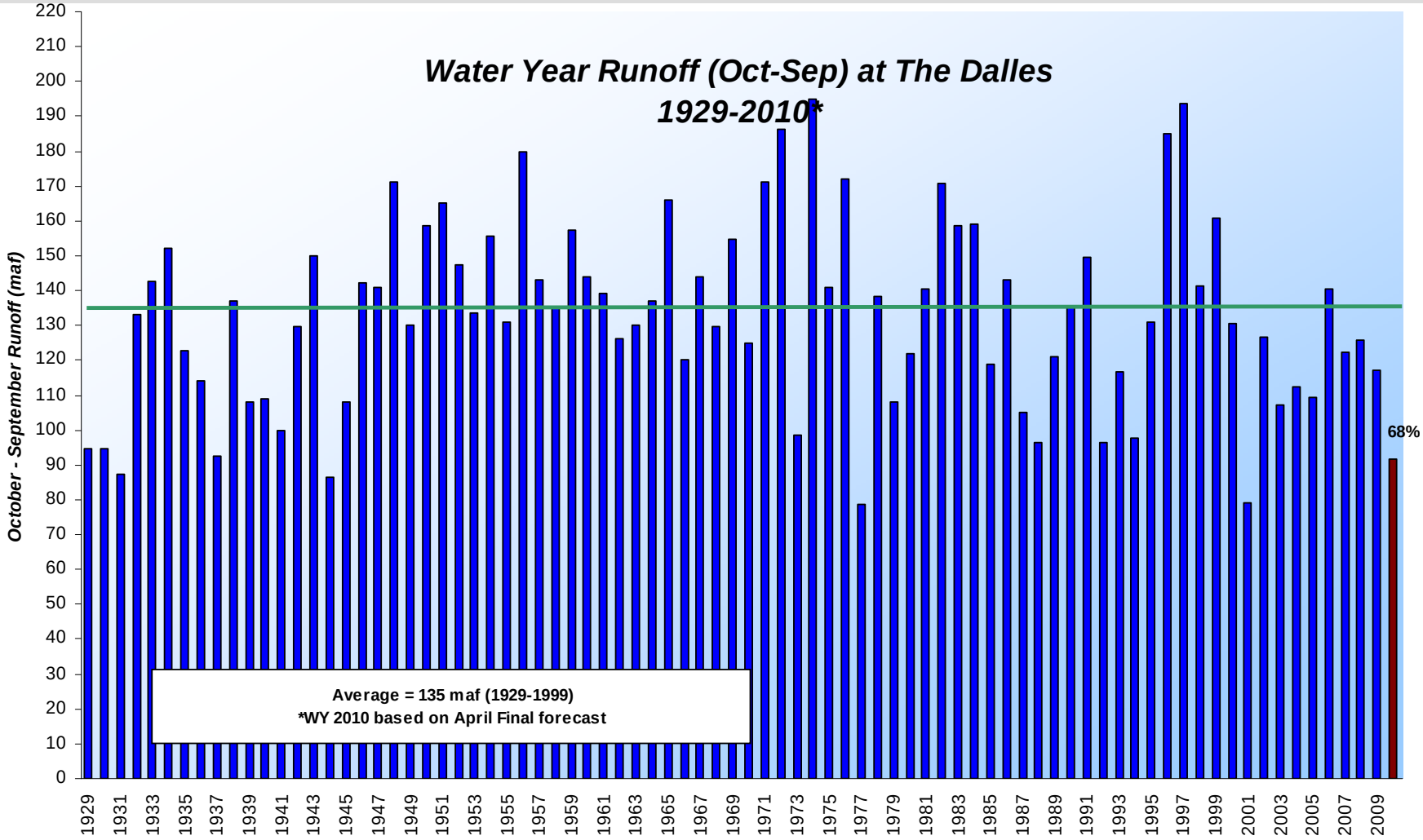
Note: Shaded programs indicate the program outside the scope of the IPR.

Historical Priority Firm Power Rates – No Transmission



Deflators for 1980-2009 from Bureau of Economic Analysis - Table 1.1.9. Implicit Price Deflators for Gross Domestic Product; 2010-11 estimated with 5-year average

Water Year Runoff



- If the 2010 forecast holds, FY 2010 will be the 10th below average water year in the last 11 years.

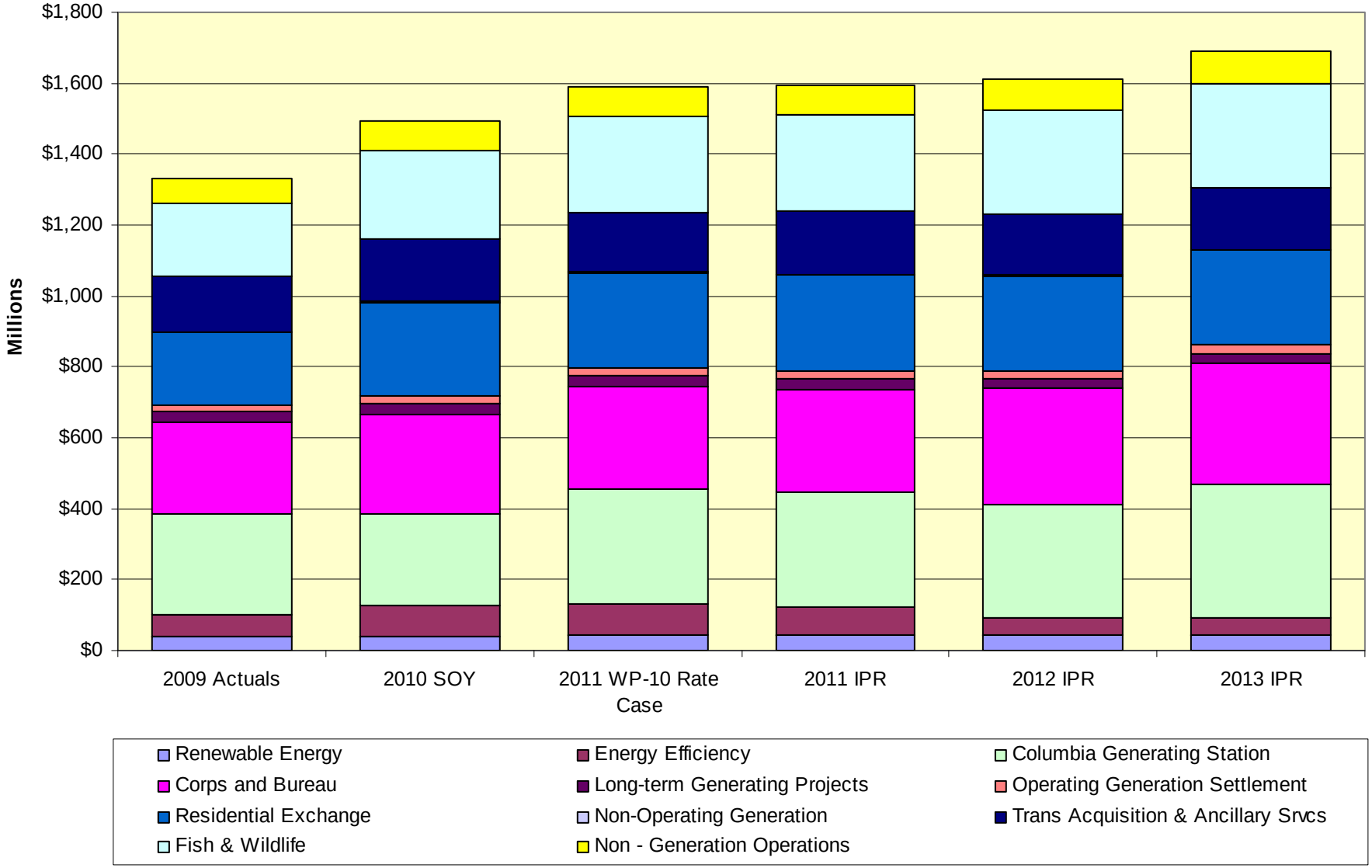
Power Expense Proposed Spending Levels[1]

Power Expenses by Program	2009 Actuals	2010 SOY	2011 WP-10 Rate Case	2011 IPR	2012 IPR	2013 IPR
Renew able Energy	38,242,980	41,078,373	44,637,864	44,798,215	44,311,823	45,101,361
Energy Efficiency	60,827,319	87,825,119	85,122,089	76,700,000	47,250,000	48,150,000
Columbia Generating Station	288,207,849	257,811,000	324,882,000	325,282,000	319,866,000	375,045,000
Corps and Bureau	256,634,419	278,378,000	288,543,000	288,543,000	327,672,000	342,591,000
Long-term Generating Projects	28,782,931	30,455,492	30,767,021	32,266,466	27,388,981	27,654,172
Operating Generation Settlement	18,169,699	21,327,665	21,754,219	21,754,219	21,928,253	22,147,535
Residential Exchange	205,171,454	264,528,233	270,087,000	268,647,000	268,647,000	268,647,000
Non-Operating Generation	(754,440)	2,618,000	2,728,000	2,128,000	1,938,000	1,948,000
Trans Acquisition & Ancillary Srvcs	157,802,096	177,717,000	167,091,000	178,477,836	173,339,721	172,317,058
Fish & Wildlife	208,059,021	248,583,002	270,714,000	270,714,000	289,852,400	295,226,424
Non - Generation Operations	69,478,619	81,490,272	81,646,873	84,164,800	88,907,614	90,151,195
Total	**1,330,621,945**	**1,491,812,156**	**1,587,973,065**	**1,593,475,536**	**1,611,101,792**	**1,688,978,745**

Rule of thumb:
A $65 million change = $1/MWh, Base = $28.77/MWh

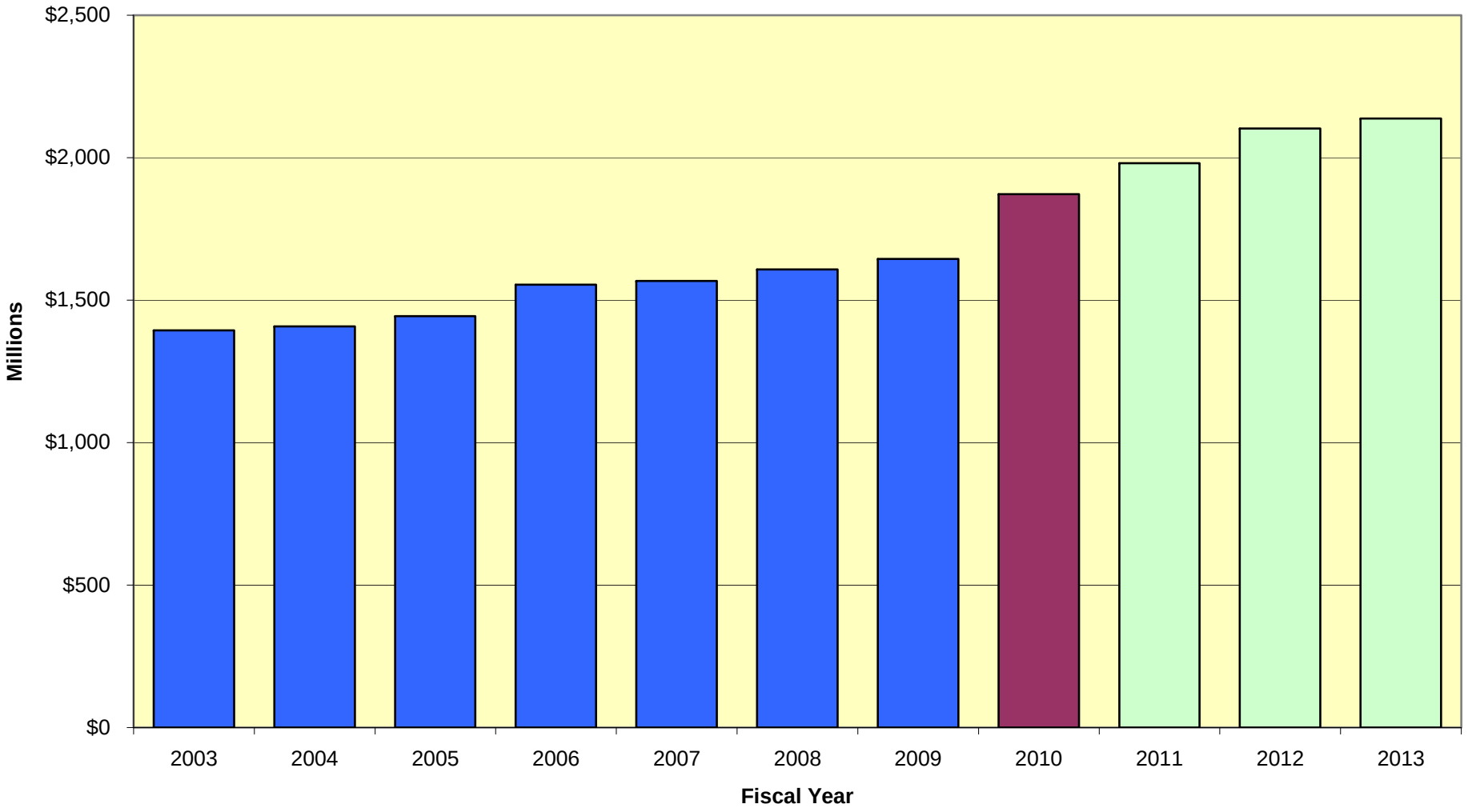
[1] Power Expenses include G&A and Direct Business Support Charges

Power Expense Proposed Spending Levels[1]



[1] Power Expenses include G&A and Direct Business Support Charges and exclude power purchases, depreciation/amortization expense, interest expense, Non-Federal debt service, Interest Income and AFUDC.

Power[1] Expense Historical Spending, 2010 SOY and Forecasted IPR Spending Levels



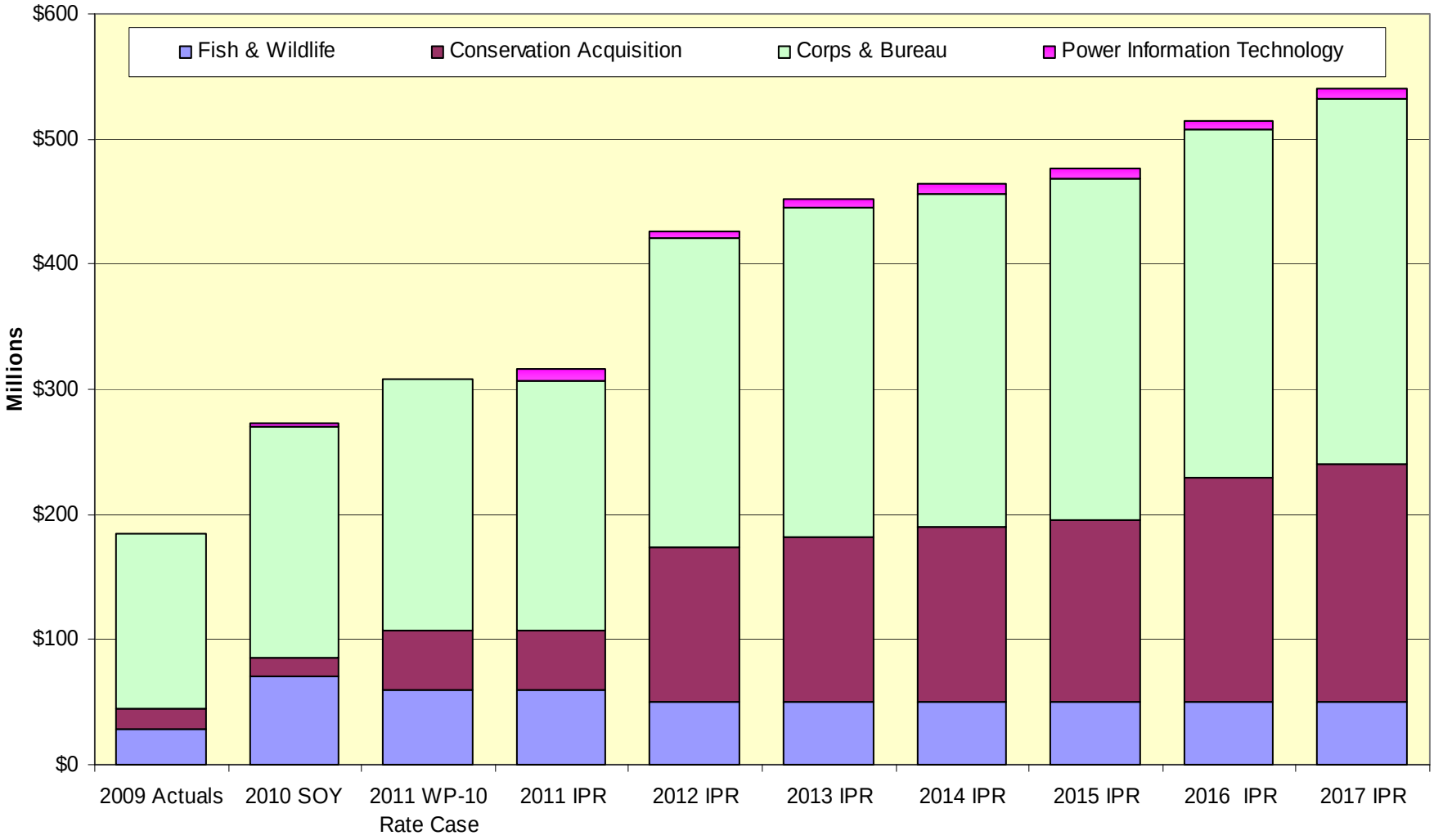
[1]FY 2003-2009 actuals, FY 2010 Start-of-Year forecast and FY 2011-2013 proposed spending levels include all Power operating expenses **except** power purchases, residential exchange, depreciation/amortization expense, interest expense, Interest Income and AFUDC and include Agency Services G&A and Non-Federal Debt Service

Power Capital Proposed Spending Levels[1]

Power Capital by Program	2009 Actuals	2010 SOY	2011 WP-10 Rate Case	2011 IPR	2012 IPR	2013 IPR	2014 IPR	2015 IPR	2016 IPR	2017 IPR
Fish & Wildlife	28,863,239	70,000,000	60,000,000	60,000,000	50,000,000	50,000,000	50,000,000	50,000,000	50,000,000	50,000,000
Conservation Acquisition	16,594,456	15,000,000	47,000,000	47,000,000	124,000,000	132,000,000	140,000,000	145,000,000	180,000,000	190,000,000
Corps & Bureau	139,552,345	185,000,000	201,000,000	200,296,000	246,269,000	263,302,000	266,618,000	273,880,000	277,302,000	292,804,000
Power Information Technology	(3,917)	3,000,000	-	8,330,000	6,630,000	6,800,000	6,970,000	7,140,001	7,310,000	7,479,999
PBL Efficiencies Program	1,397,593	-	-	-	-	-	-	-	-	-
Total Power Capital Program	**186,403,715**	**273,000,000**	**308,000,000**	**315,626,000**	**426,899,000**	**452,102,000**	**463,588,000**	**476,020,001**	**514,612,000**	**540,283,999**
Power Lapse Factor	0	(33,600,000)	(37,200,000)	(30,044,400)	(36,940,350)	(39,495,300)	(39,992,700)	(41,082,000)	(41,595,300)	(43,920,600)
Total Capital with Lapse Factor	**186,403,715**	**239,400,000**	**270,800,000**	**285,581,600**	**389,958,650**	**412,606,700**	**423,595,300**	**434,938,001**	**473,016,700**	**496,363,399**

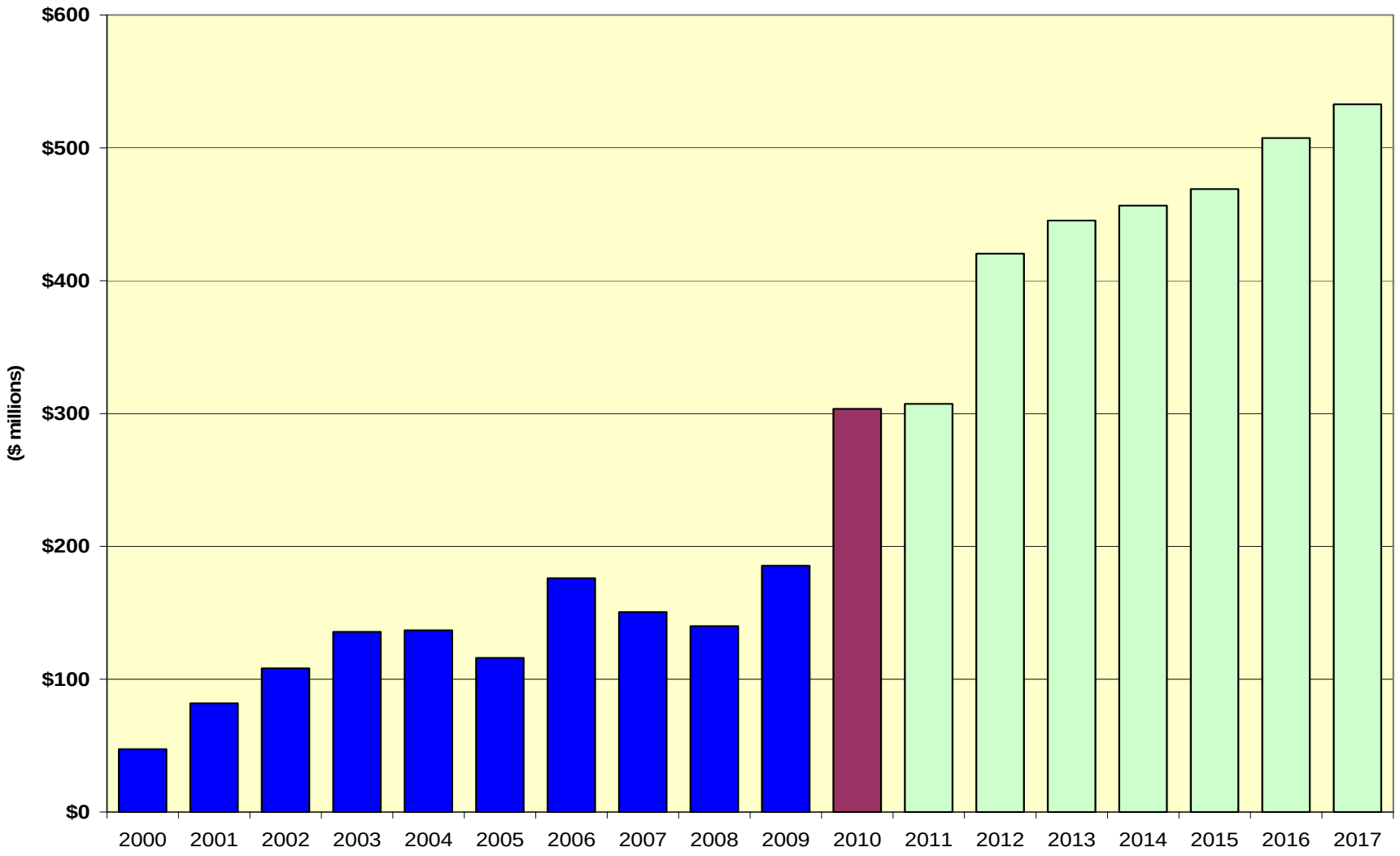
[1] A 15% lapse factor has been applied to Federal Hydro (Corps & Bureau) Capital

Power Capital Proposed Spending Levels[1]



[1] Power Capital does not include 15% lapse factor for Federal Hydro.

Power[1] Capital Historical Spending, 2010 2nd Qtr[2] and Forecasted IPR Spending Levels



[1] CGS and CRFM are not included in 2000-2017 program levels and does not include 15% lapse factor for Federal Hydro.
[2] FY 2010 reflects 2nd Quarter End-of-Year Forecast.

Power - What Has Happened

- **2009 Financial Crisis**
  - BPA's Power Services was hit hard by the nation's and region's economic woes.
    - The Power program lost $310 million Modified Net Revenues in FY 2009, due to low water and poor prices.
    - Reserves were drawn down to pay Treasury.
- **2009 IPR2**
  - In March 2009, BPA began a condensed version of the IPR.
  - Taking the financial crisis into account, BPA chose to expand the scope of the 2009 IPR2 to address risk mitigation and liquidity tools in addition to reviewing updated program spending estimates for FY 2010-2011.
  - Results helped minimize the WP-10 rate increase.
- **Long Term Contracts**
  - In December 2008, BPA signed long-term wholesale power sales contracts running through FY 2028 with all of our consumer-owned utility customers.
  - Contracts create certainty of obligations that incent building the infrastructure that will be needed to support the region's economy in the future as well as promote energy efficiency.
  - Partially as a result of signing the 20 year long term contracts, S&P and Fitch upgraded the rating on BPA-backed debt.
- **2009-2010 Poor Hydro Conditions**
  - Currently 2010 is projected to be the 5th lowest runoff year of the 82 year record.
  - This forecast is based on actual and anticipated streamflow. While results may be different by the end of the year, significant change is unlikely.

Main Program Drivers in 2010 IPR

- **Columbia Generation Station (CGS)**
  - Increase consistent with EN's long range plan and 2008-2009 IPR forecasts. Needed to fund the purchase of nuclear fuel as the uranium inventory is being replenished.
- **Federal Hydro System**
  - Increase consistent with 2008-2009 IPR forecasts. Needed to fund critical/required Western Electricity Coordinating Council (WECC)/North American Electric Reliability Corporation (NERC) reliability and compliance activities, Cultural Resources mitigation compliance work, and non-routine/extraordinary maintenance projects.
- **Transmission Acquisition**
  - Decreased due to rate settlement not including a rate increase that had been assumed in rate case estimates.
- **Fish and Wildlife**
  - Increase covers performance risks, anticipated likely future costs including potential carry-forward of the Accord budgets and BiOp performance.
- **Non-Federal Debt Service**
  - Accelerated Front End Savings - debt restructuring 20 years ago intended to provide front-loaded savings by placing EN debt in later years.
  - A variety of other more recent actions including reserve fund free ups, taxable financings, uranium tails fuel financing, interest on the 2006 debt extension into 2020-2024, and CGS capital additions.
  - Debt Optimization - debt restructuring from 2001-2009 whereby EN debt was moved to the post 2012 period, replacing Federal debt already in that period, in order to improve BPA's access to capital outlook. The Program only increased EN debt service amounts in the post-2012 period, but did not raise the total debt service responsibility of the Agency for rate setting purposes. The Program preserved the general shape of the annual debt service that already existed.

Summary of FY 2012-13 Expense Changes

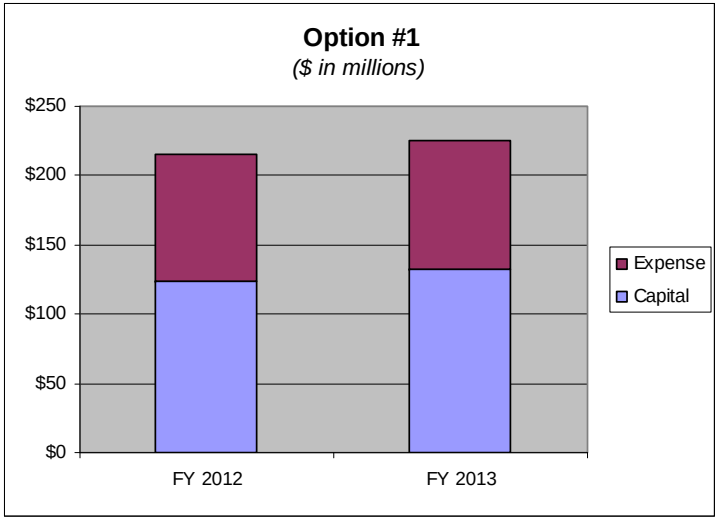
Power -- Analysis of Net Revenues and Expenses
Summary of Changes, Rate Case to April 2010 IPR Data
$ Millions

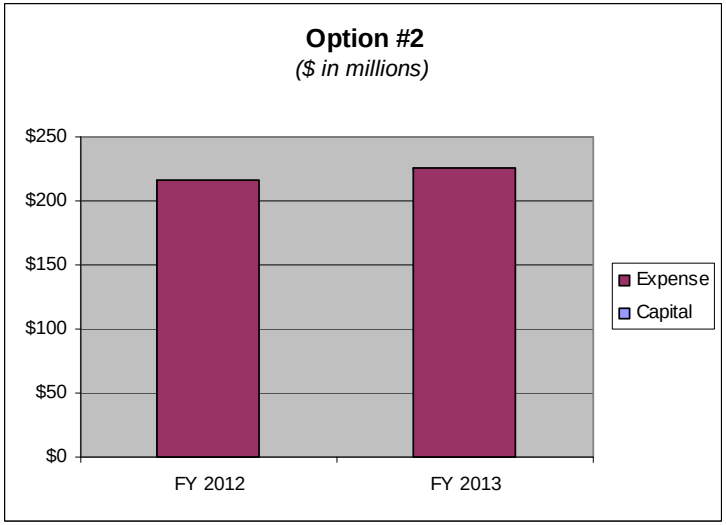
	Expenses	Change from Avg 10/11 to Avg 12/13		% Change in Rates[2]	Reasons for Large Changes
1	Non Federal Debt Service	81.1		**4%**	Increase is due to Accelerated Front End Savings, several actions in recent years such as reserve fund free ups and uranium tails fuel financing, and Debt Optimization (which did not raise the total debt service responsibility of the Agency).
2	Columbia Generating Station	56.1		**3%**	Reflects EN's long range plan and is consistent with prior IPR forecasts. Increases are primarily due to purchase of nuclear fuel as the uranium inventory is being replenished.
3	Fish and Wildlife/USF&W/Planning Council	32.9		**2%**	Increase covers performance risks, anticipated likely future costs including potental carry-forward of up to 20% of the Accord budgets, BiOp performance considerations and recommendations of the Hatchery Scientific Review Group.
4	Bureau of Reclamation	25.9		**1%**	Increase is consistent with FY 2008-09 IPR forecasts. Needed to fund critical/required WECC/NERC reliability and compliance activities, Cultural Resources mitigation/sec 106 compliance work, nonroutine/extraordinary maintenance, and salary/staff increases.
5	Corps or Engineers	25.8		**1%**	
6	Hydro Projects Insurance	10.0		**1%**	Proposed property insurance begins in FY 2012.
7	Power Non-Generation Operations	8.2		**0%**	Increases for energy storage assessments, wind forecasting, and Power and other Agency Services personnel costs.
8	G&A	6.4		**0%**	Reflects increased GSA rent, offset by small decreases in IT and Security.
9	Other expenses, net	-1.3		**0%**	
10	Transmission Acquisition	-4.3		**0%**	Rate settlement did not include a rate increase that had been assumed in the rate case estimates.
11	Net Interest Expense[1]	14.0 to 24.0		**1%**	Increase due to net increases in Federal debt (issuing signficantly more than paying per year) and decrease in interest income.
12	Depreciation and Amortization Expense[1]	6.5 to 10.4		**0 to 1%**	For FY 2012, ConAug was fully amortized ($13 million) in FY 2011 and legacy conservation is winding down, offsetting new projects coming on line. For FY 2013, larger special investment, including short-lived IT and conservation projects, offset somewhat by legacy conservation winding down.
13	Renewable and Conservation Generation[1]	-37.2 to 90.7		**-2% to 5%**	BPA is considering two options for future treatment of Conservation Acquisition activities. (See next slide for more details.) In addition to those options, the Energy Efficiency Development program was reduced and the Renewable Rate Credit will be eliminated beginning in FY 2012, but that was partially offset by increases to the Conservation Acquisition expense program and the Renewables program.
14	**Net Change in Expenses**	**224 to 366**		**12% to 20%**	
15	Purchased Power Expenses	?		**N/A**	These items will not be determined in IPR
16	Residential Exchange	?		**N/A**	These items will not be determined in IPR
17	DSI Service	?		**N/A**	These items will not be determined in IPR

Footnotes
[1] Range reflects capitalizing vs. expensing all conservation acquisitions
[2] Estimate using $65 million change = $1/MWh rule of thumb, Base = $28.77/MWh

Renewable and Conservation Generation Range

- **BPA is currently evaluating two options for capitalizing Conservation Acquisition activities starting in FY 2012.**
- **Option #1: Continue to capitalize the activities currently capitalized PLUS the activities previously funded via the Conservation Rate Credit. Also, extend the amortization period for Conservation Acquisition to 13 years beginning in FY 2011.**
  - Option #1 is the option used in all of the tables and charts for IPR when only a single number is provided
- **Option #2: Expense all of the Conservation Acquisition Program. BPA would no longer capitalize any energy efficiency activities.**
  - Depreciation/Amortization and Net Interest Expense would both decrease when compared to option #1





Note: These charts include IPR forecasts for both the Energy Efficiency and the Renewable Resources programs.

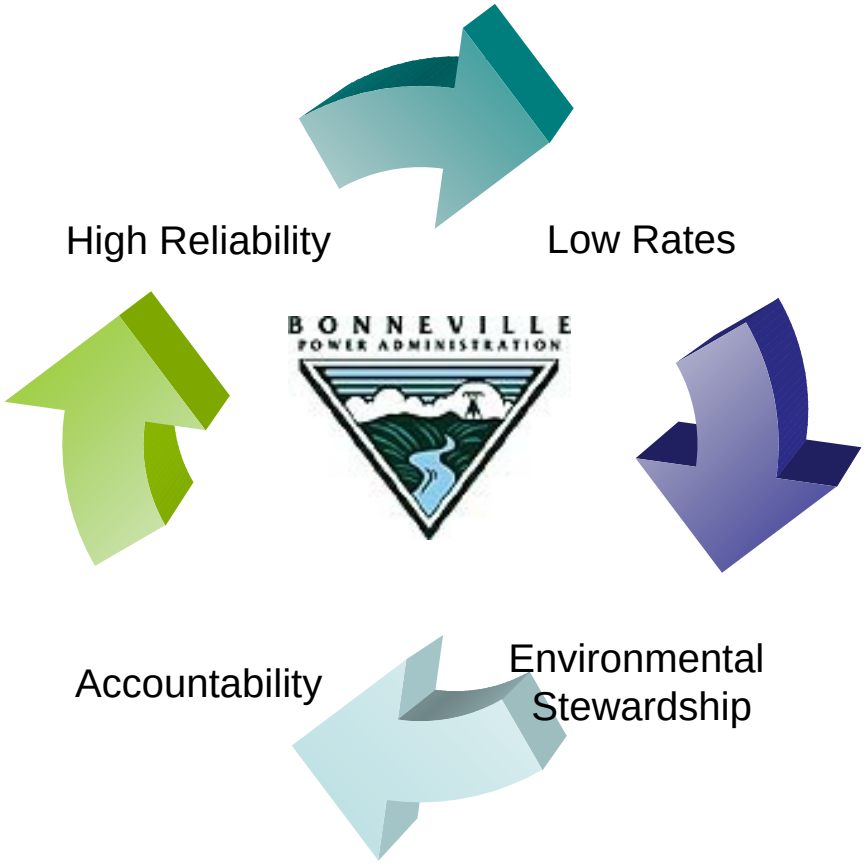
Transmission Overview

Transmission Vision

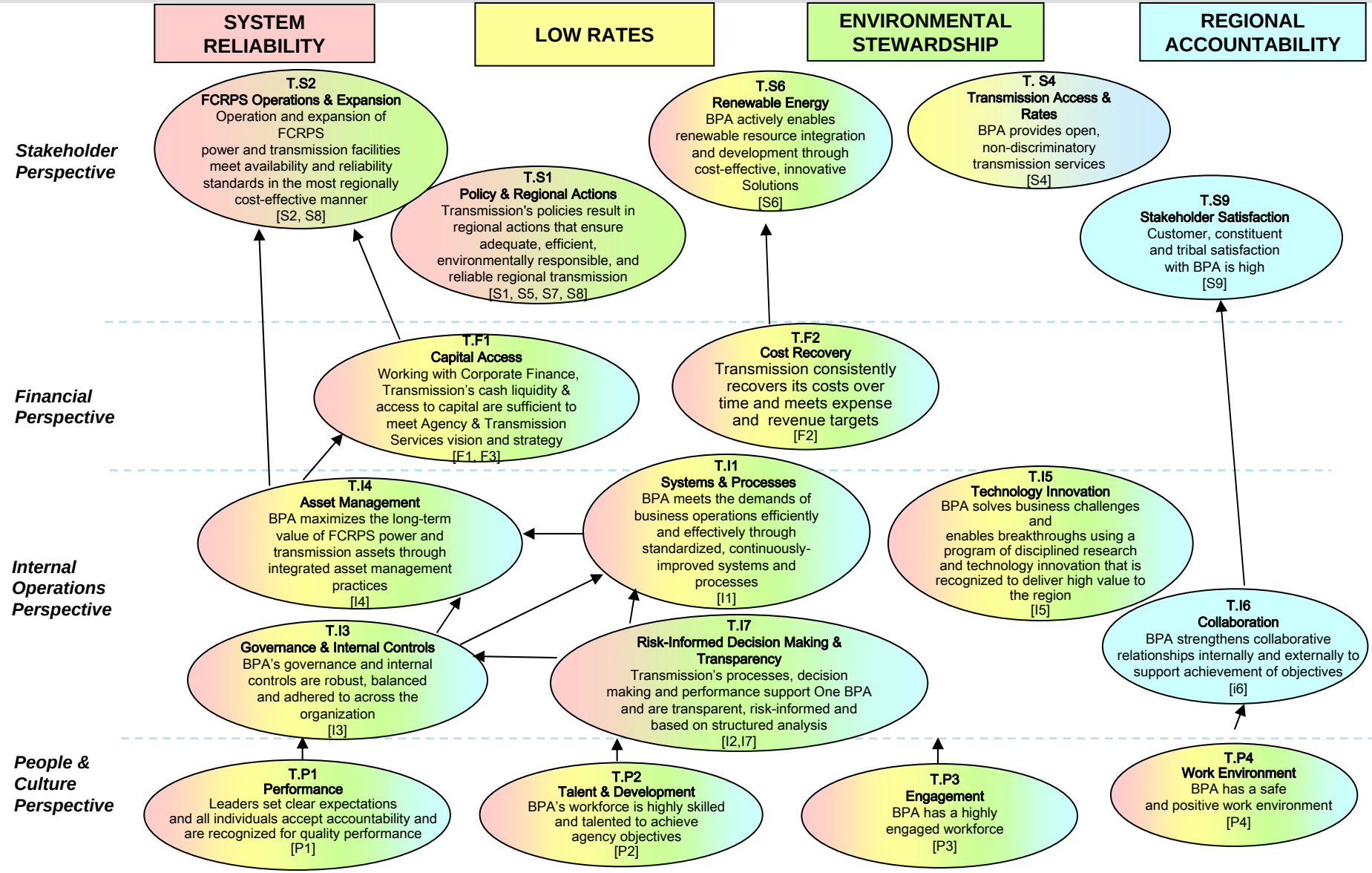
Transmission Services will be an engine of the Northwest's economic prosperity and environmental sustainability. Transmission Services' actions advance a Northwest power system that is a national leader in providing:

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

We deliver on these public responsibilities through a commercially successful business. These four characteristics define our public responsibilities.



Transmission Strategy Map: FY 2010-2016



Transmission IPR Overview for FY 2012-2013

Although Transmission capital investments are growing and operating expenses are increasing at a faster rate than inflation, revenues are also accelerating due to the success of 2008 and 2009 Network Open Season (NOS) and new services. With revenues increasing, rate pressures are minimized.

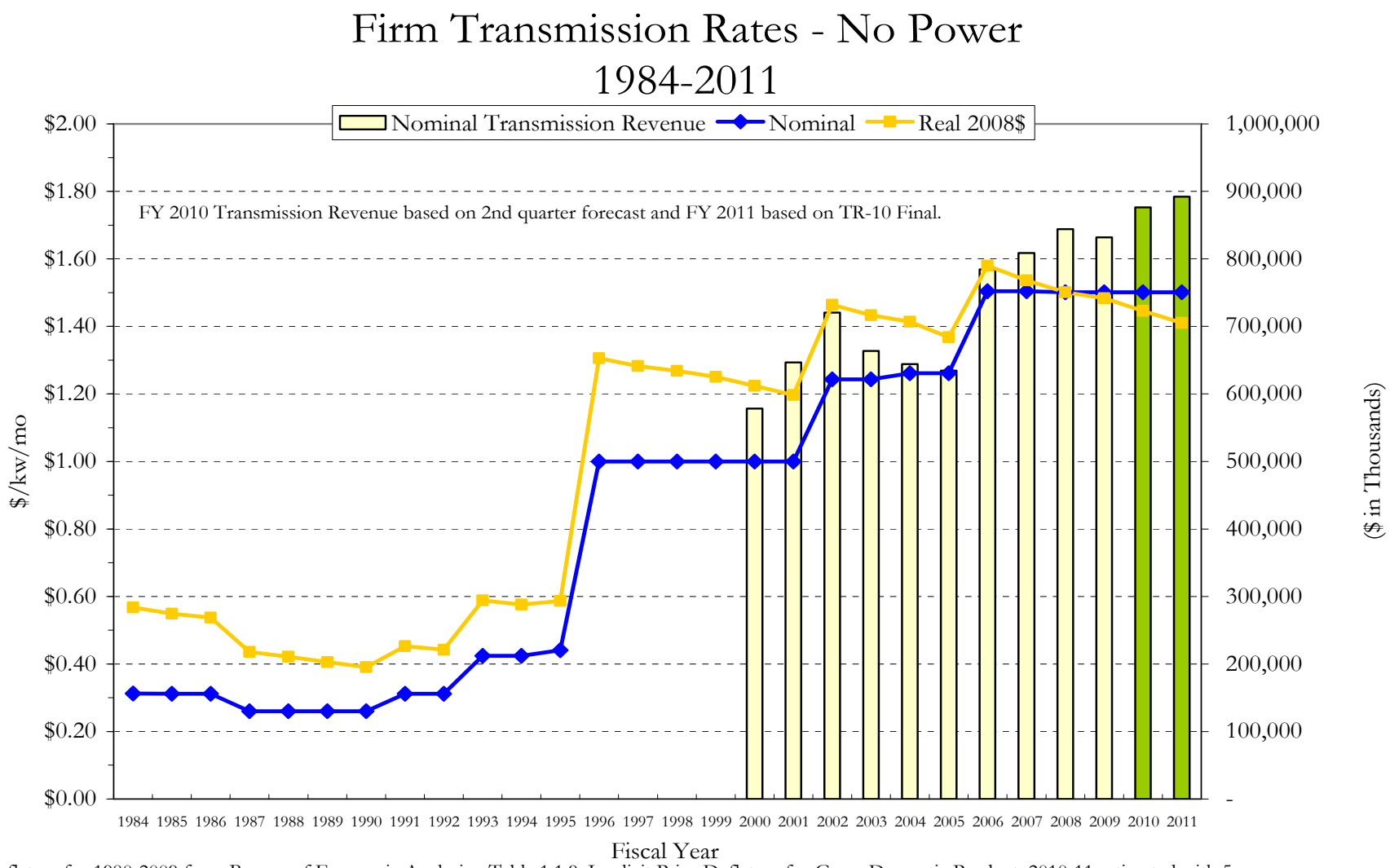
Why are costs growing?

- Investing in the existing, aging infrastructure
- Increasing complexity and requirements of mandatory compliance programs
- Integrating renewables on the grid resulting in operational and system complexities and enhancements
- Maintenance of a growing system, including fiber
- Increasing emphasis on cyber and physical security
- Climate change implementation and associated equipment maintenance, upgrade, replacement, and SF6

What trends are offsetting operating costs?

- Higher than projected revenues
- Lower than expected debt service
- Relatively stable reserves
- Efficiencies from business automation and process improvements
- Favorable short-term commodity pricing
- New strategic sourcing agreements

From 2006+ Nominal Transmission Rates Are Level



Deflators for 1980-2009 from Bureau of Economic Analysis - Table 1.1.9. Implicit Price Deflators for Gross Domestic Product; 2010-11 estimated with 5-year average

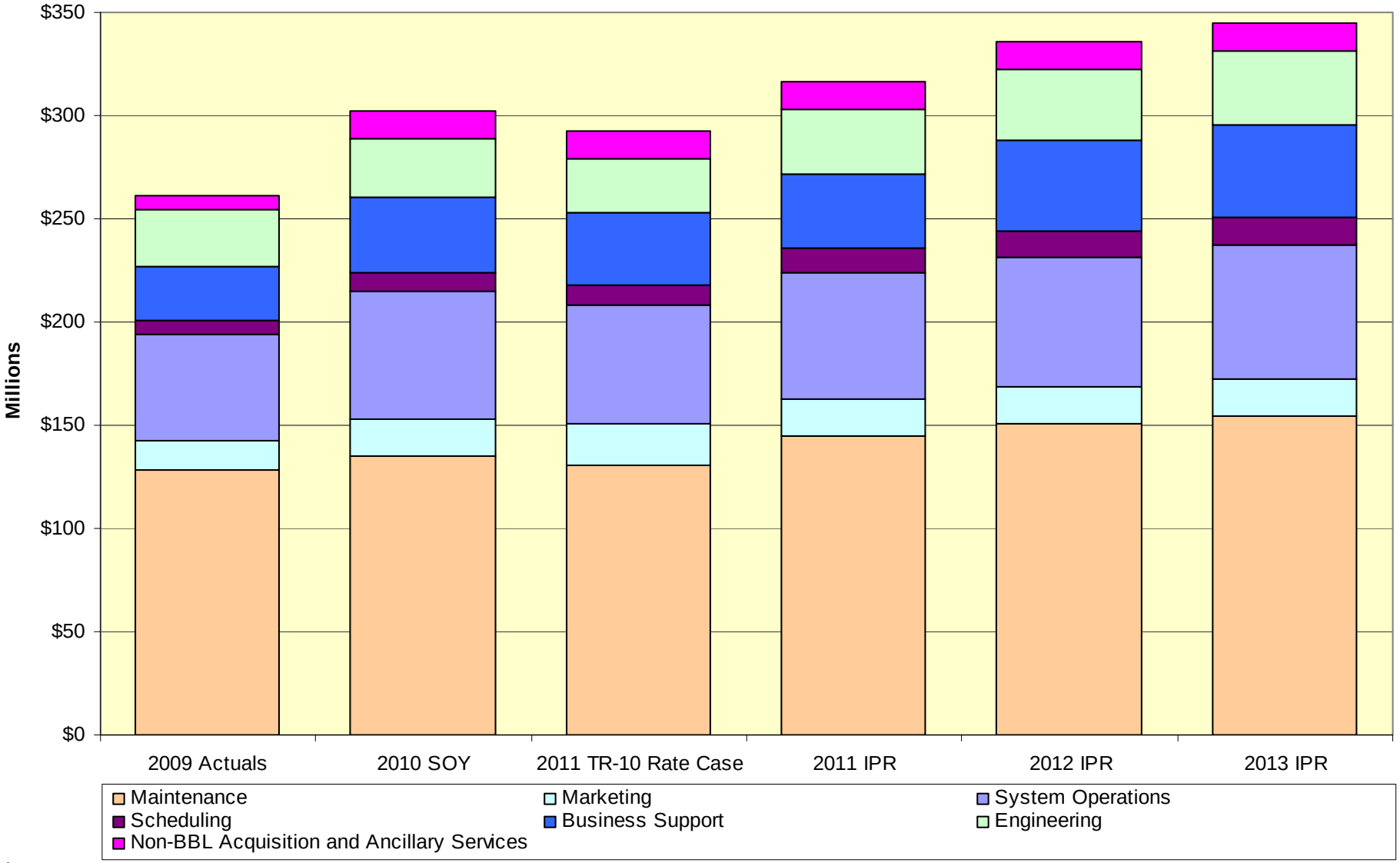
Transmission Proposed Expense Spending Levels[1]

Transmission Expenses by Program	2009 Actuals	2010 SOY	2011 TR-10 Rate Case	2011 IPR	2012 IPR	2013 IPR
System Operations	51,520,012	62,266,954	57,468,455	61,122,200	62,918,052	64,831,964
Scheduling	6,654,922	9,141,153	10,121,626	12,618,478	12,821,843	13,041,925
Marketing	14,318,150	17,539,441	19,895,588	17,366,285	17,863,515	18,207,317
Business Support	26,028,088	36,428,965	35,236,123	35,863,651	43,744,930	44,875,025
Maintenance	128,284,312	135,202,337	130,573,359	145,020,979	150,425,136	154,468,240
Engineering	27,604,963	28,482,668	25,447,820	31,029,373	34,522,085	35,578,604
Non-BBL Acquisition and Ancillary Services	6,922,962	13,149,213	13,691,582	13,376,582	13,483,595	13,618,431
Total	**261,333,409**	**302,210,729**	**292,434,553**	**316,397,547**	**335,779,156**	**344,621,505**

Rule of thumb:
A $6.2 million change in expense or revenue = 1% in Transmission Rates

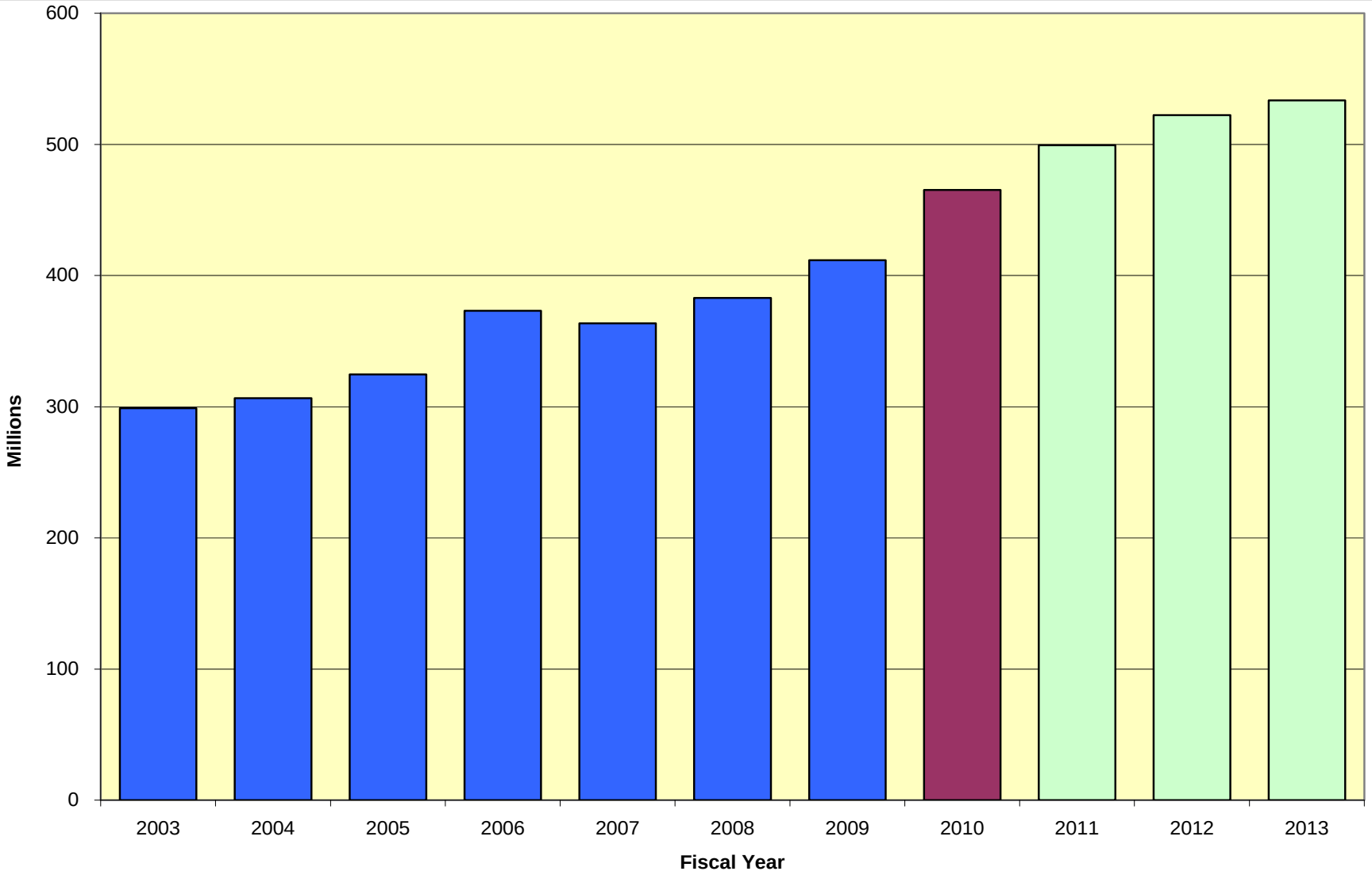
[1] Transmission Expenses include G&A and direct business support charges.

Transmission Proposed Expense Spending Levels[1]



[1] Transmission Expenses Includes Transmission Acquisition/Ancillary Services, Reimbursables, and Agency Services Support (G&A, Add'l Post Retirement Contribution, Shared Services, and TS Supply Chain costs.)

Transmission Expense [1] Historical Spending, 2010 SOY, and Forecasted IPR Spending Levels



- [1] FY 2003-2009 actuals, FY 2010 Start-of-Year forecast and FY 2011-2013 proposed spending levels include all Transmission operating expenses **except** depreciation/amortization expense, interest expense, Interest Income and AFUDC and **includes** Transmission Acquisition/Ancillary Services, Reimbursables, and Agency Services Support (G&A, Add'l Post Retirement Contribution, Shared Services, and TS Supply Chain costs.)

TR-10 Rate Case Forecast for FY 2011 vs. FY 2011 IPR Forecast

- **The rate case revenue forecast for FY 2011, $892.4 million has increased roughly 2.2% to $912.2 million.**
  - This $19.8 million change is composed of $25.6 million in cash bearing revenues offset by a $5.8 million decrease in non-cash revenues.

- **Comparing FY 2011 IPR forecast to rate case forecast for FY 2011, the total Transmission programs have increased 7.4% ($21.6 million).**
  - The three main programs contributing to the cost pressure include System Maintenance, System Engineering, and System Operations.

- **In the rate case, reserves were assumed to be drawn down to offset $32 million of expenses in FY 2011. Because of the increase in the revenue forecast, even with the increases in IPR expenses, Transmission reserves would only decline by about $15 million instead.**

System Operations

As compared to the rate case forecast for FY 2011, the key FY 2011-2013 IPR increases are:

- Operational support for wind.
- Operational management of new flow gates as a result of new Available Transmission Capacity **(**ATC) methodology.
- Increase in magnitude and complexity of core workload - Remedial Action Scheme **(**RAS), outage analysis, study workload and dispatch support for reliable system operation, and implementing commercial policies.
- Increase in disturbance analysis and line rating workload to comply with WECC reliability standards.
- Negotiated hourly wage increase to better reflect the prevailing hourly wage in the region.

Engineering

As compared to the rate case forecast for FY 2011, the key FY 2011-2013 IPR increases are:

- Expense indirect in support of the larger capital program.
- Colstrip Montana study.
- Wind integration- integration studies, network open season.
- Asset management.
- Non-wires.
- Grid modeling software.
- Support for North American Electric Reliability Corporation Critical, Infrastructure Protection compliance requirements.
- DOE Radio frequency support re-licensing.
- Technology Innovation - reflects the R&D requested increases.
- Regulatory - E-Discovery and Open Access Transmission Tariff Risk Mitigation.

System Maintenance

As compared to the rate case forecast for FY 2011, the key FY 2011-2013 IPR increases are:

- Vegetation preventive maintenance using asset health approach; realty costs associated with on right of way (ROW) orchard management, crop damage, and off ROW vegetation management.
- Engineering expertise for failing transformers / components.
- Environmental stewardship related to aging/leaking equipment including transformer testing, dry outs, sorbent maintenance and overhauls; prioritized jointly with BPA EF&W.
- Maintenance for aging equipment and newly installed power system infrastructure.
- Relay / meter engineering expertise associated with new technology additions while old technology remains.
- Communication system failures associated with declining asset health; transitional costs associated with analog to digital.
- Seismic hardening**.**

Increases offset partly by efficiencies associated with implementation of transmission asset system (Cascade) and contract vegetation removal strategic sourcing.

Transmission Program Benchmarking

In an effort to validate IPR program trends and ensure our costs are in line with utility best practices, we have the following benchmarking efforts underway:

- **FERC Form 1 Total Transmission Cost Data.**
- **2009 Staffing Benchmarking- Navigant.**
- **Transmission Benchmarking Community Survey-1st Quartile Consulting.**

Transmission Capital

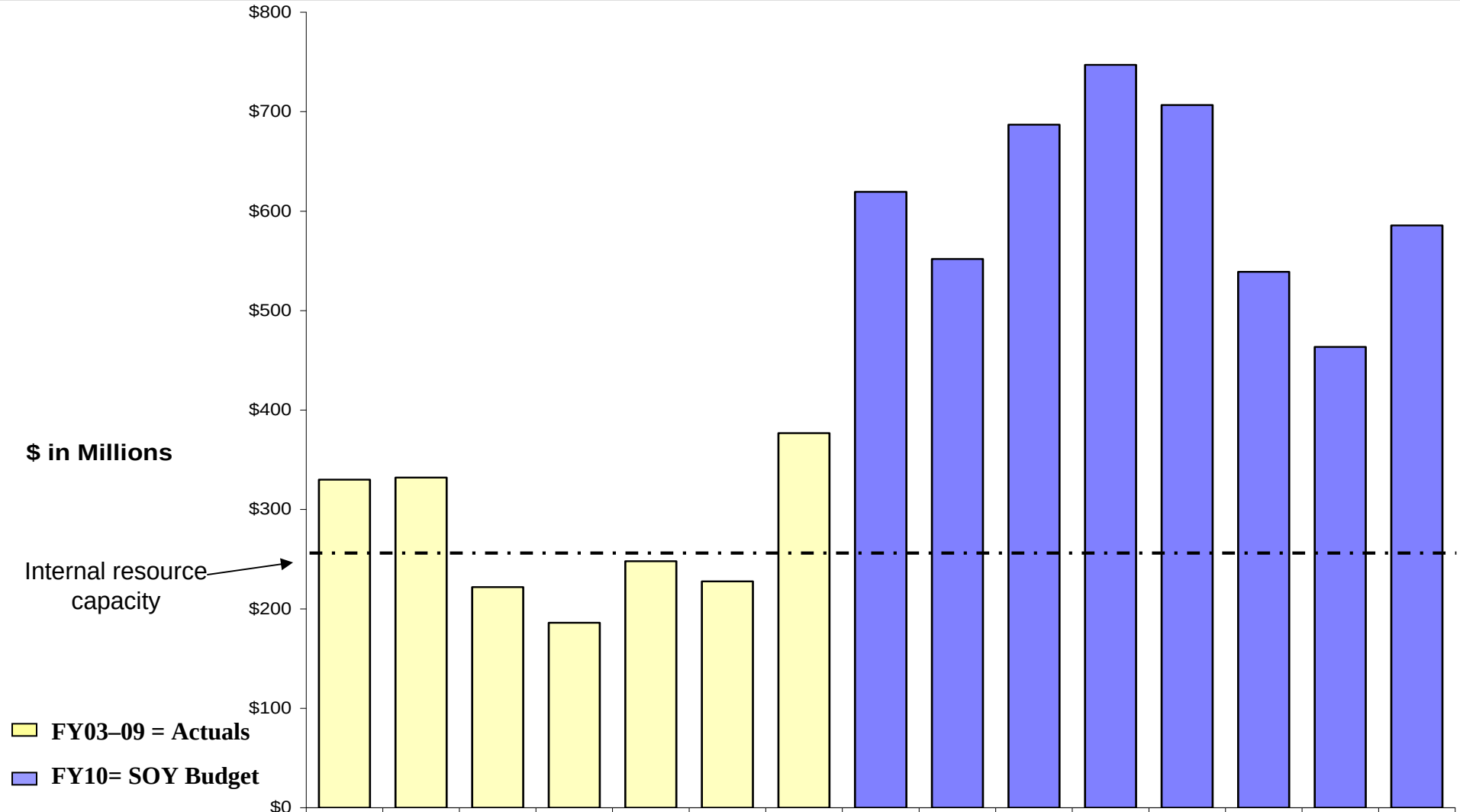
Transmission Proposed Capital Spending Levels[1]

Transmission Capital by Program	2009 Actuals	2010 SOY	2011 TR-10 Rate Case	2011 IPR	2012 IPR	2013 IPR	2014 IPR	2015 IPR	2016 IPR	2017 IPR
Main Grid	58,152,911	128,073,598	189,938,700	110,011,000	213,390,800	270,144,700	255,011,100	138,247,400	86,879,000	189,404,200
Area & Customer Service	11,452,179	37,103,360	6,255,900	6,025,300	11,324,900	9,470,100	10,749,200	16,156,700	17,130,600	28,295,400
System Replacements	115,722,167	137,146,004	138,423,175	131,671,687	157,248,543	169,430,778	188,319,480	172,039,290	160,873,183	159,372,689
Upgrades & Additions	56,899,513	103,321,871	112,584,640	103,562,730	137,432,400	122,839,000	81,191,300	51,937,700	45,280,300	46,965,100
Environment Capital	3,369,545	5,530,189	5,752,088	5,752,088	5,868,854	5,983,884	6,101,169	6,320,000	6,446,000	6,575,300
PFIA	36,784,922	106,605,296	102,286,449	86,792,200	44,431,800	43,714,500	29,693,600	22,309,700	22,649,500	22,986,700
Total Direct Capital	282,381,237	517,780,318	555,240,952	443,815,005	569,697,297	621,582,962	571,065,849	407,010,791	339,258,583	453,599,389
Capital Indirects	74,631,576	80,412,502	81,052,210	83,437,257	86,053,465	87,540,257	88,872,135	90,530,781	92,624,746	94,250,895
Transmission AFUDC	19,676,227	21,300,000	22,467,500	24,624,000	31,157,000	38,075,000	46,890,000	41,400,000	31,521,000	37,771,000
Total Indirect Capital	94,307,803	101,712,502	103,519,710	108,061,257	117,210,465	125,615,257	135,762,135	131,930,781	124,145,746	132,021,895
Total Capital Program	**376,689,040**	**619,492,820**	**658,760,662**	**551,876,262**	**686,907,762**	**747,198,219**	**706,827,984**	**538,941,572**	**463,404,329**	**585,621,284**
Transmission Lapse Factor	-	(105,117,600)	(109,902,416)	(81,678,935)	(102,158,664)	(111,179,733)	(105,101,698)	(79,896,236)	(68,543,149)	(86,853,193)
Total Capital with Lapse Factor	**376,689,040**	**514,375,220**	**548,858,246**	**470,197,327**	**584,749,098**	**636,018,486**	**601,726,286**	**459,045,336**	**394,861,180**	**498,768,091**

Rule of thumb:
A $66 million change in capital = 1% in Transmission Rates

[1] Proposed capital levels do not include lapse factor.

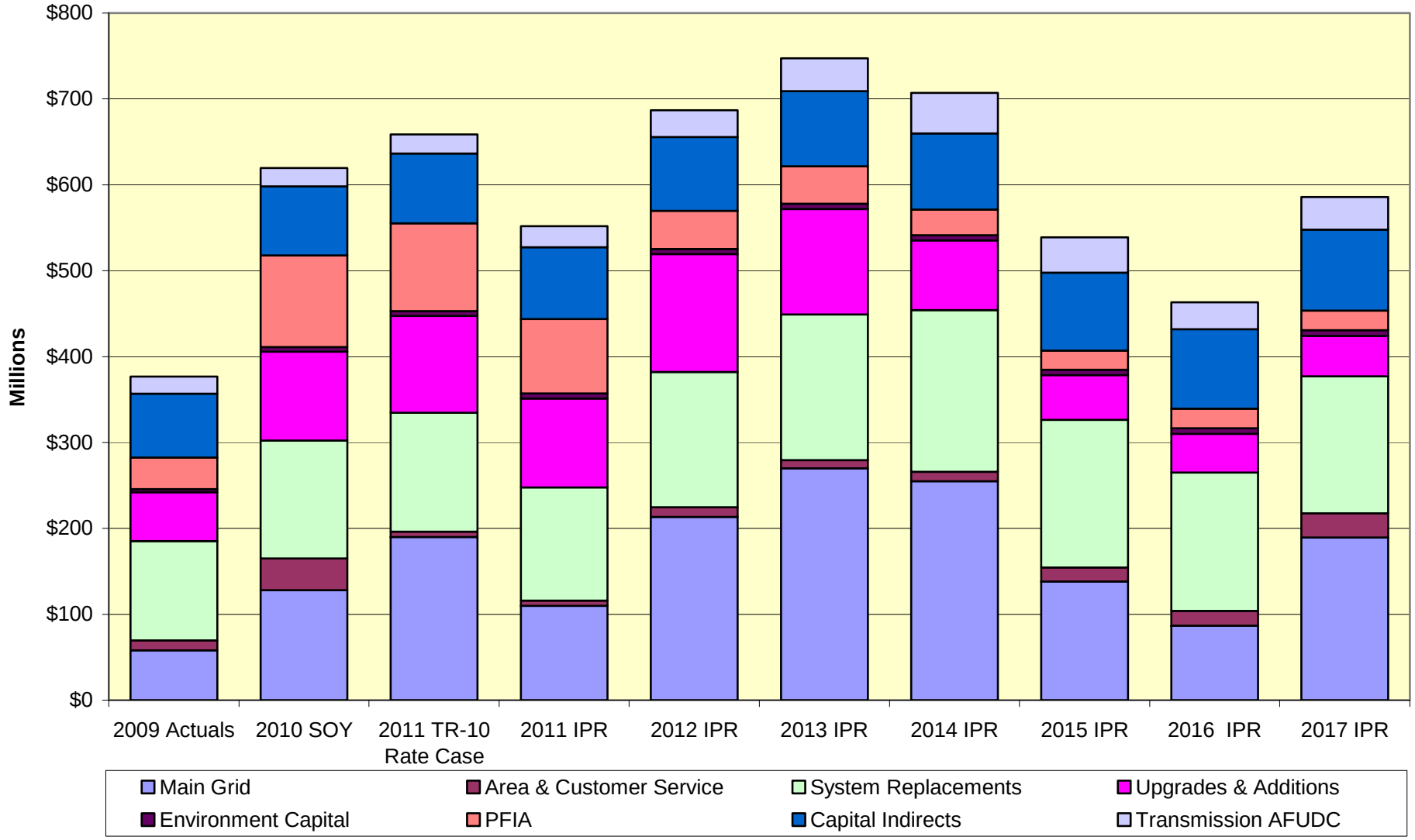
Transmission Capital: FY 2003- FY 2017



	FY03	FY04	FY05	FY06	FY07	FY08	FY09	FY10	FY11	FY12	FY13	FY14	FY15	FY16	FY17
Capital Project Spending	$330	$332	$222	$186	$248	$228	$377	$619	$552	$687	$747	$707	$539	$463	$586

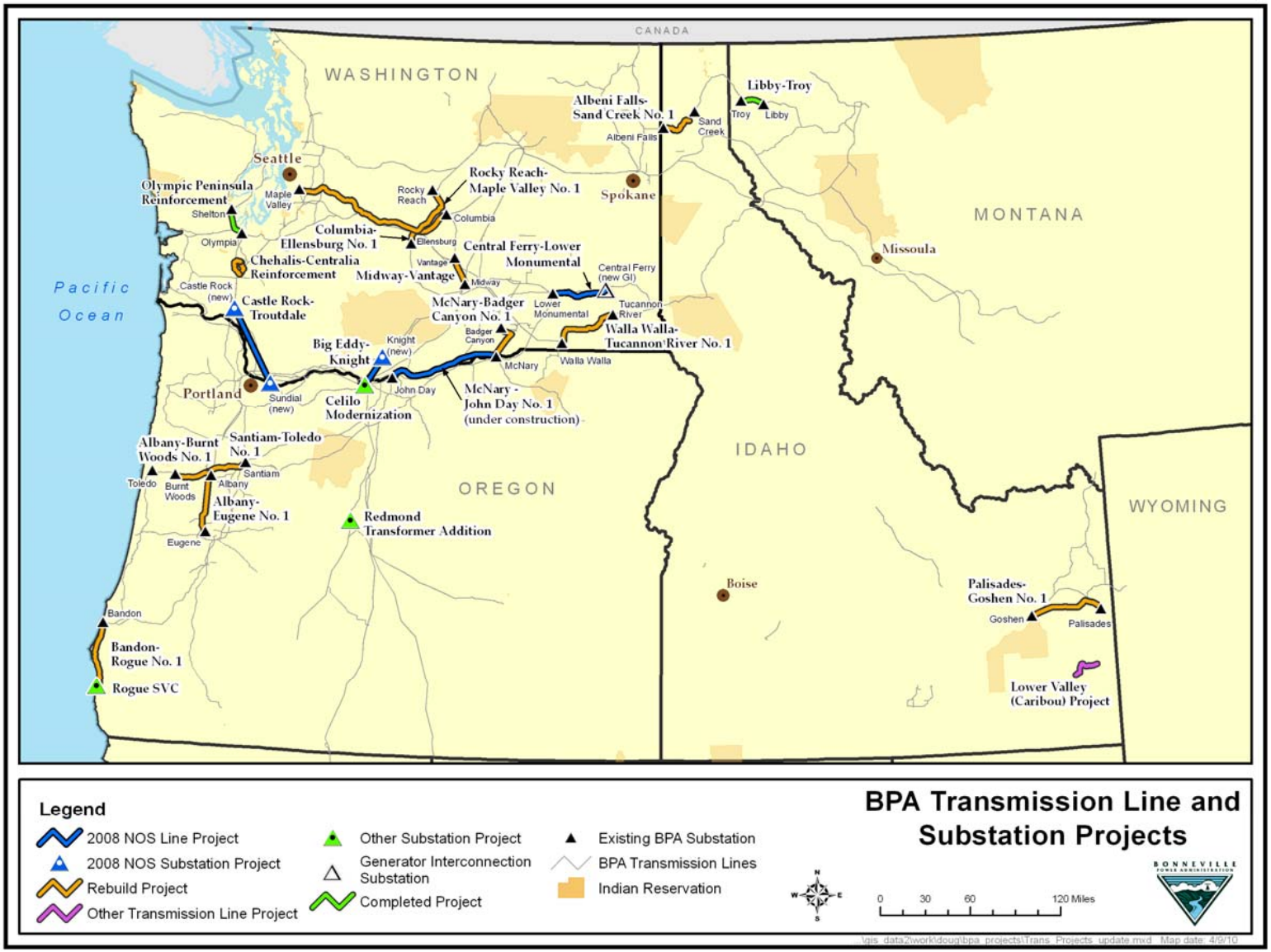
Capital levels do not include lapse factor.

Transmission Proposed Capital Spending Levels[1]



[1]Proposed Capital Levels do not include lapse factor.

Key Transmission Capital Projects



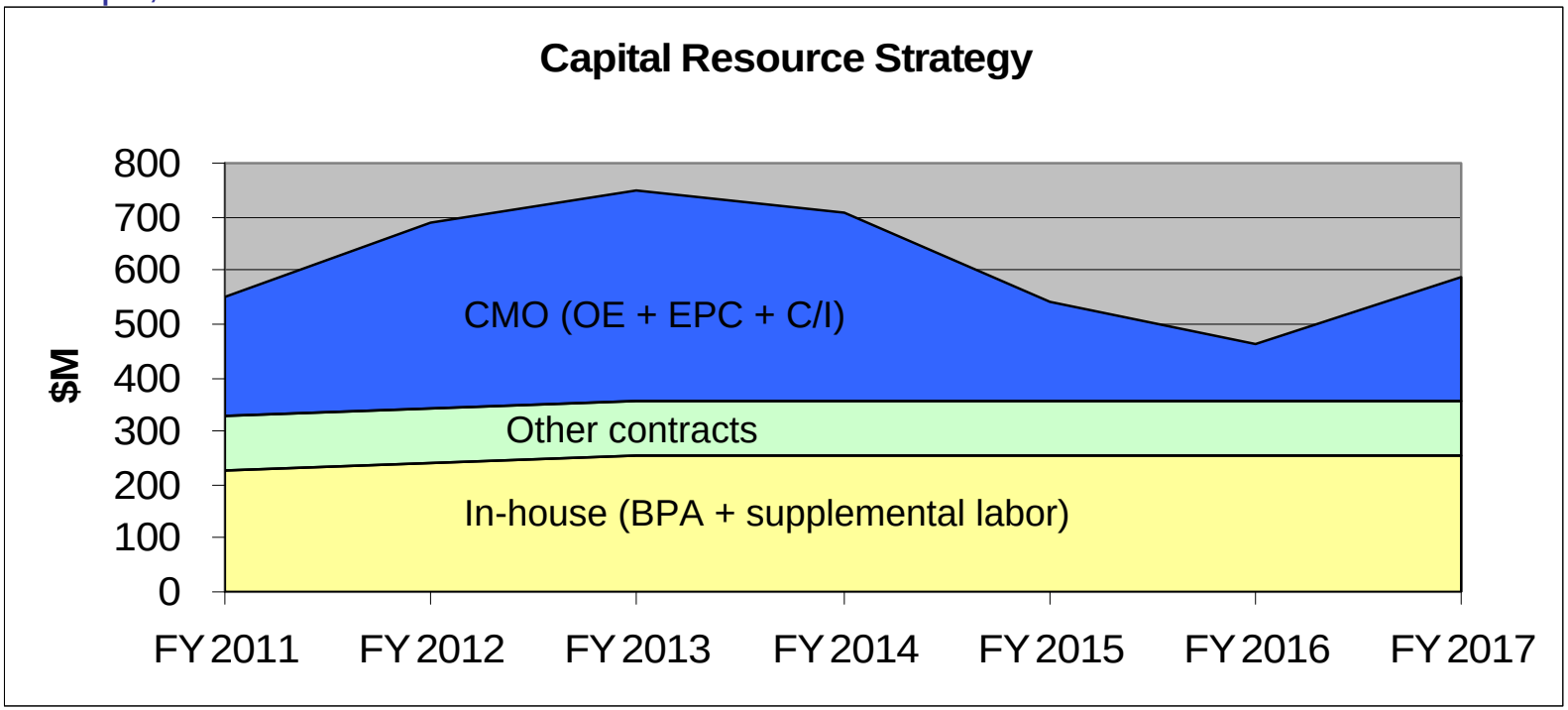
Capital Strategic Objectives

Transmission Services will prioritize capital projects and programs in accordance with our Asset Management Strategy and Customer Requests.

- On-going assessment of Transmission system against system performance metrics.
- Assess current condition of assets.
- Identify risks to BPA's long term outcomes from identified asset performance/condition gaps.
- Identify projects/programs with associated costs, to mitigate risks to long term outcomes.
- Analyze and update critical system spares.
- Comply with NERC Reliability Standards.
- Meet Contractual and Tariff obligations to provide interconnections, firm point-to-point, and network transmission service.

Accomplishing the Additional Work Effectively

- Given BPA-T's internal workforce constraint of $200 million (direct $), BPA has developed a contract strategy that will ensure the completion of the sustain and expansion capital programs.
- The Contract Management Office (CMO) and other contracting strategies provide an increase in capacity to meet the capital program needs.
- Specific CMO objectives include achieving the increased capital program contracting without increasing employee levels as well as meeting project/program objectives within budget, scope, and schedule.



Owner's Engineer (OE), Engineer, Procure, Construct (EPC), and Contract Administration and Inspection (C/I)

Improving Capital Program Forecast

In addition to a continued application of a 15% lapse factor to the total capital program, Transmission has modified its approach to capital program development for this IPR:

- Projects / programs which are included in the IPR proposed spending levels for FY 2012 and 2013 must be currently identified in the asset plan and in system planning studies.
- Traditionally BPA-T has included additional funds for subprogram areas based on prior year spending. This practice has been discontinued in non-wires solutions, and various components of Miscellaneous Main Grid and Area & Customer Service.
- Program levels were reviewed and adjusted based on best anticipated execution constraints, i.e. environmental timelines, outages, land issues, etc.
- Program levels for Projects Funded in Advance (PFIA) can vary widely depending on tax incentives and other factors. In the 2008 IPR the expected value was used; in this IPR the minimum value was used.

Agency Services Overview

What is Agency Services?

- Agency Services is a collection of activities that support and enable Power and Transmission Services to produce and sell power and transmission products. In and of themselves, Agency Services activities do not result in revenue producing products.

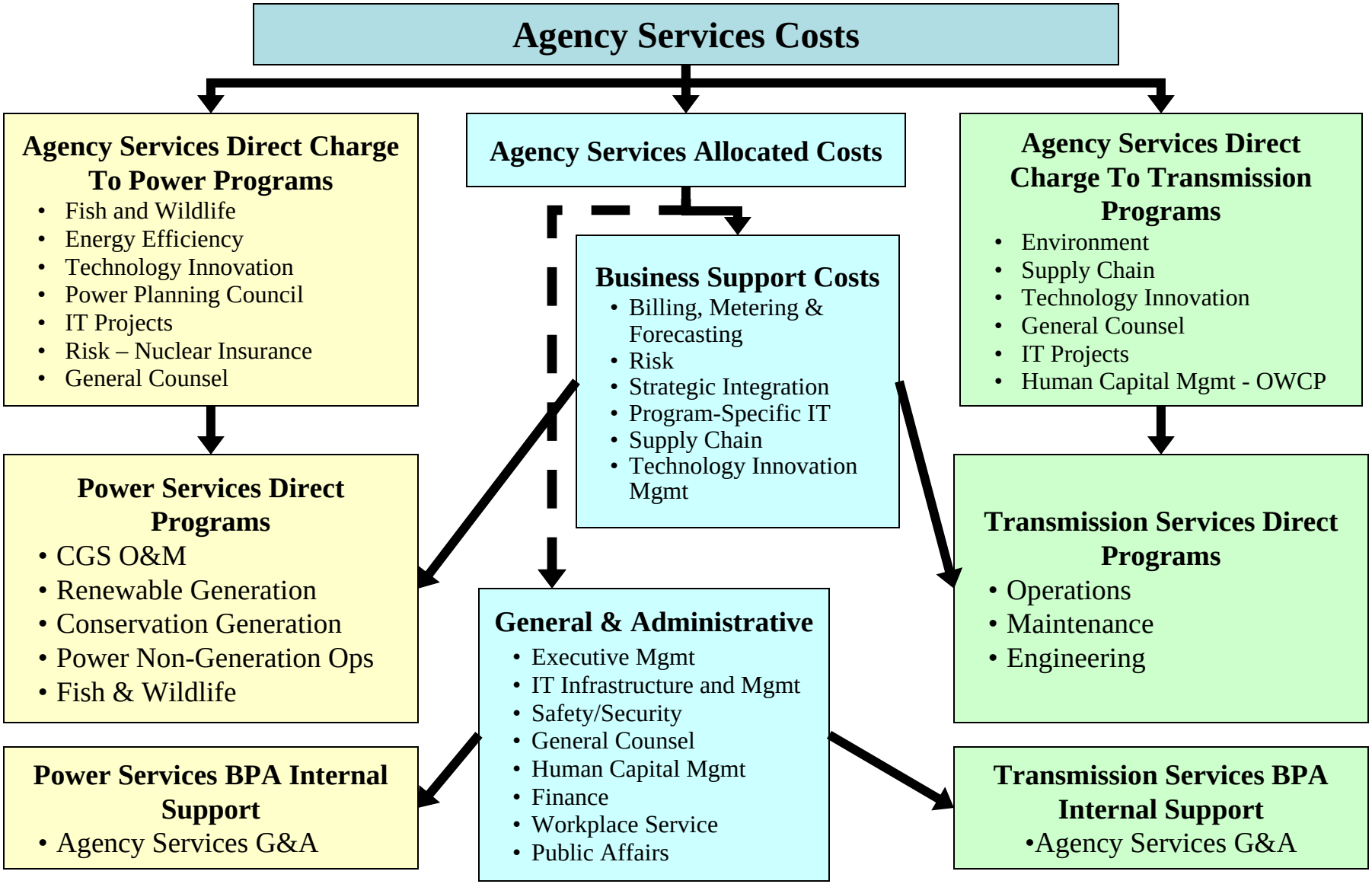
- Power and Transmission programs and projects are significant drivers of Agency Services costs. Growth in existing programs and/or new initiatives result in increased demand for Agency Services supporting activities.

- Agency Services programs fall into 2 general categories:
  - Direct program support
  - 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



Agency Services Proposed Spending Levels[1]

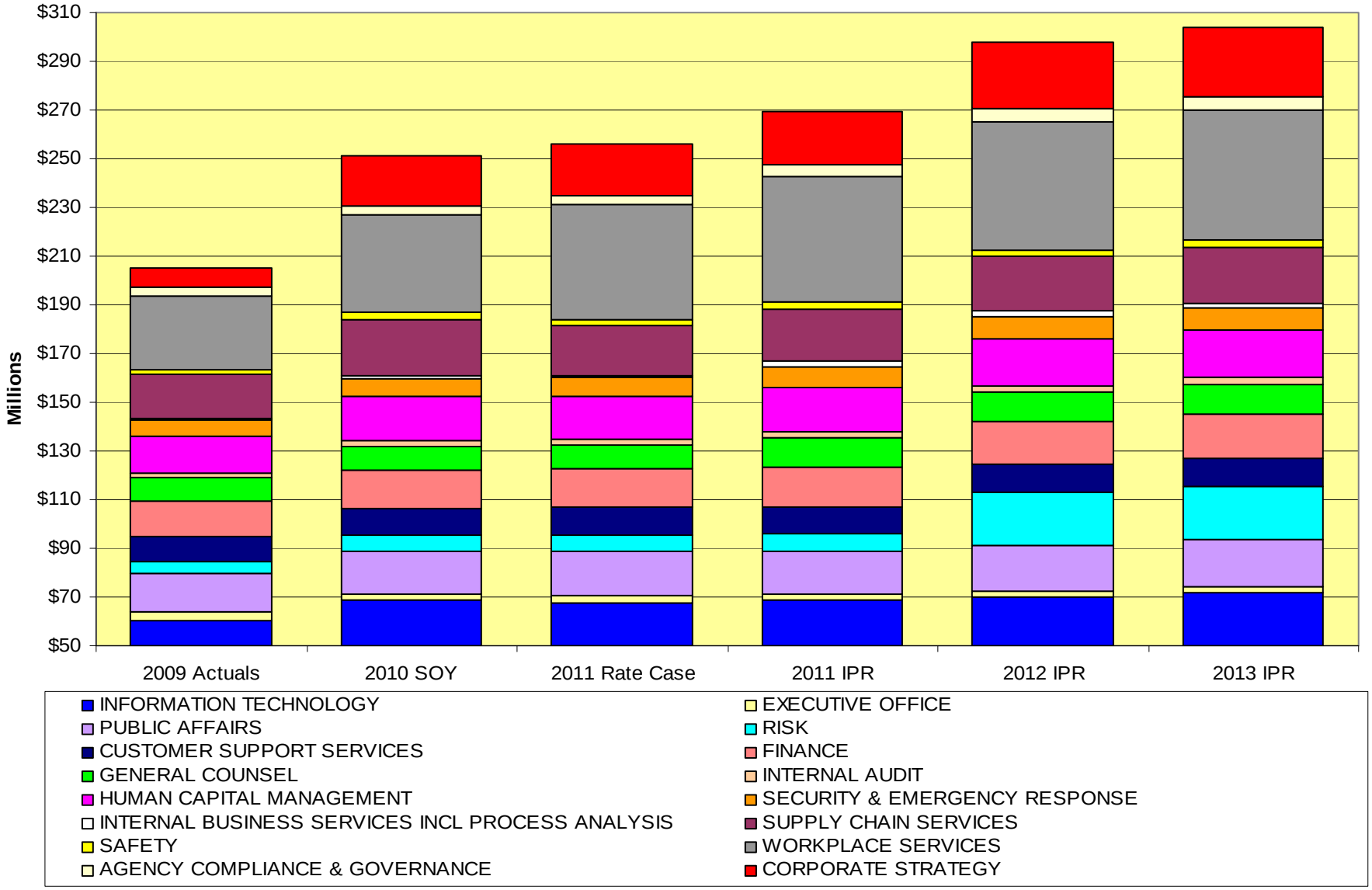
Expense

Department	2009 Actuals	2010 SOY	2011 Rate Case	2011 IPR	2012 IPR	2013 IPR
EXECUTIVE OFFICE[2]	3,107,984	2,460,214	3,004,865	2,100,074	2,151,348	2,194,915
RISK	4,637,558	6,848,177	6,853,814	7,051,195	21,992,025	22,082,095
AGENCY COMPLIANCE & GOVERNANCE	3,524,719	3,557,311	3,771,878	5,123,745	5,159,426	5,191,449
PUBLIC AFFAIRS	16,242,349	17,377,536	18,070,259	18,147,413	18,803,738	19,263,172
INTERNAL AUDIT	2,193,516	2,302,841	2,336,757	2,563,263	2,511,847	2,568,337
FINANCE	14,561,861	15,597,270	16,077,049	16,364,774	17,731,334	18,069,454
CUSTOMER SUPPORT SERVICES	10,200,105	10,847,014	11,289,059	10,931,858	11,262,181	11,501,925
GENERAL COUNSEL	9,490,185	9,734,164	9,811,964	11,728,820	11,893,694	12,551,084
INTERNAL BUSINESS SERVICES	473,547	1,084,333	786,997	874,451	892,621	908,258
BUSINESS & PROCESS ANALYSIS	-	257,015	-	1,241,793	1,442,467	1,468,290
SAFETY	2,214,061	2,497,335	2,478,586	2,577,130	2,647,346	2,701,779
HUMAN CAPITAL MANAGEMENT	15,004,532	18,035,368	17,344,046	18,387,532	19,544,538	19,361,765
SUPPLY CHAIN SERVICES	17,851,814	23,000,000	20,719,854	21,468,414	22,272,482	22,867,222
SECURITY & EMERGENCY RESPONSE	7,007,742	7,590,487	7,832,315	8,668,050	8,975,665	9,012,059
WORKPLACE SERVICES	29,911,509	40,176,738	47,213,170	51,738,457	52,881,794	53,530,953
INFORMATION TECHNOLOGY	60,574,453	69,036,394	67,547,071	68,831,671	70,224,503	71,902,311
CORPORATE STRATEGY	8,435,643	20,794,465	21,152,290	21,324,882	27,471,088	28,535,261
Total	205,431,580	251,196,662	256,289,975	269,123,523	297,858,097	303,710,329

[1] Includes direct business support charges and all costs allocated to Power and Transmission.

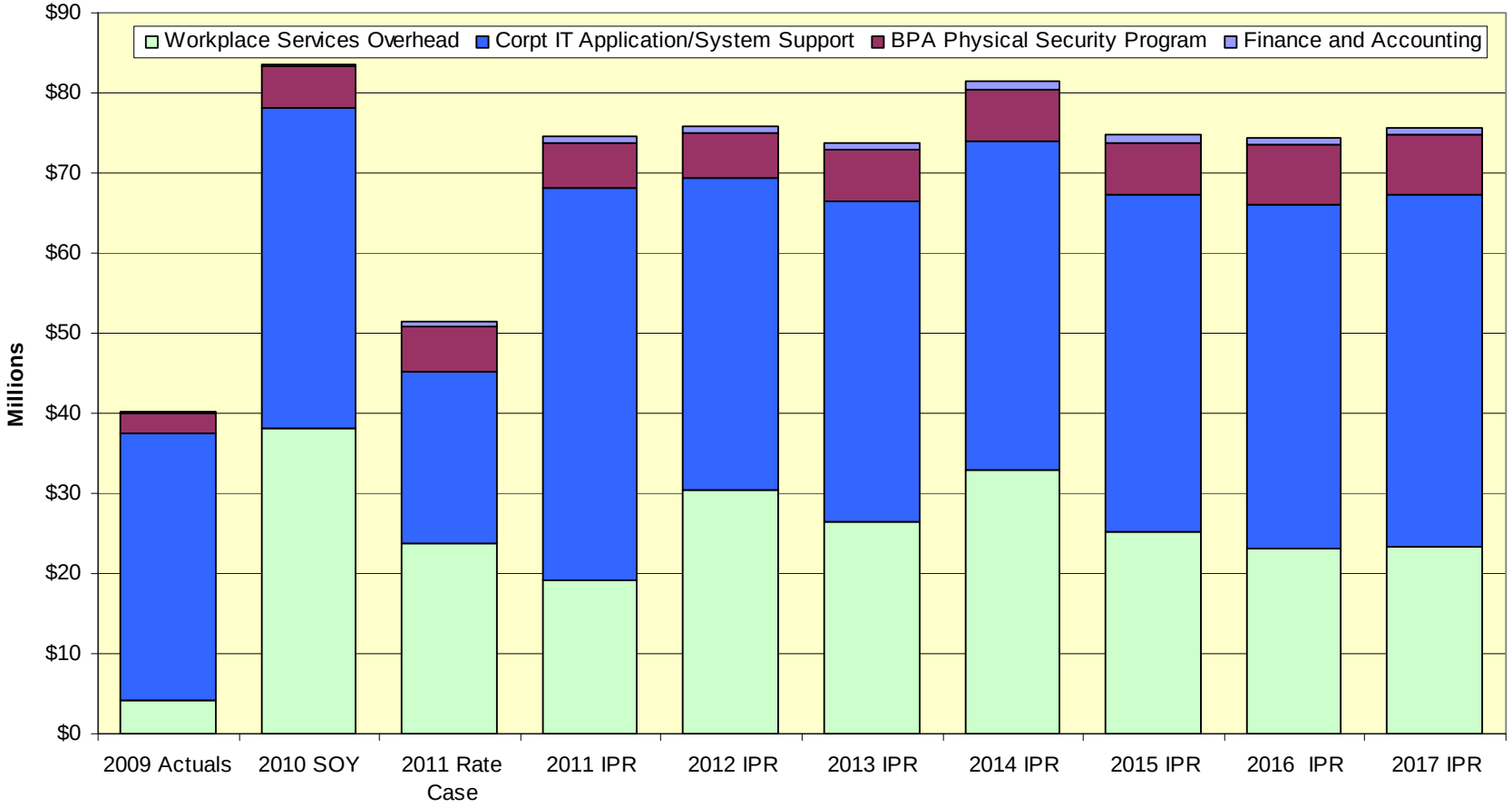
[2] Executive Office program level in 2011 Rate Case does not include an undistributed reduction totaling $2,599,149, taking this reduction into account the 2011 Rate Case level for Executive Office is $405,149 with total Agency Services expenses for 2011 Rate case equaling $253,690,826.

Agency Services Expense[1] Proposed Spending Levels



[1] Includes direct business support charges and all costs allocated to Power and Transmission.

Agency Services Capital Proposed Spending Levels



Corporate Capital by Program	2009 Actuals	2010 SOY	2011 Rate Case	2011 IPR	2012 IPR	2013 IPR	2014 IPR	2015 IPR	2016 IPR	2017 IPR
Finance and Accounting	144,388	386,111	611,876	865,410	881,743	898,941	916,248	933,925	951,721	970,429
BPA Physical Security Program	2,640,775	5,101,730	5,813,940	5,500,000	5,500,000	6,500,000	6,500,000	6,500,000	7,500,000	7,500,000
Workplace Services Overhead	4,205,312	38,150,775	23,741,449	19,202,871	30,396,804	26,371,245	33,006,906	25,272,114	23,025,921	23,236,921
Corpt IT Application/System Support	33,257,630	40,000,000	21,375,000	49,000,030	39,000,000	40,000,000	41,000,000	41,999,998	43,000,000	43,999,999
Sub Total	**40,248,104**	**83,638,616**	**51,542,265**	**74,568,311**	**75,778,547**	**73,770,186**	**81,423,154**	**74,706,037**	**74,477,642**	**75,707,349**
Corporate Lapse Factor	-	(4,895,772)	(5,011,903)	(1,922,669)	(1,179,658)	(886,788)	(444,061)	(451,481)	(459,050)	(5,011,903)
Total Power Capital	**40,248,104**	**78,742,844**	**46,530,362**	**72,645,642**	**74,598,889**	**72,883,398**	**80,979,093**	**74,254,556**	**74,018,592**	**70,695,446**

[1] Corporate lapse factor Includes 15% lapse factor applied to Facilities..

Enterprise Process Improvement Program (EPIP)

- BPA embarked on a journey to improve its efficiency in 2003. The program that was created to manage our efficiency initiatives is the BPA Enterprise Process Improvement Program (EPIP).
- 9 projects participated: Energy Efficiency, Public Affairs, Transmission O&M, Transmission Plan, Design, Build (PDB), Asset Management, IT, Supply Chain, Human Capital Management, and Marketing & Sales.
- $112.4 million was saved in FY 2006 and 2007 and an average $65 million in savings per year were expected in FY 2008-11. Without EPIP, the budgets would have been $65 million higher each year.
- With the conclusion of 2008, BPA phased out EPIP as an agency-wide program.
- Key agency targets, managers' performance contracts and metrics are being used to ensure that residual work is embedded in the business.

Enterprise Process Improvement Program (EPIP)

Actual savings for FY 06 and 07 and savings reflected in IPR budgets[1]
($ millions)

EPIP Project Name	2006	2007	2008	2009	2010	2011
	Actuals		On Track	IPR Budgets		
Energy Efficiency	$0.3	$1	$0.7	$0.3	$-0.2	$-0.4
Public Affairs	2.2	3	2.8	2.9	2.8	3.1
Transmission O&M	*Optimized spending and asset performance*					
Transmission Plan, Design, Build[2]	11.2	15	32	15	16	17
Asset Management	*Optimized spending and asset performance*					
Information Technology	31.8	37.0	38.5	42.7	34.7	39.9
Supply Chain	1.2	1	0.2	0.2	-1.8	-0.8
Human Capital Management	2.7	3	3.9	4.6	4.6	6.0
Marketing and Sales		3	0.7	0.1	-0.2	0.4
Totals	$49.4	$49.4	$78.8	$65.8	$55.9	$65.2

1 Transmission PDB savings are capital only. IT savings are capital and exspense. Other savings are expense.

2 Transmission savings depend on the final size of capital program. The capital program is subject to large changes annually. PDB actual results are for hard savings only.

- Projected savings broken down by project and year.
- Though the average savings per year in FY 2008–11 was expected to be $65 million, it is shown that FY 2008 comprised a bulk of the savings.

Next Steps

Detailed Workshop Schedule

2010 Integrated Program Review (IPR) Workshop Schedule

All workshops are subject to change as necessary

	Workshop Topic	Date	Time
-	**Asset Management Overview** *Pre-IPR meeting held at the Quarterly Business Review*	**May 3, 2010**	**3:00-4:00 PM**
1	**Executive Welcome and Overview** *Executive Welcome, Introductions, Process Overview* *Power, Transmission, Corporate overview*	**May 10, 2010**	**9:00-1:00 PM**
2	**Federal Hydro Asset Strategy & Capital Discussion** *FCRPS Hydro Asset Strategy* *Federal Hydro Capital Program for FY 2012-17*	**May 13, 2010**	**9:00-12:00 PM**
3	**Transmission Asset Strategies & Capital Discussion** *Transmission Asset Strategies* *Transmission Capital Programs for FY 2012-17*	**May 17, 2010**	**9:00-4:00 PM**
4	**Transmission Expense** *Transmission Expense Programs for FY 2012-13*	**May 18, 2010**	**9:00-12:00 PM**
5	**Transmission Overflow** *Discuss Remaining Topics, Follow Ups, Etc.*		**1:00-4:00 PM**
6	**Power Internal Operating Costs, Acquisition/Ancillary Services & Residential Exchange** *Power Internal Operating Cost for FY 2012-13* *Power Acquisition and Ancillary Services for FY 2012-13* *Residential Exchange Program for FY 2012-13*	**May 19, 2010**	**9:00-12:00 PM**
7	**Columbia Generating Station (CGS)** *CGS Expense and Capital Program for FY 2012-17*		**1:00-4:00 PM**

Detailed Workshop Schedule

2010 Integrated Program Review (IPR) Workshop Schedule

All workshops are subject to change as necessary

	Workshop Topic	Date	Time
8	**FCRPS Hydro Operation & Maintenance Program and Cultural Resources** *FCRPS Hydro O&M Program for FY 2012-13* *Cultural Resources Program*	**May 20, 2010**	**9:00-12:00 PM**
9	**Fish & Wildlife, Lower Snake River Comp (LSRC) and Northwest Power Planning Council (NWPPC)** *F&W Expense & Capital Program for FY 2012-17* *LSRC Program for FY 2012-13* *NWPPC Expense Program for FY 2012-13* *Columbia River Fish Mitigation (CRFM) FY 2012-17*		**1:00-4:00 PM**
10	**Power Overflow** *Discuss Remaining Topics, Follow Ups, Etc.*	**May 24, 2010**	**9:00-12:00 PM**
11	**Energy Efficiency & Renewable Resources** *Energy Efficiency Expense & Capital Program for FY 2012-17* *Renewable Resources for FY 2012-13*		**1:00-4:00 PM**
12	**Facilities Asset Strategy** *Facilities Asset Strategy*	**May 25, 2010**	**9:00-10:30 AM**
13	**Information Technology (IT) Asset Strategy** *IT Asset Strategy*		**10:30-12:00 PM**
14	**Agency Services** *Agency Services Expense & Capital Programs for FY 2012-2017*		**1:00-4:00 PM**
15	**General Manager Meeting**	**June 8, 2010**	**9:00-12:00 PM**
16	**General Manager Meeting**	**July 13, 2010**	**9:00-12:00 PM**

Ways to Participate

- **All forums are open to the public and will be noticed on the Integrated Program Review (IPR) external website at: http://www.bpa.gov/corporate/Finance/IBR/IPR/.**
- **Representatives from the Corps of Engineers, Bureau of Reclamation and Energy Northwest will be participating in the IPR process including presentations.**
- **All technical and managerial workshops will be held at BPA Headquarters.**
- **If participating by phone please dial into the bridge at 503-230-5566, then any time during or after the message and the double beep, enter 3981#. Presentation material will be posted on the IPR external website prior to the workshop taking place.**
- **The IPR process will include a public comment period for proposed program spending levels. The comment period opens May 10, 2010 and will close on July 29, 2010.**
- **Comments can be submitted at any of the scheduled workshops or submitted in writing to:**
  - Bonneville Power Administration, P.O. Box 14428, Portland, OR 97293-4428,
  - Email to comment@bpa.gov,
  - Faxed to (503) 230-3285

BPA's Financial Disclosure Information

- All FY 2010-2017 information has been made publicly available by BPA on May 6, 2010 and does not contain Agency-approved Financial Information.
- All FY 2000-2009 information has been made publicly available by BPA and contains Agency-approved Financial Information.
- All FY 2011 Rate Case data has been developed for publication in rates proceeding documents and is being provided by BPA.

Appendix 1 – Power Program Details

Power Expense Programs

Bureau of Reclamation (BOR) and Corps of Engineers (COE)

Bureau of Reclamation / Corps of Engineers	2009 Actuals	2010 SOY	2011 WP-10 Rate Case	2011 IPR	2012 IPR	2013 IPR
BUREAU OF RECLAMATION	78,228,221	87,318,000	96,110,000	96,110,000	113,672,000	121,591,000
CORPS OF ENGINEERS	178,406,198	191,060,000	192,433,000	192,433,000	214,000,000	221,000,000
HYDRO PROJECTS INSURANCE	-	-	-	10,000,000	10,000,000	10,000,000
Total	**256,634,419**	**278,378,000**	**288,543,000**	**298,543,000**	**337,672,000**	**352,591,000**

Program Description

- BPA works with U.S. Army Corps of Engineers and the Bureau of Reclamation to implement funding for operations and maintenance activities, non-routine extraordinary maintenance projects, and Fish and Wildlife and Cultural Resources mitigation activities at 31 hydro electric facilities throughout the Northwest**.**

Strategic Objectives

- S1– Policy and Regional Actions
- S2 – FCRPS Operations & Expansion
- S3 – Tiered Power Rates
- S7 – Environment, Fish & Wildlife
- S9 – Stakeholder Satisfaction
- I4 – Asset Management
- I6 – Collaboration

Key Products and Outputs

- 8800 aMW of generation provided to the Northwest valued at nearly $4 billion
- Reliable Generation and Transmission System Performance and Compliance with WECC/NERC Reliability Standards
- Safe Work Environment at the Generating Facilities (Complying with new standards for Arc Flash, Lockout/Tagout, Hydraulic Steel Structure Inspections, Asbestos, Emergency Management Systems, etc.)
- Compliance with Biological Requirements for Fish Passage and Clean Water, and Cultural Resources Section 106 requirements

Bureau of Reclamation (BOR) and Corps of Engineers (COE)

O&M Program Overview

- 31 generating plants, 212 generating units ranging in size from 1 to 805 MWs
- ~1560 employees: salaries and benefits, and materials and supplies related costs are 70 to 75% of the program level
- The program includes funding for mitigation activities associated with cultural resources and fish and wildlife:
  - ~ 25% of O&M program costs are fish and wildlife O&M for screens, hatcheries, fish bypass facilities, trap and transport, etc.
  - ~ 2% of O&M program costs are for the FCRPS cultural resource program and mitigation activities associated with Section 106 compliance.
- ~15% of O&M program costs are for non-routine extraordinary maintenance (NREX), the large infrequent activities associated with returning failed units to service, repairing gates and other large equipment and structures, as well as the work required for overhauling the 805 & 600MW units in the Grand Coulee Third Powerplant.
- Other O&M components are programs for Dam Safety, Clean Water, Water Management, Employee Safety (safe work environment), Engineering Support, Contracting and other Support Services, and Security.
- The program is implementing industry best practices for O&M through independent outside peer reviews of the management, mechanical, electrical, and operational functions at the generating plants, and participating in hydro benchmarking forums.

Bureau of Reclamation (BOR) and Corps of Engineers (COE)

O&M Program FY 2012-13 Objective - *Low cost power, reliable power, trusted stewardship*

- Ensure FCRPS generators are reliable and available to support system during the Grand Coulee Third Powerplant overhauls, during which one 805MW or 600MW unit will be removed from service for 8 to 10 years.

FY 2012-13 O&M Program Spending Drivers

- Cultural Resources – The program level has been flat with no inflation adjustment for 15 years (since original System Operations Review agreement). Program requirements for Section 106 compliance have increased as a result of the program transitioning from inventorying sites to evaluation and mitigation activities.
  - Increase over 2011 proposed program level: 2012=$4.2 million, 2013=$4.7 milion
- WECC/NERC reliability - The program continues to see new standards/requirements, especially Critical Infrastructure Protection (CIP) for cyber security.
  - Increase over 2011 proposed program level: 2012=$2.8 million, 2013=$2.9 million
- Staffing/Salaries - The Corps and Reclamation are adding staff at several projects (GCL, CHJ, JDA, TDA and others) to improve maintenance and operating performance (i.e. for WECC/NERC, dam and employee safety, completing critical maintenance, managing forced outages and trouble reports, etc.) , as well as planning for retirements (adding staff to Trades & Craft training and Engineering CO-OP programs). *Also note, over the past 5 years, T&C employees raises have ranged from 3.5 to 5.2%, above the 3% used in forecasts.*
  - Approximately 80 FTE total increase over the FY 2012-13 rate period, including the positions associated with increased WECC/NERC reliability and cultural resources requirements noted above.
  - Increase over 2011 proposed program level: 2012=$10.4 million, 2013=$12.1 million

Bureau of Reclamation (BOR) and Corps of Engineers (COE)

FY 2012-13 O&M Program Spending Drivers (continued)

- Non-Routine Extraordinary Maintenance (NREX) –
  - **Aging infrastructure: Average unit age of 48 years, with balance of dam infrastructure as old or older**
  - **Seeing large costs associated with repairing failed generating units across system and significant NREX requirements for spillway gates, penstock tubes, cranes, etc.**
    - Note: NREX costs for returning failed units to service are usually recovered quickly. For example, the Chief Joseph unit 21 failure cost $3 million to repair, while the value of generation from unit 21 is $6.8 million/year. Bonneville unit11 estimated repair cost is $5.8 million over 3 years, while the value of generation over the same period is $7.8 million. Grand Coulee G19 repair cost $500 thousand, while the value of the lost capacity would be ~$4 million per year.
  - **$249 million in NREX currently accounted for during the 2010-17 period in the FRCPS Asset Plan. Upcoming work is mostly associated with unit reliability, water control, cranes, and dam infrastructure (some of which are joint items that require matching appropriations)**
  - **From 2007 – 09 the Forced Outage Rate has averaged 3.13 for the system, and we experienced several long term unit outages as noted above. Note, industry average is 3.6 for the 2007-08 period (2009 average is not yet available)**
  - **Costs for the GCL 3rd Powerplant Overhaul increase from FY 2011 thru 2016 as evolving project scope is defined and refined. This project is the biggest driver in NREX expenses with 2012 costs estimated at $16.6 million and 2013 at $20.7 million.**
    - Increase over 2011 proposed program level: 2012=$23.5 million, 2013=$33.8 million
- **Appropriated Expenses - This amount is variable and depends on priorities in the Presidents Budget, but needs to be covered as an in-year expense. An example of this type of cost would be an emergency repair of a joint project feature associated with the dam structure that congress makes a high priority. In 2009 the Corps had $5.9 million in appropriated expenses and accounting cost reversals that had to be incorporated into the program that year.**

Bureau of Reclamation (BOR) and Corps of Engineers (COE)

Potential Risk

- NREX funding is critical to improving the equipment condition across the system and for ensuring safe, reliable operations. In addition to possible safety or critical infrastructure issues, limited funding hampers ability to return failed units to service, which directly impacts ability to generate revenue.
- Building a sustainable capable workforce is vital to ensuring the long term reliable performance of the system. Staffing gaps cause efficiency losses and may impact safety and reliability.
- Fines and/or sanctions will be issued for WECC/NERC Reliability Standards violation
- FY 2012-13 proposed spending levels do not contain funding for prevention or maintenance required for Aquatic Nuisance Species

Columbia Generating Station (CGS)

Columbia Generating Station	2009 Actuals	2010 SOY	2011 WP-10 Rate Case	2011 IPR	2012 IPR	2013 IPR
COLUMBIA GENERATING STATION	278,669,712	246,600,000	312,900,000	312,900,000	306,600,000	359,300,000
NEIL INSURANCE	761,216	2,300,000	2,100,000	2,500,000	2,000,000	2,000,000
DECOMMISSIONING CONTRIBUTIONS	8,776,921	8,911,000	9,882,000	9,882,000	11,266,000	13,745,000
Total	**288,207,849**	**257,811,000**	**324,882,000**	**325,282,000**	**319,866,000**	**375,045,000**

Program Description

- BPA acquires 100% of CGS generation and funds 100% of its costs plus directly funds the Decommissioning Trust Fund and NEIL insurance premiums.

Strategic Objectives

- S1– Policy and Regional Actions
- S2 – FCRPS Operations and Expansion
- S3 – Tiered Power Rates
- S9 – Stakeholder Satisfaction
- I4 – Asset Management
- I6 – Collaboration

Key Products and Outputs

- CGS continued reliable operation is the key product. CGS will have a maintenance and refueling outage in FY 2011. The condenser will be replaced during this outage along with other capital and major maintenance projects.

FY 2012-13 Program Spending Drivers

- FY 2012 and FY 2013 proposed spending levels reflect the current Energy Northwest Long Range Plan. Increases are due to the purchase of nuclear fuel as the uranium inventory is being replenished. Decommissioning Trust Fund contributions have also increased to be consistent with the funding schedule agreed upon between BPA and Energy Northwest (EN) and the schedule that was submitted to the US Nuclear Regulatory Commission in March 2009. CGS will have a maintenance and refueling outage in FY 2013.

Energy Efficiency

Energy Efficiency	2009 Actuals	2010 SOY	2011 WP-10 Rate Case	2011 IPR	2012 IPR	2013 IPR
CONSERVATION ACQUISITION	6,475,416	14,000,000	14,000,000	16,700,000	16,250,000	16,250,000
CONSERVATION RATE CREDIT	23,494,740	28,000,000	29,500,000	29,500,000	-	-
DSM TECHNOLOGIES	686,431	1,600,000	-	-	-	-
ENERGY EFFICIENCY DEVELOPMENT	10,212,332	20,500,001	20,500,000	11,500,000	11,500,000	11,500,000
GENERATION CONSERVATION R&D	2,337,550	3,200,000	-	-	-	-
LEGACY	1,421,067	1,025,118	1,622,089	1,000,000	1,000,000	900,000
LOW INCOME WEATHRZTN & TRIBAL	6,568,649	5,000,000	5,000,000	5,000,000	5,000,000	5,000,000
MARKET TRANSFORMATION	9,631,134	14,500,000	14,500,000	13,000,000	13,500,000	14,500,000
Total	**60,827,319**	**87,825,119**	**85,122,089**	**76,700,000**	**47,250,000**	**48,150,000**

Notes: Beginning in FY 2012, funding for the Conservation Rate Credit was moved to the capital program. Beginning in FY 2011, funding for DSM Technologies (aka engineering services) was imbedded in the expense Conservation Acquisition program. The Generation Conservation R&D budget is held in Technology Innovation until the SOY.

Program Description

- When acquiring resources to meet planned future loads, the Northwest Power Act requires the Administrator to first consider and acquire cost-effective conservation consistent with the Northwest Power and Conservation Council's (Council) Power Plan. In its 6th Power Plan, completed February 2010, the Council identified enough cost-effective conservation to meet 85% of the region's long-term load growth and calls for the region to acquire 1,200 aMW of efficiency over the next five years.
- Through BPA's energy efficiency program, the Agency, in collaboration with its customers, works to achieve the public power share of the Council's target (504 aMW).
- To meet this aggressive target, BPA will capture non-programmatic savings (i.e., codes and standards, ARRA funding, etc.), support market transformation through the Northwest Energy Efficiency Alliance (NEEA), and undertake the full range of activities needed to design, market, support, implement and evaluate conservation measures. BPA will also support utility and third party programs that implement conservation measures in homes, on farms, and at commercial, industrial and governmental facilities throughout the region.

Energy Efficiency

Program Description (continued)

- These long-term investments in energy efficiency will have several benefits. Conservation helps buffer the Federal Columbia River Power System (FCRPS) against future resource uncertainties. During periods of price volatility, conservation helps reduce financial risk associated with relying on the market for future energy purchases. BPA's conservation acquisition activities also support climate change initiatives, reduce the need to build new high cost generating resources, help control power costs to rate payers, and support the region's economy.

Strategic Objectives

- S1– Policy and Regional Actions
- S2 – FCRPS Operations and Expansion
- S3 – Tiered Power Rates
- S5 – Energy Efficiency
- S8 – Climate Change
- S9 – Stakeholder Satisfaction
- I6 – Collaboration

Key Products and Outputs

- BPA's conservation expense program supports the entire lifecycle of conservation measures.
  - **New Measure Development** – To replace compact fluorescent lamps (CFLs) with the more diverse set of conservation measures, BPA's energy efficiency organization will continue to coordinate with the region on the Agency's research and development agenda and assess the savings potential and cost-effectiveness of new measures.
  - **Program Support** – BPA's energy efficiency expense program is also used to make measures program-ready, support programs with marketing and engineering services, conduct evaluations and market research, and track programmatic and non-programmatic savings.
  - **Acquisition** – While BPA's capital program is used to acquire conservation through utility and 3rd party programs, BPA's expense program supports conservation acquisition through market transformation, state and tribal low income weatherization programs, and work that is reimbursed by other entities.
  - **Measurement and Verification** – This program also supports the measurement and verification work necessary to ensure that measures continue to be cost-effective and yield verifiable energy savings.

Energy Efficiency

FY 2012-13 Program Spending Drivers

- In it's 6th Power Plan, completed February 2010, the Council calls for the region to acquire 1,200 aMW of conservation over five years (2010-2014). The public power share of this target (504 aMW) represents a significant increase from conservation acquired under the 5th Power Plan (310 aMW).
- Due to anticipated changes in Federal lighting standards, CFLs, which were the largest single contributor to past savings, will not count towards the target beginning in 2012.
- Achieving higher targets without CFLs requires marketing and program support to achieve deeper market penetration from existing measures and to develop opportunities for implementing a more diverse measure set.
- More than 50% of the megawatts in the 6th Power Plan must come from technologies for which program design, piloting, and evaluation work is necessary to make them program ready.

Environment, F&W, LSRCP

Environment, Fish & Wildlife, Lower Snake	2009 Actuals	2010 SOY	2011 WP-10 Rate Case	2011 IPR	2012 IPR	2013 IPR
ENVIRONMENTAL REQUIREMENTS	1,230	300,000	300,000	300,000	302,400	305,424
FISH & WILDLIFE	177,859,443	215,000,002	236,000,000	236,000,000	250,394,000	254,384,000
LOWER SNAKE HATCHERIES	20,773,850	23,600,000	24,480,000	24,480,000	28,800,000	29,900,000
Total	**198,634,523**	**238,900,002**	**260,780,000**	**260,780,000**	**279,496,400**	**284,589,424**

Program Description

- BPA's Integrated Fish and Wildlife Program implements projects that meet BPA's fish and wildlife mitigation objectives under the Northwest Power Act, consistent with the Program adopted by the Northwest Power and Conservation Council, as well as BPA's Endangered Species Act (ESA) offsite fish and wildlife requirements under biological opinions from the U.S. Fish and Wildlife Service and National Oceanic and Atmospheric Administration (NOAA Fisheries), and the commitments encompassed within the Columbia Basin Fish Accords.

Strategic Objectives

- S1– Policy and Regional Actions
- S2 – FCRPS Operations & Expansion
- S3 – Tiered Power Rates
- S7 – Environment, Fish and Wildlife
- S9 – Stakeholder Satisfaction
- I4 – Asset Management
- I5 – Technology Innovation
- I6 – Collaboration

Environment, F&W, LSRCP

Key Products and Outputs

- BPA meets its Power Act and ESA objectives in the Fish and Wildlife Program primarily through the negotiation and award of contracts to state, federal, and tribal entities. These contracts implement projects that meet BPA's objectives in the following categories: habitat improvement, hatcheries, harvest, research monitoring and evaluation, and hydro operations. Project outcomes are credited and accounted for as contributions toward the recovery and mitigation obligations of BPA.
- The Fish and Wildlife Program is carried out in partnership with the Power Council, with the Council developing and updating the Program and making funding recommendations to BPA for projects to implement in support of the program.
- The expense program also ensures the agency's environmental and cultural resource compliance for Program activities, through analysis and documentation consistent with the requirements of the National Environmental Policy Act (NEPA) and the National (and state) Historic Preservation Act (NHPA).
- The expense program also supports continued efficient and effective operation of the federal hydro system through administration, management and documentation of the FCRPS Cultural Resources Program.

FY 2012-13 Program Spending Drivers

- Fish and Wildlife Program (aka Integrated Program): measures addressed to the recovery of Columbia River fish listed as threatened or endangered under the Endangered Species Act (ESA) and to the mitigation of impacts to fish and wildlife from the development and operation of the FCRPS under the Northwest Power Act.
- The Lower Snake River Compensation Plan (LSRCP) - The LSRCP (Lower Snake Hatcheries) provides compensation for habitat lost to construction of the four lower Snake River hydroelectric projects. The LSCRP consists of 11 hatcheries and 15 satellite facilities, with operations and maintenance costs funded by BPA directly.
- NEPA, ESA, NHPA, and other compliance analysis and documentation is also funded as part of the F&W program.

Northwest Power and Conservation Council

PLANNING COUNCIL	2009 Actuals	2010 SOY	2011 WP-10 Rate Case	2011 IPR	2012 IPR	2013 IPR
Total	9,424,498	9,683,000	9,934,000	9,934,000	10,356,000	10,637,000

Program Description

- The Northwest Power and Conservation Council was authorized by Congress as part of the Power Act of 1980. The principal duties of the Council are: 1) develop a regional power plan, 2) develop a fish and wildlife program, 3) provide for broad public participation in these processes. BPA provides the funding for the Council.

Strategic Objectives

- S7 – Environment, Fish and Wildlife
- I6 – Collaboration
- S9 – Stakeholder Satisfaction
- I5 – Technology Innovation

Key Products and Outputs

- The Council develops a regional power plan and makes funding recommendations to BPA for projects to implement in support of the Fish and Wildlife program.

FY 2012-13 Program Spending Drivers

- The Council will monitor the implementation of the 6th Power Plan including its Action Plan. The Council will also monitor the progress in the implementation of the Fish and Wildlife program designed to protect, mitigate and enhance fish and wildlife affected by the federal hydropower system. Fifty percent of the Council operations program is attributed as a Fish and Wildlife cost with the other 50 percent being attributed as a Power cost.

Long Term Generating Projects

Long-term Generating Projects	2009 Actuals	2010 SOY	2011 WP-10 Rate Case	2011 IPR	2012 IPR	2013 IPR
BILLING CREDITS GENERATION	7,188,458	7,383,219	7,468,899	7,900,000	5,810,000	5,840,000
BUREAU O&M-ELWHA	1,585,000	1,913,000	1,970,000	1,970,000	-	-
CLEARWATER HATCHERY GENERATION	922,500	1,009,572	1,019,668	1,019,668	1,027,825	1,038,104
COWLITZ FALLS O&M	3,539,453	3,291,454	3,239,307	3,301,440	3,123,068	3,169,875
IDAHO FALLS BULB TURBINE	3,672,611	4,789,092	4,789,092	4,789,092	6,198,875	6,198,875
NATIONAL PARK FOUNDATION	1,748,401	-	-	2,300,000	-	-
NEW RESOURCS INTEGRTN WHEELING	870,555	870,555	870,555	870,555	889,000	889,000
WAUNA	9,255,953	11,198,600	11,409,500	10,115,711	10,340,213	10,518,318
Total	**28,782,931**	**30,455,492**	**30,767,021**	**32,266,466**	**27,388,981**	**27,654,172**

Program Description

- This program consists of output contracts for generating resources, such as Cowlitz Falls, Billing Credits Generation, Wauna, Elwah and Glines, 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.
- These expense levels are determined in the rate case process.

Strategic Objectives

- S1– Policy and Regional Actions
- S2 – FCRPS Operations and Expansion
- S3 – Tiered Power Rates
- S7 – Environment, Fish & Wildlife
- S9 – Stakeholder Satisfaction
- I6 – Collaboration

Key Products and Outputs

- Generation from these facilities:
  - *Cowlitz Falls Project:* Operation and maintenance of the Cowlitz Falls Project, the BPA Cowlitz Falls Fish Facility; and maintenance of BPA's stress relief ponds.
  - *WGA (Wauna Project):* Purchase of power generated by the operation of the Wauna paper mill at a price stipulated by a power purchase agreement.

Long Term Generating Projects

Key Products and Outputs (continued):

- Park Service: ~162,696 MWh average annual generation. BPA makes annual payments to the Park Service based on actual generation from the Elwah and Glines plants.
  - *NOTE:* These projects are scheduled to start to be removed during FY 2011, ending generation and operation of the plants, as well as the O&M requirement for the facilities in 2012. Beginning in FY 2012 and thereafter, both the requirement for an O&M program and the payment to the Park Service will cease.

FY 2012-13 Program Spending Drivers

- *Elwah and Glines:* Salaries and benefits, materials and supplies, etc. for operation and maintenance of Elwah and Glines generation facilities.
- *Cowlitz Falls O&M:* Payments to Lewis County PUD for O&M costs at the Cowlitz Falls Dam; payments to WDFW for salaries, benefits, supplies for operation of BPA's Cowlitz Falls Fish Facility; and payments to Tacoma Power for maintenance of BPA's stress relief ponds and fish transportation.
- *WGA (Wauna Project):* Power purchase costs for power generated by the operation of the Wauna paper mill and co-gen plant at a price stipulated by a power purchase agreement.
- *Idaho Falls Bulb Turbine:* A new 10-year contract with Idaho Falls begins October 2011 that establishes new floor and ceiling prices for the output of the bulb turbines.

Non-Generation Operations

Non - Generation Operations	2009 Actuals	2010 SOY	2011 WP-10 Rate Case	2011 IPR	2012 IPR	2013 IPR
CONSERVATION SUPPORT	8,647,189	8,848,903	10,542,500	10,339,196	10,477,905	10,703,225
EXECUTIVE & ADMINISTRATIVE SVC	2,133,515	3,139,198	2,726,655	3,486,615	3,990,566	4,071,513
GENERATION PROJ COORDINATION	5,761,438	8,759,933	7,541,844	5,222,525	6,045,177	6,150,249
INFORMATION TECHNOLOGY	4,834,329	6,296,772	6,281,877	6,438,546	6,568,079	6,724,114
OPERATIONS (SCHEDULING)	8,196,406	9,167,824	9,564,474	10,353,626	10,584,199	10,611,522
OPERATIONS PLANNING	6,160,472	6,066,154	5,874,018	6,453,468	6,989,406	6,990,091
PBL SYSTEM OPERATIONS R&D	171,636	-	-	-	-	-
SALES & SUPPORT	17,453,392	19,460,854	19,324,596	20,387,156	20,978,187	21,515,798
SLICE IMPLEMENTATION	1,872,205	1,858,518	2,448,087	1,904,020	2,492,759	2,580,472
STRATEGY, FINANCE & RISK MGMT	14,248,037	17,892,117	17,342,822	19,579,648	20,781,337	20,804,212
Total	**69,478,619**	**81,490,272**	**81,646,873**	**84,164,800**	**88,907,614**	**90,151,195**

Program Description

- Internal Operations charged to Power Rates consist of the direct costs of managing and operating Power Services (Power Non-Generation Operations) and the Power share of Agency Services, both direct and allocated.
- Organizations that are included in Non-Generation Operations: Power Policy and Rates, Generation Asset Management, NW Requirements Marketing, Bulk Marketing, Fish and Wildlife, Finance, Energy Efficiency, Office of General Counsel, Risk Management, Supply Chain, Customer Support Services, Information Technology, Corporate Strategy, and Aircraft Services

Non-Generation Operations

Strategic Objectives

- S1– Policy and Regional Actions
- S2 – FCRPS Operations and Expansion
- S3 – Tiered Power Rates
- S5 – Energy Efficiency
- S6 – Renewable Energy
- S7 – Environment, Fish & Wildlife
- S8 – Climate Change
- S9 – Stakeholder Satisfaction
- I1 – Systems and Processes
- I2 – One BPA
- I4 – Asset Management
- I6 – Collaboration
- I7 – Risk-Informed

Key Products and Outputs

- Completion of the rate case; Tiered Rates implementation; Regional Dialogue and REV implementation; ongoing oversight and management of O&M for CGS, Corps, and Reclamation; implementation of the resource program; ongoing management of the Residential Exchange Program; energy efficiency programs and services; Wind Integration Team efforts; and BiOp implementation.

FY 2012-13 Program Spending Drivers

- BPA and contractor staffing costs, travel, training, consultant contracts, building leases, IT services and other related costs. These costs include Power business unit costs (including Energy Efficiency and Fish and Wildlife) as well as Agency Services costs, both direct and allocated.

Non-Operating Generation

Non-Operating Generation	2009 Actuals	2010 SOY	2011 WP-10 Rate Case	2011 IPR	2012 IPR	2013 IPR
TROJAN O&M	(1,304,296)	2,200,000	2,300,000	1,700,000	1,500,000	1,500,000
WNP-1,3&4 O&M	549,856	418,000	428,000	428,000	438,000	448,000
Total	**(754,440)**	**2,618,000**	**2,728,000**	**2,128,000**	**1,938,000**	**1,948,000**

Program Description

- BPA is responsible for EWEB's 30% share of the Trojan Nuclear Plant costs. Trojan was terminated in 1993. Demolition and decontamination of the site were completed in PGE FY 2008. These forecasts are for operating and maintaining the on-site spent fuel storage facility (ISFSI) and maintaining the remaining Trojan facilities.
- BPA is responsible for WNP-1 and WNP-4 site costs. WNP-1 was terminated in 1994. BPA agreed to fund WNP-4 restoration costs in 1996. This funding is supporting activities at the WNP-1/4 site that focus on minimal maintenance, economic development and reuse of the site.

Strategic Objectives

- S2 – FCRPS Operations and Expansion

Key Products and Outputs

- Trojan - Operate ISFSI and maintain site
- WNP-1/4 - Maintain site and support site economic development to achieve reuse

FY 2012-13 Program Spending Drivers

- Trojan – The program spending driver for Trojan is maintaining and operating the ISFSI.
- WNP-1/4 – The program spending drivers for WNP-1/4 are site maintenance and economic development to achieve reuse.

Colville Generation Settlement

Operating Generation Settlement Payments	2009 Actuals	2010 SOY	2011 WP-10 Rate Case	2011 IPR	2012 IPR	2013 IPR
COLVILLE GENERATION SETTLEMENT	18,169,699	21,327,665	21,754,219	21,754,219	21,928,253	22,147,535
Total	**18,169,699**	**21,327,665**	**21,754,219**	**21,754,219**	**21,928,253**	**22,147,535**

Program Description

- On April 24, 1994, the Confederated Tribes of the Colville Reservation and the United States of America entered into a Settlement Agreement, resulting in an annual payment amount to the Colville Tribes, for their share of revenue from the Grand Coulee project. The first payment, covering BPA fiscal year 1995, was in the amount of $15.25 million, paid by BPA to the Tribe no later than March 1, 1996. Not later than March 1 of each succeeding year, BPA pays to the Tribe for the preceding BPA fiscal year, a sum computed per the calculation outlined in the Settlement Agreement. The calculation is based on inputs from BPA power sales revenue and MWh, the Consumer Price Index (CPI), and the Grand Coulee Net Generation amounts.

Strategic Objectives

- S1 – Policy and Regional Actions
- S3 – Tiered Power Rates
- S9 – Stakeholder Satisfaction
- I6 – Collaboration

Key Products and Outputs

- Calculation and payment of the annual amounts paid to the Confederated Tribes of the Colville Reservation. The estimated payment amounts are included in this program.

FY 2012-13 Program Spending Drivers

- The calculation is based on inputs from BPA power sales revenue and MWh, the Consumer Price Index (CPI), and the Grand Coulee Net Generation amounts, as required and specified in the Settlement Agreement.

Power Services Transmission Acquisition & Ancillary Services

Power Services Transmission Acquisition and Ancillary Services	2009 Actuals	2010 SOY	2011 WP-10 Rate Case	2011 IPR	2012 IPR	2013 IPR
3RD PARTY GTA WHEELING	41,341,462	50,690,000	51,340,000	54,780,000	52,263,000	52,891,000
3RD PARTY TRANS & ANCILLRY SVC	1,845,884	1,000,000	1,000,000	2,017,200	2,221,320	2,243,533
GENERATION INTEGRATION	6,527,811	6,800,000	6,800,000	8,295,636	8,362,001	8,445,621
PBL- TRANS & ANCILLARY SVCS	108,074,162	119,177,000	107,901,000	113,335,000	110,443,000	108,686,000
TELEMETERING/EQUIP REPLACEMENT	12,778	50,000	50,000	50,000	50,400	50,904
Total	**157,802,096**	**177,717,000**	**167,091,000**	**178,477,836**	**173,339,721**	**172,317,058**

Program Description

- Generally, this category represents costs associated with services necessary to deliver energy from resources to markets and loads: transmission, ancillary services, real power losses.
- Transfer Services represents costs associated with the transmission of federal power over third party systems (see 3rd Party GTA Wheeling).

Strategic Objectives

- F2 – Cost Recovery
- S1– Policy and Regional Actions
- S3 – Tiered Power Rates
- S9 – Stakeholder Satisfaction
- I2 – One BPA
- I3 – Governance and Internal Controls
- I6 – Collaboration

Key Products and Outputs

- Through effective acquisition, utilization and remarketing of transmission services the average cost per MWh of energy transmitted is within a target range

FY 2012-13 Program Spending Drivers

- Transmission Acquisition: inventory management and our transmission strategy for changes in transmission landscape
- Transfer Services: transmission services, study costs, rate case participation (FERC)

Renewable Resources

Renewable Resources	2009 Actuals	2010 SOY	2011 WP-10 Rate Case	2011 IPR	2012 IPR	2013 IPR
RENEWABLE CONSRVTN RATE CRDT	6,322,572	4,000,000	2,500,000	2,500,000	-	-
RENEWABLES	31,080,399	35,413,410	36,004,919	37,258,267	37,669,778	38,141,097
RENEWABLES R&D	840,008	1,664,963	6,132,945	5,039,948	6,642,045	6,960,264
Total	**38,242,980**	**41,078,373**	**44,637,864**	**44,798,215**	**44,311,823**	**45,101,361**

Program Description

- BPA's Policy goal for renewable resources is to ensure the development of its share of all cost-effective regional renewable resources forecasted in the 6th Power Plan 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 preference customers, acquired by preference customers with our without assistance from BPA, counts toward this goal**.**

Strategic Objectives

- S6 – Renewable Energy
- I5 - Technology Innovation
- I6 – Collaboration
- S3 – Tiered Power Rates
- S1 – Policy and Regional Actions

Key Products and Outputs

- BPA supports renewable energy development by purchasing 65 aMW (248 MW) from seven wind projects.

FY 2012-13 Program Spending Drivers

- Renewable energy power purchases from seven wind projects are approximately $33 million per year. The Fourmile Hill Geothermal project is not expected to begin power deliveries in FY 2018, and its expenses are not included.
- Beginning in FY 2012, BPA will not reinvest Green Energy Premium revenues associated with the sale of Renewable Energy Certificates (REC) to customers with Environmentally-Preferred Power (EPP) options extending through 2016.

Renewable Resources

FY 2012-13 Program Spending Drivers (continued)

- $4 million per year for Resource Development which may include resource studies, generation options, generation input purchases, or resource purchases prior to inclusion in next rate case.
- Support costs cover on-going solar and wind data collection, memberships, publications, and other support services are forecast to be about $700,000 per year.
- The Renewables Rate Credit Program was ramped down in FY 2010 and FY 2011 based on customer input during Integrated Program Review 2 (IPR2) with the intention of eliminating the program in FY 2012.
- Renewables Facilitation is discontinued.
- The Wind Integration Team (WIT) funding of $2 million per year from Renewables Facilitation will end in FY 2011. Power Services' expenses for the WIT will be funded by surplus Green Energy Premiums in FY 2012 and FY 2013.
- The Renewables program will no longer budget for reinvestment of Green Energy Premiums in renewables research, development and demonstration (R,D&D). The Green Energy Premiums reinvestment in renewables R,D&D will be carried out through Technology Innovation, the WIT, and a pumped storage project.
    - Technology Innovation is funded half by Power Services and half by Transmission Services.

Residential Exchange

Residential Exchange	2009 Actuals	2010 SOY	2011 WP-10 Rate Case	2011 IPR	2012 IPR	2013 IPR
RESIDENTIAL EXCHANGE PROGRAM	205,171,454	264,528,233	270,087,000	268,647,000	268,647,000	268,647,000
Total	**205,171,454**	**264,528,233**	**270,087,000**	**268,647,000**	**268,647,000**	**268,647,000**

Notes: The 2009 actuals of $205.17 million does not include the Lookback amount of $77.49 million. The 2010 SOY of $264.53 million includes the Lookback amount of $82.08 million. The Lookback amount of $81.07 million is used for 2011 WP-10 Rate Case and assumed for all IPR forecasts.

Program Description

- The Residential Exchange Program (REP) was established in Section 5(c) of the Northwest Power Act of 1980. The goal of the program has been to provide rate relief to Northwest residential and small-farm customers served by high-cost investor & consumer-owned utilities. Under the REP, BPA "purchases" power from each participating utility at that utility's Average System Cost (ASC). The Administrator then offers, in exchange, to "sell" an equivalent amount of electric power to the utility at BPA's PF Exchange rate. The amount of power purchased and sold is the qualifying residential and small farm load of each utility participating in the REP. These benefits are passed on to the residential and small farm customers of the utility.

Strategic Objectives

- S1 – Policy and Regional Actions
- S3 – Tiered Power Rates
- S9 – Stakeholder Satisfaction
- I6 – Collaboration

Key Products and Outputs

- Work with participating utilities to review and determine average system costs, pay out REP benefits/monies, and implement ASC methodologies. Also, REP staff facilitates the review of each utility's records and accounts to ensure the pass-through of REP benefits to residential and small farm customers.

FY 2012-13 Program Spending Drivers

- The total amount of REP benefits for FY 2012-13 will be determined following the final determination of each exchanging utility's ASC and the integration of final ASCs into the FY 2012-13 Wholesale Power Rate Case.

Power Capital Programs

Power Capital - Corps of Engineers & Bureau of Reclamation

Capital - Corps & Bureau	2009 Actuals	2010 SOY	2011 WP-10 Rate Case	2011 IPR	2012 IPR	2013 IPR
BUREAU OF RECLAMATION	34,957,327	78,653,000	103,712,000	83,670,280	105,347,925	65,637,290
CORPS OF ENGINEERS	104,595,018	106,347,000	97,288,000	116,625,720	140,921,075	197,664,710
Total	**139,552,345**	**185,000,000**	**201,000,000**	**200,296,000**	**246,269,000**	**263,302,000**

Program Description

- This program is driven by BPA's strategy to insure that the Federal hydro projects continue to perform and meet "availability, adequacy, reliability and cost-effectiveness standards." BPA works in partnership with the U.S. Army Corps of Engineers and the Bureau of Reclamation to ensure implementation of all regionally cost-effective system asset replacements, refurbishments and enhancements to Federal hydro projects. BPA provides funds directly to these agencies for all power generation-related investments and the power allocated share of critical multipurpose, joint investments.

Strategic Objectives

- F1 – Capital Access
- F2 – Cost Recovery
- S1– Policy and Regional Actions
- S2 – FCRPS Operations and Expansion
- S3 – Tiered Power Rates
- S9 – Stakeholder Satisfaction
- I4 – Asset Management
- I6 – Collaboration

Key Products and Outputs

- The Hydro Capital Investment Program provides funding directly to the Corps and Reclamation through signing of subagreements to continue improving generation units performance by replacing or refurbishing equipment that is old, is deteriorating, is reaching an unacceptable level of risk for failing, or has failed in service. In addition to these reliability replacements, the program invests in turbine runner replacements to obtain incremental turbine unit efficiency improvements and in other upgrades that enhance overall generation efficiency.

Power Capital - Corps of Engineers & Bureau of Reclamation

Key Products and Outputs (continued)

- Currently, runner replacements are concluding at Grand Coulee Dam, which has increased energy production by 41 aMW and the first of ten runners is scheduled for installation at Chief Joseph Dam, which will result in an estimated increase of 44 aMW. Finally, the program makes investments in the power portion of joint allocated features of the system that indirectly supports electrical generation, or allows for generation to occur. The program is continually identifying new investments that are needed, assessing their criticality and timing to the system, planning and scheduling expenditures, and otherwise developing new reliability replacements or generation efficiency enhancements for implementation in later years.

FY 2012-13 Program Spending Drivers

- The Federal Hydro Projects Capital Investment Program for the Corps and Reclamation in FY 2012 has a proposed $37,784,000 increase from the previous IPR. Likewise, the FY 2013 program has a proposed increase of $40,724,000. Similar increases occur for FY 2014 and FY 2015. All of these increases stem from the analyses contained in the 2012 FCRPS Hydro Asset Strategy. This strategy documented the condition of all hydro generation equipment assets, determined the risks associated with lost generation and direct replacement costs for this equipment, performed economic evaluations to determine when equipment replacements should occur in order to minimize life cycle costs and examined the long-term needs of the system to properly size the near-term proposed program levels in order to achieve a stable program for many years beyond this initial period. The overall level of investment for the period 2011-2017 is consistent with the Agency's asset management strategic objective "to invest in, maintain, and operate assets to: 1) meet reliability standards, availability requirements, regional adequacy guidelines, efficiency needs, environmental requirements, safety and security standards, and other requirements; and 2) minimize the life cycle costs of assets when practical." These proposed program levels will provide two other important benefits: 1) they will allow our generation partners to appropriately staff and resource a program of reliability replacements for the long-term; and 2) will notify commercial vendors and contractors of our long-term commitment to a sustained program of asset replacement and modernization.

Power Capital - Corps of Engineers & Bureau of Reclamation

Capital - Corps & Bureau	2013 IPR	2014 IPR	2015 IPR	2016 IPR	2017 IPR
BUREAU OF RECLAMATION	65,637,290	53,944,300	61,303,305	49,599,525	57,277,035
CORPS OF ENGINEERS	197,664,710	212,673,700	212,576,695	227,702,475	235,526,965
Total	**263,302,000**	**266,618,000**	**273,880,000**	**277,302,000**	**292,804,000**

Potential Risk

- There are two possible risks that could arise in the context of the FY 2012-13 base program level - 1) an unplanned failure within the system that requires a significant investment to begin the recovery effort, which cannot be accommodated within the current program level without displacing planned activities or requesting a higher base program level; or 2) investment funds are programmed for expenditure in these fiscal years but due to a variety of reasons, the actual end-of-year expenditure is less than the planned amount. There is little to no mitigation tool for the first risk. However, for the second risk, two mitigation tools can be employed, namely over-programming (or planning to expend more than the base program level), so that by year's end the entire program level is spent; or 2) if the "under-run" occurs in the first year of the two-year rate period, unexpended funds can be rolled over for use in the second year of this rate period.

FY 2014-2017 Drivers of Proposed Spending Forecast

- The drivers for program investment in subsequent years remain the same as those for the upcoming rate period. The need to maintain the system through capital investment persists for indefinite future since the generation equipment continues to age and the risk of failure increases. One possible addition to the scope of the program is the assessment and development of energy storage resources to assist in renewable resource integration for system/area balancing.

Power Capital - Conservation

Capital - Conservation Acquisition	2009 Actuals	2010 SOY	2011 WP-10 Rate Case	2011 IPR	2012 IPR	2013 IPR
CONSERVATION ACQUISITION	16,594,456	15,000,000	47,000,000	47,000,000	124,000,000	132,000,000
Total	**16,594,456**	**15,000,000**	**47,000,000**	**47,000,000**	**124,000,000**	**132,000,000**

Note: Beginning in FY 2012, the Conservation Acquisition program includes a shift of $30 million from the expense program for the Conservation Rate Credit (CRC) line item.

Program Description

- When acquiring resources to meet planned future loads, the Northwest Power Act requires the Administrator to first consider and acquire cost-effective conservation consistent with the Northwest Power and Conservation Council's (Council) Power Plan. In its 6th Power Plan, completed February 2010, the Council identified enough cost-effective conservation to meet 85% of the region's long-term load growth and calls for the region to acquire 1,200 aMW of efficiency over the next five years.
- Through BPA's energy efficiency program, the Agency, in collaboration with its customers, works to achieve the public power share of the Council's target (504 aMW).
- To meet this aggressive target, BPA will capture non-programmatic savings (i.e., codes and standards, non-BPA ARRA funding, etc.), support market transformation through the Northwest Energy Efficiency Alliance (NEEA), and undertake the full range of activities needed to design, market, support, implement and evaluate conservation measures. BPA will also support utility and third party programs that implement conservation measures in homes, on farms, and at commercial, industrial and governmental facilities throughout the region.
- These long-term investments in energy efficiency will have several benefits. Conservation helps buffer the Federal Columbia River Power System (FCRPS) against future resource uncertainties. During periods of price volatility, conservation helps reduce financial risk associated with relying on the market for future energy purchases. BPA's conservation acquisition activities also support climate change initiatives, reduce the need to build new high cost generating resources, help control power costs to rate payers, and support the region's economy.

Power Capital - Conservation

Strategic Objectives

- S5 – Energy Efficiency
- S3 – Tiered Power Rates
- S8 – Climate Change
- S9 – Stakeholder Satisfaction

Key Products and Outputs

- The Conservation Acquisition capital program will be used in conjunction with BPA's expense program and utility self-funding to achieve the public power share of all cost effective conservation in BPA's service area as defined by the Council's 6th Power Plan.
- Specifically, the FY 2012 and FY 2013 proposed capital program levels support utility and direct acquisition programs that are expected to yield an annual average of ~54 aMW, or 75% of the public power objective (excluding non-programmatic savings and market transformation which are expense funded).
- This program level does not speak to the mechanisms through which BPA would provide funding to utility and direct acquisition programs. A funding mechanism will be available to reimburse customers for the acquisition of cost effective energy efficiency. This funding mechanism will be determined during Phase 2 of the Post-2011 public process.

Power Capital - Conservation

FY 2012-13 Program Spending Drivers

- In its 6th Power Plan, completed February 2010, the Council calls for the region to acquire 1,200 aMW of conservation over five years (2010-2014). The public power share of this target (504 aMW) represents a significant increase from conservation acquired under the 5th Power Plan (310 aMW).
- Due to anticipated changes in federal lighting standards, compact fluorescent lamps (CFLs), which were the largest single contributor to past savings, will not count towards the target beginning in 2012.
- To achieve higher targets without CFLs, BPA will maintain higher incentive rates and provide the third party support necessary to increase market penetration from existing measures. As market penetration rates are reached, BPA also anticipates that it will also need to acquire more conservation from higher cost measures (E.g., HVAC, weatherization, and ductless heat pumps).
- To reach the penetration rates needed from existing measures and implement the broader mix of measures required to achieve the targets in the Council's 6th Power Plan, BPA forecasts that its cost/aMW will increase to a two-year average of ~$2.4 million/aMW.

Power Capital - Conservation

Capital - Conservation Acquisition	2013 IPR	2014 IPR	2015 IPR	2016 IPR	2017 IPR
CONSERVATION ACQUISITION	132,000,000	140,000,000	145,000,000	180,000,000	190,000,000
Total	**132,000,000**	**140,000,000**	**145,000,000**	**180,000,000**	**190,000,000**

Note: Beginning in FY 2012, the Conservation Acquisition program includes a shift of $30 million from the expense program for the Conservation Rate Credit (CRC) line item.

FY 2014-2017 Program Drivers

- **Increasing Targets:**
  - ***FY 2014 –*** In the final year of the 6th Power Plan, BPA, in collaboration with its public utility customers, will need to acquire approximately 75aMW to achieve the Plan's 5-year targets. BPA's FY 2014 capital program reflects funding to acquire approximately 56aMW or 75% of that conservation (excluding non-programmatic savings and market transformation which are expense funded).
  - ***FY 2015-17 –*** To achieve 85% of regional load growth through conservation over the next 20 years, the 7th Power Plan (FY 2015-19) is likely to include even higher conservation targets.
- **Cost of Measures:**
  - ***FY 2014 –*** With the phase out of low-cost CFLs, BPA expects that it will cost about $2.5 million/aMW to implement the mix of measures needed to achieve the targets in FY 2014.
  - ***FY 2015-17 –*** Due to uncertainty about the mix of cost-effective measures that will be ready for implementation under the 7th Power Plan, these proposed program levels reflect an assumption that the cost/aMW will remain constant. BPA will re-examine this assumption in the next IPR process.

Power Capital – Fish & Wildlife

Capital - Fish & Wildlife	2009 Actuals	2010 SOY	2011 WP-10 Rate Case	2011 IPR	2012 IPR	2013 IPR
F&W CAPITAL IT PROJECTS	1,450,876	-	-	-	-	-
F&W CAPITAL-HATCHERY	4,883,255	43,603,506	33,496,716	21,424,930	15,832,175	15,715,359
F&W CAPITAL-LAND	14,574,830	21,050,115	21,051,690	21,051,690	21,220,479	21,433,018
F&W CAPITAL-PASSAGE/OTHER	7,954,278	5,346,379	5,451,594	17,523,380	12,947,346	12,851,623
Total	**28,863,239**	**70,000,000**	**60,000,000**	**60,000,000**	**50,000,000**	**50,000,000**

Program Description

- BPA's Integrated Fish and Wildlife Program implements projects that meet BPA's fish and wildlife mitigation objectives under the Northwest Power Act, consistent with the Program adopted by the Northwest Power and Conservation Council, as well as BPA's Endangered Species Act (ESA) offsite fish and wildlife requirements under biological opinions from the U.S. Fish and Wildlife Service and National Oceanic and Atmospheric Administration (NOAA Fisheries), and the commitments encompassed within the Columbia Basin Fish Accords.

Strategic Objectives

- S7 – Environment, Fish and Wildlife
- I6 – Collaboration
- S9 – Stakeholder Satisfaction
- I5 – Technology Innovation

Power Capital – Fish & Wildlife

Key Products and Outputs

- BPA meets its Power Act and ESA objectives in the Fish and Wildlife Program primarily through the negotiation and award of contracts to state, federal, and tribal entities. These contracts implement projects that meet BPA's objectives in the following categories: habitat improvement, hatcheries, harvest, research monitoring and evaluation, and hydro operations. Project outcomes are credited and accounted for as contributions toward the recovery and mitigation obligations of BPA.
- The Fish and Wildlife Program is carried out in partnership with the Power Council, with the Council developing and updating the Program and making funding recommendations to BPA for projects to implement in support of the program.

FY 2012-13 Program Spending Drivers

- Fish and Wildlife Program (aka Integrated Program): measures addressed to the recovery of Columbia River fish listed as threatened or endangered under the Endangered Species Act (ESA) and to the mitigation of impacts to fish and wildlife from the development and operation of the FCRPS under the Northwest Power Act. The program focuses on three primary capital components: major construction, such as hatcheries, passage improvement, and land acquisitions.
- The major driver behind the FY 2012-13 proposed capital level is the base program of land acquisitions and tributary fish passage improvements as well as major construction activities for several large capital projects, such as the Chief Joseph Hatchery, that have shifted out of FY 2009-10 timeframe and into the FY 2012-13 rate period, due to permitting, reviews and final decisions taking longer than anticipated in the IPR process leading up to the FY 2010-11 rate case.

Power Capital – Fish & Wildlife

Capital - Fish & Wildlife	2013 IPR	2014 IPR	2015 IPR	2016 IPR	2017 IPR
F&W CAPITAL IT PROJECTS	-	-	-	-	-
F&W CAPITAL-HATCHERY	15,715,359	15,609,145	15,501,974	15,405,818	15,284,727
F&W CAPITAL-LAND	21,433,018	21,626,283	21,821,294	21,996,278	22,216,606
F&W CAPITAL-PASSAGE/OTHER	12,851,623	12,764,572	12,676,732	12,597,904	12,498,667
Total	**50,000,000**	**50,000,000**	**50,000,000**	**50,000,000**	**50,000,000**

FY 2014-17 Program Spending Drivers

- The major drivers behind the FY 2014-17 proposed capital levels continue to be the base program of land acquisitions, tributary fish passage improvements and major construction activities associated with hatcheries.

Power Capital - IT

Capital - Power Information Technology	2009 Actuals	2010 SOY	2011 WP-10 Rate Case	2011 IPR	2012 IPR	2013 IPR
Capital - Power Information Technology	(3,917)	3,000,000	-	8,330,000	6,630,000	6,800,000
Total	**(3,917)**	**3,000,000**	**-**	**8,330,000**	**6,630,000**	**6,800,000**

Note: Power IT capital not included in Power prior to FY 2010 and therefore does not appear in the WP-10 rate case column.

Program Description

- Information Technology (IT) Capital Work Plan develops and implements agency wide business automation systems (non-Grid Ops). This includes the infrastructure to run and operate these systems. The current Capital Work Plan allocation is 15% Transmission, 17% Power, 68% Corporate and consists of 48 projects.

Strategic Objectives

- S1 – Policy and Regional Actions
- S3 – Tiered Power Rates
- S9 – Stakeholder Satisfaction
- I1 – Systems and Processes
- I2 – One BPA
- I6 – Collaboration

Key Products and Outputs

- Currently the IT Capital Work Plan is projected to complete 18 projects in FY2011, delivering 11 new systems into production. The power systems that will be supported include:
- Regional Dialogue Program - nine projects to ensure BPA can support 20-year power contracts. Projects include a scheduling system, loads obligation and resource analyzer, load forecasting system, revenue forecasting system, and a contracts management system.
- RODS Replacement - Replaces the legacy RODS system with a modern distributed automation system serving Power and Transmission.

Power Capital - IT

FY 2012-13 Program Spending Drivers

- Automatic solutions are needed to enable the Agency to meet its strategic business objectives.
- The need to maintain reliability by replacing aging systems.

Capital - Power Information Technology	2013 IPR	2014 IPR	2015 IPR	2016 IPR	2017 IPR
Capital - Power Information Technology	6,800,000	6,970,000	7,140,001	7,310,000	7,479,999
Total	**6,800,000**	**6,970,000**	**7,140,001**	**7,310,000**	**7,479,999**

FY 2014-17 Program Spending Drivers

- Continued need for automatic solutions that enable the Agency to meet its strategic business objectives.
- Continued need to maintain reliability by replacing aging systems.

Appendix 2 – Transmission Program Details

Transmission Expense Programs

Transmission System Operations

Transmission System Operations	2009 Actuals	2010 SOY	2011 TR-10 Rate Case	2011 IPR	2012 IPR	2013 IPR
CONTROL CENTER SUPPORT	11,400,420	12,019,884	13,541,472	13,746,000	14,137,179	14,554,493
INFORMATION TECHNOLOGY	4,572,020	7,932,582	6,761,202	6,638,546	6,773,896	6,936,123
POWER SYSTEM DISPATCHING	11,138,057	11,434,178	11,863,794	12,000,000	12,399,838	12,816,798
SUBSTATION OPERATIONS	19,167,809	19,905,262	19,205,532	20,526,054	21,171,176	21,849,019
TECHNICAL OPERATIONS	5,241,705	10,975,048	6,096,454	8,211,600	8,435,963	8,675,531
Total	**51,520,012**	**62,266,954**	**57,468,455**	**61,122,200**	**62,918,052**	**64,831,964**

Program Description

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

Strategic Objectives

- S2 - FCRPS Operations & Expansion, S8 - Climate Change, S6- Renewable Energy

Key Products and Outputs

- Many of the programs are heavily involved in providing technical expertise in support of NERC mandatory reliability standard and federal cyber security standards.
- Power System Dispatching- Provides dispatching, control, and monitoring of the electric operation of the Federal transmission system, including load, frequency and voltage control of Federal generating plants to ensure a safe and reliable system.
  - Monitors power system conditions and takes proactive actions to ensure a safe and reliable system.
  - Manages generation load balance
  - Responsible for voltage control and control of power system stability tools (e.g. Remedial Action Schemes (RAS))
  - Manages outages in real-time coordinating switching activity with field crews to support construction, maintenance and repair of facilities
  - Coordinates BPA operations with interconnected utilities
  - Determines priorities and provides direction for emergency restoration activities
  - Provides long and short term outage coordination including responsibility for the NWPP 45 day outage planning process
  - Provides training to ensure NERC Operator certification requirements are met

Transmission System Operations

Key Products and Outputs (continued)

- Technical operations
  - Operational engineering support for real-time operations – completing operational studies in support of dispatch, development and maintenance of standards, guides and procedures supporting real-time operations (e.g. Dispatching Standing Orders, etc.), coordination and power system analysis support for outage scenarios, engineering oversight for Automatic Generation Control (AGC), Remedial Action Schemes (RAS), under frequency and under voltage load shedding, variable energy resources, e.g. wind, maintaining engineering line ratings to support operational studies.
  - Management of power system operational data to support internal analysis, regulatory reporting and external requests
  - Transmission Emergency Management - planning, maintaining and exercising Transmission Service's emergency response capabilities
  - Transmission Reliability Program – programmatic responsibility for North American Electric Reliability Corporation (NERC)
  - Reliability standards including strategic direction and policy development; manages and coordinates responses to NERC/WECC standards development process requests, etc.; responsible for external coordination and supports agency reliability objectives.
- Control Center Support – Planning, engineering, design, construction and operation and maintenance support for automation used by Power System Dispatchers to operate and control the transmission grid, e.g. energy management systems such as Supervisory Control and Data Acquisition (SCADA), AGC, etc. Also includes support for:
  - Infrastructure – engine generators/HVAC, access control, network, hardware (e.g. servers, workstations, data acquisition devices), operating and application software.
  - Provides for 24X7 monitoring of Control Center automation as well as system wide communications network
- Substation Operations
  - Field Operations – Station inspections, switch orders, switching, first response, emergency response, and outage planning.
  - Develops policies, procedures and standards for Substations Operations, responsible for maintenance of BPA's Switching and Clearance procedures, management of access to energized facilities and maintenance of the Operations Technical Manual. Provides leadership and support for the Substations Operations Apprentice Craft Committee.
- Information Technology –costs dedicated 100% in support of Transmission IT projects and Agency Services IT costs allocated to Transmission via G&A allocations.

Transmission System Operations

FY 2012-13 Program Spending Drivers

- **FY 2011 IPR Proposed changes as compared to FY2011 rate case:**
  - **Substation Operations +$1.3 million**
    - Negotiated hourly wage increase
    - Decrease in lapse of field operation positions
  - **Technical Operations +$2.1 million**
    - Operational support for wind
    - Operational management of new flowgates as a result of new ATC methodology
    - Completing core workload - RAS, outage analysis, study workload, support of commercial activity - business practices, etc.
    - Support of WECC disturbance analysis and line rating workload reflects actual costs
    - Shift of emergency management personnel from Security Enhancement program

- **FY 2012-13 IPR Changes:**
  - FY 2011 IPR changes carry forward into 2012 and 2013 with only an adjustment for inflation.

Transmission Scheduling

Transmission Scheduling	2009 Actuals	2010 SOY	2011 TR-10 Rate Case	2011 IPR	2012 IPR	2013 IPR
SCHED-AFTER-THE-FACT	310,352	48,351	447,393	447,393	456,016	465,067
SCHED-MANAGE SPRVISION & ADMIN	237,381	-	734,000	-	-	-
SCHED-PRE-SCHEDULING	261,283	105,060	470,382	470,382	479,570	489,195
SCHED-REAL-TIME SCHEDULING	3,491,829	5,218,964	5,027,654	5,027,654	5,117,608	5,213,070
SCHED-RESERVATIONS	789,943	1,267,593	1,073,546	1,073,546	1,094,288	1,116,052
SCHED-TECHNICAL SUPPORT	1,564,134	2,501,186	2,368,651	5,599,502	5,674,361	5,758,541
Total	**6,654,922**	**9,141,153**	**10,121,626**	**12,618,478**	**12,821,843**	**13,041,925**

Program Description

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

Strategic Objectives

S1 - Policy & Regional Actions, S4 - Transmission Access & Rates, P1 – Performance, I1 - Systems & Processes

Key Products and Outputs

- Scheduling After-The-Fact - Verify net scheduled and net actual interchange, and investigate and resolve discrepancies.
- Pre-Scheduling - Sales/scheduling of transmission for next day(s) operations per the WECC Pre-schedule timeline.
- Real-Time Scheduling - Sales/scheduling of transmission services for next hour delivery; curtail schedules in-hour as system conditions require
- Reservations - Analysis to determine whether specific transmission requests can be granted subject to requirements of the Tariff and FERC orders, runs the market competitions, assists customers with questions about their transmission requests and operation of OASIS.
- Scheduling Technical Support - Technical analysis, manages work requests, develop documentation to support the Real-Time and Pre-schedule functions.

Transmission Scheduling

FY 2012-13 Program Spending Drivers

- **FY 2011 IPR Proposed changes as compared to FY2011 rate case:**
  - **Scheduling Technical Support +$3.2 million**
    - Commercial business support for wind - reps on wind policy and business practices committees. Support for automation of wind operations.
    - Commercial wind IT operations, shift from the marketing program

- **FY 2012-13 IPR Changes:**
  - FY2011 IPR changes carry forward into 2012 and 2013 with only an adjustment for inflation.

Transmission Marketing

Transmission Marketing	2009 Actuals	2010 SOY	2011 TR-10 Rate Case	2011 IPR	2012 IPR	2013 IPR
MARKETING IT SUPPORT	22,171	-	2,112,150	-	-	-
MKTG BUSINESS STRAT & ASSESS	5,345,690	6,639,814	7,006,597	6,863,173	7,105,219	7,230,923
MKTG CONTRACT MANAGEMENT	3,556,413	4,963,603	4,905,281	4,394,453	4,510,232	4,603,949
MKTG TRANSMISSION BILLING	2,698,102	2,591,673	2,308,852	2,548,263	2,622,902	2,678,722
MKTG TRANSMISSION FINANCE	398,238	289,450	301,699	299,386	306,392	313,561
MKTG TRANSMISSION SALES	2,297,537	3,054,900	3,261,010	3,261,010	3,318,770	3,380,162
Total	**14,318,150**	**17,539,441**	**19,895,588**	**17,366,285**	**17,863,515**	**18,207,317**

Program Description

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

Strategic Objectives

S1 - Policy & Regional Actions, S4 - Transmission Access & Rates, I1 - Systems & Processes, P1 - Performance

Key Products and Outputs

- Marketing Business Strategy & Assessment - Transmission business policy, assessments, rate case support, and commercial infrastructure.
- Marketing Contract Management - Analysis and support to Transmission sales to establish, update, or renew transmission contracts.
- Marketing Transmission Finance - Budgeting, accounting, and finance support to Transmission Marketing.
- Transmission Sales- Primarily responsible for customer relationships. Establish, update, or renew transmission contracts, and explain changes in business practices or procedures.

Transmission Marketing

Drivers of Change:

- Implementation of Network Integration Service (NITS) OASIS
- Increased requirements of additional NERC ATC Standards
- Increased concerns regarding reliability to the Federal System based on additional wind
- Assess and Implement Intertie Open Seasons

FY 2012-13 Program Spending Drivers

- FY 2011 IPR Changes as compared to FY 2011 Rate Case:
  - **Marketing Program, -$3.4 million**
    - Business Strategy & Assessment, Marketing IT Support, and Management and Supervision shifted to Technical Support within Scheduling Program

FY 2012-13 IPR Changes:

- FY 2011 IPR changes carry forward into 2012 and 2013 with only an adjustment for inflation.

Transmission Business Support

Transmission Business Support	2009 Actuals	2010 SOY	2011 TR-10 Rate Case	2011 IPR	2012 IPR	2013 IPR
AIRCRAFT SERVICES	921,283	2,102,084	1,203,471	2,318,036	2,378,897	2,444,578
EXECUTIVE & ADMIN SERVICES	9,310,545	11,691,392	7,871,014	12,904,998	18,241,611	18,601,352
GENERAL ADMINISTRATIVE	6,452,872	9,113,721	14,864,799	10,581,397	13,052,128	13,337,294
LEGAL SUPPORT - EXPENSE	2,401,088	3,116,774	3,026,654	3,364,189	3,186,933	3,429,120
LOGISTICS SERVICES	3,756,348	9,882,993	6,840,930	5,739,031	5,907,829	6,061,368
SECURITY ENHANCEMENTS EXPENSE	3,185,952	522,000	1,429,256	956,000	977,532	1,001,313
Total	**26,028,088**	**36,428,965**	**35,236,123**	**35,863,651**	**43,744,930**	**44,875,025**

Program Description

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

Strategic Objectives

I4 - Asset Management, I7 - Risk Informed Decision Making and Transparency, S1 - Policy and Regional Action, I1 - Systems and Processes

Key Products and Outputs

- **Executive and Administrative Services**
  - Transmission Services Management including VP's and managers' labor, outplacement training, employee reimbursements for flu shots, etc. Includes student tuition assistance and travel
- **Aircraft Services**
  - Provides aviation support to insure the reliability of the power system. Consists of two fixed wing aircraft, flight crew, mechanics and dispatchers. Transports employees to support the power system.
- **General Administrative**
  - Represents the support of the Transmission Services, including training, awards, efficiency projects, balance scorecard/business strategy and asset management not specific to another program.
- **Legal Support - Expense**
  - Represents direct legal support for transmission issues, including contracting, right-of-way, etc.

Transmission Business Support

Key Products and Outputs (continued)

- **Logistics Services**
  - Materials Handling and Transportation Services, including traffic management, transportation, material handling, shipping, parts pickup, small freight and mail
  - Materials Management, including materials and supply purchasing strategy coordination, materials and supply purchasing, stock and direct inventory management, spare parts inventory management, system/order processing, receiving inspection, capital construction material coordination
  - Construction/Services and Field Purchasing, including construction and services purchasing strategy coordination, professional/non-professional services contracting and construction contracting
  - Asset Utilization, including program property management, Tools and Equipment Acquisition Program (TEAP) coordination, and equipment loan pools
  - Process Management, including continual process improvement of the overall logistics services processes, evaluation and coordination of cross-agency processes in inventory management, purchasing and asset utilization
- **Security Enhancements**
  - Costs associated with regular maintenance, minor additions, and inspection of physical security measures such as fences, gates, monitors, and special locks.

Transmission Business Support

FY 2012-13 Program Spending Drivers

- **FY 2011 IPR Proposed changes as compared to FY2011 rate case:**
  - Within Business Support there are some internal program restructuring changes to more appropriately reflect the direction of effort. $4.3 million of funds was shifted from General & Administrative to Executive & Administrative Services, yielding no net increase in the overall Business Support program.
  - **Aircraft Services, +$1.1 million**
    - FAA mandated aircraft maintenance, hangar and aircraft refurbishment, and employee transportation for emergencies.
  - Logistic Services, -$1.8 million
    - 100% of Logistic Services is charged into the expense budget and then the capital portion is transferred out. Typically this is 75% capital and 25% expense. In FY2011 allocation of Logistic Services to capital has increased; therefore the credit in base case was too low and then $1.8M reflects this change.
  - Security Enhancements, -$473 thousand
    - emergency management staff was moved from the Security Enhancements program to the Technical Operations program.
    - Increase for enhanced field response to equipment
- **FY 2012-13 IPR Changes: +$9.1 million**
  - Property Insurance and adjustments made based on realignment of personnel from multiple programs

Transmission Maintenance

Transmission Maintenance	2009 Actuals	2010 SOY	2011 TR-10 Rate Case	2011 IPR	2012 IPR	2013 IPR
ENVIRONMENTAL ANALYSIS	66,825	77,970	80,310	80,310	80,952	81,762
HEAVY MOBILE EQUIPMENT MAINT	58,282	(53,380)	(0)	(0)	0	0
JOINT COST MAINTENANCE	141,635	156,749	200,499	200,499	206,741	213,312
NON-ELECTRIC MAINTENANCE	11,280,142	21,672,499	28,055,096	29,291,716	29,752,254	30,272,207
POLLUTION PREVENTN & ABATEMENT	2,906,599	3,635,719	3,915,484	4,063,961	4,174,698	4,261,470
POWER SYSTEM CONTROL MAINT	10,270,560	11,257,940	10,658,781	13,100,000	13,510,531	13,942,646
ROW MAINTENANCE	34,417,269	30,016,610	18,508,417	24,100,000	24,672,429	25,299,601
SUBSTATION MAINTENANCE	25,522,118	23,364,327	22,784,161	27,400,000	29,815,256	30,678,013
SYSTEM MAINTENANCE MANAGEMENT	7,753,452	5,968,413	6,150,516	6,165,131	6,351,940	6,549,743
SYSTEM PROTECTION CONTRL MAINT	11,418,812	13,059,262	11,317,486	12,500,000	12,898,096	13,316,452
TECHNICAL TRAINING	2,465,761	2,571,397	2,723,220	2,823,200	2,915,964	3,013,210
TRANSMISSION LINE MAINTENANCE	21,982,859	23,474,832	26,179,389	25,296,162	26,046,274	26,839,823
Total	**128,284,312**	**135,202,337**	**130,573,359**	**145,020,979**	**150,425,136**	**154,468,240**

Program Description

- System maintenance contains expenses 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.

Strategic Objectives

I4 - Asset Management, S9 - Stakeholder Satisfaction, S2 - FCRPS Operations & Expansion, S8 - Climate Change

Key Products and Outputs

- **Environmental Analysis**
  - Provide National Environmental Policy Act (NEPA) and National Historic Preservation Act (NHPA) regulatory compliance through analysis and documentation of impacts related to transmission construction, operation and maintenance activities

Transmission Maintenance

Key Products and Outputs (continued)

- **Heavy Mobile Equipment Maintenance (HMEM)**
  - HMEM program covers costs associated with repair and maintenance on all BPA E-plated equipment, microwave communication and substation engine generators, outfitting of BPA/GSA vehicles (winches, radios, toolboxes) and maintenance of miscellaneous tools
- **Joint Cost Maintenance -** Operations and maintenance of facilities jointly owned by BPA and an outside entity.
- **Non-Electric Maintenance**
  - Inspection and maintenance of the substation and building facilities grounds and yards. It includes janitorial services; road, parking, curbs, and gutter upkeep; care of grounds, snow removal and cutting grass; water and sewer upkeep; security, fire protection, and alarm system upkeep; heating, cooling, and associated equipment inspections and maintenance; and crane inspections and upkeep.
- **Pollution, Prevention & Abatement**
  - Develop, coordinate, and manage environmental compliance actions and programs associated with the operation, maintenance, and construction of BPA's transmission system
- **Power System Control**
  - Operations, maintenance, and corrective / emergency inspection, diagnostics, service and repair of BPA owned communications system, including mobile radios, analog and digital microwave, fiber optic cable, and terminal equipment
- **ROW Maintenance**
  - Planning, implementation, and monitoring (program management) of all vegetation-related activities associated with ROWs and access road activities.
- **Substation Maintenance**
  - Operations, maintenance, and corrective / emergency inspection, diagnostics, service and repair of BPA owned substation power equipment, including transformers, breakers, and other high voltage equipment within substations and energized facilities

Transmission Maintenance

Key Products and Outputs (continued)

- **System Maintenance Management**
  - Develop, coordinate and manage system management activities and programs associated with the operations, maintenance and construction of the transmission system
- **System Protection Control Maintenance**
  - Operations, maintenance, and corrective / emergency inspection, diagnostics, service and repair of BPA owned protection and monitoring equipment, including relays, meters, instruments, and controls
- **Technical Training**
  - Coordinating and providing training for apprentices (electrician, lineman, operator), craftsman, lineman, electrician, operator, and field engineer training
- **Transmission Line Maintenance**
  - Operations, maintenance, and corrective / emergency inspection, diagnostics, service and repair of BPA owned overhead transmission lines, including steel towers, wood poles, cross arms, insulators, overhead conductors and components. This includes expense for air patrol via BPA's helicopter fleet

Transmission Maintenance

FY 2012-13 Program Spending Drivers

- **FY 2011 IPR Proposed changes as compared to FY2011 rate case:**
  - **Substation maintenance, $4.7 million**
    - Environmental stewardship related to aging/leaking equipment including transformer testing, dry outs, sorbent maintenance and overhauls; prioritized jointly with BPA EF&W
    - Laboratory business case
    - Engineering expertise associated with failing transformers and components such as load tap changers
    - Increased maintenance associated with aging equipment and additional infrastructure requiring maintenance
    - Seismic hardening
    - *Program includes efficiency gains for the new Transmission asset system (Cascade) that better informs priority, risk and equipment health decision making*
  - **PSC Maintenance, $2.4 million**
    - Increasing failures associated with failing asset health and new technology interfaces (digital/analog)
    - Analog to digital circuit moves
    - NERC CIP projections in the field and control center
    - Redlines and drawing updates and as-builts
    - Control center expertise, oversight in the FY11 rate case
  - **SPC Maintenance, $1.2 million**
    - Engineering expertise associated with new technology additions while old technology remains
    - Increasing failures associated with aging equipment
    - PMU/synchrophasor engineering work, standards, test gear

Transmission Maintenance

FY 2012-13 Program Spending Drivers (continued)

- **FY 2011 IPR Proposed changes as compared to FY2011 rate case:**
  - **Right-Of-Way (ROW) Maintenance, $5.6 million**
    - Increased vegetation preventive maintenance (cycle) using asset health approach
    - Increased use of Light Detection and Ranging (LiDAR) as a key diagnostic
    - Realty associated with orchard impacts, crops damage and off ROW vegetation management
    - Program includes efficiency gains anticipated from Strategic Sourcing of contract vegetation removal
  - **Transmission Line Maintenance, (-$600k)**
    - Program includes efficiency gains for the new Transmission Asset System (Cascade) that better informs priority, risk and equipment health decision making
    - Rescheduled sign replacement program based on system and safety priority

FY 2012-13 IPR Changes:

- **FY 2011 IPR changes carry forward into 2012 and 2013 with an adjustment for inflation.**
  - **Seismic Hardening**

Transmission Engineering

Transmission Engineering	2009 Actuals	2010 SOY	2011 TR-10 Rate Case	2011 IPR	2012 IPR	2013 IPR
CAPITAL TO EXPENSE TRANSFER	6,100,706	3,695,107	4,000,000	4,000,000	4,032,000	4,072,320
ENVIRONMENTAL POLICY/PLANNING	1,332,748	1,777,565	1,853,415	1,783,483	1,823,179	1,854,449
REGULATORY COSTS	5,148,765	7,863,535	5,082,837	6,758,487	7,700,268	7,867,689
RESEARCH & DEVELOPMENT	6,994,116	6,663,225	5,700,544	6,579,691	8,688,116	9,114,490
TSD PLANNING & ANALYSIS	8,028,628	8,483,236	8,811,024	11,907,712	12,278,522	12,669,656
Total	**27,604,963**	**28,482,668**	**25,447,820**	**31,029,373**	**34,522,085**	**35,578,604**

Program Description

- Transmission engineering consists of expenses in support of the research and development program, transmission system planning and analysis, regulatory costs, including the allocated costs for industry restructuring, and costs associated with cancelled capital projects and inventory adjustments.

Strategic Objectives

- I4 - Asset Management, I5 - Technology Innovation, S2 - FCRPS Operations & Expansion, S8 - Climate Change

Key Products and Outputs

- **Capital to Expense Transfer**
  - Conduct annual analysis of Bonneville's outstanding capital work orders to assess whether they should be expensed. As obsolete inventory is identified and disposed of, it is expensed
- **Environmental Policy Planning**
  - Ensures statutory/regulatory environmental compliance requirements are accomplished through appropriate biological, physical, and cultural investigations and social and economic analyses of BPA decisions, or actions that it carries out or funds.

Transmission Engineering

Key Products and Outputs (continued)

- **Research & Development**
  - Conduct research focused on technologies related to business challenges BPA faces including reliability, energy efficiency, and integration of renewable energy resources.
  - Oversight of BPAs R&D program. Technologies of interest are identified in BPA's Technology Roadmaps. A portfolio of research is selected every year through BPA's Portfolio Decision Framework
- **TSD Planning and Analysis**
  - Provide technical support for capital infrastructure and sustain program, such as, transmission planning studies in compliance with reliability standards, non-wire solutions, feasibility studies, and standardizing the programs for assets, grid modeling software maintenance, and estimating system enhancements (CHESS).
- **Regulatory & Regional Association Fees**
  - Western Electricity Coordinating Council (WECC) dues and loop flow payments, DOE licensing costs for radio frequencies and NERC CIP compliance program costs.

Transmission Engineering

FY 2012-13 Program Spending Drivers

- **FY 2011 IPR Proposed changes as compared to FY2011 rate case:**
  - **TSD Planning & Analysis, +$3.1 million**
    - Expense indirect in support of the larger capital program
    - Colstrip Montana study
    - Wind integration- integration studies, network open season
    - Asset management, PAS 55
    - Non-wires
    - Grid modeling software
  - **Regulatory & Association Fees, +$1.7 million**
    - Support for NERC CIP compliance requirements
    - DOE Radio frequency support relicensing
- **FY 2012-2013 IPR Changes:**
  - Technology Innovation - reflects the R&D requested increases (Research & Development)
  - Regulatory - E-Discovery and OATT Risk Mitigation (Regulatory Costs)

Transmission Non-BBL[1/] Acquisition and Ancillary Services

Transmission Non-BBL Acquistion and Ancillary Services	2009 Actuals	2010 SOY	2011 TR-10 Rate Case	2011 IPR	2012 IPR	2013 IPR
LEASED FACILITIES	6,284,278	5,914,213	6,456,582	6,141,582	6,190,715	6,252,622
NON BBL ANCILLARY SERVICES	638,684	6,735,000	6,735,000	6,735,000	6,788,880	6,856,769
SETTLEMENT AGREEMENTS	-	500,000	500,000	500,000	504,000	509,040
Total	**6,922,962**	**13,149,213**	**13,691,582**	**13,376,582**	**13,483,595**	**13,618,431**

Program Description

- Non-BBL Transmission acquisition and ancillary services includes leased facility payments, settlement agreements, and non-BBL ancillary services for contingent energy, redispatch, generation supplied reactive, and stability reserves.

Strategic Objectives

- F2 - Cost recovery, S2 - FCRPS Operations, S4 - Transmission Access & Rates.

Key Products and Outputs

- Leased Facilities - Leases and other costs of transmission, delivery and voltage support facilities when such arrangements are operationally feasible and cost effective to deliver power.
- Non-BBL Ancillary Services - Payments to others for generation inputs provided by others.
- General Transfer Agreement - Payments made to customers in the event a settlement is due to marketing activities. TS (settlement)

1/ BBL = Between Business Line

Transmission Capital Programs

Transmission Capital – Main Grid

Capital - Main Grid	2009 Actuals[1]	2010 SOY	2011 TR-10 Rate Case	2011 IPR	2012 IPR	2013 IPR
BIG EDDY-KNIGHT 500kv PROJECT		3,627,000	-	9,465,500	81,382,800	27,935,500
CENTRAL FERRY- LOWER MONUMNTAL		3,371,731	-	12,620,600	53,541,300	40,521,300
I-5 CORRIDOR UPGRADE PROJECT		6,000,000	6,840,000	6,310,300	12,849,900	135,305,700
LIBBY-TROY LINE REBUILD		4,888,859	-	157,800	-	-
MIDWAY-VANTAGE LINE UPGRADE		3,200,000	-	7,004,400	-	-
MISC. MAIN GRID PROJECTS		22,088,199	97,772,229	14,889,500	58,592,200	61,673,600
OLYMPIC PENINSULA PROJECT		2,115,204	-	999,100	1,070,800	4,708,600
REDMOND TRANSFORMER ADDITION		3,807,797	-	7,362,000	-	-
WEST OF MCNARY INTEGRATION PRO		78,974,808	85,326,471	51,201,800	5,953,800	-
Total	**58,152,911**	**128,073,598**	**189,938,700**	**110,011,000**	**213,390,800**	**270,144,700**

Program Description

- **BPA's Main Grid capital program consists of projects which reinforce and expand the system in order to meet the following objectives:**
  - Maintain reliable service to loads
  - Ensure adequate reactive support to maintain system voltages
  - Accommodate transmission service requests
  - Relieve transmission congestion
  - Comply with WECC and NERC Reliability Standards

Strategic Objectives

S2 – FCRPS Operations and Expansion, S4- Transmission Access and Rates, I4 – Asset Management

Key Products and Outputs

- Maintaining a reliable transmission system and relieving congestion
- Meeting load service obligations
- Meeting firm transmission service obligations

[1] Due to changes to the data structure historical spending is not available at the same level of detail.

Transmission Capital – Main Grid

FY 2012-13 Program Spending Drivers

- **Major Network Reinforcements identified from the 2008 Network Open Season: $363 million**
  - Completion of the West of McNary Reinforcement Project - Group I
  - Big Eddy-Knight 500kV Project
  - Central Ferry - Lower Monumental 500kV Project
  - I-5 Corridor 500kV Reinforcement Project
- **Reliability to loads:**
  - Olympic Peninsula Reinforcement
  - Portland / Vancouver Area Reinforcements
  - Salem/ Albany/ Eugene Area Reinforcement
  - Tri-Cities Area Reinforcement
  - Central Oregon Reinforcement
  - Facility Additions for NERC Compliance

Potential Risk

- **The proposed spending levels are needed to ensure contractual and regulatory requirements are met, including: load service obligations, transmission service requests, and NERC reliability compliance**
- **Changes to proposed spending levels could occur as a result of:**
  - Unexpected changes to project schedules (such as delays/deferrals)
  - Variations in load forecasts resulting in project schedule or scope changes
  - Changes to current regulatory requirements
  - Fluctuations in the commodities market (i.e. price of materials)
- **New requests for firm transmission service could drive additional investments**

Transmission Capital – Main Grid

Capital - Main Grid	2013 IPR	2014 IPR	2015 IPR	2016 IPR	2017 IPR
BIG EDDY-KNIGHT 500kv PROJECT	27,935,500	-	-	-	-
CENTRAL FERRY- LOWER MONUMNTAL	40,521,300	-	-	-	-
I-5 CORRIDOR UPGRADE PROJECT	135,305,700	138,064,600	80,372,100	1,127,500	-
LIBBY-TROY LINE REBUILD	-	-	0	-	-
MIDWAY-VANTAGE LINE UPGRADE	-	-	-	-	-
MISC. MAIN GRID PROJECTS	61,673,600	116,946,500	57,317,200	84,060,200	185,843,900
OLYMPIC PENINSULA PROJECT	4,708,600	-	558,100	1,691,300	3,560,300
REDMOND TRANSFORMER ADDITION	-	-	-	-	-
WEST OF MCNARY INTEGRATION PRO	-	-	-	-	-
Total	**270,144,700**	**255,011,100**	**138,247,400**	**86,879,000**	**189,404,200**

FY 2014-2017 Drivers of Proposed Spending Forecast

- Completion of the I-5 Corridor Reinforcement Project
- Additional Olympic Peninsula Reinforcements
- West of Cascades Reinforcements
- Puget Sound Area Reinforcements
- Tri-Cities Area Reinforcements
- Central Oregon Reinforcements

Transmission Capital – Area & Customer Service

Capital - Area & Customer Service	2009 Actuals[1]	2010 SOY	2011 TR-10 Rate Case	2011 IPR	2012 IPR	2013 IPR
CITY OF CENTRALIA PROJECT		2,026,378	-	-	-	-
LOWER VALLEY (CARIBOU) PROJECT		19,127,551	-	1,183,200	7,064,700	6,004,100
MISC. AREA & CUSTOMER SERVICE		9,545,947	6,255,900	4,842,100	4,260,200	3,466,000
ROGUE SVC ADDITION		6,403,484	-	-	-	-
Total	**11,452,179**	**37,103,360**	**6,255,900**	**6,025,300**	**11,324,900**	**9,470,100**

Program Description

- **BPA's Area and Customer Service capital program consists of projects which reinforce and expand the system in order to meet the following objectives:**
  - Provide reliable service to customer loads in accordance with contractual obligations
  - Comply with WECC and NERC Reliability Standards
  - Facilitate customer interconnection requests (generation, line, and load interconnections)

Strategic Objectives

- S2 – FCRPS Operations and Expansion
- S9- Stakeholder Satisfaction
- I4 – Asset Management

Key Products and Outputs

- Maintaining a reliable transmission system
- Meeting contractual obligations for serving customer loads
- Ensuring adequate reactive support at customer points of delivery

[1] Due to changes to the data structure historical spending is not available at the same level of detail.

Transmission Capital – Area & Customer Service

FY 2012-13 Program Spending Drivers

- Lower Valley Reinforcement
- Okanogan Area Reinforcement
- Kalispell / Flathead Valley Reinforcement
- Area Service Reactive Additions & Customer Service Facility Additions

Potential Risk

- The proposed spending levels are needed to ensure customer load service obligations are met and to ensure compliance with NERC Reliability Standards.
- Changes to proposed spending levels could occur as a result of:
  - Unanticipated changes to project schedules (such as delays/deferrals)
  - Variations in load forecasts resulting in project schedule or scope changes
  - Changes to current regulatory requirements
  - Fluctuations in the commodities market (i.e. price of materials)
- New customer interconnection requests could result in additional projects which would affect the proposed spending levels

Capital - Area & Customer Service	2013 IPR	2014 IPR	2015 IPR	2016 IPR	2017 IPR
CITY OF CENTRALIA PROJECT	-	-	-	-	-
LOWER VALLEY (CARIBOU) PROJECT	6,004,100	-	-	-	-
MISC. AREA & CUSTOMER SERVICE	3,466,000	10,749,200	16,156,700	17,130,600	28,295,400
ROGUE SVC ADDITION	-	-	-	-	-
Total	**9,470,100**	**10,749,200**	**16,156,700**	**17,130,600**	**28,295,400**

FY 2014-2017 Drivers of Proposed Spending Forecast

- Kalispell / Flathead Valley Reinforcements
- Oregon Coast Reinforcements
- Longview Area Reinforcement
- Area Service Reactive Additions & Customer Service Facility Additions

Transmission Capital – Upgrades & Additions

Capital - Upgrades & Additions	2009 Actuals [1]	2010 SOY	2011 TR-10 Rate Case	2011 IPR	2012 IPR	2013 IPR
CC INFASTRUCTURE COMPONENTS		2,312,493	-	1,682,700	1,070,400	1,965,000
CC SYSTEM & APPLICATION		1,630,337	-	1,682,700	1,926,700	3,165,800
CELILO UPGRADES PROJECT		6,200,000	21,488,900	11,568,900	47,327,300	43,120,400
CONTROL CENTERS		2,541,975	-	3,996,500	4,495,700	2,510,800
FIBER OPTICS AND TERMINALS		12,762,000	-	21,560,200	39,001,300	35,260,400
IT PROJECTS		5,000,000	-	7,350,030	5,850,000	6,000,000
LAND ACQUISITION & REBUILDS		10,103,200	10,853,000	9,991,300	10,168,800	10,370,700
LAND RIGHTS - ACCESS ROADS		470,084	-	525,900	535,200	545,800
LAND RIGHTS - TRIBAL RENEWALS		25,329,994	-	3,681,000	3,746,400	-
LAND RIGHTS- VEG MITIGATION		500,000	-	525,900	535,200	545,800
LINE SWITCH UPGRADES		-	-	-	-	-
MISC. UPGRADES AND ADDITIONS		31,870,058	75,128,800	12,681,000	11,070,400	3,091,700
SECURITY ENHANCEMENTS		4,601,730	5,113,940	5,000,000	5,000,000	6,000,000
SUBSTATION UPGRADES		-	-	23,316,600	6,705,000	10,262,600
UPGRADES & ADDITIONS		-	-	-	-	-
Total	**56,899,513**	**103,321,871**	**112,584,640**	**103,562,730**	**137,432,400**	**122,839,000**

Program Description

- Bonneville's Upgrades and Additions program consists of adding new equipment and facilities and replacing older equipment and facilities in order to maintain or enhance the capabilities of the transmission system.

Strategic Objectives

- S2 – FCRPS Operations and Expansion,
- S4 – Transmission Access and Rates,
- S9 – Stakeholder Satisfaction,
- I4- Asset Management

[1] Due to changes to the data structure historical spending is not available at the same level of detail.

Transmission Capital – Upgrades & Additions

Key Products and Outputs (continued)

- Communications and controls additions and replacements such as:
  - Newer technology including fiber optics in order to maintain or enhance the capabilities of the transmission system
  - Special remedial action control and protection schemes to accommodate new generation & mitigate constrained paths
- Pacific DC intertie upgrades at Celilo
- Line and substation upgrades and additions
- Control Center upgrades and additions
- IT upgrades and additions
- Land Rights including renewals, access, and vegetation management
- Security Enhancements

FY 2012-13 Program Spending Drivers

- Telecommunication upgrades and additions needed to replace:
  - Analog radio systems with new digital radio systems
  - The VHF radio system
- Celilo Upgrades

Potential Risk

- Proposed spending levels are needed to maintain system reliability by moving to current technologies and equipment while replacing old equipment that is no longer supported by the equipment manufacturers and is also no longer maintainable.
- Fluctuations in the commodities market (price of materials) could affect proposed spending levels.
- Emerging technology could make existing equipment obsolete and difficulty in obtaining parts for maintenance could drive upgrades that were not anticipated.
- Increased spending levels support load growth and mitigate reliability concerns by preventing failures that may result if the needed equipment upgrades and replacements are not made.

Transmission Capital – Upgrades & Additions

Capital - Upgrades & Additions	2013 IPR	2014 IPR	2015 IPR	2016 IPR	2017 IPR
CC INFASTRUCTURE COMPONENTS	1,965,000	2,784,800	1,703,700	1,157,500	1,179,000
CC SYSTEM & APPLICATION	3,165,800	2,227,800	2,839,500	4,051,100	4,126,400
CELILO UPGRADES PROJECT	43,120,400	7,362,000	-	-	-
CONTROL CENTERS	2,510,800	2,784,800	3,407,400	2,893,700	2,947,400
FIBER OPTICS AND TERMINALS	35,260,400	32,126,500	16,014,800	5,208,600	6,248,600
IT PROJECTS	6,000,000	6,150,000	6,300,000	6,450,000	6,600,000
LAND ACQUISITION & REBUILDS	10,370,700	10,582,200	10,222,200	10,417,200	10,610,800
LAND RIGHTS - ACCESS ROADS	545,800	557,000	567,900	578,700	589,500
LAND RIGHTS - TRIBAL RENEWALS	-	-	-	-	-
LAND RIGHTS- VEG MITIGATION	545,800	557,000	567,900	578,700	589,500
LINE SWITCH UPGRADES	-	-	-	-	-
MISC. UPGRADES AND ADDITIONS	3,091,700	4,617,700	3,271,600	6,944,800	7,073,900
SECURITY ENHANCEMENTS	6,000,000	6,000,000	6,000,000	7,000,000	7,000,000
SUBSTATION UPGRADES	10,262,600	5,441,500	1,042,700	-	-
UPGRADES & ADDITIONS	-	-	-	-	-
Total	**122,839,000**	**81,191,300**	**51,937,700**	**45,280,300**	**46,965,100**

FY 2014-2017 Drivers of Proposed Spending Forecast

- Communications and controls additions and replacements
- Line and Substation Upgrades and Additions
- Control Center upgrades and additions
- IT upgrades and additions
- Land Rights including renewals, access, and vegetation management
- Security Enhancements

Transmission Capital – System Replacements

Capital - System Replacements	2009 Actuals [1]	2010 SOY	2011 TR-10 Rate Case	2011 IPR	2012 IPR	2013 IPR
TOOLS & WORK EQUIPMENT		-	7,000,000	-	-	-
LINES - STEEL HARDWARE REPLCMT		19,918,776	-	16,091,300	20,551,800	12,772,300
LINES - WOOD POLE LN REBUILDS		19,397,648	-	42,296,900	41,537,100	43,447,800
MISC FACILITIES- NON-ELECTRIC		22,750,000	-	11,679,287	17,818,743	18,737,478
MISC. REPLACEMENT PROJECTS		16,666,155	114,058,381	-	-	-
PSC - FIN/OP NETWORKS		300,000	-	185,100	235,500	240,200
PSC - SCADA/TELEMTRY/SUP CNTRL		782,000	-	3,605,300	4,618,800	4,909,200
PSC - TELEPHONE SYSTEMS		945,000	-	625,800	540,600	305,700
PSC - TLECOM TRANSPORT		1,484,000	-	1,514,500	1,156,000	1,179,000
PSC - TRANSFER TRIP		6,069,000	-	8,413,700	5,137,900	6,113,300
PSC- TELECOM SUPPORT EQUIPMENT		1,060,301	-	1,809,000	1,250,200	1,414,800
SPC - DFRS		2,977,800	-	3,510,600	251,500	-
SPC - METERING		372,225	-	262,900	535,200	545,800
SPC - RELAYS		4,457,804	-	2,835,400	10,410,800	22,313,400
SPC - SER		744,450	-	1,407,200	3,341,800	3,235,700
SUB CAPACITORS		921,000	-	724,600	-	-
SUB CIRCUIT BREAKER REPLACMENT		11,123,820	-	10,054,400	20,213,500	21,985,000
SUB CVT/PT/CT REPLACEMENT		1,165,004	-	1,490,300	1,523,200	1,504,300
SUB DC		5,814,141	-	1,304,100	5,309,200	7,052,100
SUB LOW VOLTAGE AUX.		2,913,762	-	4,802,100	5,651,700	5,075,100
SUB NON-ELECTRIC PLANT		563,914	-	485,900	750,400	691,000
SUB TRANSFORMERS & REACTORS		3,709,021	-	5,351,100	5,710,600	5,900,400
TEAP - EQUIPMENT		12,060,000	-	12,170,500	9,633,600	10,916,500
TEAP - TOOLS		950,183	-	1,051,700	1,070,400	1,091,700
TL SPACER DAMPER REPLACEMENT		-	10,852,996	-	-	-
TL WOOD POLE REPLACEMENTS		-	6,511,798	-	-	-
Total	**115,722,167**	**137,146,004**	**138,423,175**	**131,671,687**	**157,248,543**	**169,430,778**

[1] Due to changes to the data structure historical spending is not available at the same level of detail.

Transmission Capital – System Replacements

Program Description

- 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. Replacements are based on transmission asset management strategy and plans, findings and recommendations.
- This program also includes the Transmission Capital dollars associated with the plan, design and construction of new facilities, replacement of existing facilities; hazardous materials abatement; and demolition of buildings no longer useful to BPA.

Strategic Objectives

- S2 – FCRPS Operations and Expansion,
- S9 – Stakeholder Satisfaction,
- I4 – Asset Management,
- 17 – Risk-Informed Decision Making and Transparency

Key Products and Outputs

- Keep the existing transmission assets operating in accordance with safety, reliability and security requirements
- Improve asset health and therefore maintain and/or improve system performance
- Facilities Asset Management key products and output include plan, design, and build new facilities as required by BPA business activities, hazmat abatement, and asset decommissioning.

Transmission Capital – System Replacements

FY 2012-13 Program Spending Drivers

- Wood Pole Replacements
- Steel Hardware Replacements
- Various Substation Replacements (circuit breakers, switchgear, CVT/PT/CT, low voltage, transformers & reactors, capacitors, non-electric plant)
- PSC (VHF, telecom transport, SCADA/telemetry/sup control, FIN/OP networks, transfer trip, telephone systems)
- SPC (relays, RAS, metering, DFR, SER, Tools and equipment)
- Misc. Facilities

Potential Risk

- Capital funding for FY12-13 as identified in previous IPR processes is not adequate to support required replacements as identified by FY10 asset management strategies and plans.
- Failure to fund programs as identified will result in further degradation of system performance and health.
- Delays to construction could also increase overall construction costs due to inflation of materials and labor rates.

Transmission Capital – System Replacements

Capital - System Replacements	2013 IPR	2014 IPR	2015 IPR	2016 IPR	2017 IPR
TOOLS & WORK EQUIPMENT	-	-	-	-	-
LINES - STEEL HARDWARE REPLCMT	12,772,300	13,032,800	13,288,900	13,542,400	13,794,000
LINES - WOOD POLE LN REBUILDS	43,447,800	41,660,300	42,138,200	40,164,200	43,032,600
MISC FACILITIES- NON-ELECTRIC	18,737,478	27,316,180	22,530,390	20,232,483	20,390,189
MISC. REPLACEMENT PROJECTS	-	-	0	-	-
PSC - FIN/OP NETWORKS	240,200	245,100	374,800	382,000	389,100
PSC - SCADA/TELEMTRY/SUP CNTRL	4,909,200	5,844,700	5,959,500	6,941,400	7,070,300
PSC - TELEPHONE SYSTEMS	305,700	345,300	408,900	416,700	424,400
PSC - TLECOM TRANSPORT	1,179,000	1,203,000	1,635,600	1,666,800	1,697,700
PSC - TRANSFER TRIP	6,113,300	6,683,500	6,814,800	6,944,800	7,073,900
PSC- TELECOM SUPPORT EQUIPMENT	1,414,800	1,755,500	1,790,000	1,939,900	1,976,000
SPC - DFRS	-	-	-	-	-
SPC - METERING	545,800	557,000	567,900	578,700	589,500
SPC - RELAYS	22,313,400	31,387,800	32,004,600	32,615,200	25,733,500
SPC - SER	3,235,700	3,301,600	3,366,500	3,430,700	3,494,500
SUB CAPACITORS	-	-	-	-	-
SUB CIRCUIT BREAKER REPLACMENT	21,985,000	19,200,200	14,630,300	9,109,300	9,137,100
SUB CVT/PT/CT REPLACEMENT	1,504,300	1,258,700	1,249,400	1,273,200	1,385,300
SUB DC	7,052,100	13,077,300	2,271,600	-	-
SUB LOW VOLTAGE AUX.	5,075,100	2,283,500	3,373,300	2,826,500	3,259,900
SUB NON-ELECTRIC PLANT	691,000	931,200	539,500	-	-
SUB TRANSFORMERS & REACTORS	5,900,400	5,982,800	5,465,500	4,919,200	5,187,500
TEAP - EQUIPMENT	10,916,500	11,139,100	12,493,800	12,732,200	13,558,200
TEAP - TOOLS	1,091,700	1,113,900	1,135,800	1,157,500	1,179,000
TL SPACER DAMPER REPLACEMENT	-	-	-	-	-
TL WOOD POLE REPLACEMENTS	-	-	-	-	-
Total	**169,430,778**	**188,319,480**	**172,039,290**	**160,873,183**	**159,372,689**

FY 2014-2017 Drivers of Proposed Spending Forecast

- Same drivers as identified for FY 2012-2013
- Increased spending in circuit breakers and switchgear, capacitors FY14, and relays FY14-FY17 consistent with asset strategies

Transmission Capital – Environment

Capital - Environment Capital	2009 Actuals[1]	2010 SOY	2011 TR-10 Rate Case	2011 IPR	2012 IPR	2013 IPR
MISC. ENVIRONMENT PROJECTS		5,530,189	5,752,088	5,752,088	5,868,854	5,983,884
Total	**3,369,545**	**5,530,189**	**5,752,088**	**5,752,088**	**5,868,854**	**5,983,884**

Program Description

- The Environmental capital Asset program consists of three portfolio areas: reduction of Polychlorinated Biphenyls (PCB), water resources protection, and oil storage containment facilities. These programs reduce environmental risks and resolve or prevent regulatory non-compliance.

Strategic Objectives

- S7 – Environment, Fish and Wildlife,
- F1 – Capital Access,
- F2 – Cost Recovery,
- I2- One BPA

Key Products and Outputs

- Replace or retire minimum of 15 pieces of PCB containing equipment with non-PCB equipment to reduce PCBs, a primary Persistent Bioaccumulactive Toxic, on the transmission system.
- Upgrade/install drainage treatment and containment systems at 6 environmentally sensitive facilities for water resource protection and compliance
- Install oil storage facilities that meet regulatory requirements at 4 facilities for water resource protection and compliance

FY 2012-2013 Program Spending Drivers

- PCB Spending
- Water Resource Protection
- Oil storage containment facilities

[1] Due to changes to the data structure historical spending is not available at the same level of detail.

Transmission Capital – Environment

Capital - Environment Capital	2013 IPR	2014 IPR	2015 IPR	2016 IPR	2017 IPR
MISC. ENVIRONMENT PROJECTS	5,983,884	6,101,169	6,320,000	6,446,000	6,575,300
Total	**5,983,884**	**6,101,169**	**6,320,000**	**6,446,000**	**6,575,300**

FY 2014-2017 Drivers of Proposed Spending Forecast

- PCB Spending
- Water Resource Protection
- Oil storage containment facilities

Potential Risk

- Reductions to the proposed Environment spending levels could negatively impact the programs ability to address regulatory and liability issues at facilities and is likely to adversely affect water and environmental resources
- Changes in environmental regulations could put BPA in non-compliance. However, this is not anticipated because BPA staff monitors regulatory changes and is likely to foresee changes in time to modify program efforts within the planned budget.

Transmission Capital – PFIA

Capital - PFIA	2009 Actuals[1]	2010 SOY	2011 TR-10 Rate Case	2011 IPR	2012 IPR	2013 IPR
COI ADDITION PROJECT		25,482,894	23,442,472	11,238,500	-	-
GENERATOR INTERCONNECTION		63,809,900	65,117,977	57,784,700	35,266,700	36,450,300
MISC. PFIA PROJECTS		6,500,000	13,726,000	9,643,000	7,385,100	6,864,200
SPECTRUM RELOCATION		10,812,502	-	8,126,000	1,780,000	400,000
Total	**36,784,922**	**106,605,296**	**102,286,449**	**86,792,200**	**44,431,800**	**43,714,500**

Program Description

- BPA's Projects Funded In Advance (PFIA) program includes those facilities and/or equipment where Bonneville retains control or ownership but which are funded or financed by a third-party or with revenues, either in total or in part.
- This program also includes investments associated with the CSE Act.

Strategic Objectives

- S6 – Renewable Energy, S4 – Transmission Access and Rates, I4 – Asset Management, S8 – Climate Change

Key Products and Outputs

- Transmission line and substation modifications and additions to interconnect generation and line/load interconnection requests to the BPA Transmission Grid
- Integration of generation projects connected to third-party transmission and distribution systems that are located within BPA's Balancing Authority Area
- Control Area move projects
- Non-tariff reimbursable work performed for entities that require the relocation or modification of BPA transmission facilities (e.g. moving a transmission line to accommodate a freeway expansion)
- Address customer load service needs and interconnect renewable energy generation to the grid while minimizing risk to BPA.
- Relocation or modification of BPA transmission assets, funded by a third party.

[1] Due to changes to the data structure historical spending is not available at the same level of detail.

Transmission Capital – PFIA

FY 2012-13 Program Spending Drivers

- Generation Interconnection & Line Load Interconnection projects
- Completion of the COI Project
- Completion of the Radio Spectrum Program
- Various other projects

Potential Risk

- BPA's Open Access Transmission Tariff requires BPA continue to integrate new generation projects into the BPA transmission grid in response to Interconnection Requests submitted via the Large and Small Generation Interconnection procedures outlined in the Tariff.
  - Developers are required to advance finance the interconnections; therefore, there is always uncertainty on if and when a particular customer will authorize BPA to begin design and construction on a particular interconnection plan of service.
  - This results in great uncertainty in the projected spending levels.

- Miscellaneous PFIA spending levels are extremely difficult to forecast due to the nature of the projects. They are usually the unexpected consequence of a state or county moving or widening a road or freeway, resulting in BPA moving transmission lines.

- BPA lacks sufficient resources to accomplish the engineering, construction, testing and energization of all of these projects and expects to utilize the Owner Engineer and Engineer-Procure-Construct contracting out strategies to help achieve the projected spending levels.

Transmission Capital – PFIA

Capital - PFIA	2013 IPR	2014 IPR	2015 IPR	2016 IPR	2017 IPR
COI ADDITION PROJECT	-	-	-	-	-
GENERATOR INTERCONNECTION	36,450,300	24,328,500	17,809,700	18,149,500	18,486,700
MISC. PFIA PROJECTS	6,864,200	5,365,100	4,500,000	4,500,000	4,500,000
SPECTRUM RELOCATION	400,000	-	-	-	-
Total	**43,714,500**	**29,693,600**	**22,309,700**	**22,649,500**	**22,986,700**

FY 2014-2017 Drivers of Proposed Spending Forecast

- Generator Interconnection Projects
- Various other Misc. PFIA projects

Appendix 3 – Agency Services

Agency Services Expense Programs

Agency Services - Risk

RISK OFFICE	2009 Actuals	2010 SOY	2011 Rate Case	2011 IPR	2012 IPR	2013 IPR
Total	4,637,558	6,848,177	6,853,814	7,051,195	21,992,025	22,082,095

Program Description

- The key responsibilities of Risk Management include: facilitating a risk-based approach to strategic planning in which BPA's tolerance for specific risks and overall risk management capability are key inputs to strategy development and execution planning; coordinating a robust and sustained Enterprise Risk Management (ERM) program to identify and appropriately address the broad range of risks to achievement of the agency's strategic objectives; monitoring and reporting on BPA's full range of risks, including commodity transacting risks; mitigating BPA's credit exposure in the event of counter-party default; and implementing a Business Continuity Management Program, including Emergency Management and Continuity of Operations planning.

Strategic Objectives

- I7- Risk Informed Decision Making and Transparency
- I3 - Governance and Internal Controls
- I4 - Asset Management
- F1- Capital Access

Key Products and Outputs

- The key products and outputs at a high level are agency enterprise risk management, transacting and credit risk management, and business continuity assurance. This group supports various executive initiatives in risk management through the Enterprise Risk Management Committee, the Transacting and Credit Risk Management Committee, and the Business Continuity Steering Committee.

FY 2012-13 Program Spending Drivers

- Includes $15 million of property Insurance. This comprises the cost of a property insurance premium and $100,000/year for administrative expenses for Transmission Services, Power Services, Corps of Engineers and Bureau of Reclamation. This is a new insurance policy purchase for BPA.

Agency Services – Compliance & Governance

AGENCY COMPLIANCE & GOVERNANCE	2009 Actuals	2010 SOY	2011 Rate Case	2011 IPR	2012 IPR	2013 IPR
Total	3,524,719	3,557,311	3,771,878	5,123,745	5,159,426	5,191,449

Program Description

Bonneville Power Administration's (BPA) Governance & Compliance Program oversees agency compliance and governance functions. The program is managed by Agency Compliance & Governance Organization in consult with the Office of General Counsel and affected programs, and maintains a comprehensive program to assure compliance with applicable regulatory rules and standards by:

- ✓ Monitoring and commenting on developing regulations that apply to BPA.
- ✓ Building and maintaining relationships with regulatory bodies.
- ✓ Implementing management controls and reporting.
- ✓ Shaping and monitoring internal compliance policies and procedures.
- ✓ Working cooperatively to provide direction to business units concerning compliance processes and procedures.
- ✓ Interpreting regulatory rules and standards, in consult with the Office of General Counsel, as necessary.
- ✓ Coordinating review and testing of business unit controls and compliance.
- ✓ Communicating and training of BPA employees and contractors.

Strategic Objectives

- I3 - Governance and Internal Controls
- I1 - Systems and Processes
- S2 - FCRPS Operations and Expansion
- I2 - One BPA

Agency Services – Compliance & Governance

Key Products and Outputs

Agency Compliance and Governance assures:

- ✓ An effective governance structure.
- ✓ Adequate controls over financial reporting.
- ✓ Clear policies and guidelines for directing day-to-day business operations.
- ✓ Certified and documented practices for reliable Transmission and Generation operations.
- ✓ Effective Equal Employment Opportunities program for all employees.
- ✓ Robust and consistent procurement and personal property policies.
- ✓ An ethics program, code of conduct and hot line for all employees.

Comparison to 2008 IPR Program Levels

Agency Compliance and Governance did not exist during the 2008 IPR. In 2009 Regulatory Affairs, Supply Chain Policy and Governance and Civil Rights were combined to become Agency Compliance and Governance. Then in 2010, two small activities were transferred from Transmission and Information Technology - Reliability Compliance and Records Management, respectively. The table to the right presents the comparison between 2008 and 2010 IPR materials:

	IPR 2008			IPR 2010				
	2009	2010	2011	2009	2010	2011	2012	2013
				($'s millions)				
Agency Compliance and Governance				$ 3,525	$ 3,557	$ 5,124	$ 5,159	$ 5,191
Regulatory Affairs	$ 2,327	$ 2,426	$ 2,530					
Supply Chain Policy & Governance	667	696	726					
Civil Rights	725	758	792					
Total	$ 3,719	$ 3,880	$ 4,048	$ 3,525	$ 3,557	$ 5,124	$ 5,159	$ 5,191

differences from 2010 IPR Estimates compared to 2008 IPR Estimates

($194)

($323)

$ 1,076

Not included in the IPR 2008 Base for FY 2010 and 2011 are the following:

~ Transfer of Reliability Staff from Transmission 2nd quarter FY 2010 to Agency Compliance and Governance = $300 (full year equivalent amount)

~ Transfer of Records Management Staff from IT mid FY 2010 to Agency Compliance and Governance = $435 (full year equivalent amount)

Agency Services – Compliance & Governance

FY 2011 Program Spending Drivers

Compared to the IPR 2008 for FY 2011 or the IPR 2010 materials, there has been an increase for FY 2011. While there have been efficiencies achieved through consolidations of various compliance activities, there has also been an increased focus in compliance at BPA as a result of needing to remediate compliance gaps in:

1. **Information Management/e-Discovery:** BPA is required to meet the 2006 amendments to the Federal Rules of Civil Procedure (FRCP) which codified the requirements for discovery of Electronically Stored Information (ESI). ESI is an "expansive" term—it encompasses "any type of information that is stored electronically" in "any medium." In a lawsuit or claim, BPA must preserve all potentially relevant ESI. By necessity, this requires that BPA know where its ESI is created and stored, and how it is disposed of. In fact, in response to the new rules, the Department of Justice requires each federal agency to adopt clear and enforced data management policies. Failure to comply potentially may lead to adverse judgments and judicial sanctions representing material financial penalties to the agency.

2. **Open Access Transmission Tariffs (OATT):** FERC's Order 888 outlined the requirements for OATT and BPA maintains that the agency is not subject to FERC jurisdiction, but has chosen to comply voluntarily. FERC has approved BPA's OATT, so there is technically no risk of being in noncompliance with the requirements for OATT. However, BPA, at this time, potentially may not be complying with all of the provisions of the agency's OATT. FERC has described what additional steps would need to be taken (beyond those already taken) to meet the requirements for a Reciprocity Tariff.

These initiatives along with further assurance that BPA is meeting all of its compliance responsibilities with regard to ethics, financial reporting, procurement policy management, transmission and power reliability and equal employment opportunity have caused staffing increases. The increase from FY 2010 to 2011 results in:

1. Staffing costs and associated benefits.
2. Supplemental labor and service contract support.

FY 2012-13 Program Spending Drivers

For FY 2012 and 2013, the very slight increases forecasted are because of inflation offsets with a continued effort to achieve further efficiencies.

Agency Services – Public Affairs

PUBLIC AFFAIRS	2009 Actuals	2010 SOY	2011 Rate Case	2011 IPR	2012 IPR	2013 IPR
Total	16,242,349	17,377,536	18,070,259	18,147,413	18,803,738	19,263,172

Program Description

- Public Affairs is responsible for developing a comprehensive public affairs strategy and managing the centralized support of the agency implementation of that strategy. This includes direction and support for national, regional, and tribal relations, media and internal and external communications. This function is responsible for fostering support, knowledge, and awareness of BPA's activities, including the regional engagement required by section 2.3 of the 1980 Northwest Power Act, achievements, and value to the Pacific Northwest. Public Affairs is also responsible for ensuring that programs are in place to secure appropriate public input into BPA's decision-making processes.

Strategic Objectives

- S9 – Stakeholders Satisfaction
- I6 – Collaboration
- I2 – One BPA
- P3-Engagement

Key Products and Outputs

- **The Public Affairs programs consist of:**
  - Agency's Freedom of Information Act and Privacy Act programs.
  - Communications group develops and implements an array of products for both internal and external audiences.
  - Community Engagement group does Public Engagement by identifying the appropriate processes, techniques and procedures to inform and involve key stakeholders of an issue or a proposed decision that may impact them.
  - National Relations group are the liaison between BPA and the Congress, the Executive Branch agencies, Department of Energy (DOE), the Federal Energy Regulatory Commission (FERC) and other organizations.
  - Public Relations group does Media/Writing maintains agency relationships with the Northwest media.
  - Regional Relations group DKR -- Builds and maintains productive relationships with the Northwest Power & Conservation Council, Governors, state legislatures and executive agencies; state congressional offices; public utility and environmental regulatory commissions; local governments; and public interest groups.
  - Tribal Affairs group develops and maintains effective government-to-government relationships and provide up-to-date information on tribal leadership and tribal programs with the 46 tribes and tribal organizations within the BPA service territory.

Agency Services – Public Affairs

FY 2012-13 Program Spending Drivers

- Program spending levels are driven by a combination of factors.
- Public Relations heightened by multiple transmission proposals under review, more intensive work on Columbia River Treaty, and likely increasing agency focus on consolidating control areas and other inter-utility initiatives, including wind and renewable resource integration, effects of California and potentially national renewable portfolio standard implementation, smart grid development and meeting regional and customer Energy Efficiency targets.
- Regional Relations are expected to continue to assist with transmission siting and construction as well as to support California policy development. Expect additional demand of staff time for support of agency participation and coordination for working with state agencies and regulators for implementation of the Council's 6th Power Plan and development of the Council's Fish & Wildlife Program.
- Communications expect additional workload as the build projects, the Columbia River Treaty, Energy Efficiency targets and Social Media engagement and emerging communication technologies demand more time.

Potential Risk

- Unable to provide adequate support to agency programs.

Agency Services – Internal Audit

INTERNAL AUDIT	2009 Actuals	2010 SOY	2011 Rate Case	2011 IPR	2012 IPR	2013 IPR
Total	2,193,516	2,302,841	2,336,757	2,563,263	2,511,847	2,568,337

Program Description

- Provides independent, objective assurance and consulting services designed to evaluate and help BPA improve the effectiveness of its internal control, risk management and agency governance processes. This includes evaluating whether BPA processes are adequately designed and functioning to help assure:
  - Risks are appropriately identified and managed.
  - Controls and risk management activities are adequately designed and operating effectively.
  - Interaction between BPA's various control, risk and governance groups is effective.
  - Significant financial, managerial and operating information is accurate, reliable and timely.
  - Employee actions comply with policies, standards, procedures, laws and regulations.
  - Resources are acquired economically, used efficiently and protected adequately.
  - Operational excellence and continuous improvement are fostered.
- The scope of work also includes services such as contract audits and preliminary investigations, which support operation of BPA internal control systems.

Strategic Objectives

- I1 – Systems and Processes
- I3 – Governance and Internal Controls
- I4 – Asset Management
- I7 – Risk-Informed Decision Making and Transparence

Key Products and Outputs

- Provide audit services contained in the annual workload plan approved by BPA's Audit and Internal Controls Committee.

Agency Services – Internal Audit

FY 2012-13 Program Spending Drivers

- The increases are due to the expanded audit program that supports various compliance and governance initiatives that have increased recently.

Potential Risk

- Unable to monitor compliance adequately leading to possible sanctions and urgency to achieve compliance.

Agency Services – Finance

FINANCE	2009 Actuals	2010 SOY	2011 Rate Case	2011 IPR	2012 IPR	2013 IPR
Total	14,561,861	15,597,270	16,077,049	16,364,774	17,731,334	18,069,454

Program Description

- Finance provides financial planning, accounting, and reporting for the Federal Columbia River Power System (FCRPS) and BPA. The organization also provides economic and analytical support for rate case and regulatory proceedings, and coordinates and executes all Treasury and non-Federal financing programs. Finance has primary responsibility for relationships with Federal and non-Federal banking communities, rating agencies, investors and others in the financial community. It also has primary responsibility for the development of agency spending levels. Finance provides leadership in developing proposals and policies on strategic issues that affect the agency's long-term financial integrity and competitiveness, or that have an impact on customers, constituents, and other stakeholders. Finance is also responsible for establishing financial policies and procedures for agency-wide guidance and internal controls.
- This program also manages the CGS Decommissioning Trust Fund.

Strategic Objectives

- F1 - Capital Access
- F2 - Cost Recovery
- F3 - Cash Flow
- I3 - Governance and Internal Controls

Agency Services – Finance

Key Products and Outputs

- Finance provides all accounting and financial reporting for BPA, both Federal and commercial; develops and implements accounting policy, prepares audited financial statements; maintains appropriate and adequate financial systems and establishes BPA and FCRPS requirements and reporting mechanisms to ensure adequacy of internal controls and compliance with applicable laws, regulations, and internal directives; supports and participates in Power and Transmission rate cases; establishes debt service (annual capital cost) levels; plans, coordinates and leads processes to develop program spending levels; provides budget support for all organizations in the agency including development of start-of-year budgets and tracking, monitoring and reporting on budget-to-actuals during the year; identifies financial and strategic issues; plans, coordinates and leads public processes on costs and budgets, e.g., IPR, Quarterly Business Review; participates in internal capital review processes; allocates capital funds based on approved budgets; develops Federal Budget, working closely with DOE and coordinating across the agency, developing testimony, resolving issues, assuring accuracy and consistency; tracks and manages all agency debt and cash, plans and coordinates 3rd party financing deals including working with the banking communities, rating agencies and investors.
- Total costs include annual contributions to the CGS Decommissioning Trust Fund.

	2009 Actuals	2010 SOY	2011 Rate Case	2011 Proposed	2012 Proposed	2013 Proposed
Finance	$14,561,861	$15,597,270	$16,077,049	$16,364,774	$17,731,334	$18,069,454
Decommissioning Fund	$8,776,921	$8,911,000	$9,882,000	$9,882,000	$11,266,000	$13,745,000
Total	$23,338,782	$24,508,270	$25,959,049	$26,246,774	$28,997,334	$31,814,454

Agency Services – Finance

FY 2012-13 Program Spending Drivers

- **Financial Planning and Analysis/Budget computer software improvements/upgrades. Expected benefits:**
  - Improve efficiency of budgeting and forecasting work, allowing re-direction of staff to other value-added work
  - Reduce budgeting/ forecasting cycle times by simplifying and standardizing data collection across the organization
  - Decrease errors, improve accuracy
  - Make faster, more informed decisions
  - Proposal includes consultant support for:
    - FY 2012 - mapping current process, identifying process improvements and design work, support to back up staff members dedicated to project leadership
    - FY 2013 - application implementation
- **Financial Reporting computer software improvement/upgrade: Expected benefits**
  - Improved efficiency in reporting work – less staff time spent developing/modifying/trouble-shooting reports
  - Significant reduction in the number of financial reporting tools used and the skills necessary required for those tools.
  - Reduced reliance on IT for financial report development and maintenance.
  - Simplified report access and execution. Improved access to online information.
  - Improved decision making and quality of financial information through enhanced financial analytics capabilities, including drill downs, pivots, ad hocs, and dashboards.
- **Increased cost of contracts**
  - To support debt management actions including lease financing (Moody's)
  - To support improved, more efficient operational cash management and long-term cash forecasting
- **Additional accounting staff due to emerging FASB accounting changes and ramp-up of transmission capital program**
- **Resources for additional workload associated with accounting for and tracking LGIA revenues/credits**
- **Efficiencies:**
  - Assumes significant efficiencies occur
  - Potential efficiencies due to process improvements in Start-of-Year/Quarterly Review processes, system improvements to allow automation for Federal reporting to DOE

Agency Services – Finance

Potential Risk of Insufficient Funding

- Need to support ever-changing and complex financial reporting requirements for programs such as Lease Financing, Recovery Act, and Tiered Rates.
- Inefficiencies and inflexibility in current system for gathering budget and forecast data, calculating allocations, and reporting, result in errors and significant resources needed. If improvements in software are not made, assumed efficiencies, e.g., reductions in FTE that are assumed in these forecasts, will not be achievable while providing the same level of service.
- Inadequately staffed to provide strategic analysis to BPA management to inform business decisions.
- The proposed levels to not include resources to support any new FERC requirements such as the initiative to financially facilitate Transmission resales.

Agency Services – Customer Support Services

CUSTOMER SUPPORT SERVICES	2009 Actuals	2010 SOY	2011 Rate Case	2011 IPR	2012 IPR	2013 IPR
Total	10,200,105	10,847,014	11,289,059	10,931,858	11,262,181	11,501,925

Note for FY 2009: $253.5K in expenses were charged as capital, making combined actuals = $10,453,568

PROGRAM DESCRIPTION:

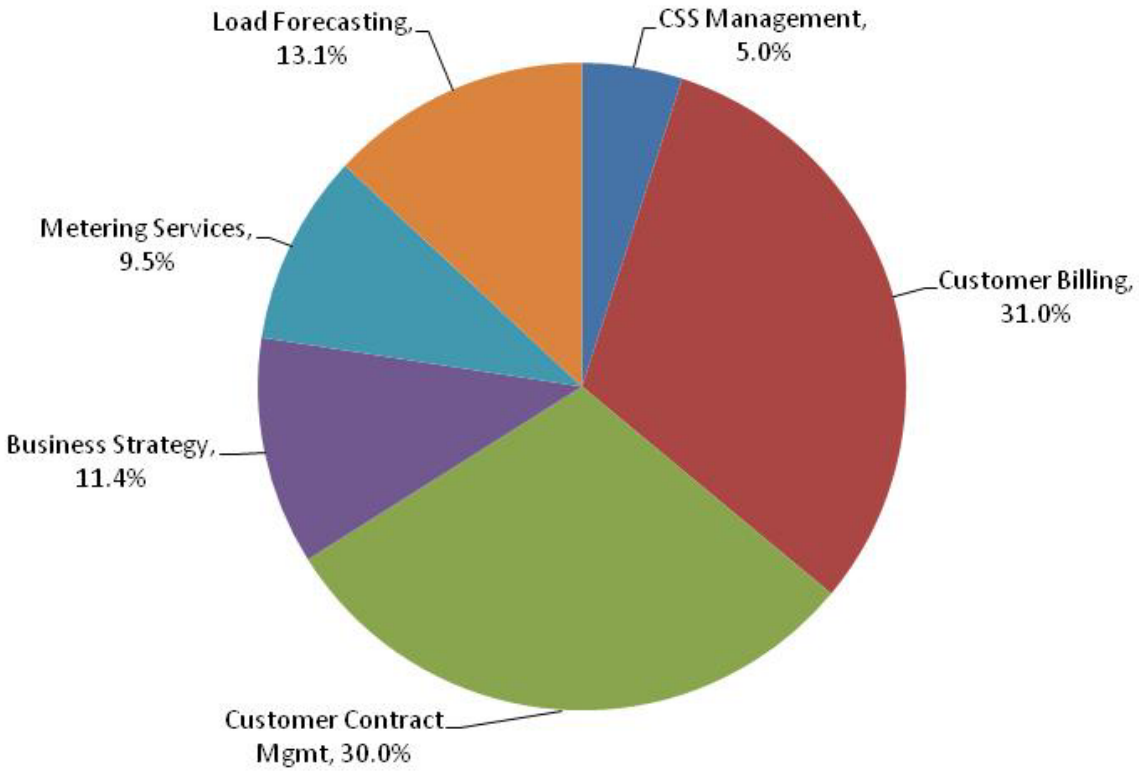
Customer Support Services (CSS) provides core business services and leadership central to the customer experience and marketing and sales value chain. CSS is the single source of consolidated and aligned customer contract, metering, load forecasting and billing information.

PROGRAM AREAS:

- ✓ Customer Billing
- ✓ Customer Contract Management & Administration
- ✓ BPA Load Forecasting & Analysis
- ✓ Customer Metering Services
- ✓ Business Strategy & Analysis

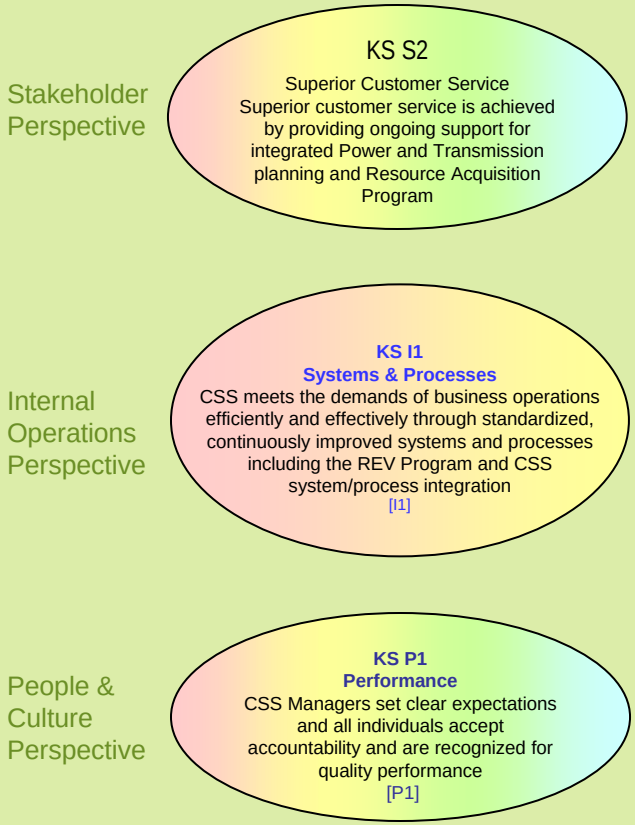
CSS costs are direct charged:
54% to Power, 46% to Transmission

PROGRAM FUNDING DISTRIBUTION:



Agency Services – Customer Support Services

STRATEGIC OBJECTIVES:



KEY PRODUCTS AND OUTPUTS:

- ✓ Conducts billing analysis. Validates and distributes more than 6,600 Transmission and Power bills for 550 customers each year, collecting nearly $3 billion annually.
- ✓ Creates and maintains over 1,140 Contract Implementation Plans. Nearly 260 new contracts, amendments, and exhibits revisions are administered each quarter; and approximately 6,000 contracts and related documents are maintained and authenticated each year.
- ✓ Provides over 1000 energy/peak forecasts annually. Analyzes customer load projections, Transmission points and scheduling points of delivery from day-ahead -> 20 years for Power and Transmission rate cases, operating year revenue projections, Transmission system power flow, and Power resource planning, and regular scheduling and Available Transfer Capability (ATC) activities.
- ✓ Performs Agency's revenue metering function. Coordinates, manages and directs activities related to the lifecycle of all revenue metering functions. Single source of revenue meter data for BPA, providing data retrieval, collection and storage, meter data validation, estimations, meter analysis, tracking and information exchanges for nearly 1800 meters daily and 110 meters hourly.
- ✓ Identifies improvements to customer service either through current services (e.g., billing and metering), or through new service offerings (e.g., Regional Dialogue contracts). In addition, maintains the group's internal controls and provides for the integrated/aligned management of customer support systems.

Agency Services – Customer Support Services

FY 2012-13 Program Spending Drivers

- ✓ **Customer Support Services' spending levels are comprised entirely of salary, related expenses, and supplemental labor costs.**

- ✓ **The total dollars for salary, benefits, travel, training, rents/utilities, materials/equipment, and contract staff have been declining and are reduced further for FY 2011-13 compared to the prior IPR as the organization realizes the benefits of the Marketing and Sales Enterprise Process Improvement project (M&S EPIP).**

- ✓ **Program Spending Drivers will continue in order to provide critical base customer services:**

  - Collecting ~$3 billion in revenue for 550 BPA customers and implementing a single agency customer billing system, including single customer bills, and billing under the Tiered Rates Methodology.
  - Providing meter data retrieval, collection, analysis, validation, estimations, and tracking.
  - Producing integrated plans for implementing agency initiatives, including Regional Dialogue contracts.
  - Providing understanding of regional and national economic conditions that impact regional load growth and enhance system operations.
  - Ensuring A-123 responsibilities are met for proper contract administration and associated internal controls, and implementing a single agency customer contract management system.
  - Delivering superior customer service and operational excellence.

Agency Services – Customer Support Services

What the data show – CSS has managed its costs effectively (see Bar Chart)

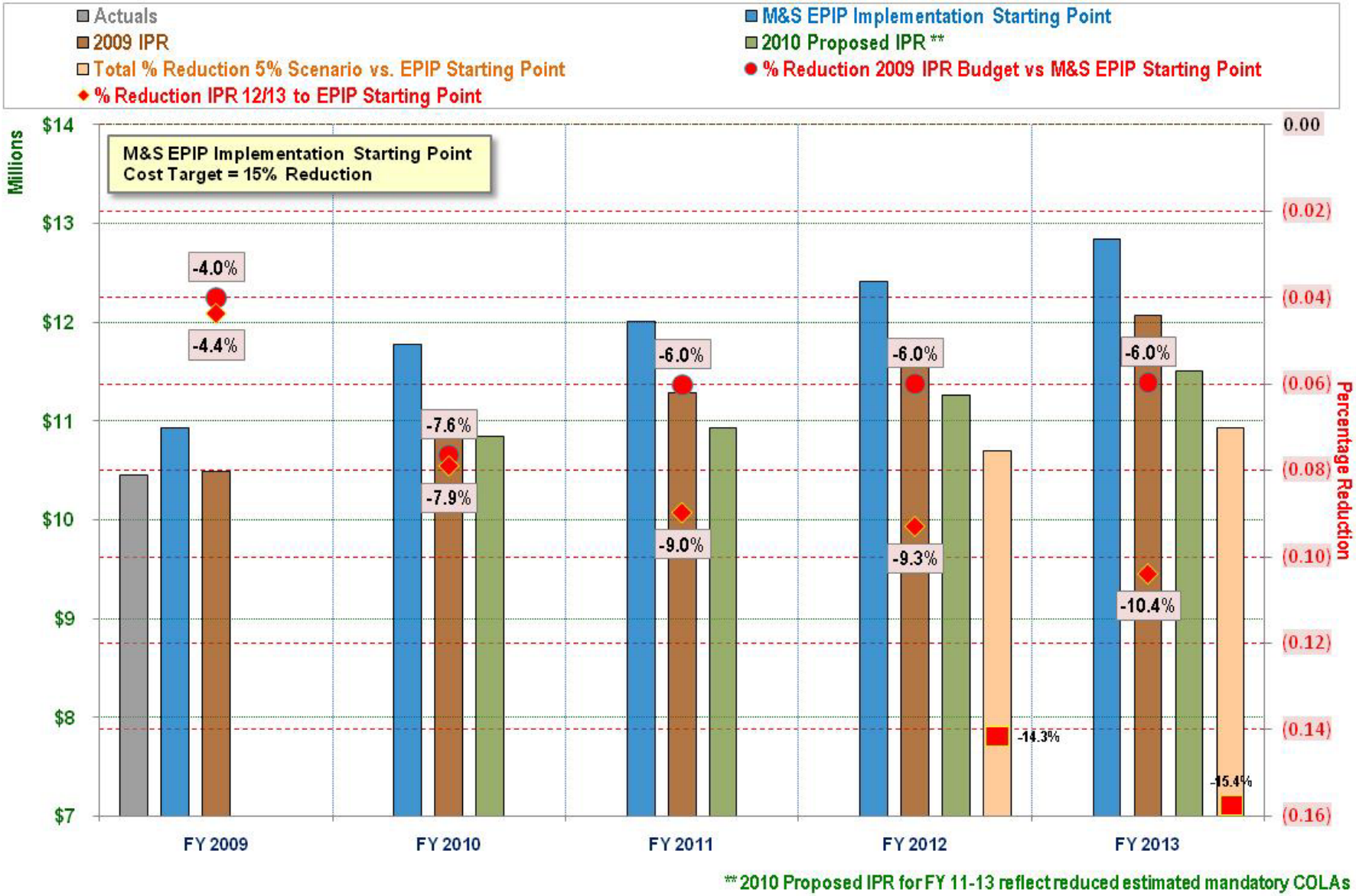
- ✓ Consistent with the M&S EPIP, CSS will achieve it's 15% EPIP cost reduction target during FY 2011. In last year's IPR for the current FY 2010-11 rate period, CSS reduced its spending levels by 7.6% for FY10, and 6.0% for FY11.
- ✓ Moreover, compared to last year's IPR, CSS will achieve additional reductions of 3.5% in FY 2012, and 4.7% in FY 2013.
- ✓ CSS's proposed IPR10 spending levels for FY 2011 is the same as its spending levels for FY 2009 – flat over three years.

CSS's Continuous Improvement Goals

- ✓ Implement one combined Power and Transmission bill for those customers that want it, with one analyst providing a single point of contact.
- ✓ Distribute all customer bills electronically, except where technology is a limitation.
- ✓ Eliminate most monthly estimated billing (produce nearly all bills as final bills).
- ✓ Implement an automated meter usage data cross-check to ensure accurate and consistent meter data is used in all customer systems.
- ✓ Eliminate manual document hand-offs, create and access standardized contract templates and provisions, and automate alerts and notifications through the Contract Management System.

Agency Services – Customer Support Services

(FY 2009 = Includes expenses charged as capital)



Agency Services – Customer Support Services

Evolution of Customer Support Services Staffing & Costs

✓Grade structure aligned.

✓New employees, many of which started as student interns.

✓Consolidated billing, contract administration, load forecasting, and metering services into single agency functions, eliminating duplication of staff.

✓Implemented single agency systems for billing, load forecasting, metering and contracts (FY 2011).

✓Cross training and reskilling (upskilling) employees to perform both (dual) Transmission and Power functions for billing, contracts, load forecasting, and metering.

Agency Services – Customer Support Services

Potential Risk

Proposed IPR FY 2010 spending levels for Customer Support Services are reduced compared to the 2008 IPR.

- ✓ **CSS Federal and contractor resources will have to operate at full capacity with minimal or no back-ups for many core functions. Cross-training of CSS employees has helped this situation, but has not eliminated it.**
- ✓ **New demands placed on the CSS organization, e.g., for sub-hourly scheduling activities associated with the integration of Wind projects, and implementation of the Regional Dialogue contracts starting in the fall of 2011.**
- ✓ **Demands increase the complexity of customer billing, metering, contract administration and the number of short-term load forecasts required to ensure proper accounting of customer resource use and minimizing imbalance charges.**

The increased level and complexity of work facing CSS, along with its reduced spending level, will require creative position management and diligent cost control leadership to be successful.

CSS is intending to live within its lower, proposed IPR FY 2010 spending levels.

Agency Services – Legal (General Counsel)

GENERAL COUNSEL	2009 Actuals	2010 SOY	2011 Rate Case	2011 IPR	2012 IPR	2013 IPR
Total	9,490,185	9,734,164	9,811,964	11,728,820	11,893,694	12,551,084

Program Description

- The Office of General Counsel (OGC) supports BPA programs through legal advice and representation. Major activities include: (1) risk assessment, negotiation and alternative dispute resolution; (2) advice and representation concerning BPA power marketing, transmission policies and transmission tariffs, contracts and rates; (3) representation in all areas of litigation before the courts or administrative and regulatory proceedings covering: power marketing, contracts, rates, energy efficiency, resource acquisition, renewable resource policy matters, federal projects, and nonfederal projects, including Energy Northwest and BPA's statutory and contractual responsibilities with regard to the provision of transmission service; (4) advice and legal representation on environmental matters, including NEPA, lands, hazardous waste, and BPA's fish and wildlife obligations under various acts; (5) drafting and negotiating financial instruments, including documents related to Energy Northwest and treasury financing, and (6) advice and representation on personnel, ethics, privacy, EEO, finance, budget, lands & rights of way, torts, procurement, corporate authority and other corporate legal matters.
- General Counsel's spending levels include costs for hearing officers, court reporters, arbitrators, investigators, third-party experts, and outside counsel.

Strategic Objectives

- S1 – Policy and Regional Actions
- I7 – Risk Informed Decision Making and Transparence
- S3-Tiered Power Rates
- P2 –Talent and Development

Key Products and Outputs

- OGC is wholly a support group; the work is programmatic. OGC advises on all Agency issues.

Agency Services – Legal (General Counsel)

FY 2012-13 Program Spending Increase Drivers

- The wind initiative is one of the top BPA priorities. BPA expects to integrate 4-6000 mw of wind over the next two years and beyond.
- DOE has recommended increased attention and review for personnel annual financial disclosures.
- Increased FERC and reliability related work.
- Arbitrations are also expected to increase due to the terms of the new power sales contracts.
- The Tiered Rates Methodology anticipates increased hearing officer responsibilities. Program spending reflects a possible significant increase in hearing officer work.
- Fact findings are expected to be a continued workload and they have been consolidated in these spending levels.

Potential Risk

The potential risk would be in the following programs:

- OGC support is necessary for the agency to succeed on its various wind initiatives and related work, such as FERC's recent Renewables Notice of Inquiry. Inadequate OGC support will delay or frustrate accomplishment of the initiatives since they rely on timely environmental, contractual, tariff and other legal work.
- OGC would be unable to process personnel financial disclosure work leading to risks of potential fraud & unethical behavior.
- Derivative regulation and taxation may have a significant impact on financing of BPA infrastructure additions that are critical to meeting our mission. We anticipate that these developments will require additional expenditures on outside bond and tax counsel.
- Arbitrations are also expected to increase due to the terms of the new power sales contracts. Inadequate funding for hearing officers could compromise agency commitments in the Tiered Rates Methodology.
- Without these increases OGC will be unable to provide advice regarding these or other issues or quality will be less than appropriate.

Agency Services – Corporate Strategy

CORPORATE STRATEGY	2009 Actuals	2010 SOY	2011 Rate Case	2011 IPR	2012 IPR	2013 IPR
Total	8,435,643	20,794,465	21,152,290	21,324,882	27,471,088	28,535,261

	2009 Actuals	2010 SOY	2011 Rate Case	2011 IPR	2012 IPR	2013 IPR
Corporate Strategy	$ 248,182	$ 311,695	$ 329,324	$ 579,521	$ 624,170	$ 637,947
Strategic Planning	$ 1,370,571	$ 1,937,265	$ 2,129,330	$ 1,635,355	$ 1,789,221	$ 1,854,560
Strategy Integration	$ 3,595,898	$ 5,438,470	$ 5,826,983	$ 5,820,006	$ 7,515,695	$ 7,645,820
SubTotal	**$ 5,214,651**	**$ 7,687,430**	**$ 8,285,637**	**$ 8,034,882**	**$ 9,929,086**	**$ 10,138,327**
Technology Innovation	$ 3,220,992	$ 13,107,035	$ 12,866,653	$ 13,290,000	$ 17,542,002	$ 18,396,845
Grand Total	**$ 8,435,643**	**$ 20,794,465**	**$ 21,152,290**	**$ 21,324,882**	**$ 27,471,088**	**$ 28,535,172**

Program Description

On January 1, 2010, BPA's Technology Innovation Program was consolidated into BPA's Corporate Strategy group. As a result, the Technology Innovation program spending levels are now managed as part of Corporate Strategy. The Corporate Strategy group has three functional organizations: Strategic Planning, Strategy Integration, and Technology Innovation. This provides a significant increase in Corporate Strategy's ability to create successful futures for BPA by effectively integrating Asset Management, Technology Innovation, and cross-agency initiative management.

Strategic Planning plans, directs, and manages a strategic planning program and an asset management program aligned to meet BPA's mission, vision, and strategic objectives. It analyzes the potential impact of the energy industry landscape, and evaluates future scenarios and strategic options. This function supports the executive team in establishing and updating BPA's strategies, and leads development of agency performance objectives and targets that integrate both business and public responsibility goals. Strategic Planning is also responsible for the development of agency level asset management policies, and interfaces closely with the business units in the development of asset strategies.

Strategy Integration develops, directs and coordinates the management of specific cross-agency strategic initiatives, consistent with BPA's mission and strategic objectives. These include BPA's initiatives related to renewables integration, transmission strategy, climate change and market design. Strategy Integration manages BPA's engagement with ColumbiaGrid and the North American Energy Standards Board (NAESB). The group also conducts landscape analysis and and manages analytical tools to support the cross-agency initiatives.

Agency Services – Corporate Strategy

Program Description (continued)

Technology Innovation (TI) strategically recruits, constructs and manages a portfolio of research projects to address and solve BPA business challenges by applying research results that have a direct link to the agency's strategic objectives/mission and provide financial benefit to the region. The TI Office works synergistically with Strategic Planning and Strategy Integration to implement technologies in support of asset management and cross agency initiatives. Technology Innovation uses target driven, systematic, sound business best practices for strategy evaluation and program development that addresses integration of decisions made across all program areas. The purpose is to provide benefit to BPA and its customers, based on a well defined agency strategic agenda. The TI Office also works to preserve the regional benefit associated with the intellectual property developed during the research. The portfolio consists of projects proposed from internal BPA staff and external organizations. The TI Office leads BPA R&D engagement with external research groups such as such as universities, national labs, Electric Power Research Institute (EPRI) and TVA. The TI Office is responsible for structuring BPA's research investments and set the agency's technology agenda (except Fish & Wildlife) through consultation, coordination and collaboration with BPA executives and technical experts. This program is guided internally by a Technology Innovation Council consisting of experts and executives from across the agency. The TI Office implements mature business practices associated with excellence in R&D management such as the use of technology roadmaps to drive the research agenda, robust portfolio management, life cycle project management, technology transfer and business driven technology application.

Strategic Objectives

- S1- Policy and Regional Actions
- S8 - Climate Change
- I5 - Technology Innovation
- I4 - Asset Management

Key Products and Outputs

- Up-to-date agency strategy description and performance metrics/targets.
- Fully resourced Agency Strategy Forum (ASF) based on research agenda ratified by the Front Office.
- Strategic market intelligence.
- Asset management strategy and policy guidance in support of asset category, asset strategies, plans, business case development and evaluation.
- An effective climate change strategy that identifies implications for BPA, and responds with actions and policies to address physical, economic, legislative and regulatory changes related to climate change.

Agency Services – Corporate Strategy

Key Products and Outputs (continued)

- A coordinated, agency-wide strategy for integrating additional amounts of variable renewable resources (with a current emphasis on wind energy) into the regional power system.
- Involvement in regional activities facilitated by ColumbiaGrid to foster a one-utility approach to planning and utilizing the regional grid and participation in Joint Initiative activities to foster new inter-utility business practices and operational approaches for meeting variable generation integration challenges.
- R&D portfolio linked to agency business objectives that advances technologies that are environmentally sound, increase system reliability and reduce system costs through managing a portfolio of near, medium and long term research projects. The portfolio consists of a suite of projects that span across grid operation, energy efficiency, climate change, wind integration, and smart grid.
- Research on shunt connector designs has resulted in transmission lines upgrades to carry up to 40 percent more power and yield a cost savings of 25-35 percent of the cost to reconductor an existing line. In 2008, BPA saved $4 million installing this shunt design to upgrade 20 miles of the Ross Lexington line. Cost savings of $200,000 per mile are expected on all future shunt applications with several lines planned for upgrading in the near future.
- Research on BPA grid operation results in incremental improvements that move toward Operational Transfer Capability levels to be based on real time system conditions. This enables efficient use of existing transmission lines and eliminates the need for building new transmission lines. This research works to develop tools for BPA operators to respond quickly and effectively to outage/emergency situations, thereby increases reliability and minimizes costly curtailments caused by unplanned line outages.
- Other grid operation research outputs include potential cost savings and reliability increases from improved seismic standards, advanced surge suppression technology, gigabit ethernet transport over fiber network and synchrophasor application for wide area grid control.
- Energy efficiency projects develop technologies to meet the 504 aMW energy efficiency target outlined in the NW Power Planning Council's 6th Power Plan. Climate change projects develop strategies and stream flow scenarios to reflect the most up-to-date climate change modeling. Benefits from wind research are increased understanding of wind forecasting and ramp events. Technologies that reliably integrate large amounts of wind are currently being worked on. The BPA Smart Grid project organized initial regional efforts to submit a PNW proposal for DOE Smart Grid funding in 2009 resulting in the largest smart grid demonstration project chosen in the nation.

Agency Services – Corporate Strategy

FY 2012-13 Program Spending Drivers

- Additional funding to support asset management analysis for business case development as volume increases and Columbia Generating Station (CGS) and Energy Efficiency (EE) asset categories are added.
- Additional funding of $1.5 million per year to enable BPA to financially contribute to a region-wide analysis of the costs and benefits of new approaches to balancing authority coordination across the Northwest Power Planning Council and WECC footprints.
- Additional funding to enable internal analysis and coordination of such regional initiatives.
- After flat program spending levels in FY 2010-2011, Technology Innovation Program includes additional funds in FY 2012-13 consistent with ramp-up in programmatic spending target of one-half of one percent of Agency revenues.

Potential Risks Mitigated by these Increases

- Inability to keep pace with demands of asset management strategy, plan development and business case analysis, and desired expansion of asset categories to include CGS and EE.
- Limited internal resources to evaluate and analyze potential operational requirements as well as potential costs and benefits of new mechanisms to increase regional balancing authority coordination which may promote better use of existing system resources and reduce pressure on the capacity of the Federal hydro system from increased wind integration.
- Inability to advance application of technologies in the BPA system, thereby not solving some of BPA's business challenges, resulting in loss of value to the region.

Agency Services – Internal Business Services (IBS)

INTERNAL BUSINESS SERVICES	2009 Actuals	2010 SOY	2011 Rate Case	2011 IPR	2012 IPR	2013 IPR
Total	473,547	1,084,333	786,997	874,451	892,621	908,258

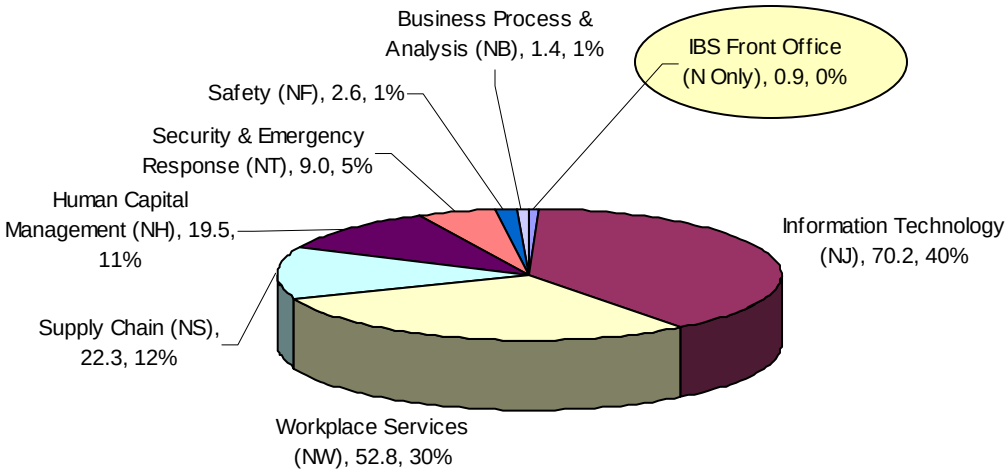
Program Description

- Internal Business Services is responsible for providing policy and strategic guidance covering a significant part of BPA's internal operations. This program area covers the executive vice-president and staff that provides the executive oversight function and integration of the 800+ person organization. BPA's internal operations sustainability strategy is also led out of this program.

Key Products and Outputs

- Key outputs include strategic oversight and integration of the IT, Supply Chain, Workplace Services, Human Capital Management, Security, Safety and Business Process & Analysis functions. It establishes executive-level key performance indicators for IBS functions and assures performance. It also implements the Agency's sustainability strategy and integrates business continuity efforts for IBS functions.

Internal Business Services – Total Program ($ in millions)



Agency Services – Internal Business Services

AGENCY STRATEGIC OBJECTIVES:

Stakeholder Perspective

- S2 FCRPS Operations & Expansion
- S8 Climate Change

Internal Operations Perspective

- I1 Systems & Processes
- I4 Asset Management
- I7 Collaboration

People & Culture Perspective

- Performance (P1), Talent & Development (P2), Engagement (P3) & Work Environment/Safety (P4)

INTERNAL BUSINESS SERVICES ALIGNMENT:

- IBS core functions (IT, Supply Chain, HCM, Workplace Services, Security & Safety) provide the critical internal infrastructure and services support to enable BPA to deliver on its critical Transmission and Power mission.
- IBS leads the Agency's strategy to support and encourage innovative, cost-effective business practices to shrink BPA's carbon footprint and conserve resources.
- IBS delivers Agency-wide operational excellence and business process management support through the application of standard methods and technology, and builds capacity through training and consulting.
- IBS integrates and optimizes its approach to planning and implementing capital investments and to operating and maintaining IT, Non-electric Facilities & Security assets
- IBS sustains partnerships with internal business units to ensure effective delivery of Agency-wide programs.
- IBS leads BPA's People & Culture strategy through the development and deployment of BPA's Talent Management Strategy and Agency Safety Program.

Agency Services – Internal Business Services

FY 2012-13 Program Spending Drivers

- **The program drivers are:**
  1. Operational integration of a large subset of core Agency support services that enable the BPA's business to deliver on its core function – operational integration includes effectively integrating both systems and processes at least cost to deliver needed Agency support services.
  2. Integration of business continuity planning & implementation for IBS functions.
  3. Development and implementation of BPA's sustainability strategy for internal operations.

Potential Risk

- **Increased need for additional focus on sustainability and/or business continuity.**
- **Increased audit findings or operational requirements within IBS requiring additional support or executive engagement.**

Agency Services – Business & Process Analysis

BUSINESS & PROCESS ANALYSIS	2009 Actuals	2010 SOY	2011 Rate Case	2011 IPR	2012 IPR	2013 IPR
Total	-	257,015	-	1,241,793	1,442,467	1,468,290

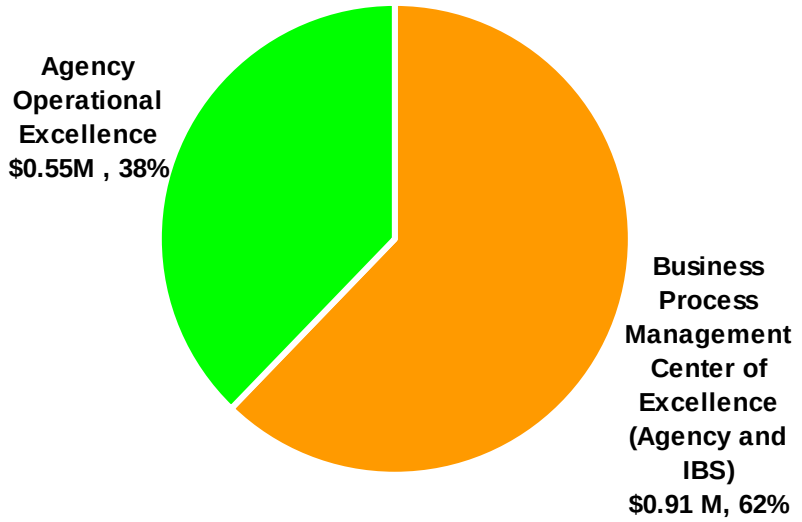
Program Description:

- The Business & Process Analysis group includes operational excellence consultants, process managers and business analysts to deploy business process tools, architectures work flow technology, and other continuous improvement methodologies to advance operational excellence throughout the Agency.

Strategic Objectives:

- The Business & Process Analysis group carries on EPIP-like continuous improvement initiatives. It deploys the Agency's operational excellence and business process management methods, standards and technology to enable BPA to meet business operations efficiently and effectively through standardize continuously improved systems and processes (I1).

Business & Process Analysis Group



Agency Services – Business & Process Analysis

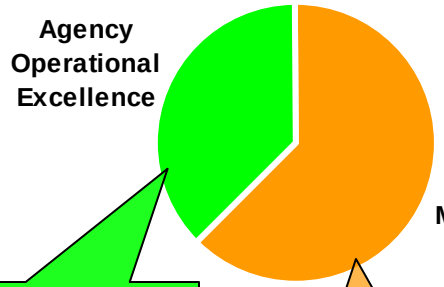
FY 2012-13 Program Spending Drivers

- The program is expected to meet the increased need to address process management issues and operational excellence within the Agency in order to achieve the less than inflation and other efficiency related program assumptions throughout the Agency. This program carries on Agency operational excellence and business process architecture/management expertise and supports initiation of any new process improvement projects in 2012-13 (similar to launching new EPIP program reviews).

Potential Risk

- Because Agency-wide organizations have efficiency assumptions built into IPR proposed spending levels and this program will be the Agency's central support resource for continuous improvement, there is a high probability that Agency demand for this program will be greater than it was set up to meet. Therefore, only a sub-set of the Agency's continuous improvement needs are likely to be supported by this program.

Key Products & Outputs



1) Agency support for process and work improvement initiatives.
2) Consultancy approach using a wide range of methods to increase operational excellence in work process, quality of outputs, and/or team effectiveness
3) Key performance indicators on each application of OpEx support to measure performance.

1) Oversight and implementation of business process architecture and workflow technology for process improvement throughout the Agency
2) Oversight, management and further implementation of the EPIP-driven self-service and workflow technology applied to client-oriented services across IBS.
3) Key performance indicators on each process and/or service to measure performance.
4) Continuous improvement initiatives deployed at the direction of senior management.

Agency Services – Safety

SAFETY	2009 Actuals	2010 SOY	2011 Rate Case	2011 IPR	2012 IPR	2013 IPR
Total	2,214,061	2,497,335	2,478,586	2,577,130	2,647,346	2,701,779

Program Description

- The Safety Office provides advice, information and support to all employees to enable BPA, as an employer, to fulfill its primary safety responsibility of providing a workplace that is free from all recognizable safety and health hazards.

Strategic Objectives

- BPA's Safety program objective is to provide a system-wide environment free from recognized hazards which might cause serious physical harm, death, or system property damages. This program supports the agency's work environment (P4) goal of having a safe and positive work environment.

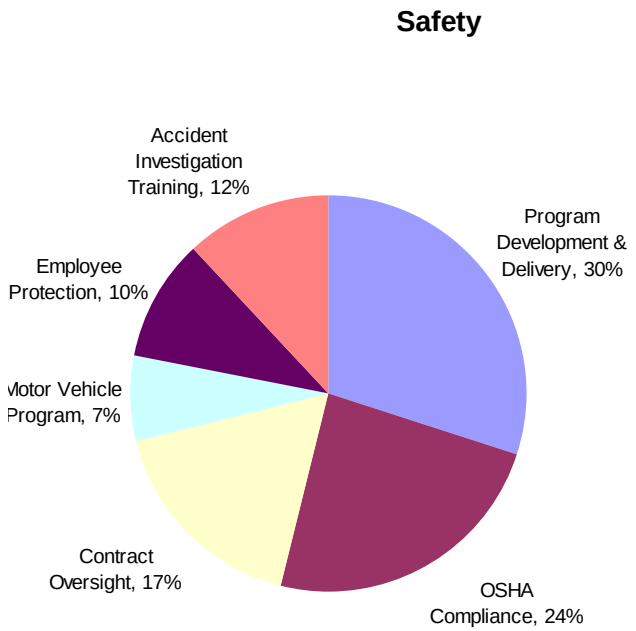
Key Products and Outputs

- Successful implementation of the following elements of BPA's Safety Program will be demonstrated by obtaining an Accident Frequency rate of 1.5 or less Agency-wide, program development and delivery, OSHA compliance, contract oversight, motor vehicle safety program, employee protection and accident investigation training.

Potential Risk

- Potential increased workload above our current capabilities due to Transmission Services future capital program.

FY 2012-13 Program Spending Drivers



Agency Services – Human Capital Management (HCM)

HUMAN CAPITAL MANAGEMENT	2009 Actuals	2010 SOY	2011 Rate Case	2011 IPR	2012 IPR	2013 IPR
Total	15,004,532	18,035,368	17,344,046	18,387,532	19,544,538	19,361,765

Program Description

- Human Capital Management plans, directs, and manages a comprehensive human capital management strategy and program aligned to meet agency mission and objectives. We do this through delivery in six major program areas: Integrated Strategy and Policy, Business Unit Strategic Partnering, Talent Acquisition, Talent Development and Organizational Effectiveness, Talent Sustainment, Performance Enhancement, Labor Relations, and Internal Operations.

Strategic Objectives

- HCM is aligning all of its processes, systems, and program initiatives to deliver improved outcomes under the entire BPA Strategy Map with special focus on:
  - P1 – Performance: *Leaders set clear expectations and all individuals accept accountability and are recognized for quality performance*.
  - P2 – Talent and Development: *BPA's workforce is highly skilled and talented to achieve agency objectives.*
  - P3 – Engagement: *BPA has a highly engaged workforce*.
  - P4 – Work Environment: *BPA has a safe and positive work environment.*
  - I1 – Systems and Processes: *BPA meets the demands of business operations efficiently and effectively through standardized, continuously improved systems and processes.*

Agency Services – Human Capital Management

Efficiencies Reflected in Current Proposed Spending Levels

- Since 2006 HCM has deployed more efficient processes and systems which allowed us to consolidate and reduce staff.
  - **Personnel Actions**
    Activated the HCM call center which provides a centralized point for requestors to submit personnel action requests.
  - **Workplace Moves**
    Centralized all workplace move service requests within Workplace Services.
  - **Training Self Service Administration**
    Implemented centralized, streamlined and standardized training registration, tracking and reporting processes.
  - **Recognition Administration**
    Deployed an on-line recognition system which provides more efficient, accurate tracking and reporting.
- Several additional efficiency efforts are underway and already embedded in the proposed spending levels:
  - **Leveraging of HRIS**
    Implementing additional modules in BPA's HCM information system will lead to a better return on our enterprise investment and gain proces efficiencies, and improving HCM service delivery.
  - **Electronic Personnel Folders**
    Digitizing official personnel records ensures security of personal information for continuity of operations capabilities while streamlining recordkeeping and improving accessibility for employees.
  - **Process Redesign and Automation of Talent Acquisition**
    Implementing new processes and tools that provide a standardized way to request, track, and deliver talent acquisition services (the "hire" process) while enabling data-driven process analysis for continuous improvement efforts.

Agency Services – Human Capital Management

Allocation of Program Across Key Products

- HCM Front Office and Integrated Strategy and Policy – $2.3 million, 12%
  - Directs a comprehensive human capital management strategy and programs aligned to meet agency mission and objectives. Sets methodology, approach, and policy that ensures an effective Talent Management Strategy through human capital strategic planning, governance, compliance, and policy integration.
    - Human Capital Strategic Planning.
    - Governance, Compliance, and Policy Integration.

- Performance Enhancement –$2.1 million, 11%
  - Provides performance enhancement programs that ensure an effective results-driven organization and improved individual performance through effective performance management, management and employee relations, and bonus, awards, and recognition programs.
    - Performance Management.
    - Management and Employee Relations.
    - Bonus, Awards, and Recognition Programs.

- Labor Relations –$0.7 million, 4%
  - Represents management in all dealings with unions to optimize achievement of business objectives.
    - Negotiations.
    - Informal and Formal Dispute Resolution.
    - Contract Interpretation and Consulting Services.

Agency Services – Human Capital Management

Allocation of Program Across Key Products (cont.)

- Internal Operations – $1.4 milllion, 7%
  - Designs easy-to-use automated and manual processes that provide operational support to strategic partnering, HCM staff offices, and transactional functions.
    - HR Operations.
    - Business Analysis.

- Talent Acquisition – $2.5 million, 13%
  - Provides staffing and recruiting programs that are in alignment with the Agency Talent Management Strategy. Ensures proper application of Federal Classification standards.
    - Staffing and Position Management.
    - Acquisition Services.
    - Recruiting Services.

- Talent Development and Organizational Effectiveness – $4.2 million, 20%
  - Provides processes and programs that effectively assess, develop and increase workforce bench strength capabilities through leadership and employee development programs, automated training self service, and organizational effectiveness programs.
    - Leadership and Employee Development.
    - Training Self Service.
    - Organizational Effectiveness.

- Talent Sustainment – $6.4 million, 33%
  - Provides services to ensure our BPA workforce is working safe and well through workplace prevention and responsive programs that deliver occupational health, employee benefits programs, and Office of Workers Compensation Program (OWCP) with associated Return to Work Programs.
    - Employee Benefits Programs.
    - Occupational Health Program.

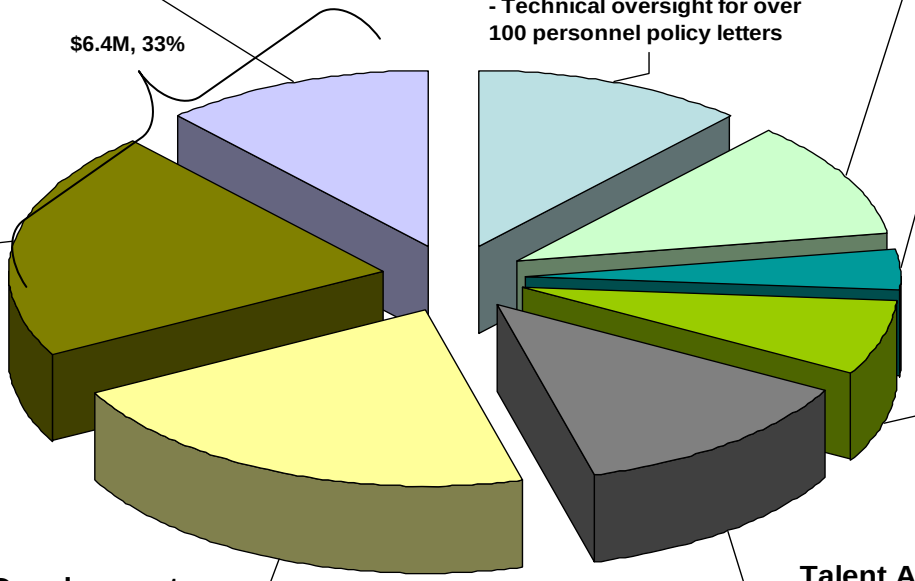
    } *$2.3M (36% of Talent Sustainment program)*

    - OWCP.

    } *$4.1M (64% of Talent Sustainment program)*

Agency Services – Human Capital Management

FY 2012-13 Proposed Costs for Human Capital Management Programs



Talent Susatinment (Other)
$2.3M, 12%
- 470 Retirement Estimates and 139 Retirements in 2009
- 57 Current reasonable accommodtion cases
- 413 Current suitability adjudication determinations

Strategy & Policy
$2.3M, 12%
- Leads development of Talent Management Strategy, Workforce Planning, and Employee Value Proposition initiatives
- Technical oversight for over 100 personnel policy letters

Performance Enhancement
$2.1M, 11%

Labor Relations
$0.7M, 4%
- Est 50 bargaining instances
- Est 10-15 formal disputes per yr
- Over 100 informal issues or disputes resolved per yr

Talent Susatinment (OWCP)
$4.1M, 21%
Over 360 OWCP cases in 2009

Internal Operations
$1.4M, 7%
- Supports 38 HR automated systems and initiatives
- Processed over 20,000 personnel actions during 2009

Talent Development
$4.2M, 20%
- Over 40 training class topics and 19 required training classes
- 500 consulting engagements

Talent Acquisition (Hire Process)
$2.5M, 13%
In 2009, opened more than 500 vacancy announcements, filled over 260 vacancies, and processed over 8300 employment applications

Agency Services – Human Capital Management

Potential Risk

- **Staffing levels in HCM may be too low**

  The FY 2011-17 proposed spending levels incorporate and embed the assumed staffing and related program efficiencies from the HCM/SM EPIP. However, some of the automation initiatives (electronic personnel files, electronic performance management, on-line applications) have been delayed or will come online fully after FY 2012 which could upward pressure on HCM staffing levels in the near-term.

- **Training spending levels may be too low**

  BPA has invested in excess of $125 million over the last few years in new IT systems in support of changing business models, processes and regulatory requirements. The effectiveness of these investments depends on maintaining and enhancing staff and organizational proficiency in use of these investments.

- **Demand growing for aligning organizations to new business requirements**

  The changes that are driving our need for enhanced training are also creating an increasing misalignment of organizational talent, structure, processes, systems, policy and culture. This misalignment is resulting in increasing demands on the strategic partnering function and on organizational effectiveness consulting.

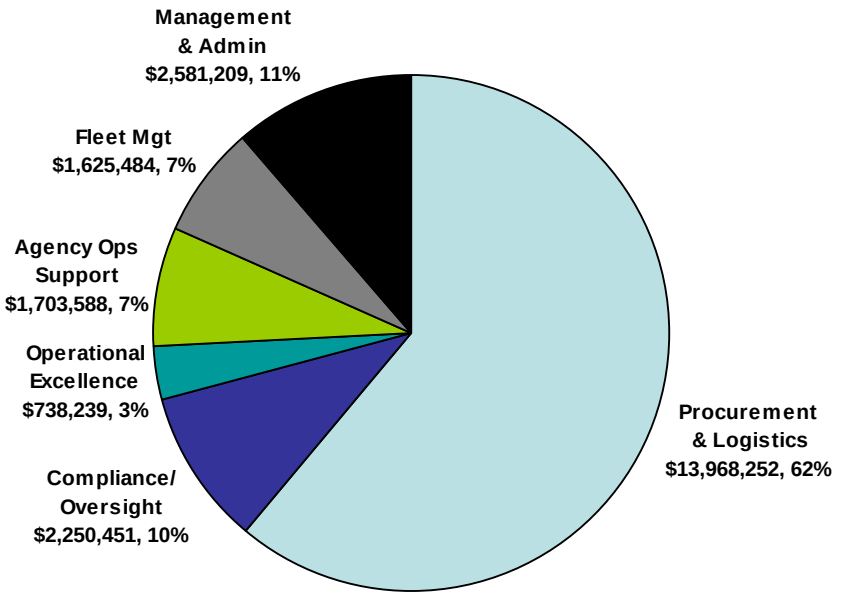
Agency Services – Supply Chain

SUPPLY CHAIN SERVICES	2009 Actuals	2010 SOY	2011 Rate Case	2011 IPR	2012 IPR	2013 IPR
Total	17,851,814	23,000,000	20,719,854	21,468,414	22,272,482	22,867,222

Program Description

- Supply Chain Services is responsible for all BPA services and materials procurement, and for safe materials storage and transportation across the service territory. Supply Chain Services mitigates Agency risk by incorporating industry best practices and by strict adherence to internal and external compliance and controls.

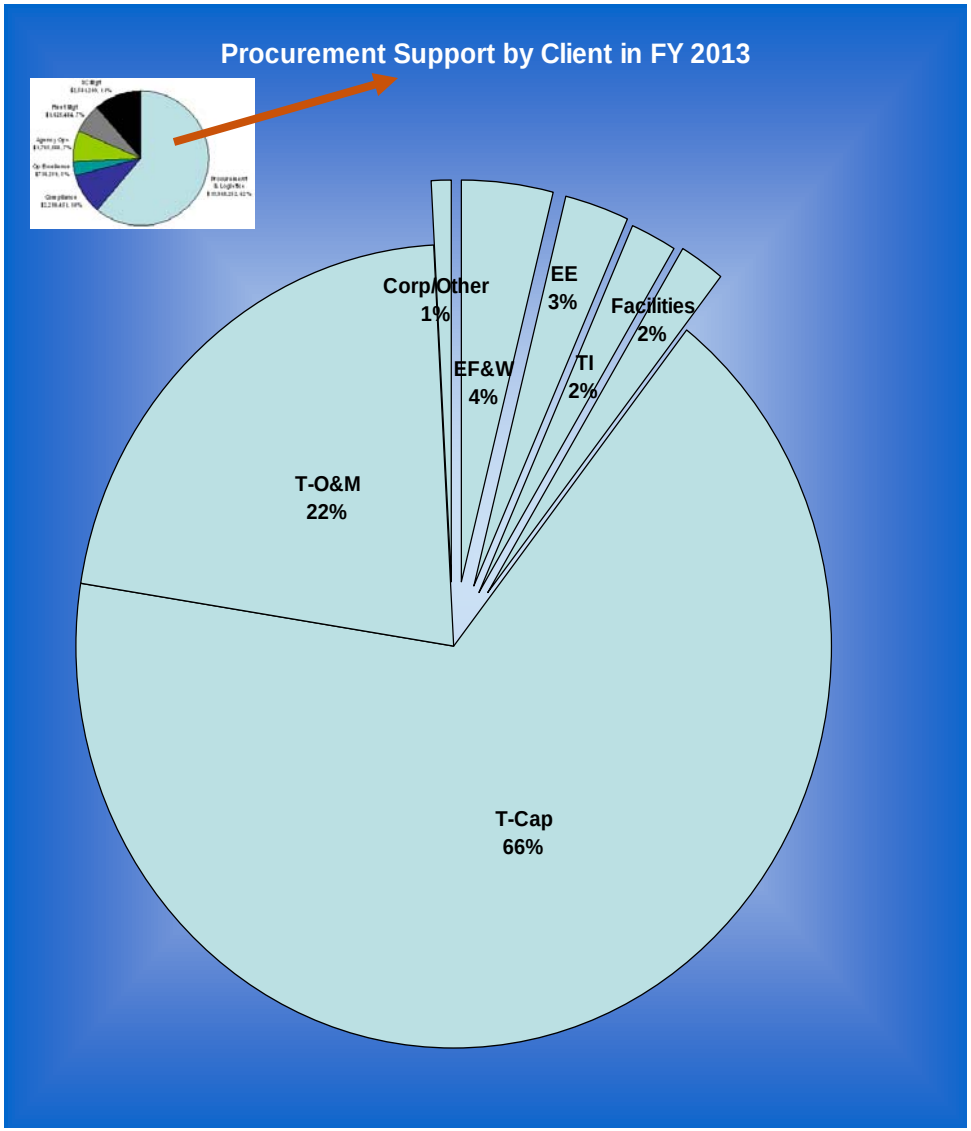
FY 2012-13 Proposed Spending Levels by Program



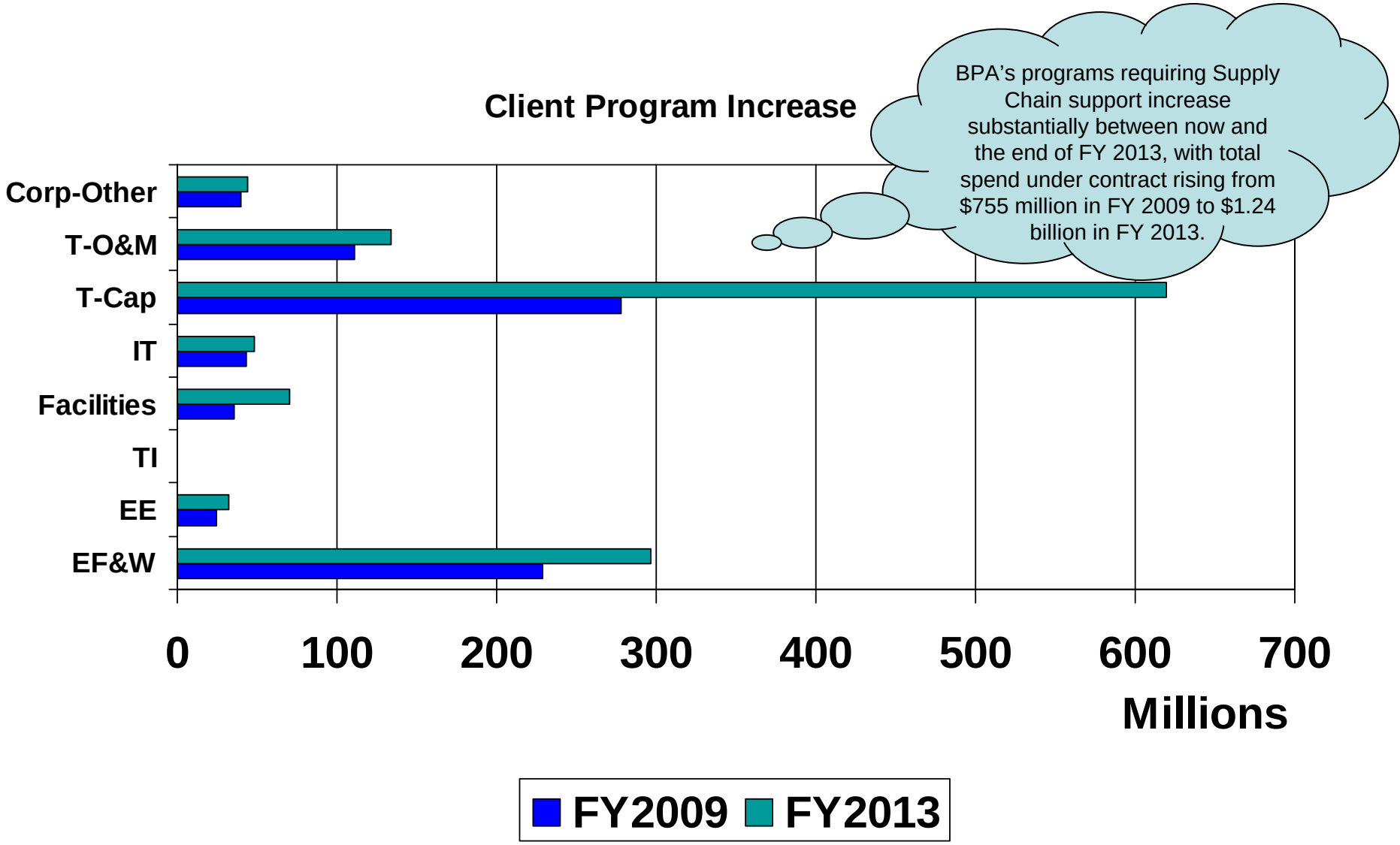
Agency Services – Supply Chain

Strategic Objectives

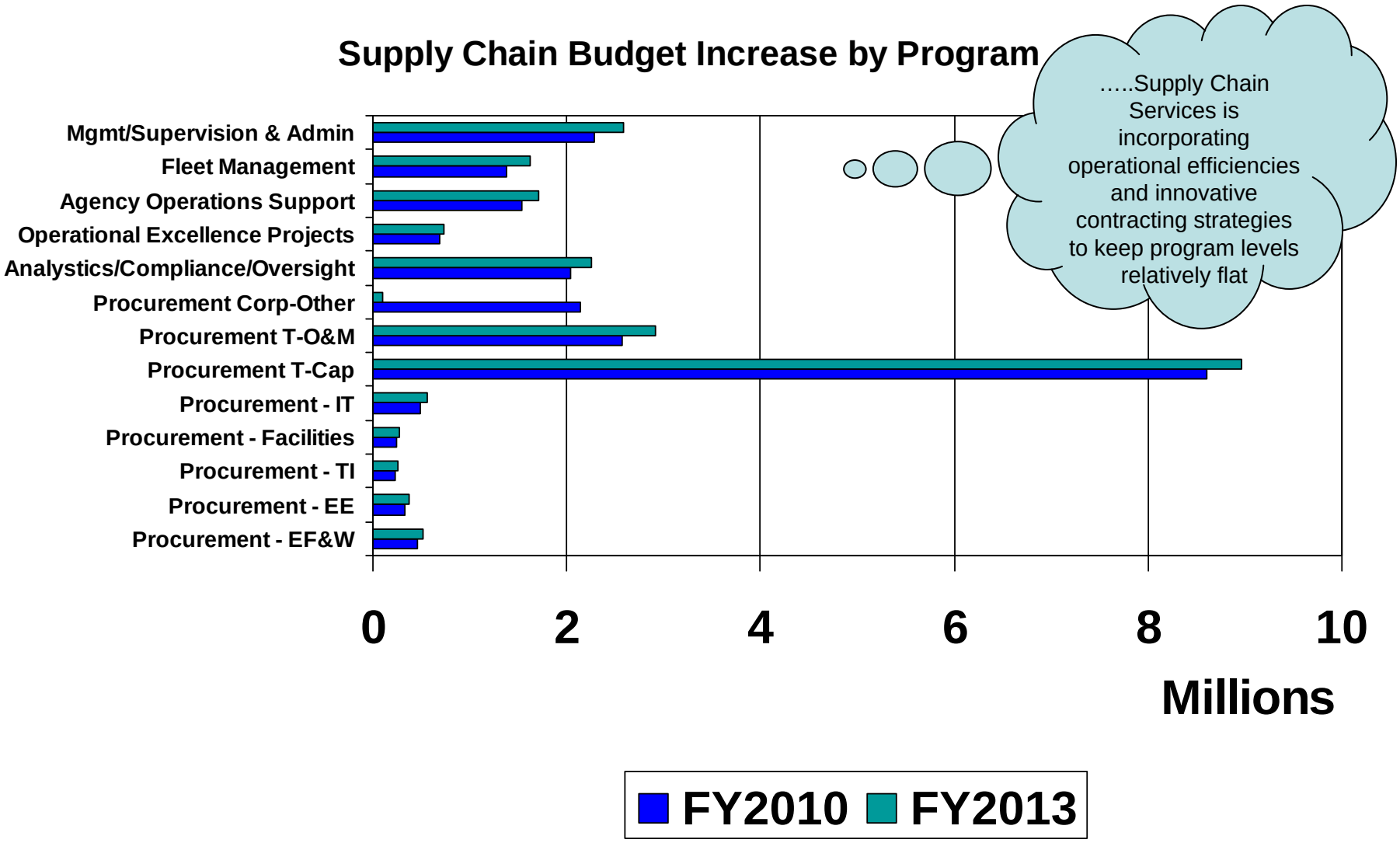
- Supply Chain Services supports all services and materials procurement for BPA to meet its FCRPS operations and expansion objectives (S-2). We incorporate market research and analysis, specialized experience, and software tools to collaboratively support our client's resource needs while remaining compliant with federal procurement guidelines. As our clients' programs expand, we need to flex our capability accordingly to provide the best value for rate payer dollars. Our approach supports BPA systems and processes (I-1) and governance and controls (I-3) objectives.
- Our clients are:
  - Transmission Capital (T-Cap)
  - Transmission Operations & Maintenance (T-O&M)
  - Environment Fish & Wildlife (EF&W)
  - Energy Efficiency (EE)
  - Technical Innovation (TI)
  - Facilities
  - All Other Agency Organizations (Power/Corp/Other)



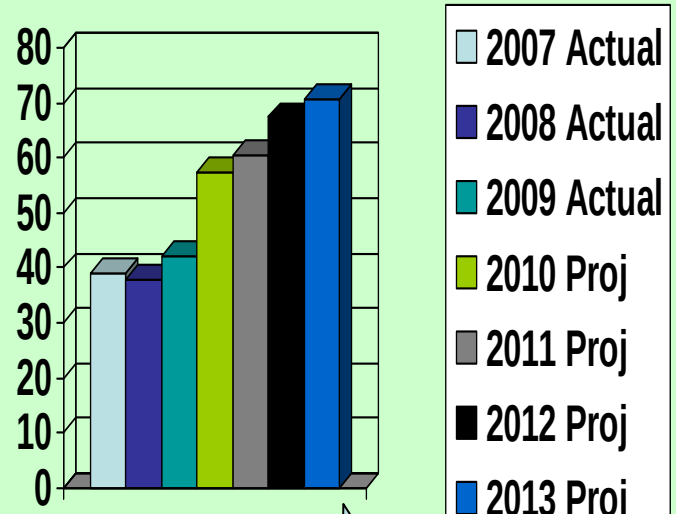
Agency Services – Supply Chain



Agency Services – Supply Chain



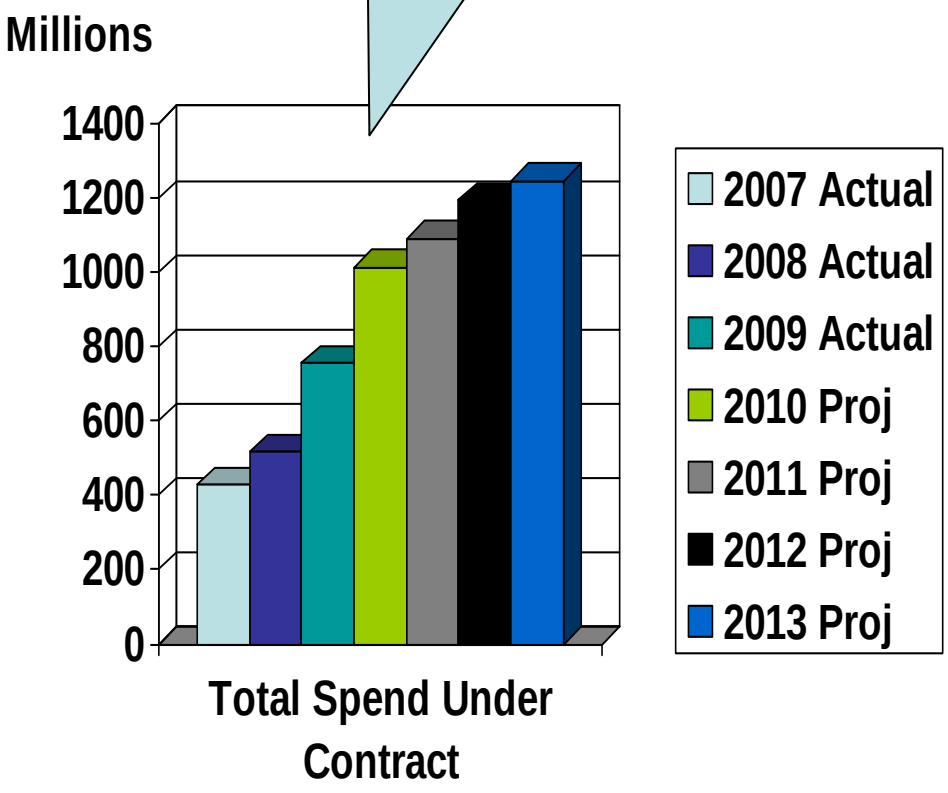
Agency Services – Supply Chain



PO Lines
Contracts
Receipts, QC, Store, Pick, Pack, Ship Actions

Transactions are projected to increase by 81% between FY 2007 and FY 2013

Total spend under contract is projected to increase by 191% between FY 2007 and FY 2013



Agency Services – Supply Chain

Key Programs within Supply Chain Services

- **Risk appropriate and policy compliant contracts and purchase orders in support of Agency programs in EF&W, EE, TI, Facilities, IT, T-Cap, T-O&M and Corp/Other**
- **Analytics/Compliance/Oversight**
  - **Inventory Management**
    - Secured $4m in targeted inventory reductions to clear excess over past 2 years.
    - On-going inventory optimization to ensure correct item availability for BPA crews.
  - **COTR program management.**
  - **Market Intelligence, Analysis & Reporting**
  - **Data Stewardship**
- **Operational Excellence Projects**
  - **E-Commerce implemented and expanding to reduce transaction costs. Automates RFO/Bid solicitation process, provides for electronic transmission of PO's and Invoices vs printing and faxing documents.**
  - **Implementing "Lean" warehousing to eliminate waste and streamline logistics processes. The focus is on value-added steps only.**
  - **On-going use of Strategic Sourcing methodology to provide cost savings, reduced risks and other value improvements. Examples:**
    - Line Construction - $1.85 million Savings and improved project team efficiencies.
    - Transformers - $1.3 million Savings and delivery lead time improvement of 25%.
    - Crafts – over $1 million Savings and improvement in recruitment capacity.
    - Cell Phones – Consolidated resources and generated $1.05 million in Savings
    - Current projects seeking over $4 million in annual cost savings

Key Programs within Supply Chain Services (cont.)

- **Agency Operations Support**
  - **Purchase Card Management – lauded as one of the best in the federal system.**
  - **Property Management**
  - **Vendor File Maintenance**
  - **Materials Catalog Maintenance**
  - **Supplemental Labor Management Office**
    - Established in FY 2008-09 to better manage the costs and quality of the growing supplemental labor force.
    - Now managing BPA contract workforce.
    - Recognized immediate benefit in project cost analysis and opportunity to reduce labor costs.
    - Anticipate minimal $500 thousand to $1 million in annual savings.
- **Fleet Management**
  - **Reviewing major restructuring of Fleet to employ a centralized single responsibility model, that will:**
    - Significantly improve return on BPA Fleet investment dollars.
    - Reduce number of vehicles deployed.
    - Improve vehicle utilization rates.
    - Better support BPA greening and sustainability initiatives.
    - Establish key performance indicators to ensure progress and savings.
- **Management/Supervision & Accountability**
  - **Supply Chain management embraces an innovative strategic focus and commitment to delivering value to rate payers in all facets of the operation.**

Agency Services – Supply Chain

Potential Risk

- The highest risk area for Supply Chain Services is ensuring all workload above the base FY 2010 work gets completed through the Contract Management Office. Supply Chain is projecting the following workload needs to be processed outside of Supply Chain (FY 2010 $60 million of work, FY 2011: $100 million of work, FY 2012: $200 million of work, FY 2013: $247 million of work.

- Delays in implementation or utilization of new technology tools (related to TPIP) may cause additional workload for Supply Chain Services which may result in material shortages, a spending level shortfall, and delayed projects.

- An economic recovery may result in upward pressure on commodity prices thereby reducing the ability of Supply Chain Services to support the Agency's objectives without additional resources.

- Unplanned significant swings in programs other than Transmission Services could result in Supply Chain Services being unable to support those programs.

Agency Services – Security

SECURITY & EMERGENCY RESPONSE	2009 Actuals	2010 SOY	2011 Rate Case	2011 IPR	2012 IPR	2013 IPR
Total	4,167,095	7,590,487	7,832,315	8,668,050	8,975,665	9,012,059

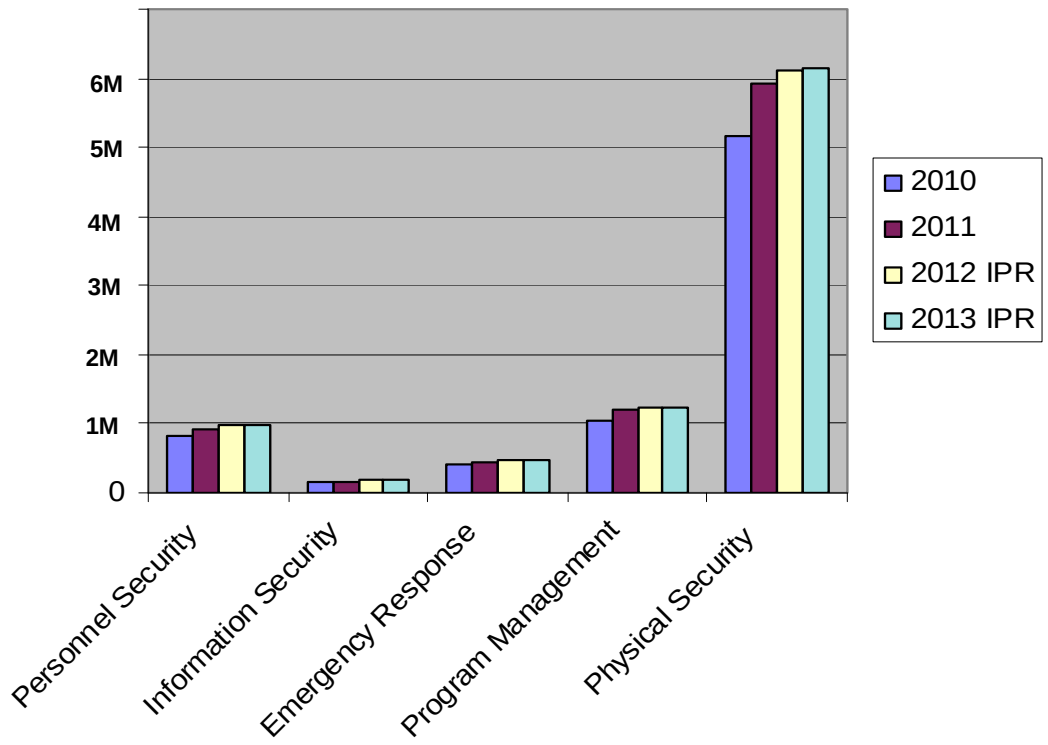
PROGRAM DESCRIPTION:

Security and Emergency Response provides an agency wide Safeguards and Security program that focuses on program planning and management; physical protection of assets and personnel; information protection; foreign visitor controls; and emergency response

PROGRAM AREAS:

- ✓ Program Management
- ✓ Physical Security
- ✓ Personnel Security
- ✓ Information Security
- ✓ Emergency Response

PROGRAM FUNDING DISTRIBUTION:



Agency Services – Security

STRATEGIC OBJECTIVES:

FCRPS/Operations
Operation of FCRPS power and transmission facilities meets availability standards in the most regionally cost-effective manner.

Systems & Processes
BPA meets the demands of business operations efficiently and effectively through standardized, continuously-improved systems and processes

Governance & Internal Controls
BPA's governance and internal controls are robust, balanced and adhered to across the organization

Risk-Informed Decision Making & Transparency
BPA's processes, decision making and performance are transparent, risk-informed and based on structured analysis

SECURITY SUPPORTS BPA'S STRATEGIC OBJECTIVES

- **Security & Emergency Response Mission**
  Through professionalism and integrity, BPA's Security and Emergency Response develops safeguards and security strategies and policies that aid in the protection of people and infrastructure.
- **Effective, risk informed security measures help ensure the reliability of BPA's transmission system and protection for our people and assets.**
- **Compliance with governance and internal controls helps mitigate risk of monetary sanctions, helps ensure alignment with established security policies.**
- **BPA implements risk informed security measures including best practices that assure sustained effective and efficient business operations resulting in best value for our ratepayers at the most reasonable cost.**

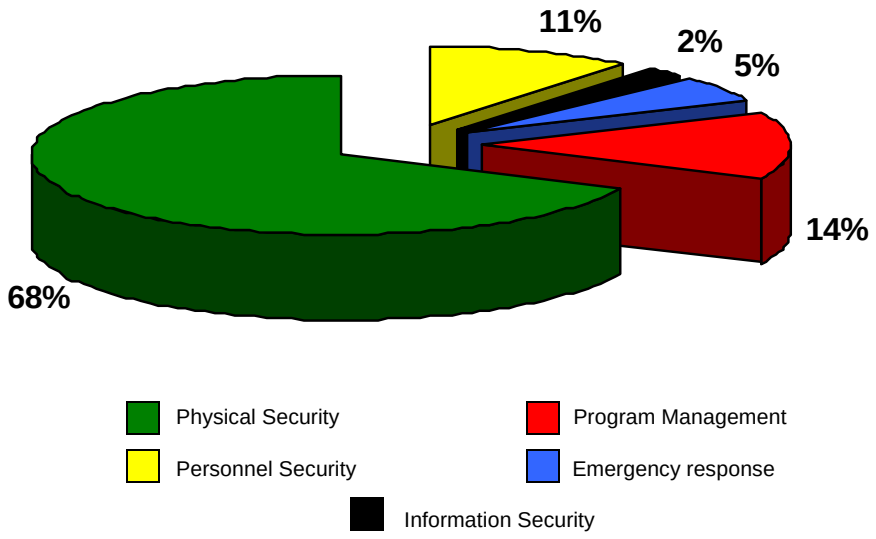
Agency Services – Security

KEY PRODUCTS AND OUTPUTS:

- Physical protection of personnel and property
- Protection of sensitive BPA information
- Security training and awareness
- Compliance with Homeland Security; North American Electric Reliability Corporation (NERC CIP); Department of Energy; and Federal Emergency Management Administration (FEMA) standards and requirements
- Foreign Visits and Assignments
- Personnel Access Processing
- Operations Security
- Emergency Response: Warden and Occupant Emergency Plan programs

Physical Security
Program Management
Personnel Security
Emergency response
Information Security

Proposed Program Funding Distribution by Program Area



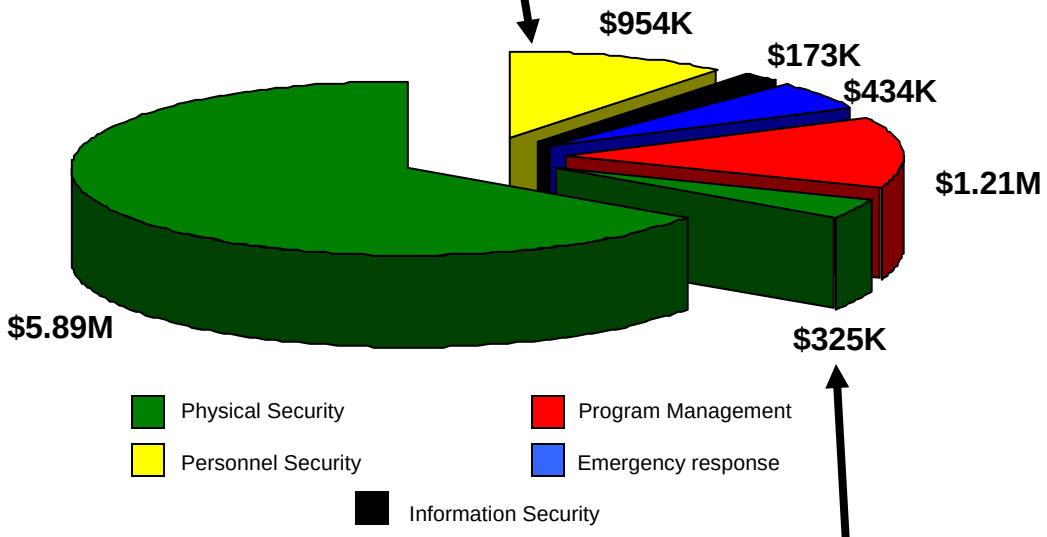
Agency Services – Security

FY 2012-13 PROGRAM SPENDING DRIVERS :

- ✓ Personnel Security (NERC CIP, HSPD-12)
  - In FY 2010 DOE and NERC CIP requirements have increased the number of recurring background checks from 0 to more than 2,000.
  - BPA is required to conduct background checks on all newly hired employees, this number continues to increases in support of transmission upgrades.
- ✓ Physical Security (DOE, NERC CIP)
  - The number of security systems needing ongoing maintenance has increased by more than 70% in support of meeting NERC CIP requirements.
  - The number of critical site security plans requiring annual site reviews and updates have increased from 5 to approximately 70.
  - 24x7 monitoring of BPA critical assets; facilities requiring 24x7 monitoring have more than doubled over the last year.

Programmatic increases due to FY 2012-13 Drivers

No requested program increase for Personnel Security, increased workload due to background checks will be managed with existing resources.



All of security's proposed program increases for FY 2012-13 support the Physical Security program.

Agency Services – Security

EFFICIENCIES PUT IN PLACE TO KEEP COSTS WITHIN CURRENT PROGRAM LEVELS

- Moving resources from less critical programs to support programs that could have a monetary impact to the agency if the program was found non-compliant.
- Reduced the number of access servers from 12 to 2, saving the agency $80,000 per year.
- Development of a strategy that integrates all security requirements so that dollars spent on one requirement would also support other like requirements.
- An alternate alarm monitoring station will be included within Power's alternate emergency scheduling center project.

ASSUMPTIONS MADE IN ORDER TO KEEP COSTS WITHIN FORECASTED LEVELS

- The number of current Personnel Security employees will not be increased to meet the increase of background investigations required to be processed in FY 2012-13.
- Installed security systems will pass a compliance audit.
- Employees working for transmission will be able to support the security office by regularly testing security systems, thus avoiding additional costs incurred by having this work performed externally.
- BPA's strategy for identifying critical assets will not be challenged by auditors. Therefore, the number of critical assets requiring physical protection remains unchanged in the near future.
- Maintaining security systems every two years is sufficient to ensure continued performance of the system.

POTENTIAL UNFORESEEN FUTURE COST IMPACTS

- A change in current NERC CIP standards greatly increases the number of BPA critical assets requiring physical protection.
- BPA's strategy for identifying critical assets is challenged by auditors. This may greatly increase the number of BPA critical assets requiring physical protection.
- Sanctions or fines associated with security systems found out of compliance.
- The length of time needed for processing background investigations increases to a point that adversely effects Transmission's ability to meet key agency goals.
- Future government legislation identifies additional assets requiring physical protection.

Agency Services – Workplace Services

WORKPLACE SERVICES	2009 Actuals	2010 SOY	2011 Rate Case	2011 IPR	2012 IPR	2013 IPR
Total	29,911,509	40,176,738	47,213,170	51,738,457	52,881,794	53,530,953

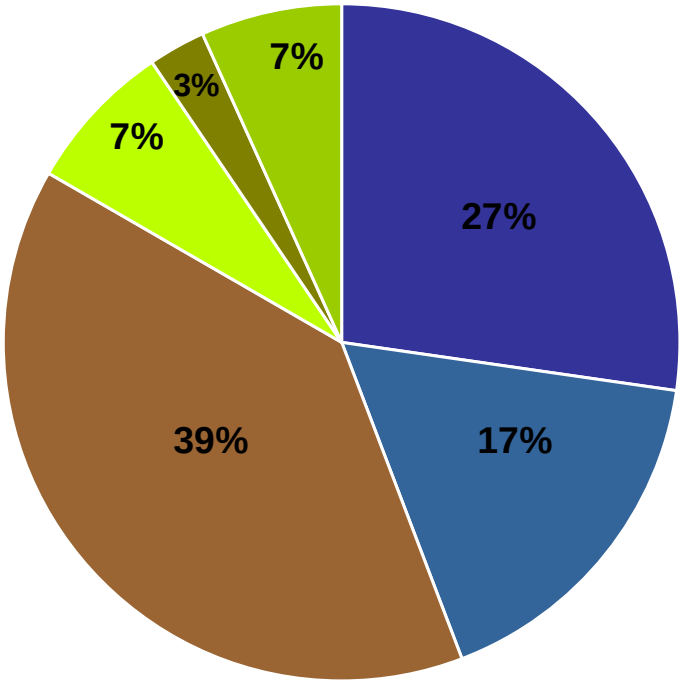
PROGRAM DESCRIPTION:

Workplace Services is an agency-wide workplace enabler, delivering a full range of sustainable support services necessary to house and equip the BPA workforce.

PROGRAM AREAS:

- Facilities Operations: Commercial Leases
- Facilities Operations: O&M
- Facilities Asset Management
- Support Services
- Employee Transportation
- Space Management

PROGRAM FUNDING DISTRIBUTION:



Agency Services – Workplace Services

AGENCY STRATEGIC OBJECTIVES:

Stakeholder Perspective

S8 Climate Change

BPA is prepared for the physical, economic and policy changes stemming from climate change developments, and promotes and implements cost-effective strategies to address these changes.

Internal Operations Perspective

I4 Asset Management

BPA maximizes the long-term value of FCRPS power and transmission assets through integrated asset management practices

People & Culture Perspective

P4 Work Environment

BPA has a safe and positive work environment

WORKPLACE SERVICES ALIGNMENT:

An effective facilities asset management strategy incorporates sustainability, energy intensity and carbon footprint reduction goals, which in turn drives successful performance in implementing cost effective climate change strategies, ultimately saving costs over the life-cycle of the asset category.

Work environment requirements, combined with operational needs and business processes, drives desired outcomes within a facilities asset management strategy.

The need for a high performing work force drives requirements in the work environment.

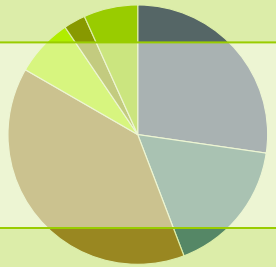
Agency Services – Workplace Services

NW PROGRAMS FOCUS ON:

- ✓ Sustainability
- ✓ Cost Effectiveness
- ✓ Operational Efficiency
- ✓ Customer Service

KEY PRODUCTS AND OUTPUTS:

- Lease Compliance Of 12 Commercial Office Leases
- Day-to-Day Facilities Management Of Over 80 Buildings And 260 Acres In The Portland / Vancouver Area
- Facilities Support Of Agency Business Continuity And Critical Business Systems
- Lifecycle Management Of 1013 Facilities
- Full Service Printing And Mail Support
- Alternative Employee Transportation Options
- Integrated Space Planning And Employee Moves



- Facilities Operations: Commercial Leases
- Facilities Operations: O&M
- Facilities Asset Management
- Support Services
- Employee Transportation
- Space Management

Agency Services – Workplace Services

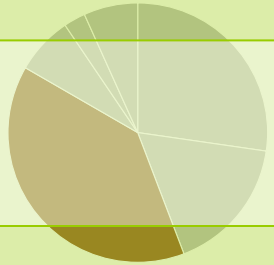
FACILTIES ASSET MANAGEMENT PROGRAM STATUS UPDATE :

- ✓ In FY 2009 96% Of Completed Work Addressed Life-safety and Reliability Issues
- ✓ $69 million Of Facility Requirements Have Been Identified
- ✓ Requirements Continue to Be Prioritized and Addressed Based On Potential Operational Impacts
- ✓ Prioritization Methodology Considers The Likelihood Of Failure, Risks To Life Safety, and Input From Strategic Partners

KEY PRODUCTS AND OUTPUTS SUPPORTED :

- Lifecycle Management Of 1013 Facilities

PROGRAM FOCUS AREAS

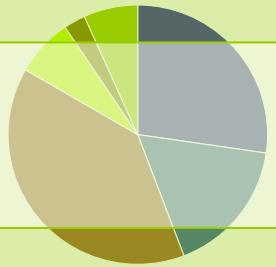


- Facilities Operations: Commercial Leases
- Facilities Operations: O&M
- **Facilities Asset Management**
- Support Services
- Employee Transportation
- Space Management

Agency Services – Workplace Services

FY 2012-13
PROGRAM SPENDING DRIVERS :

- ✓ **All NW Programs**: **Agency Staffing Levels**
  - Maintaining Workspace That Enables Optimum Productivity
- ✓ **Facilities Asset Management: Backlog Of Maintenance And Repair**
  - Reduce Backlog Over Time
- ✓ **Facilities Operations: Commercial Leases**
  - GSA Market-Rate Lease Increase Effective In FY 2011 And Continues Through FY 2015

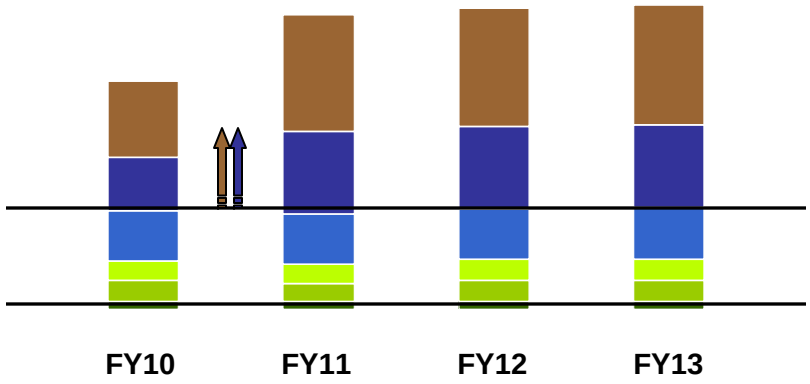


Facilities Operations: Commercial Leases
Facilities Operations: O&M
Facilities Asset Management
Support Services
Employee Transportation
Space Management

REDUCE FACILITIES REPAIR BACKLOG OVER TIME:

New Facilities Work
Backlog of Requirements

IMPACTS TO PROGRAM SPENDING LEVELS:



Agency Services – Workplace Services

FY 2012-13 RISKS PROGRAMS AT HIGHEST RISK:

- ✓ Facilities Operations
- ✓ Facilities Asset Management
- ✓ Space Management

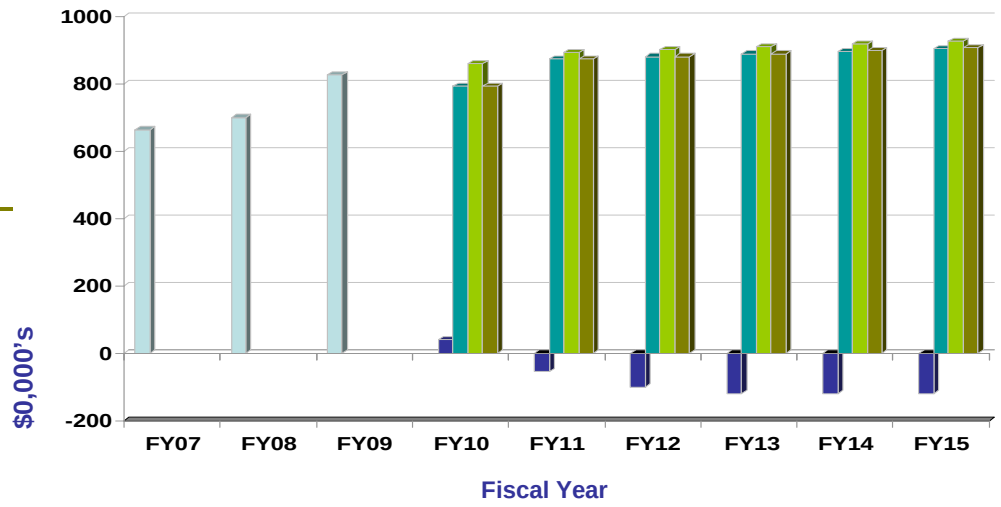
THE FOLLOWING EFFICIENCIES ARE ASSUMED IN OPERATING PROGRAMS:

- ✓ Energy and water conservation projects.
- ✓ Backlog of critical facilities maintenance and repair work declines over time.
- ✓ Continued implementation of workstation standards.

PRUDENT INVESTING IN INFRASTRUCTURE, SUSTAINABILITY AND ENERGY INTENSITY PROGRAMS MITIGATE:

- ✓ Impacts from unplanned variations in utility costs outside of proposed spending levels.
- ✓ Inability to meet federal mandates for sustainability.
- ✓ Additional expenses for short-term repairs and prolonged and more costly emergency response to those systems beyond their economic life.
- ✓ Failures of building systems that protect critical assets.
- ✓ The inefficient use of space, increased number moves and increased day-to-day move costs over a longer period of time.

Portland HQ Utility Cost Projections



Agency Services – Information Technology (IT)

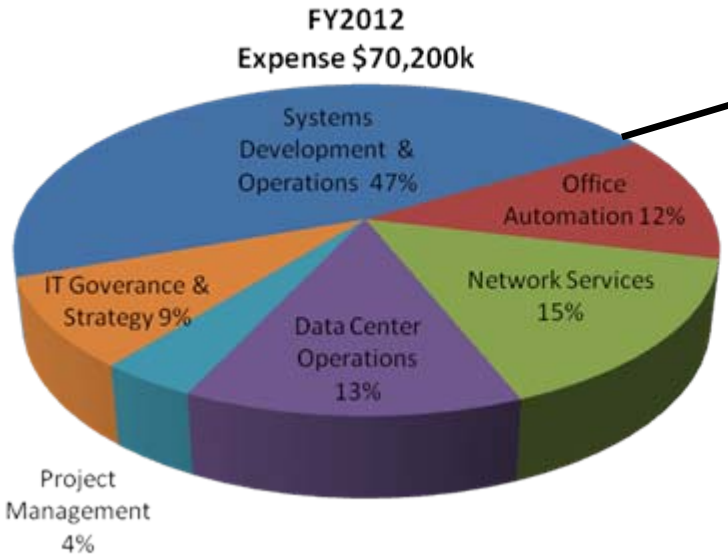
IT	2009 Actuals	2010 SOY	2011 Rate Case	2011 IPR	2012 IPR	2013 IPR
Total	60,574,453	69,036,394	67,547,071	68,831,671	70,224,503	71,902,311

Program Description:

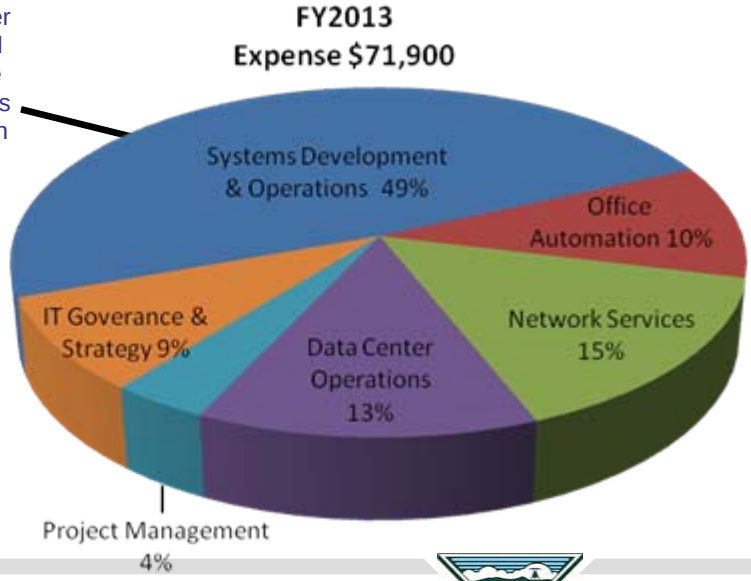
→**Systems Development & Operations**
→**Office Automation**
→**Network Services**
→**Data Center Operations**
→**Project Management**
→**IT Governance & Strategy**

Information Technology (IT)

Develops and supports agency-wide business automation systems and provides information technology governance, planning, and standards for the agency's general business activities. IT has overall responsibility and accountability for all BPA information technology-related (non-Grid Ops) programs. This includes establishing IT strategies, objectives, and performance standards in alignment with financial targets and agency direction.



As new systems are delivered under the Capital Program, Operation and Maintenance costs will increase the Systems Development & Operations Program costs, which will require an offset by decreasing the Office Automation Program.



Information Technology - Key Products and Outputs

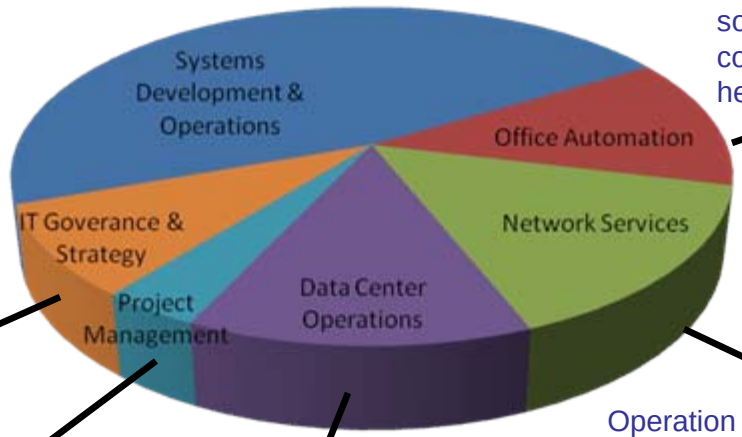
Strategic Objectives:

→**S2 – FCRPS Operations & Expansion.** Operation and expansion of FCRPS power and transmission facilities meet availability and reliability standards in the most regionally cost-effective manner.

→**I1 – Systems & Processes**. BPA meets the demands of business operations efficiently and effectively through standardized, continuously-improved systems and processes.

→I4 – **Asset Management.** BPA maximizes the long-term value of FCRPS power and transmission assets through integrated asset management practices.

Covers the operations and maintenance of 42 Critical Business Systems and 71 General Support Systems.



Operation and support of 4,500 desktop systems, software, network printers, copiers, cell phones, and help desk support services.

Provides Agency-wide IT governance and Information Assurance, incident response, standards, and IT strategic planning.

Operation and maintenance of data and voice networks (including user access, remote access, video conferencing).

Management of the planning and execution of the $49.5 m capital portfolio, delivering 18 projects including 5 new automation systems.

Management of 1100 servers, 400TB of data, across 2 data centers, an alternate data center, as well as field offices.

Information Technology - Agency Strategic Objectives

Strategic Objectives:

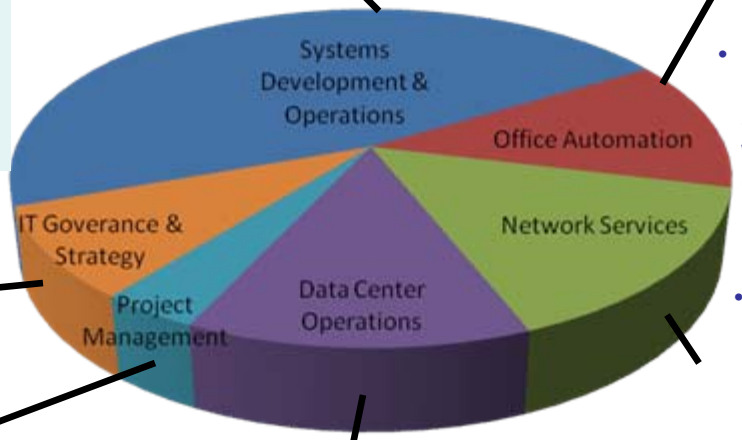
→**S2 – FCRPS Operations & Expansion.** Operation and expansion of FCRPS power and transmission facilities meet availability and reliability standards in the most regionally cost-effective manner.

→**I1 – Systems & Processes.** BPA meets the demands of business operations efficiently and effectively through standardized, continuously-improved systems and processes.

→**I4 – Asset Management.** BPA maximizes the long-term value of FCRPS power and transmission assets through integrated asset management practices.

- **S2**: Maintaining and operating forecasting and scheduling systems
- **I1**: Achieving efficiencies through standardized software development and operation methods and practices
- **I4**: Adoption of technology and methodologies such as Service Oriented Architecture to reduce time to meet emerging business requirements while providing reliable solutions

- **I1**: Exploring and implementing energy efficient solutions for desktops, including thin clients and network printers.
- **I1**: Implementing ITIL base maturity model to improve service delivery and control growth in operations and maintenance costs.
- **I4**: Leveraging technology to provide diverse from mobile solution for GIS systems to help with vegetation management to collaboration.



- **S2**: Plans and set standards for achieving IT energy efficiencies .
- **I1**: Plans and measures effectiveness of continuous improvement efforts such as implementing ITIL model.
- **I4** :Plans, sets standards and timelines for adopting technology.

- **I1**: Deliver technology innovation.
- **I1**: Improve system processes .
- **S2**:Deliver new systems support transmission and power forecasting, marketing, and scheduling services.

- **I1**: Consolidating and virtualization to reduce number of physical servers to save energy and reduce O&M costs.
- **I4**:Leveraging technology to improve service and reduce costs. Examples include examining blade servers, tiered storage, and implementing improved monitoring and management tools.

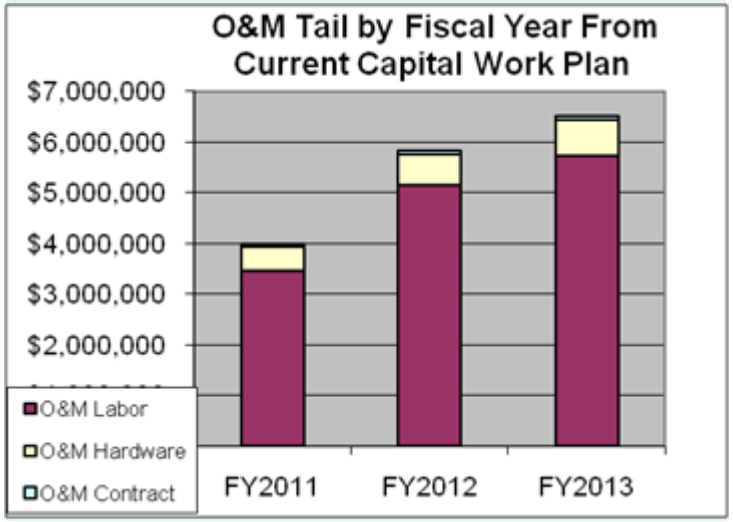
- **S2**: Provides reliable and secure connectivity to ensure regional transmission and power marketing and scheduling services.
- **I1**: Implementing ITIL base maturity model to improve service delivery and control growth I operations and maintenance costs.

IT - Systems Development & Operations

FY2012 Expense: $33.4m
FY2013 Expense: $35.6m

Program Areas:

→Critical Business Systems
→General Support Systems
→Quality Assurance



Systems Development &Operations **covers the operations and maintenance of 42 critical business systems and 71 general support systems.**

- **Critical Business Systems supports 24x7 Power Marketing, Energy and River Forecasting, Power and Transmission scheduling services.**
- **General Support Systems supports Financial services, Human Capital services, Corporate services, Agency Commercial services, Intra and Internet services, Engineering support, and all other general support systems and applications.**
- **Quality Assurance supports change management for application systems.**

Efficiencies

- Adopt Software Development maturity model to control operations and maintenance costs
- Proactive Monitoring to improve reliability and reduce operations and maintenance costs
- Maturing of Asset Plans/Strategy to forecast and prioritize business system enhancements

Spending Drivers

- New Operations & Maintenance costs from delivering new systems under the current Capital Work Plan
- Increasing use of Software as a Service
- New compliance requirements such as NERC CIP
- Emerging business requirements resulting in higher than expected resources for system enhancement

IT - System Development & Operations

Critical Business Systems

Program Areas:

→**Power Scheduling**

→**Transmission Scheduling**

→**Load Forecasting**

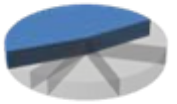
→**Deal Capture/Marketing**

→**High Availability (24x7 Support)**

→**Metering**

- **Power Scheduling** includes: Real-time Trading, Pre-scheduling Real-time Scheduling, Slice Scheduling, GTA scheduling, and After-the-Fact processing.
- **Transmission Scheduling** includes Pre-Scheduling, Real-Time scheduling (which includes hourly checkout with adjacent balancing authority, hourly energy and transmission levels balancing, operation in the hourly transmission market, providing operation for capacities, curtailments, OASIS, and issue resolution, and congestion relief), and the After-the-Fact function.
- **Load Forecasting** produces short and mid-term load forecasts for TBL/TS Dispatch, PBL/PS Scheduling/Pre-scheduling and PBL Operations.
- **Deal Capture/Marketing** manages trading, bidding, settlement, and invoicing with the California Independent System Operator (CAISO); manages the Agency's Power Services Secondary Revenue; supports the Front Office, Middle Office, and Back Office; includes the following key functions: Origination, position management, delivery functions, market, operational, credit risk, contract administration, billing, and accounting functions.
- **High Availability** provides 24x7 operations, monitoring, support and trouble-shooting of Bonneville's identified CBS portfolio and the design, development, and enhancement of Critical Business Systems.
- **Metering** collects, validates, estimates, stores, and distributes meter profile and usage data.

IT - System Development & Operations



General Support Systems

Program Areas:

→**Agency Commercial Systems**

→**Enterprise Applications**

→**Business Applications**

→**Data Integration & Reporting**

→**Asset Management & Engineering Applications**

→**Software Development**

- **Agency Commercial Systems** includes Commercial Billing System (CBC), Commercial Contracts, and related support for Critical Business Systems.
- **Enterprise Applications** includes Financial Management Human Resource (including Time & Payroll), Supply Chain, and Property Management.
- **Business Applications** provides development, operations, and maintenance for Public Affairs, Records Management, Agency Intranet and Extranet, Agency Portal and Agency Rates.
- **Data Integration & Reporting** provides development, operations, and maintenance for integration, architecture, modeling, warehousing and reporting of Agency-wide data.
- **Asset Management & Engineering Applications** provides IT system support for development , operation, and maintenance for Transmission Field Service, Geospatial and Engineering Service.
- **Software Development** supports the management of the Software Development for various agency systems such as Prowatch, enterprise software requirements and Agency software development strategy.

IT - Quality Assurance

Quality Assurance

Program Areas:

→**Version Control**

→**Migration Control**

→**Change Management**

→**Project QA Support**

- **Version Control -** This is the management of changes made to application software. This provides for the ability to revert to an earlier revision of software.
- **Migration Control -** Implementation of new application updates, upgrades, new application modules, and the application of fixes from development or test to production.
- **Change Management -** Provides for an orderly methodology for scrutinizing and assessing the potential impacts of proposed changes to the IT infrastructure.
- **Project QA Support -** Perform test case development, defect tracking, test coordination, test installation and execution of applications.

IT - Office Automation

FY2012 Expense: $8.9m
FY2013 Expense: $7.8m

Program Areas:

→**Front-Office Services**

→**Back-Office Services**

Office Automation supports operation and maintenance of 4,500 desktop systems, network printers, copiers, cell phones, and Help Desk services.

- **Front-Office Services -** Provide those client-facing services that are key to employee productivity: Help Desk services to resolve and/or dispatch for client service problems and disruptions, inventory and track equipment, meet client requests for hardware and software, consult with clients for IT solutions, facilitate employee moves and new-hires, coordinate service disruption information.
- **Back-Office Services -** Provide and maintain the every-day services used by employees in the regular execution of their duties: production services batch processing, print/plot services, web/SharePoint services, email, webmail, Blackberry, and Citrix access to shared applications**.**

Efficiencies

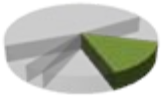
- Introduce Virtual Desktop Infrastructure (thin client, application streaming, etc.) during normal refresh schedules.
- Advancing Continuous Process Improvement through leveraging automated management and monitoring and ITIL maturity model.
- Implementing proactive monitoring and management tools.
- Leveraging new capabilities of Windows 7 (e.g. MDOP, Forefront etc.) to reduce licensing costs.
- Implementing self service through System Center Service Manager.

Spending Drivers

- Reducing refresh of desks systems ($600 thousand in FY 2012) will result in an increased break fix costs in the out-years (FY 2013 and beyond).
- Reducing refresh of desks systems ($600 thousand in FY 2013) will result in an increased break fix costs in the out-years (FY 2014 and beyond).

IT - Network Services

FY2012 Expense: $10.8m
FY2013 Expense: $11.1m



Program Areas:

→**Data Network Services**

→**Voice & Video Services**

Network Services **covers the operations and maintenance of voice and data networks) including user access, remote access, video conferencing, …)**

- Data Network Services - Provide highly available and reliable local-area and wide-area networks to support electronic data interconnection for BPA computing devices, and connectivity to remote business partners, delivering application access to end users. Support connectivity for mobile employees through Internet, VPN, Citrix, and RAS.
- Voice & Video Services - Provide reliable telephone services throughout the Agency facilities, conference bridges, video conferencing, voice recording, circuit management, and operator assistance.

Efficiencies

- Advancing continuous improvement through implementing ITIL base maturity mode (Microsoft Operations Framework - MOF) to improve service delivery and control growth in operations and maintenance costs.
- Extending PBX and switches life to maximize value and reduce total cost of ownership.

Spending Drivers

- Enhancing network segregation to meet evolving security requirements.
- Implementing HSPD-12 mandated smart card for network access.

IT - Data Center Operations

FY2012 Expense: $9.3m
FY2013 Expense: $9.5m

Program Areas:

→**System Reliability**

→**System Security**

→**Infrastructure Solution Design**

Data Center Operations **manages data center operations, including 400TB of data, 1000 servers across 2 data centers and an alternate data center, as well as multiple field offices.**

- **System Reliability -** Provide reliable IT infrastructure through pro-active fault monitoring, repair, capacity planning, performance analysis and tuning, and asset configuration management.
- **System Security -** Maintain a secure computing environment; providing virus protection, anti-spam filtering, intrusion detection, access control, software patching, disaster recovery backups, event log management, firewall management, and business continuity.
- **Infrastructure Solution Design -** Provide analysis and infrastructure design for IT projects, technologies, and applications. Establish baselines and standards for the infrastructure and methods to ensure compliance.

Efficiencies

- Physical server reduction through consolidation and virtualization; resulting in power savings and licensing costs.
- Advancing Continuous Process Improvement through leveraging automated management and monitoring and ITIL maturity model.
- Implementing proactive monitoring and management tools (e.g. System Center) to reduce system administrator overhead.

Spending Drivers

- Increase in server and storage resource demand from new systems being delivered under the Capital Work Plan.

IT - Project Management

FY2012 Expense: $ 2.7m Capital: $39.0m
FY2013 Expense: $ 2.7m Capital: $40.0m

Major Projects:

→**REV**
→**TPIP**
→**RODS Replacement**
→**Data Center Modernization**
→**Other Projects**

Project Management **covers management of the planning and execution of the ~$50 million IT Capital portfolios (Capital Work Plan)**.

- **REV –** The Regional-Enterprise-Value (REV) Program is organized to implement and support BPA's new Regional Dialogue contracts establishing a tiered rate methodology, and offering new long-term power sales agreements. Completion FY 2012
- **TPIP –** TPIP is the coordination of oversight for the IT projects and processes they support that were spawned from the O&M, PDB, Asset Management, and Supply Chain EPIPs. Completion FY 2011
- **RODS Replacement –** The RODS Replacement Program (RRP) is a multi-year project with the purpose of developing and deploying high availability IT systems to replace the functionality that currently resides on BPA's legacy RODS (Real-time Operations, Dispatch, and Scheduling) system. Completion FY 2012
- **Data Center Modernization –** The purpose of this project is to modernize the Agency's data center, increase the efficiency of the delivery and reliability of all of the Agency's information systems, improve the internal application development and support process and, generally, reduce the total cost of ownership of all internal IT systems and services. Completion FY2012

Efficiencies

Maturing of PMO processes;
- Enable delivering projects at lower costs.
- Providing solutions with lower Total Cost of Ownership.
- Improved and lower cost system through common architecture.

Spending Drivers

- Increase demand for automation.

IT Governance & Strategy

FY2012 Expense: $6,2m
FY2013 Expense: $6.4m

Program Areas:

→Cyber Security

→Asset Management and Contract Support

→Service Delivery

→Governance and Strategy

IT Governance and Strategy **provides overall guidance and direction for Cyber Security, IT Asset Management, Contract Support, Service Delivery (Customer Delivery), IT technology strategy and planning, Architectural Standards, and the Office of the CIO.**

- Cyber Security provides security program management, policies, standards and guidelines; manages a Risk Management Framework (Security Authorization Process); Subject matter expertise, security control & business objective alignment, critical infrastructure protection strategy, security architecture; Internal & external reporting and liaising; Risk Assessment and Incident Management.
- Asset Management and Contract Support provides contract management for capital and expense projects, hardware and software procurement, software licensing, subscription management, service contract tracking; Agency cell phone procurement, asset tracking, cost optimization, and auditing; supplemental labor acquisition and administration for the NJ org including SLIM liaison and security sponsorship.
- Service Delivery provides IT communications**;** client outreach programs and SharePoint presence/branding for IT. The team seeks to understand business needs; monitor and report on the delivery of IT services; assist in the resolution of delivery problems; responsible for preparing and negotiating Operational Agreements between business line clients and IT.
- Governance and Strategy provides Architectural standards for systems development, enterprise architecture, technology standards, strategy, and planning for data center, desktop, and network infrastructure.

Information Technology Efficiencies and Spending Drivers

FY2012 Expense: $33.4m
FY2013 Expense: $35.6m

IT Program Area	Efficiencies	Spending Drivers
Systems Development & Operations	• Adopt Software Development maturity model to control operations and maintenance costs • Proactive Monitoring to improve reliability and reduce operations and maintenance costs • Maturing of Asset Plans/Strategy to forecast and prioritize business driven system enhancements	• New Operations & Maintenance costs from delivering new systems under the current Capital Work Plan • Increasing use of Software as a Service • New compliance requirements such as NERC CIP • Emerging business requirements resulting in higher than expected resources for system enhancement
Office Automation	• Introduce Virtual Desktop Infrastructure (thin client, application streaming, etc.) during normal refresh schedules • Advancing Continuous Process Improvement through leveraging automated management and monitoring and ITIL maturity model • Implementing proactive monitoring and management tools • Leveraging new capabilities of Windows 7 (e.g. MDOP, Forefront etc.) to reduces licensing costs. • Implementing self service through System Center Service Manager	• Reducing refresh of desks top systems ($600k in FY2012) will result in an increased break fix costs in the out-years (FY2013 and beyond) • Reducing refresh of desks top systems ($600k in FY2013) will result in an increased break fix costs in the out-years (FY2014 and beyond)
Network Operations	• Advancing continuous improvement through implementing ITIL base maturity mode (Microsoft Operations Framework - MOF) to improve service delivery and control growth in operations and maintenance costs • Extending PBX and switches life to maximize value and reduce total cost of ownership	• Enhancing network segregation to meet evolving security requirements • Implementing HSPD-12 mandated smart card for network access
Data Center Operations	• Physical server reduction through consolidation and virtualization; resulting in power savings and licensing costs • Advancing Continuous Process Improvement through leveraging automated management and monitoring and ITIL maturity model • Implementing proactive monitoring and management tools (e.g. System Center) to reduce system administrator overhead	• Increase in server and storage resource demand from new systems being delivered under the Capital Work Plan

Project Management	• Maturing of PMO processes;
	  • Enable delivering projects at lower costs
	  • Providing solutions with lower Total Cost of Ownership (BPAM Chapter 660)
		• Increase in number of projects

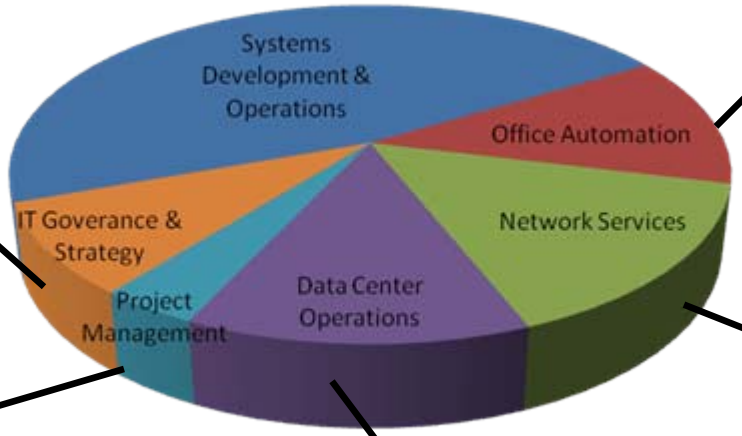
IT Governance & Strategy		
FY2012 Efficiencies/Increases	**$1.1 million**	**$2.5 million**
FY2013 Efficiencies/Increases	**$1.1 million**	**$2.8 million**

Information Technology – Potential Risks

- A larger than expected capital work plan will result in a higher than anticipated operations and maintenance tail.
- Rapidly emerging business and/or compliance requirements may require higher levels of system enhancements than anticipated.

- Should the FY 2012-13 spending levels not be increased, IT will not be able to resume the refresh of aging systems creating reliability issues and negatively impacting staff productivity .
- Virtual Desktops Infrastructure may not prove to be a good fit for the agency resulting in IT failing to reduce desktop operations.

- Emerging compliance requirements or threats may require an increase in security monitoring, management, and response capabilities.
- Implementing physical and network access from HSPD12 mandated smart card may have unanticipated expense costs.



- Extending refresh of PBX until FY 2014-15 may result in unexpected maintenance costs.

- Rapidly emerging business needs (such as supporting green legislation, dynamic transfer, sub hourly scheduling, smart grid, wind integration, or other initiatives, may result in a higher capital work program with associated planning and execution expenses.

- Data Center Modernization may either be delayed or not fully deliver anticipated operational efficiencies.
- Advancing along maturity model may not deliver efficiencies and associated savings as rapidly as expected.

Agency Services Capital Programs

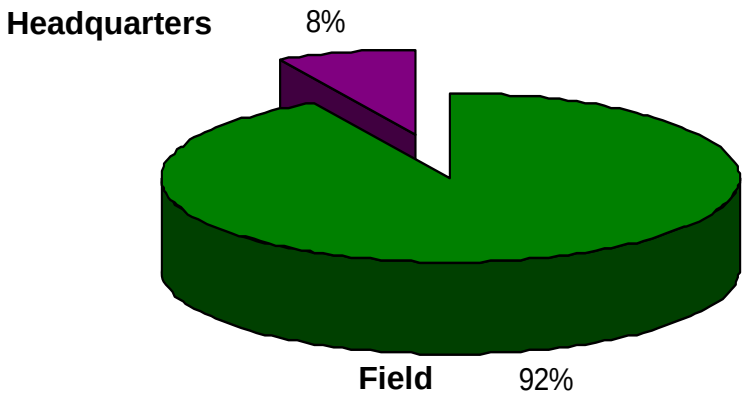
Agency Services – Physical Security

Capital - BPA Physical Security Program	2009 Actuals	2010 SOY	2011 Rate Case	2011 IPR	2012 IPR	2013 IPR
Total	2,640,775	5,101,730	5,813,940	5,500,000	5,500,000	6,500,000

PROGRAM DESCRIPTION:

- Provide capital funding for physical security enhancements to protect BPA transmission facilities and the BPA Headquarters facility.
- Approximately 92% of security's capital program supports the physical protection of transmission's critical facility infrastructure through the installation of security enhancements.
- Approximately 8% of security's capital program supports the physical protection of the BPA Headquarters located in Portland, Oregon. The headquarters is a General Services Administration (GSA) leased facility that houses approximately 1500 employees that includes BPA's critical power scheduling function.

BPA CAPITAL PROGRAM SPENDING LEVELS (2012-13)



Agency Services – Physical Security

STRATEGIC OBJECTIVES:

- **POLICY & REGIONAL ACTIONS**
  BPA policies result in regional actions that ensure adequate, efficient and reliable regional transmission and power service

- **SYSTEMS & PROCESSES**
  BPA meets the demands of business operations efficiently and effectively through standardized, continuously-improved systems and processes

- **GOVERNANCE & INTERNAL CONTROLS**
  BPA's governance and internal controls are robust, balanced and adhered to across the organization

- **RISK-INFORMED DECISION MAKING & TRANSPARENCY**
  BPA's processes, decision making and performance are transparent, risk-informed and based on structured analysis

SECURITY SUPPORTS BPA'S STRATEGIC OBJECTIVES

- **Security & Emergency Response Mission**
  Through professionalism and integrity, BPA's Security and Emergency Response develops safeguards and security strategies and policies that aid in the protection of people and infrastructure.

- Effective, risk-informed security measures help ensure the reliability of BPA's transmission system and protection for our people and assets.

- Compliance with governance and internal controls helps mitigate risk of monetary sanctions, helps ensure alignment with established security policies.

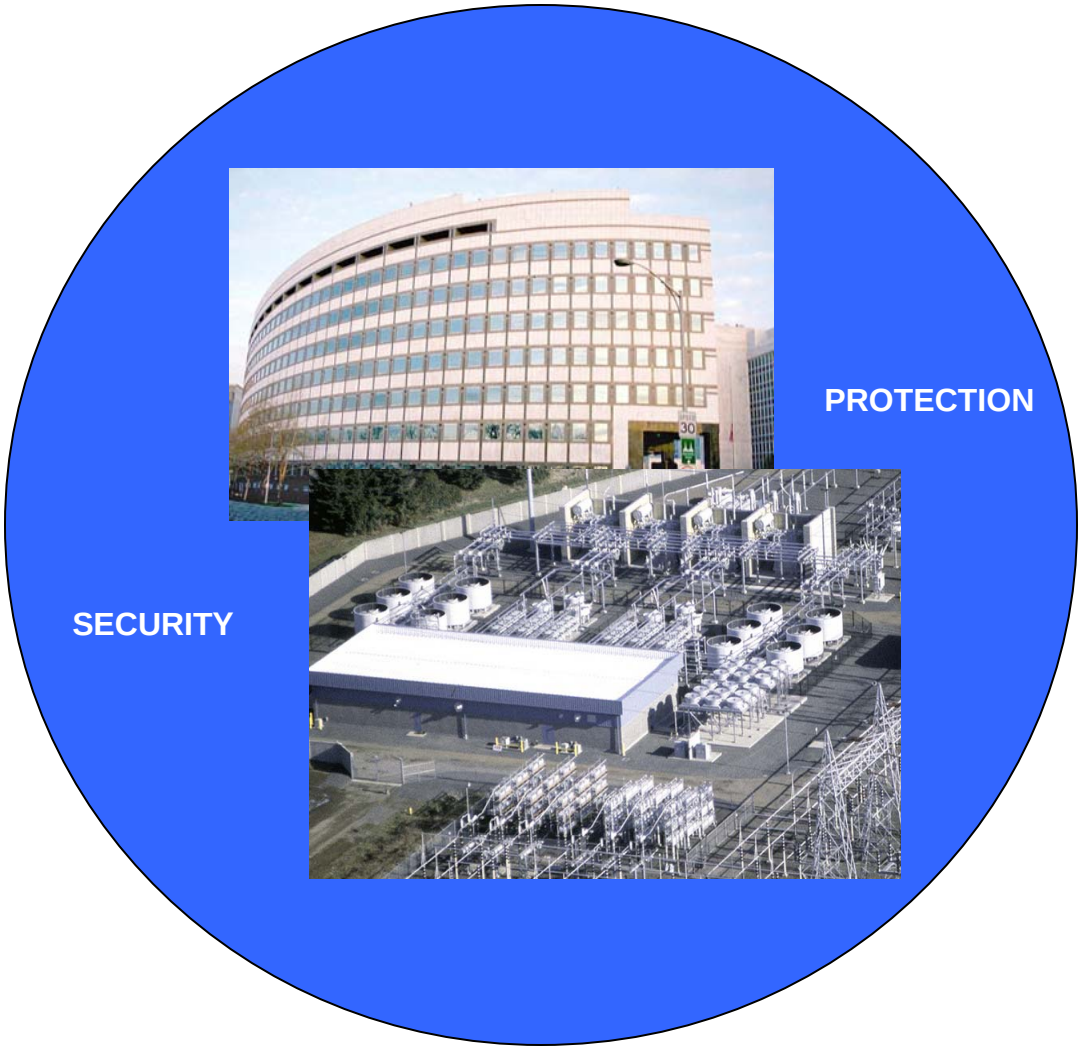
- BPA implements risk informed security measures including best practices that assure sustained effective and efficient business operations that offer best value for our ratepayers at the lowest possible cost.

Agency Services – Physical Security

KEY PRODUCTS AND OUTPUTS:

- **HEADQUARTERS**
  - Provide a safe and secure work environment.
  - Deter criminal activity.
  - Meet compliance requirements related to Homeland Security, Department of Energy (DOE) and NERC CIP.
  - Minimize risks of potential attacks against the facility.
- **TRANSMISSION FACILITIES**
  - Protection of BPA's most critical transmission facilities.
  - Provide the ability to mitigate consequences associated with an attack at a critical BPA transmission facility.
  - Deter criminal activity.
  - Meet security standards and requirements related to Department of Energy, Homeland Security and NERC CIP.
- **AGENCY BENEFITS**

  Security capital expenditures decreases the likelihood and risk that the headquarters facility or a critical transmission facility would be attacked. The security improvements proposed also help mitigate the consequences associated with such an attack, if it were to occur. A well planned attack against BPA's transmission system could severely impede the agency's ability to provide power to the region.



Agency Services – Physical Security

FY 2012-13
PROGRAM SPENDING DRIVERS:

- **NO CHANGE in PLANNED CAPITAL**
- **COMPLIANCE with SECURITY REQUIREMENTS**
  - North American Electric Reliability Corporation (NERC)
  - Homeland Security Presidential Directives (HSPD)
  - Department of Energy (DOE)
- **SOPHISTICATION of INTRUDERS**
  - Terrorists
  - Criminals
  - Disgruntled Persons
- **PROTECTION of CRITICAL ASSETS**
  - Control Centers
  - Government Facilities
  - Substation Control Houses
  - Substation Relay Houses
  - Substation Energized Yards

- Previously, capital expenditures supported security enhancements at as many sites as possible.
- As a result of NERC requirements for Critical Infrastructure Protection (CIP), BPA focused security upgrades on sites containing or anticipated to contain Critical Cyber Assets in order to be compliant with NERC standards. .
- In 2010, BPA began the development of a graded strategy focused on the protection of BPA's most critical infrastructure. This strategy is based on the following:
  - Compliance in support of protecting the Bulk Electric System
  - A risk based protection strategy that focuses capital expenditures on BPA's most critical infrastructure.
  - The Transmission Business Line analysis of critical infrastructure
  - Protecting BPA facilities that support large population centers, the economy, large generation sites, Department of Defense, and grid reliability
  - Protecting facilities that have a pattern of criminal activity
  - Anticipation of future non-discretionary security enhancements in relation to protecting critical facilities
- Fewer sites will receive security upgrades in the same period of time as planned previously. However, these security upgrades will do a much better job at reducing risks and consequences associated with an attack.

Agency Services – Physical Security

EFFICIENCIES PUT IN PLACE TO KEEP CAPITAL WITHIN CURRENT PROGRAM LEVELS

- BPA utilizes Department of Energy (DOE) and Homeland Security resources to assist in the deployment of proven security technologies.
- The Security Office is working more closely with Information Technology, Facilities Management, Transmission, Power, Corporate and outside agencies to ensure efficiencies in facility planning (Alternate Scheduling Center), and internal IT Support (downsizing the number of Access Servers).
- BPA is benchmarking with other utilities and major industrial organizations to better align security enhancements with best practices and lessons learned.

ASSUMPTIONS MADE TO KEEP CAPITAL COSTS WITHIN FORECASTED LEVELS

- Capital expenditures will be prioritized based on facility importance level.
- The number of BPA compliance driven Critical Assets will not significantly increase in FY 2012-13.
- Installed security systems will pass a compliance audit and not require additional expenditures to achieve compliance.
- BPA's strategy for identifying critical assets will not be successfully challenged by auditors, leaving the number of critical assets requiring physical protection unchanged in the near future.

POTENTIAL UNFORESEEN CAPITAL COST IMPACTS

- Changes in current NERC CIP standards could greatly increase the number of critical assets requiring physical protection.
- Possible sanctions or fines associated with security systems found out of compliance could require significant upgrades to bring current security systems into compliance.
- Future government legislation identifies additional assets requiring physical protection within a short period of time.

Agency Services – Physical Security

FY 2014 – 2017 DRIVERS for CAPITAL FORECAST:

- **Essentially the same drivers used in FY 2012 and 2013**
- **NO SIGNIFICANT CHANGE in PLANNED CAPITAL**
- **COMPLIANCE with SECURITY REQUIREMENTS**
  - North American Electric Reliability Corporation (NERC)
  - Homeland Security Presidential Directives (HSPD)
  - Department of Energy (DOE)
- **SOPHISTICATION of INTRUDERS**
  - Terrorists
  - Criminals
  - Disgruntled Persons
- **PROTECTION of CRITICAL ASSETS**
  - Control Centers
  - Government Facilities
  - Substation Control Houses
  - Substation Relay Houses
  - Substation Energized Yards

Capital - BPA Physical Security Program	2013 IPR	2014 IPR	2015 IPR	2016 IPR	2017 IPR
Total	6,500,000	6,500,000	6,500,000	7,500,000	7,500,000

- For FY 2014-17 the amount of security capital used for protecting the Headquarters facility will be greatly reduced in order to increase the percentage available for protecting BPA's critical field assets .
- The BPA Security Office will continue to work closely with our stakeholders to ensure capital expenditures are spent efficiently and effectively.
- BPA will continue to protect its most critical assets first.
- New legislation could mandate additional security enhancements that could greatly increase the amount of capital currently planned for in FY 2014-17.

Agency Services – Workplace Services Capital

Capital-Workplace Services	2009 Actuals	2010 SOY	2011 Rate Case	2011 IPR	2012 IPR	2013 IPR
Total	4,205,312	38,150,775	23,741,449	19,202,871	30,396,804	26,371,245

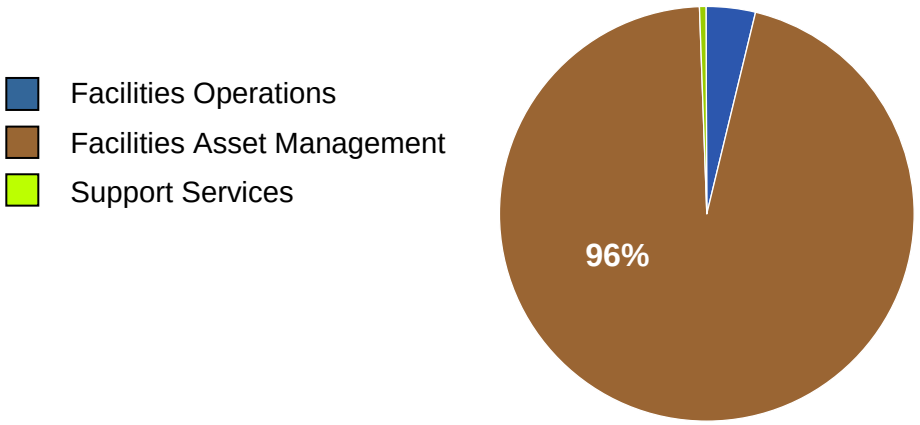
PROGRAM DESCRIPTION:

Workplace Services is an agency-wide workplace enabler, delivering a full range of sustainable support services necessary to house and equip the BPA workforce.

FY 2012-13 PROGRAM SPENDING DRIVERS :

- ✓ Age and Condition of Facilities
- ✓ Transmission Business Requirements
- ✓ Sustainability Initiatives

PROGRAM FUNDING DISTRIBUTION BY PROGRAM AREA:



Agency Services – Workplace Services

AGENCY STRATEGIC OBJECTIVES:

Internal Operations Perspective

I4 Asset Management

BPA maximizes the long-term value of FCRPS power and transmission assets through integrated asset management practices

People & Culture Perspective

P4 Work Environment

BPA has a safe and positive work environment

KEY PRODUCTS AND OUTPUTS:

- **Leasehold Improvements at HQ**
  - ✓Upgrade Critical Power and Mechanical Systems
- **Facilities to Enable Improved Transmission Field Maintenance Operations**
  - ✓Consolidate Crews and Staff in Tri-Cities
- **Facility Asset Sustainment**
  - ✓Incorporate Sustainable Practices in new and existing facilities
  - ✓Invest in Low-Water Landscaping Practices
- **Life, Safety and Work Environment**
  - ✓Remove Hazardous Building Materials in Workspaces
  - ✓Bring Workspace up to Current Standards/Codes
- **Continuity of Critical Business Operations**
  - ✓Build Capability on East-side of Cascades
  - ✓Establish Alternate Work-Site Capabilities
- **Management of Transmission Services Project Drawings**

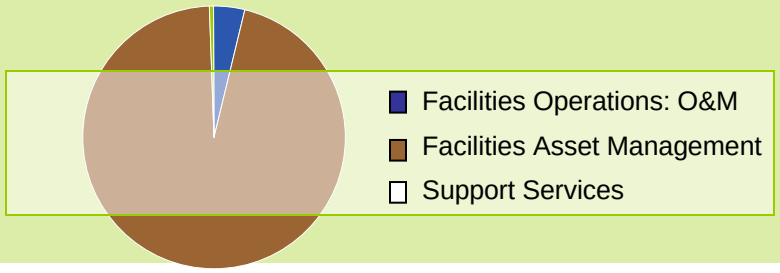
Agency Services – Workplace Services

PROGRAM STATUS:

- ✓ A maintenance headquarters strategy has been initiated and is expected to be complete by the end of the year.
- ✓ Work has been initiated to develop a feasibility study and environmental assessment for the potential Transmission Services Facility.

KEY PRODUCTS AND OUTPUTS SUPPORTED :

- Construction of New Facilities
- Critical Upgrades Accomplished Through Lease-Hold Improvements at Portland Headquarters Building



PROGRAM ACCOMPLISHMENTS

- ✓ Constructed Building To Protect Critical Equipment Used by BPA's bare handing crew.
- ✓ Purchased Idaho Falls Maintenance Headquarters and Constructed New Maintenance Shop - Meeting The Increasing Business Need In The Idaho Falls District
- ✓ New Snohomish Warehouse - Replaced Deteriorating Building That Was Unsafe
- ✓ Completed significant critical power upgrade at Portland Headquarters building

Agency Services – Workplace Services

FY 2012-13 PORTLAND/VANCOUVER OFFICE STRATEGY:

- ✓ Development of a strategy began back in 2002, however it was not until the last IPR that a new office building was under serious consideration.
- ✓ Initial business case indicated a possible rate neutral project, however there were still some uncertainties with the lease vs. buy decision.
- ✓ To address those uncertainties, BPA commissioned an environmental assessment and feasibility study and design process that began last fall.
- ✓ Currently the Environmental Assessment is 50% complete and the feasibility study is approximately 35% complete.

WHAT WE KNOW:

- Approximately 600 Transmission Services employees and contractors would come out of commercial lease space.
- Productivity gains can be made by co-locating transmission work teams
- We expect cost estimates for build and lease options to be available this Fall.

WHAT WE DON'T KNOW:

- The outcome of the study/design process and the corresponding results of the business case.
- The impacts of the current economy on the actual cost of construction.
- Future rate impacts, however there is likely no impact to 2012-2013 rates.

OUR APPROACH:

- Do not include capital costs of a new facility in the current rate case
- Continue to include lease space costs (expense)
- Upon completion of the environmental assessment and feasibility study/design later this fall, we will schedule time in January 2011 for a customer and stakeholder engagement process on our findings and possible approaches.

Agency Services – Workplace Services Capital

Capital-Workplace Services	2013 IPR	2014 IPR	2015 IPR	2016 IPR	2017 IPR
Total	26,371,245	33,006,906	25,272,114	23,025,921	23,236,921

FY 2014-17 DRIVERS OF PROPOSED SPENDING FORECAST:

Program areas are anticipated to remain relatively consistent with FY 2012-13 levels, with the exception of; a possible increase resulting from a decision to construct a new transmission services facility, deferred projects from prior years or any delays associated with major proposed construction projects.

Agency Services – Information Technology (IT)

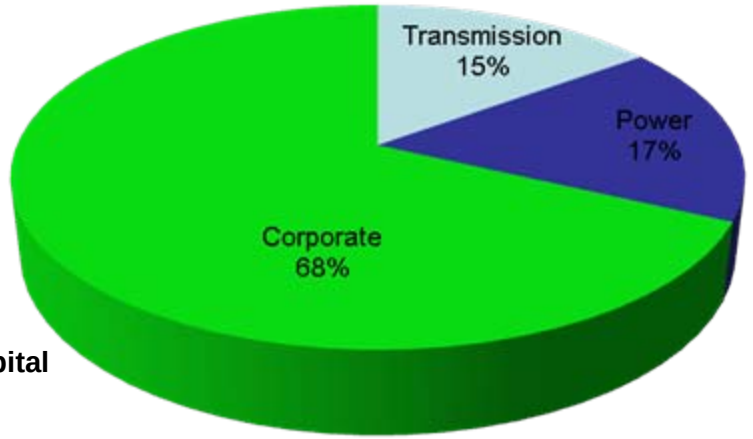
Capital-Information Technology	2009 Actuals	2010 SOY	2011 Rate Case	2011 IPR	2012 IPR	2013 IPR
Total	33,257,630	40,000,000	21,375,000	49,000,030	39,000,000	40,000,000

Strategic Objectives:

- → **S2 – FCRPS Operations & Expansion. Operation and expansion of FCRPS power and transmission facilities meet availability and reliability standards in the most regionally cost-effective manner.**
- → **I1 – Systems & Processes. BPA meets the demands of business operations efficiently and effectively through standardized, continuously-improved systems and processes.**
- → **I4 – Asset Management. BPA maximizes the long-term value of FCRPS power and transmission assets through integrated asset management practices.**

Information Technology (IT)

Develops and supports agency-wide business automation systems and provides information technology governance, planning, and standards for the agency's general business activities. IT has overall responsibility and accountability for all BPA information technology-related (non-Grid Ops) programs. This includes the infrastructure to run and operate these systems. The current Capital Work Plan allocation is 15% Transmission, 17% Power, 68% Corporate and consists of 48 projects.



FY 2012 Capital Program ($39m)

Corporate projects include systems and assets that benefit more than one business unit; examples include: RODS Replacement, Customer Billing, HQ Cable Plant Upgrade, Data Center Modernization, Voice Recording Replacement, E-Discovery, etc.

Information Technology

FY 2012 Expense: $70,200k Capital: $39,000k
FY 2013 Expense: $71,900k Capital: $40,000k

Historical Capital Spending

	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011	FY2012	FY2013
IT Capital Spending ($m)	11.1	17.2	16.8	18.7	35.4	49.6	49.0	39.02	40.0
Agency Capital Spending ($m)	350.1	380.1	419.3	389.0	593.2	593.2	996.8	1,116.5	1,161.6
IT as a % of Total Agency Spending	3.2%	4.5%	4.0%	4.8%	5.9%	5.2%	4.9%	3.5%	3.4%
Numbers of IT Projects Delivered	9	11	10	13	18	21	18	6+	TBD
FY 2008 IPR Forecasts for IT Capital ($m)	29.3	17.5	20.0	19.0	20.0	22.5	22.5	22.5	22.5

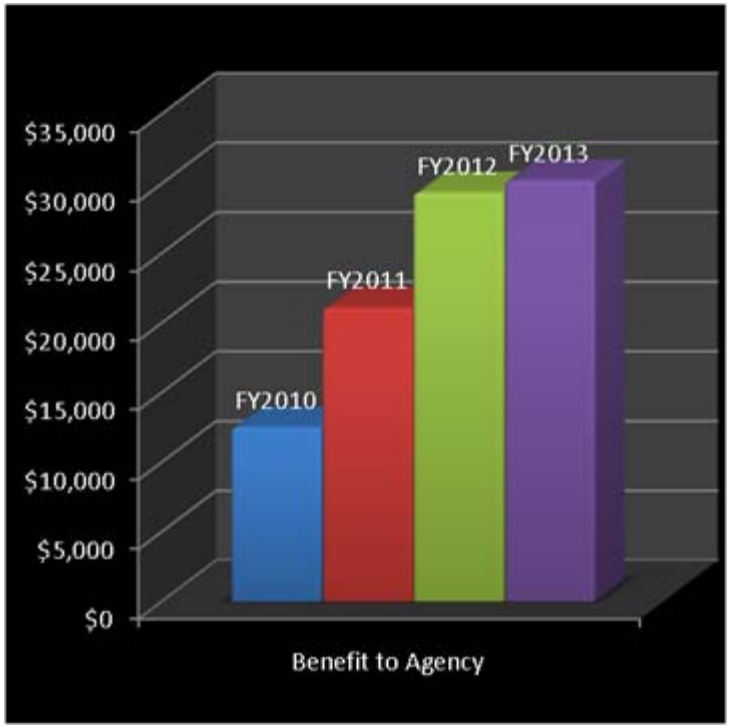
After ramping up in FY 2008 through FY 2011 to support RODS Upgrade, the REV program and TPIP program, IT capital spending is expected to return to the pre ramp up spending levels of approximately 3.5% of Agency Capital spending.

Project Management

FY 2012 Expense: $ 2.7m Capital: $39.0m
FY 2013 Expense: $ 2.7m Capital: $40.0.

Project Areas:

→REV
→TPIP
→RODS Replacement
→Data Center Modernization
→Other Projects



Project Management covers management of the planning and execution of the ~$50 million FY 2010 IT Capital portfolios (Capital Work Plan).

- **REV** – The Regional-Enterprise-Value (REV) Program is organized to implement and support BPA's new Regional Dialogue contracts establishing a tiered rate methodology, and offering new long-term power sales agreements. Completion FY 2012
- **TPIP** – TPIP is the coordination of oversight for the IT projects and processes they support that were spawned from the O&M, PDB, Asset Management, and Supply Chain EPIPs. Completion FY 2011
- **RODS Replacement** – The RODS Replacement Program (RRP) is a multi-year project with the purpose of developing and deploying high availability IT systems to replace the functionality that currently resides on BPA's legacy RODS (Real-time Operations, Dispatch, and Scheduling) system. Completion FY 2012
- **Data Center Modernization** – The purpose of this project is to modernize the Agency's data center, increase the efficiency of the delivery and reliability of all of the Agency's information systems, improve the internal application development and support process and, generally, reduce the total cost of ownership of all internal IT systems and services. Completion FY 2012

	FY2009 ($m)	FY2010 ($m)	FY2011 ($m)	FY2012 ($m)
REV Implementation	$3.2	$14.3	$11.3	$1.9
TPIP Implementation	$9.5	$9.2	$0.8	$0.0
RODS Retirement	$1.6	$4.4	$3.8	$3.2
Data Center Modernization	$3.0	$10.5	$9.9	$1.8
Other Projects	$18.1	$11.1	$23.2	$32.1
Total	**$35.4**	**$49.6**	**$49.0**	**$39.0**

Agency Services – Information Technology (IT)

Capital-Information Technology	2013 IPR	2014 IPR	2015 IPR	2016 IPR	2017 IPR
Total	40,000,000	41,000,000	41,999,998	43,000,000	43,999,999

FY 2012-13 Spending Drivers:

- → TPIP- complete FY 2012
- → Regional Dialogue - complete FY 2012
- → Transmission Commercial System Reinforcement – complete FY 2012+
- → Dynamic Transfer - complete FY 2012+
- → Wind Integration - complete FY 2012+
- → Data Center Modernization - complete FY 2012
- → Smart Grid Phase I – complete FY 2015
- → Emerging Compliance Requirements

FY 2014-17 Spending Drivers:

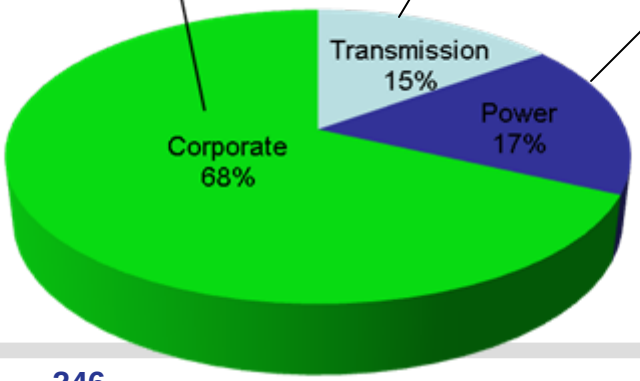
- → Alternative Scheduling Center
- → Transmission Commercial System Reinforcement
- → Dynamic Transfer
- → Smart Grid Phase I - complete FY 2015
- → Smart Grid Phase II – start FY 2015-16+
- → Emerging Compliance Requirements
- → Move ERP system to Oracle Fusion – start FY 2016-17 move
- → Upgrade PBX – start FY 2014-15
- → Storage Modernization – start FY 2014-15
- → Network Upgrade to include move to IPv6 - start FY 2014-16
- → Data Center Modernization – start FY 2016-17

Key Products and Outputs.

The FY 2010 Capital Work Plan includes 48 projects with scheduled completion of 20 projects in FY 2010, 17 in FY 2011, 11 projects in FY 2012. A sampling of the key product and outs produced by this work plan include:

- Dynamic Modeling – Provides Finance modeling for debt repayment scenarios, allowing optimization of opportunities.
- Electronic Personnel Files – implementing this capability enables BPA to align with DOE practices and allows HCM to reduce a FTE.
- RODS Replacement provides Power and Transmission a modern distribution automation system
- Data Center Modernization
- Pisces BIOP Accords

- Transmission Commercial System Reinforcement revamps Transmission's systems to support sub-hourly markets.
- HiDMS (High Density Modem Solution) – Provides failover capability for metering data at the Alternate Data Center by implementing a modem bank.
- Digital Signatures –Enables non-repudiation of electronically signed CAD drawing and other documents.



- Rev Program – nine projects ensuring BPA can 20-year power projects. Includes scheduling system, loads obligation, resource analyzer, load forecasting, revenue forecasting, and contracts management.
- Stream Flow Model Replacement
- Trade Management System (Gateway)