

2014 Integrated Program Review

Initial Publication

May 2014



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Building on a Northwest Legacy

TO BPA CUSTOMERS, TRIBES, CONSTITUENTS AND INTERESTED PARTIES:

Meeting the demands on the Federal Columbia River Power System (FCRPS) – while keeping rates as low as possible – remains a challenge for the Bonneville Power Administration (BPA) and the region. The challenges are magnified when considering the long-term need to build on the power system’s 75-year legacy of providing reliable, low cost hydropower to the Northwest, while investing in strategies that enable the system to operate more efficiently and reliably, while at the same time stretch the region’s supply of clean, affordable, carbon-free energy.

During the development of program spending levels that will be part of the 2014 Integrated Program Review (IPR), BPA considered both the near-term and long-term challenges facing the region. Even though there is an understandably strong desire for the public to focus primarily on the program spending levels for the next rate period, BPA also strongly encourages participants to take a step back from BPA’s two-year rate cycle and think longer-term about BPA’s cost structure, spending priorities and potential trade-offs needed to preserve the extraordinarily valuable federal power system for decades to come.

For example, one of the most important long-term challenges facing the region as more clean energy joins our resource base is the shift from an energy-constrained system to one that is more limited by capacity. This shift not only presents a challenge to the region, but a major opportunity for innovation to modernize the grid and explore methods of coordinating assets more efficiently to serve the region’s future.

As with past IPRs, the public will have an opportunity to rigorously review BPA’s proposed program and spending levels for FYs 2016-17 before they are used to develop revenue requirements for the FY 2016-17 rate case.

The Power and Transmission services’ programs that came out of the 2012 IPR provided BPA the opportunity to meet regional needs despite challenging economic conditions and low wholesale power prices. Currently, BPA is in sound financial condition and continues to take the lead on issues of consequence to the Northwest, including:

- Investing in the infrastructure of the region’s unique hydroelectric system,
- Working to restore the Columbia Basin’s endangered and threatened fish runs,
- Advancing energy efficiency, and
- Introducing new products to integrate intermittent renewable resources.

In addition, for a better part of the last decade, BPA's asset management strategies have set the direction for maintaining, replacing and adding capabilities to the power and transmission systems. These strategies called for a ramp up in capital spending to manage the risks of an aging system, meet long-term capacity and flexibility needs, fulfill regional commitments in energy efficiency and fish and wildlife and improve internal efficiency.

Conversely, these past decisions limit the flexibility BPA has to adjust future spending levels. For example, in Power Services, debt restructuring and extensions for rate relief caused uncommonly low capital-related costs in the last two rate periods. This accentuates the percentage increase in the FY 2016-2017 rate period.

The proposed program spending levels for both Power and Transmission services demonstrate hard work on BPA's part to contain costs in areas in which the agency has a significant amount of control. However, some increases are projected to occur where BPA is required or mandated to invest, maintain or sustain services.

Power Services. The proposed Power Services program for FY 2016-17 supports BPA's mission to provide adequate, efficient and economical power supply and mitigate the impacts of the FCRPS on fish and wildlife. The revenue requirement for Power Services Program contains a mix of costs, some of which are included in the IPR process, some are not. Some of those items that are part of the IPR include:

- Bureau of Reclamation and Army Corps of Engineers operation and maintenance costs to continue refurbishing FCRPS projects, as set out in their long-range plans.
- Fish and Wildlife costs including biological opinions and Fish Accords.
- Internal costs largely driven by corporate costs related to energy imbalance market, Columbia Grid and the recently adopted Oversupply Management Protocol.

Some Power Services' costs are not included in the IPR because they are either part of the upcoming rate case or BPA debt management process. Some items influencing these costs, which make up about half of Power Services' spending level, include:

- Past capital spending, including principal and interest associated with past capital spending and debt restructuring.
- Power purchases,
- Residential Exchange program, and
- Transmission acquisition and ancillary services, partially driven by Southern Idaho load service.

Transmission Services. Transmission Services' key goals are to build on BPA's longstanding legacy of transmission service reliability by cost-effectively managing and maintaining transmission assets, and developing a strategic framework, built upon a foundation of regulatory and statutory compliance that delivers innovative products and market-based solutions for Northwest customers. The primary factor influencing transmission costs in the next rate period is an escalating capital requirement related to the ramp-up in investments needed to sustain and expand the transmission system and meet steadily increasing aforementioned regulatory requirements.

These spending levels have been thoroughly reviewed internally. It is now time for those outside of BPA to provide input. This input can come through challenges to specifics in the scope and design of programs and through discussions of the spending itself. BPA looks forward to a thorough, challenging and informed discussion.

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1 INTRODUCTION

1.1 AGENCY STRATEGY

BPA’s **mission** as a public service organization is to create and deliver the best value for our customers, stakeholders, and constituents as it acts in concert with others to assure the Pacific Northwest:

- An adequate, efficient, economical and reliable power supply;
- A transmission system 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 (FCRPS) impacts on fish and wildlife.

BPA is committed to cost-based rates and public and regional preference in its power marketing. 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.

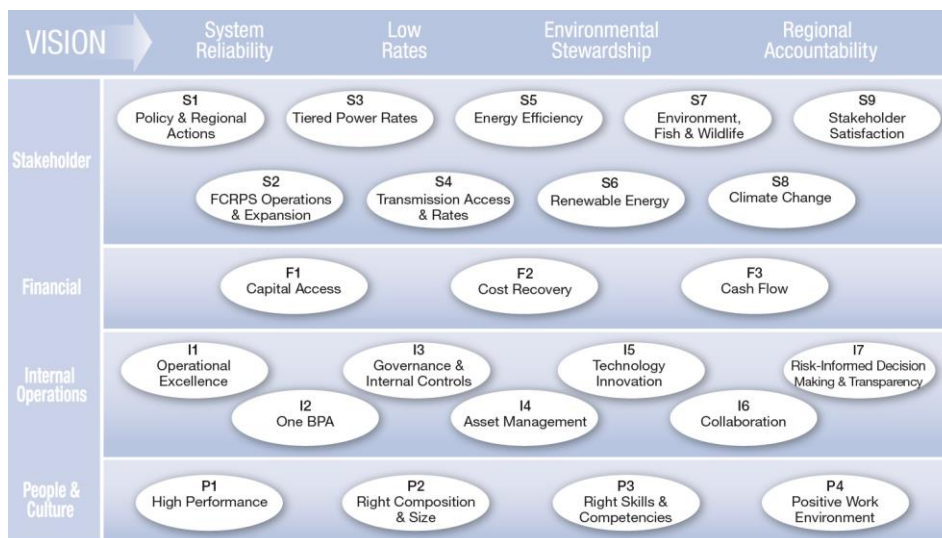
BPA’s **vision** is to be an engine of the Northwest’s economic prosperity and environmental sustainability. BPA’s actions advance a Northwest power and transmission system that is a national leader in providing:

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

BPA delivers on these public responsibilities through a commercially successful business.

BPA’s mission and “four pillars” of its vision are supported by the agency’s strategic objectives. These are ongoing, long-term outcomes

BPA pursues across all dimensions of its business.



BPA elevated six strategic priorities for special focus in FY 2012-17. These priorities support strategic objectives and are especially critical to fulfilling the vision given the drivers of change in our operating environment. Major drivers and strategic priorities are outlined in the [Strategic Direction 2012-2017 Report](#). BPA’s top strategic priority is to “*Preserve and enhance federal generation and transmission assets and the economic, environmental and operational value they produce for the region, while anticipating and adapting to industry developments and regulatory change.*” Consistent with this, BPA is investing to sustain and modernize its core assets through its focus on capital project prioritization and integrated asset management practices to maximize the long-term value of the system.

BPA's **core values** include:

Trustworthy Stewardship

As stewards of the FCRPS, BPA is entrusted with the responsibility to manage resources of great value for the benefit of others. BPA is trusted when others believe in and are willing to rely upon our integrity and ability. To be worthy of trust the Agency must:

- Consistently adhere to the highest ethical and professional standards
- Obtain the greatest value from the FCRPS for the people of the region
- Collaborate with those BPA serves as decisions are made
- Communicate clearly, forthrightly and fully
- Hold ourselves accountable for performance on our commitments by aligning our words and actions.

Collaborative Relationships

Trustworthiness grows out of a collaborative approach to relationships. Internally BPA must collaborate across organizational lines to maximize the value brought to the region. Externally the Agency must work with many stakeholders who have conflicting needs and interests. Through collaboration, BPA can discover and implement the best possible long-term solutions. This approach of creating together requires:

- Taking time to listen and understand each other's viewpoints, issues, and concerns
- Searching respectfully for mutually beneficial solutions
- Sharing and explaining decisions in a timely fashion

Operational Excellence

Operational excellence is a cornerstone of delivering on the four pillars of BPA's strategic objectives (system reliability, low rates, environmental stewardship and regional accountability) and will place the Agency among the best electric utilities in the nation. Operational excellence requires:

- Continual review and improvement of standardized systems, processes and controls
- Measurement of our accomplishments against clearly-defined and benchmarked performance standards
- Investment in our people
- Focus on ease of doing business with customers and with each other

Safety

BPA values safety in everything it does. Together, our actions result in people being safe all day, every day. At work, at home or at play, everyone at BPA contributes and is committed to a safe community for themselves and others.

BPA demonstrates its commitment by:

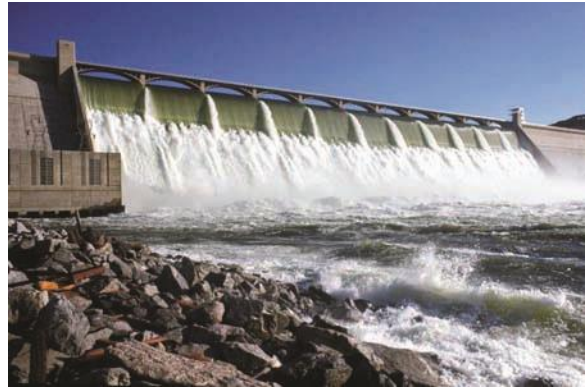
- Taking the time to do our work safely
- Proactively speaking up to eliminate and prevent hazards
- Incorporating safety into everything BPA does, including how success is measured

1.2 ACCOMPLISHMENTS

2013 Successes

- 2013 produced positive adjusted net revenues of \$56 million due in large part to cost management.
- Made payment to the U.S. Treasury on time and in full for the 30th consecutive year.

- Maintained high reliability and system performance for the generation and transmission system, and successfully met cost and performance targets for Columbia Generating Station.
- Continued major efforts to replace and refurbish essential hydro generation and transmission equipment to address aging assets and meet other needs.
- Met targets to ensure the U.S. entity efforts on the Columbia River Treaty review were on track to produce a report and regional recommendation to the U.S. Department of State.
- Delivered over 80 aMW of new energy efficiency from all BPA and public utility energy efficiency programs.
- Completed installation of an unparalleled synchrophasor network to gain greater visibility to transmission operations and improve reliability.
- Completed a 5-year effort to map more than 15,000 circuit miles of BPA's transmission system using Light Detection and Ranging (LiDAR).
- Implemented the Power Prepay Program.
- Implemented the Super Forecast, a new software program built by a small team of BPA analysts that supports the reliable integration of renewable resources.
- Bonneville Dam recorded the largest run of Fall Chinook salmon since the dam was built in 1938.
- Implemented 12 projects that protected or restored over 110 acres of estuary habitat.
- Habitat improvement actions protected over 15,000 acre feet of water in-stream. Sixty-seven barriers were removed restoring access to 192 miles of habitat. Enhancements were made to 270 miles and 8,500 acres of stream.



Recognition of Excellence

- R&D Magazine innovation award for image-processing occupancy sensor detectors.
- Peak Load Management Alliance award for Innovative Application of Demand Response.
- Platts Global Energy Award for BPA's synchrophasor program.
- Finalist for Platt's Stewardship Award for Efficiency Initiative (Energy Supplier) for the Energy Smart Industrial program.

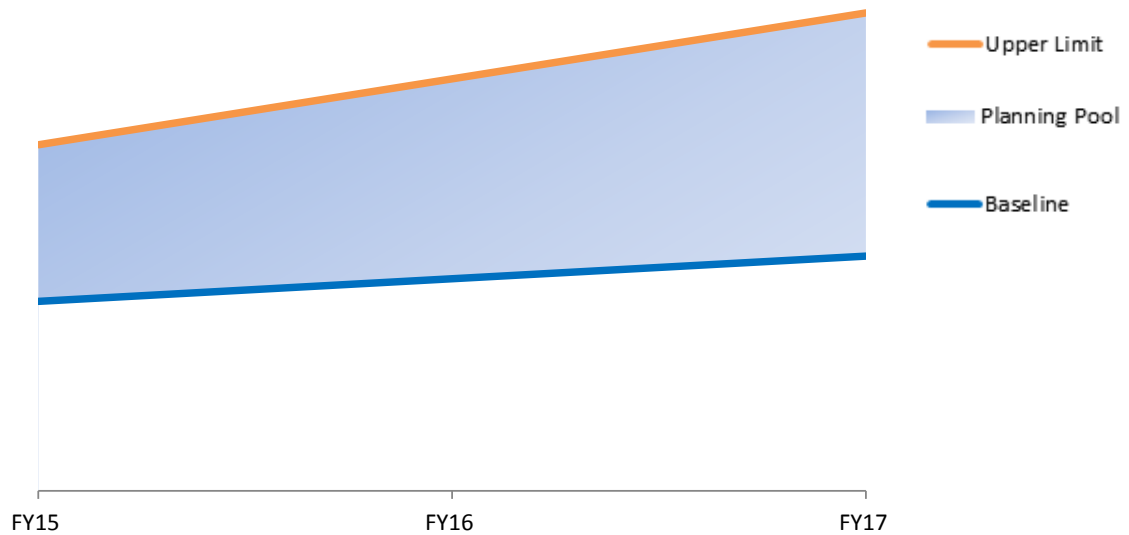
2 HOW BPA PREPARES IPR SPENDING LEVELS

2.1 SPENDING LEVEL DEVELOPMENT PROCESS

Based on customer and stakeholder requests and after researching other processes, BPA changed its approach to developing IPR spending levels for the 2014 IPR. In the last IPR, spending targets were established for each program based on inflating the budgeted amount from the prior-year, with few exceptions. This resulted in every program receiving a proportionate bump-up in their spending level target from the prior year. This forecasting technique is commonly referred to as Incremental Budgeting and is widely used.

For this IPR process, the revised approach sought to be more strategic about the requested spending levels recognizing that the prior method did not take into account proposed spending level execution when establishing the spending level targets or that some programs are a higher priority than others. By using the Incremental Budgeting method in the past, this effectively treated all programs equally by setting all spending level targets using inflated budgets.

The new method for developing IPR spending levels is grounded in actual results. The revised spending level development process started with FY 2013 expense actuals as the basis of comparison, with capital-related costs being the result of the recent CIR process. Personnel costs were adjusted to reflect BPA’s headcount as of December 2013, but non-personnel costs (i.e. service contracts, materials, supplemental labor, etc.) were inflated based on FY 2013 actuals. This created what is being referred to as the Baseline and served as the starting point for program and department managers that were developing their resource needs for the FY 2015-17 period. Coupled with the Baseline, an Upper Limit (or ceiling) was established. The Upper Limit was calculated based on inflated BP-14 rate case amounts. In aggregate the difference between the Baseline and the Upper Limit created a delta or “Planning Pool” for IPR spending levels being reviewed.

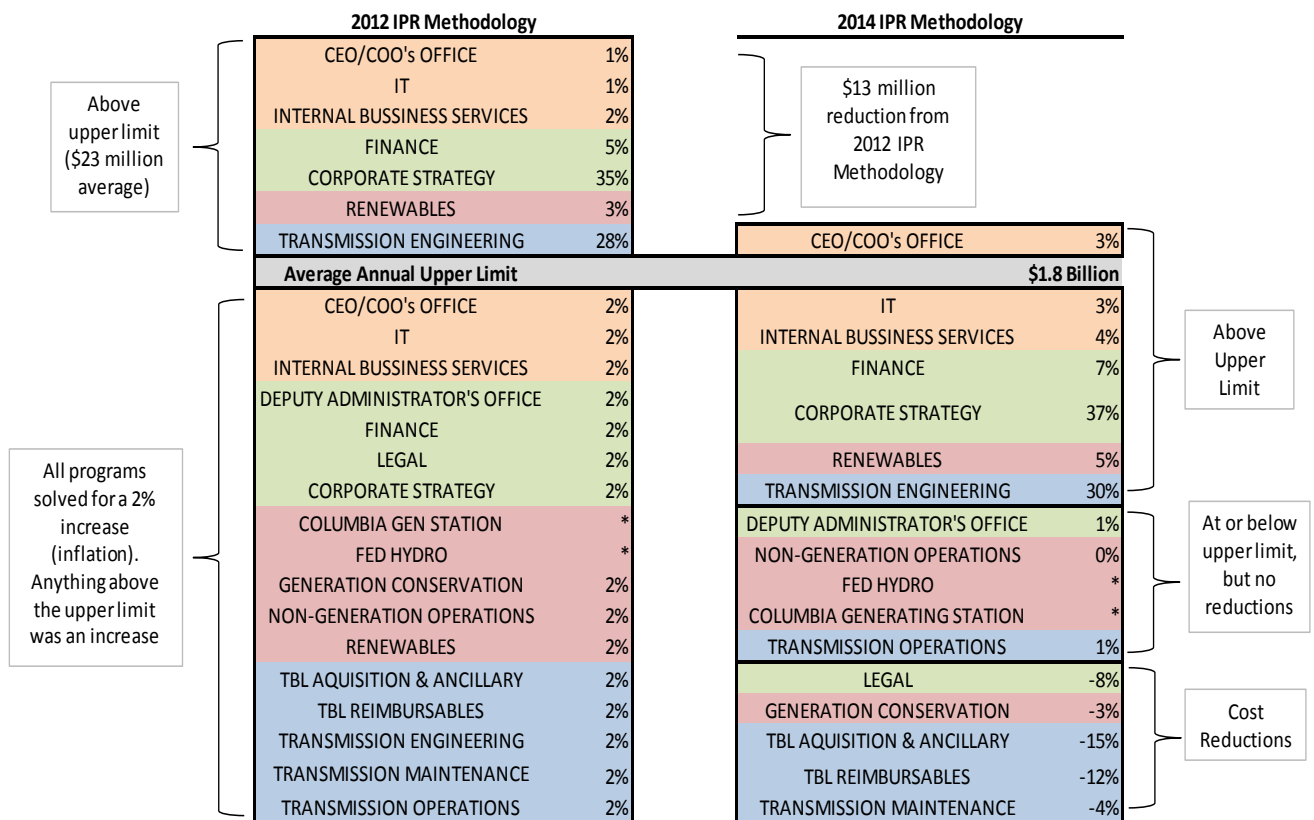


To encourage discussions of trade-offs and the prioritization of funding requests, all of BPA’s costs were consolidated into four distinct planning pools. The planning pools include departments for the following categories: Power, Transmission, Chief Operating Officer, and Deputy Administrator. Each of these pools received considerable scrutiny and was managed by the executive responsible for those organizations – the Senior Vice Presidents of Transmission and Power, the Chief Operating Officer, and the Deputy Administrator – and are referred to as Pool Managers. The Pool Managers had the ability to distribute their planning pool to fund new initiatives, projects, or staffing that were not included in the calculation of the baseline. See the table below for organizations and programs that make up each planning pool.

Planning Pool Program Summary			
Deputy Administrator	COO	Transmission	Power
Compliance and Governance	Safety	System Operations	Columbia Generating Station
Internal Audit	Human Capital Management	Scheduling	Bureau of Reclamation
Public Affairs	Supply Chain	Business Support	Corps of Engineers
Risk	Security and Continuity of Operations	Marketing	Energy Efficiency
Finance	Workplace Services	Maintenance	Non-Generation Operations
General Counsel	Customer Support Services	Engineering	Renewables
Corporate Strategy	Information Technology	Transmission Acquisition and Ancillary Services	
	Environment, Fish and Wildlife		

The process required that the program managers, department managers, and eventually senior-level managers and vice presidents justify to their respective Pool Manager any increases to their proposed costs in excess of their baseline. Proposed increases also required evaluation of other activities that could possibly be scaled-back or eliminated to offset the increase in costs. Taking into account all of the requests for additional funds before them, the Pool Manager would determine which increases to include in the IPR proposed spending. This method allowed for some high priority programs to receive more proposed funding than other programs that were held closer to their baseline. Any requests for funds in excess of a planning pool were brought to an IPR executive sponsor team for ultimate approval/disapproval for inclusion in the proposed IPR spending levels. The subsequent spending levels are being brought forward as BPA’s IPR proposed spending levels subject to stakeholder comment and revision based on feedback.

A comparison of the methods used in the 2012 IPR vs. the 2014 IPR is shown below.



* The Columbia Generating Station and Fed Hydro upper limits were set based on their long-range plan instead of inflation.

The initial results show that the methodology used in the 2014 IPR yielded spending levels that were \$13 million lower per year than they would have been using the prior method.

After all of the IPR proposed spending levels were totaled by pool, further analysis was performed on BPA’s historical underspending across the four planning pools and including all of the costs discussed in IPR. Historical spending for the past four fiscal years was compared to the amounts included in the BP-12 and BP-14 rate case for the IPR costs. This analysis showed that while the programs or departments that underspent varied by year, BPA has in recent years systematically underspent what was put into rates as a whole. The IPR sponsor team decided to account for this underspending in the proposed IPR spending levels by including undistributed reductions totaling \$29.7 million per year. These reductions made up a majority of the underspending BPA experienced across the programs BPA has more direct control over. The annual reduction amounts by pool are as follows: Power - \$20 million, Transmission - \$2.1 million, Chief Operating Officer - \$3.8 million, Deputy Administrator - \$3.8 million. The undistributed reductions for the Chief Operating Officer and Deputy Administrator are allocated to the Power and Transmission revenue requirements (52 percent Transmission, 48 percent Power) based on the weighted average of all the Corporate allocations.

By combining the effects of the new spending level development methodology with the underspending analysis resulting in undistributed reductions, the total reduction to IPR spending levels compared to past practices is \$42.7 million per year.

The summary – level results for each of the planning pools:

Pool Results Summary: Upper Limit to Proposed IPR Comparison*									
	FY15			FY16			FY17		
(\$ Thousands)	A	B	C	D	E	F	G	H	I
Pool	Upper Limit	Proposed	Delta	Upper Limit	Proposed	Delta	Upper Limit	Proposed	Delta
Power	856,092	854,171	(1,920)	813,789	795,119	(18,669)	883,989	857,105	(26,884)
Transmission	292,532	292,532	0	298,746	296,646	(2,100)	304,988	302,888	(2,100)
Deputy	92,595	94,012	1,417	94,497	98,654	4,157	96,409	102,148	5,738
COO	506,597	506,367	(230)	515,855	515,281	(574)	524,949	526,604	1,656
Total	1,747,817	1,747,083	(733)	1,722,886	1,705,701	(17,185)	1,810,335	1,788,745	(21,590)

*This table shows a view of IPR related costs used for spending level development and is not intended to tie directly to the program cost information provided in the IPR publication

Proposed Spending Assumptions

Budget Assumptions			
Assumption	FY15	FY16	FY17
Cost of Living Adjustment	1%	1.5%	1.5%
Step and Grade Increases	1%	1%	1%
Benefits as a percentage of salary	31.20%	31.61%	32.02%
General Inflation (non-personnel)	1.64%	1.66%	1.62%
Awards Assumptions: Awards assumptions are consistent with DOE requirements.			

2.2 GENERAL ALLOCATION OF AGENCY SERVICES COSTS

Costs resulting from Agency Services organizations must be included in the Power and Transmission revenue requirements. Some costs are direct charged to Power and Transmission O&M programs, and some costs are allocated. The allocation process is accomplished through General and Administrative (G&A) and Business Support Services cost pools.

BPA has fourteen G&A cost pools and nine Business Support pools. The G&A and Business Support pools are collections of costs from the centralized Agency Services organizations. Each Agency Services organization may charge into one, and sometimes more than one cost pool and certain organizations may also charge directly into Power and Transmission O&M programs. The description of products and services provided by these organizations can be found in the individual organizations summaries in the [Agency Services](#) section of this publication.

2.3 INTEGRATED PROGRAM REVIEW

The following items are outside the scope of the IPR process and will be addressed in the upcoming joint Power and Transmission Rate Case.

- Loads and resources
- Cash reserve levels
- Rate design
- Reimbursables
- Revenue credits including net secondary sales/power purchases
- BBL levels
- Rate levels
- Billing determinants

Program estimates are provided for the following but are not described in detail during the IPR process.

- Long-Term Contract Generating Projects
- Operating Generation Settlement (Colville Settlement)
- Non-Operating Generation (Trojan Decommissioning and WNP-1 and 4 O&M)
- Power Services Transmission Acquisition and Ancillary Services
- Residential Exchange Program

BPA held a public meeting January 8, 2014, in order to receive input from regional stakeholders prior to the upcoming 2014 IPR. Discussion centered on controlling costs and curtailing the increasing of rates. BPA executives described strategic drivers of costs and rates, and stakeholders provided their perspectives. BPA understands many of its customers' members are having financial troubles and that power and transmission rates stand to make a significant impact to their daily lives and well-being.

Proposed spending levels reflect BPA's current estimate of the costs needed to deliver on its mission. The estimates have been scrubbed but have not been finalized; participants can influence proposed spending levels that will be included in the rate case, by providing input during the 6-week comment period. To enhance accessibility and understanding all information is centralized in this document with a consistent format. Please refer to the [Next Steps](#) section for information on how and where to submit requests for additional information.

Between May 28 and June 6, participants may request additional information or technical discussions targeting specific programs, which will allow participants to engage on areas of specific interest.

BPA asks that all requests pertain to the IPR. Questions and requests outside the scope of the IPR will not be appropriate for this venue and will be redirected to the proper venue where possible.

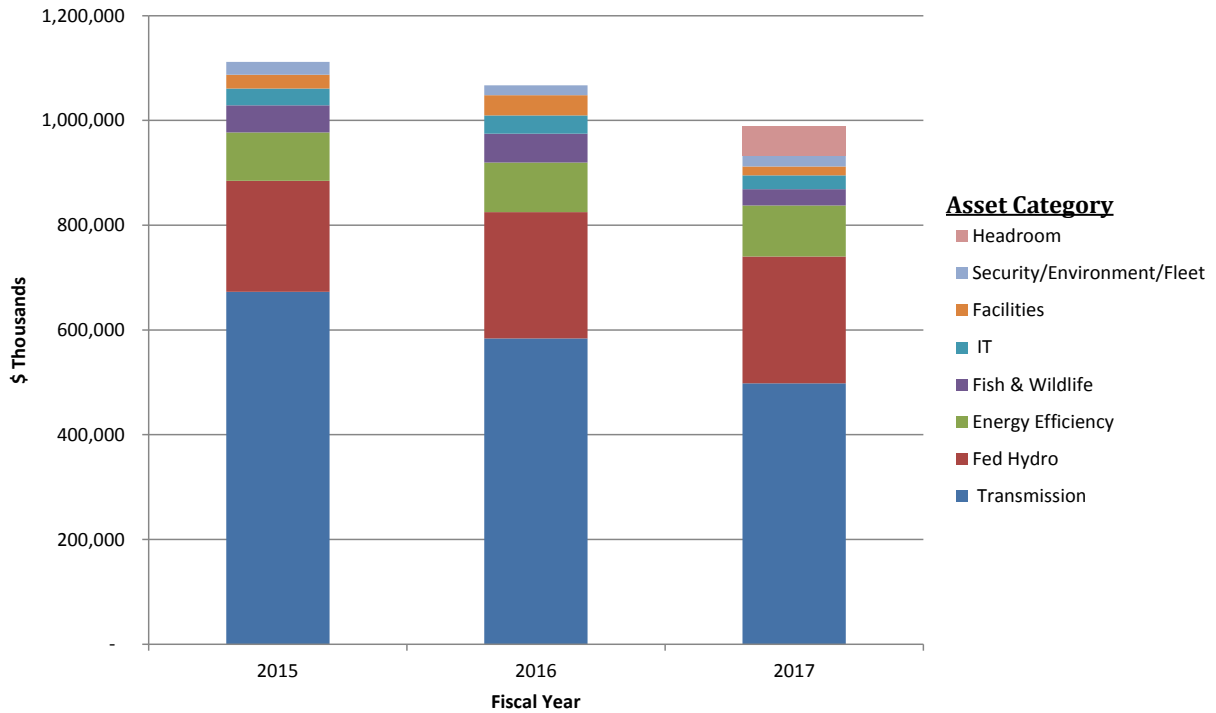
Technical discussions, if requested, will be held June 18-19. Discussions will be based on specific questions and requests received from IPR participants. This option encourages collaborative discussions on specific areas of interest to the IPR participants.

A six-week public comment period will provide interested participants an opportunity to comment on programs and proposed spending levels.

2.4 2014 CAPITAL INVESTMENT REVIEW

Following the CIR process, BPA proposes to use the following capital spending levels in the debt management analyses and June workshop. BPA continues to seek comment on the proposed spending levels. For more information on the specific projects, please refer to the asset strategies on the [2014 CIR webpage](#).

Agency Capital Spending by Asset Category



(\$ Thousands)	Proposed IPR		
	2015	2016	2017
Costs Described in IPR			
Headroom			56,000
Security/Environment/Fleet	24,465	18,585	20,570
Facilities	26,427	38,876	17,005
IT	32,262	34,900	26,624
Fish & Wildlife	51,807	54,807	30,795
Energy Efficiency	92,000	94,800	97,600
Fed Hydro	211,829	240,790	241,908
Transmission	673,069	584,111	498,374
Grand Total	1,111,859	1,066,869	988,876

POWER SERVICES



3.1 POWER OVERVIEW

The proposed Power Services’ program for FY 2016-17 supports BPA’s mission to provide an adequate, reliable, and low-cost power supply and to mitigate the impacts of the FCRPS on fish and wildlife. The Integrated Program Review (IPR) process focuses on program and internal costs that make up approximately 45 percent of Power Services’ overall cost of doing business (commonly referred to as the revenue requirement). For FY 2016-17, Power is forecasting an average annual increase of \$12 million in IPR expenses compared to the 2012 IPR. Some of the main areas that drive increases in Power Services’ IPR costs are:

- **FCRPS Infrastructure:** To ensure continued reliable output from an aging hydropower infrastructure, this proposal contains increases in Bureau of Reclamation and Corps of Engineers Operation and Maintenance expenses to continue refurbishing the projects in the FCRPS, as set out in their long-range plans.
- **Fish and Wildlife:** Consistent with BPA commitments in biological opinions and the Fish Accords, Fish and Wildlife costs are also increasing.
- **Internal Operations:** Increases in internal costs are largely being driven by Corporate allocations to Power for additional staff and systems support.

These increases are being offset by a decrease in the funding levels required for the Columbia Generating Station and \$20 million in annual undistributed reductions from Power Services.

In the following sections, this document provides more information about these and other IPR programs and their costs.

The other costs in Power’s revenue requirement are not included in the IPR because they are largely a function of variables that will be decided in the upcoming BP-16 rate case or debt management process. While most of these projections will change, updated forecasts for these non-IPR costs are summarized in the table on page 18. The main drivers behind these cost increases are:

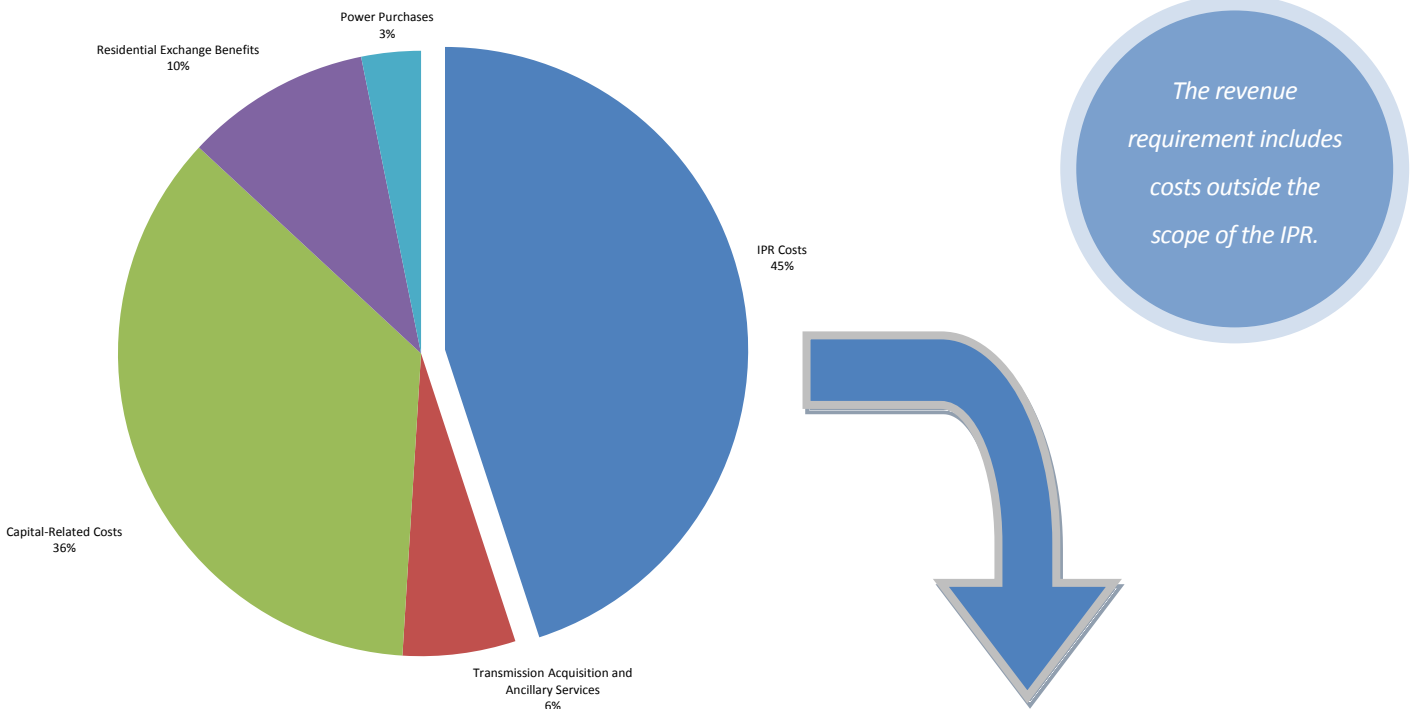
Past Capital Spending: Depreciation, amortization, debt service and interest on past capital spending account for approximately 36 percent of Power Services’ revenue requirement. These costs are projected to increase by about \$123 million per year. This increase is higher than it otherwise would have been because of \$85 million in one-time actions that decreased the capital related costs imbedded in FY 2014-15 rates. These one-time actions allowed for a smaller rate increase to mitigate economic impacts on the region.

Other Non-IPR Costs: BPA is also projecting about \$26 million in increased costs associated with items that are modeled in the rate case or are a function of past settlements such as:

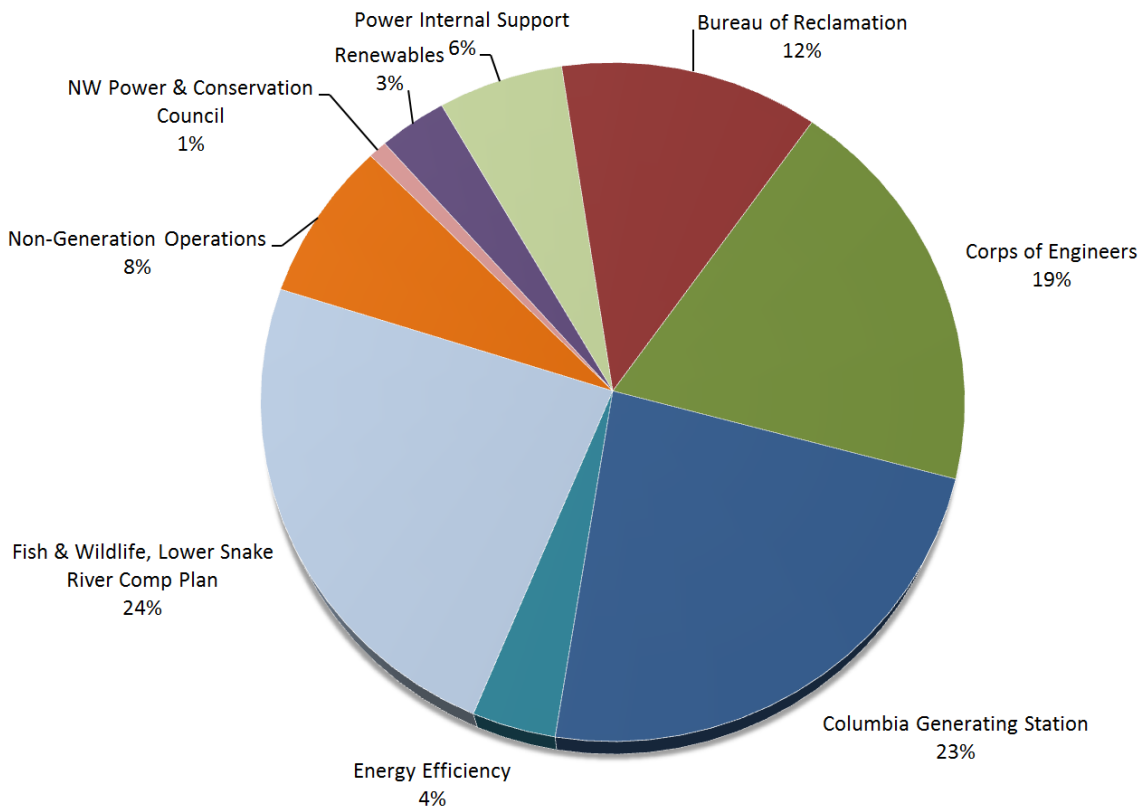
- **Residential Exchange Program:** This increase is caused by implementation of the cost schedule in the 2012 Residential Exchange Settlement.
- **Transmission Acquisition and Ancillary Services:** Due to increases in General Transfer Agreement wheeling costs for Southern Idaho Load Service offset in part by lower wind integration costs, Transmission Acquisition and Ancillary Services costs are expected to increase.

	2012 Final IPR	2014 Proposed IPR
	FY 2011 Actuals to FY 2015 Final IPR	FY 2013 Actuals to FY 2017 Proposed IPR
Overall 5-Year Change	17.7%	12.2%
Compound Annual Growth Rate	4.2%	2.9%

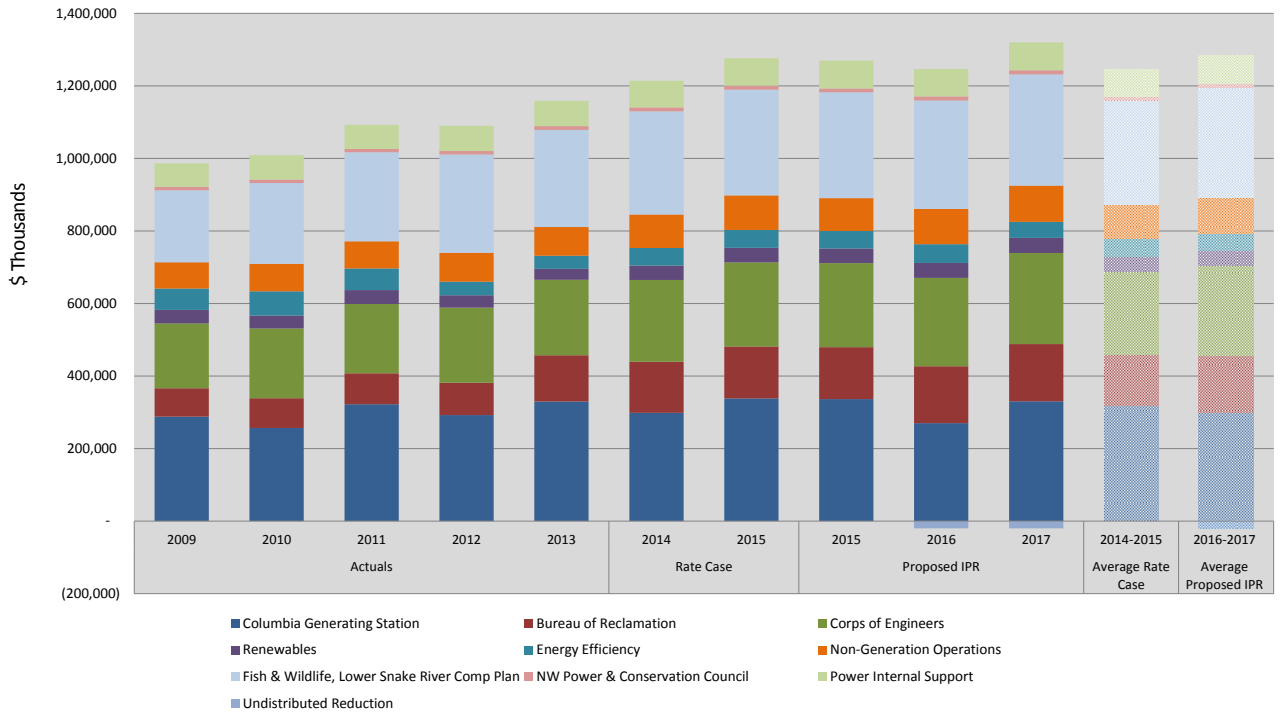
Power Potential Revenue Requirement



FY 2016-17 Average: Proposed IPR



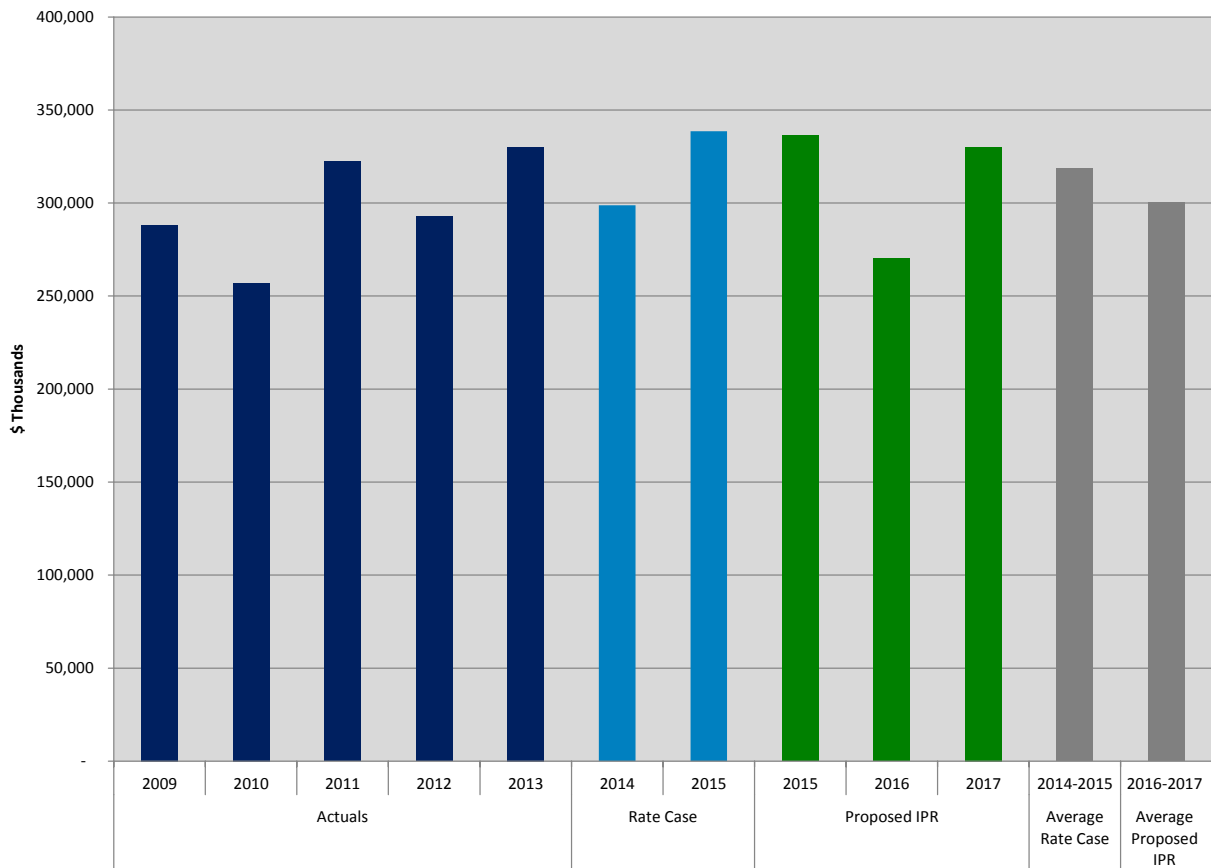
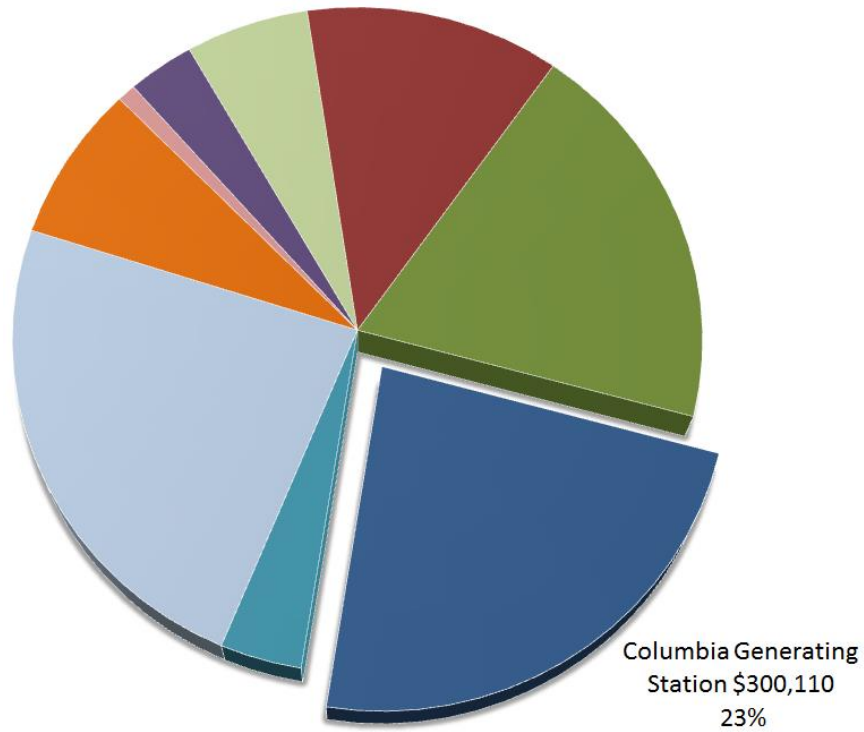
Power Services Expense Summary



(\$ Thousands)	Actuals	Rate Case		Proposed IPR		
	2013	2014	2015	2015	2016	2017
Costs Described in IPR						
Columbia Generating Station	330,066	298,751	338,558	339,863	270,048	330,173
Bureau of Reclamation	127,116	140,601	143,033	143,033	156,818	158,121
Corps of Engineers	208,096	225,687	231,878	231,878	243,885	250,981
Renewables	30,463	39,799	40,147	40,331	40,987	41,641
Energy Efficiency	36,078	48,408	49,320	50,122	51,814	44,150
Non-Generation Operations	79,302	92,156	95,010	90,628	97,018	99,836
Fish & Wildlife, Lower Snake River Comp Plan	267,684	284,670	291,670	291,670	299,303	306,949
NW Planning & Conservation Council	10,118	10,568	10,799	10,799	11,094	11,338
Power Internal Support	69,928	73,603	76,034	76,644	75,413	76,854
Undistributed Reduction					(20,000)	(20,000)
Costs Described in IPR Total	1,158,851	1,214,242	1,276,449	1,274,968	1,226,379	1,300,044
Other Costs						
Long-Term Contract Generating Projects	22,518	25,999	26,619	27,461	22,303	17,034
Non-Operating Generation	(25,878)	2,206	2,228	1,467	1,600	1,863
Operating Generation Settlement	22,122	21,405	21,906	21,497	21,863	22,234
Power Services Transmission Acquisition	162,351	164,845	165,102	164,914	171,645	183,546
Residential Exchange & IOU Settlements	201,933	201,919	201,899	203,900	217,100	217,100
Other Costs Total	383,046	416,374	417,754	419,239	434,511	441,777
Grand Total	1,541,897	1,630,616	1,694,202	1,694,207	1,681,032	1,761,929

3.2 COLUMBIA GENERATING STATION

FY 2016-17 Average: Proposed IPR



Program Details

(\$ Thousands)	Actuals	Rate Case		Proposed IPR		
	2013	2014	2015	2015	2016	2017
Columbia Generating Station	330,066	298,751	338,558	339,863	270,048	330,173
Grand Total	330,066	298,751	338,558	339,863	270,048	330,173

Description, Purpose and Responsibilities

The Columbia Generating Station (CGS) is a 1,120 net megawatt boiling water nuclear reactor located on the Department of Energy Hanford Site in Richland, Washington. It is owned and operated by Energy Northwest. CGS began operating in 1984 and is on a two-year refueling and maintenance outage cycle.



CGS operating costs are included in the revenue requirement of the Power Services’ rate structure and are tied to operations and maintenance of the nuclear plant. BPA acquires 100 percent of CGS generation and funds 100 percent of its costs plus directly funds the Decommissioning Trust Fund and Nuclear Electric Insurance Limited (NEIL) insurance premiums.

Goals

CGS strives to operate in a safe, reliable, and cost effective manner such that its performance is in the top quartile of the industry in technical performance and has adopted a goal of remaining in the top quartile of the industry in cost performance relative to its peers on a sustained basis.

Proposed IPR levels for FY 2015-17 will support continued operation and maintenance of CGS and are consistent with the spending forecast provided by the FY 2015 Energy Northwest Long-Range Plan (LRP) for CGS that reflected cost reductions from the previous LRP. In FY 2015 and FY 2017, CGS will have refueling and maintenance outages.

Changes from 2012 IPR

The earthquake and tidal wave that occurred in Japan in 2011 continues to have a financial impact on nuclear plants in the United States. The Nuclear Regulatory Commission (NRC) has been taking a closer look at U.S. nuclear plants and the impacts that natural disasters may have on operations and safety. CGS has included approximately \$30 million in its LRP over the next three years to respond to the NRC mandates that have been and will be issued as a result of the events and damage that occurred at Fukushima.

In March 2013, the NRC issued its annual assessment letter for CGS for calendar year 2012. The NRC cited findings in the Emergency Preparedness area which resulted in additional NRC oversight in 2013. A supplemental inspection was performed in March 2013 which resulted in the closure of the issues associated with the findings and no additional findings. The NRC determined that sustainable performance improvements had been made through appropriate corrective actions and CGS has shown station performance improvements in calendar year 2013.

CGS is now operating under a sixty year NRC license. On May 23, 2012, the NRC signed the documents approving the extension of CGS' operating license to 2043. This extension of operating life has allowed BPA to reduce contributions to the CGS Decommissioning Trust Fund as the contributions will be made over a longer period of time.

In May 2012, the Department of Energy (DOE), Tennessee Valley Authority, the U.S. Enrichment Corporation and Energy Northwest signed agreements to pursue another depleted uranium program to provide nuclear fuel for CGS, a program similar to the one conducted in 2005. The program involves DOE providing depleted uranium hexafluoride (DUF₆) that can be cost effectively enriched to provide enough enriched uranium for CGS operations through at least 2028. This agreement generates savings of \$20 million per year for the FY 2014-17 period. The enrichment program has now been completed and the benefits have been reflected in the LRP.

New Projects/Programs

Each year CGS identifies, funds and completes projects. Examples of expense and capital projects for FY 2015-17 include the following:

Expense

- In-service inspection and non-destructive examination as required by NRC to inspect the reactor during the outage on a periodic basis
- Inspection, repair and refurbishment of valves in the plant
- Vessel services during the outage
- Transformer yard maintenance
- Cooling tower preventative maintenance

Capital

- Fukushima impacts due to the natural disaster that occurred in Japan in 2011
- Control rod blade procurement and replacement
- Radioactive dose reduction
- Control rod drive repair and refurbishment

The cost estimates for FY 2015-17 include funding for identified Fukushima-related modifications that need to be made in response to the NRC's mandates. These modifications are forecast to be implemented from FY 2015 through FY 2017. If these modifications are not completed, CGS will be out of compliance with regulatory requirements and could be shut down.

Risks of Operating at Levels below the Proposed Spending Levels

The impacts of reductions to the CGS O&M expense forecasts would be reductions to long-term reliability and performance. Projects would be deferred and/or canceled. Deferred projects may cause a future bow wave of projects that would need to be done in a short period of time, probability of plant shutdowns may increase due to the long time period in ordering spare parts, and short-term CGS performance and reliability may be affected if human performance improvement initiatives cannot be completed

Non-funded Items

- Forced outages if the plant needs to be taken offline for repairs
- Undefined as well as unknown regulatory mandates from the NRC
- Likely change mandates issued as result of Fukushima

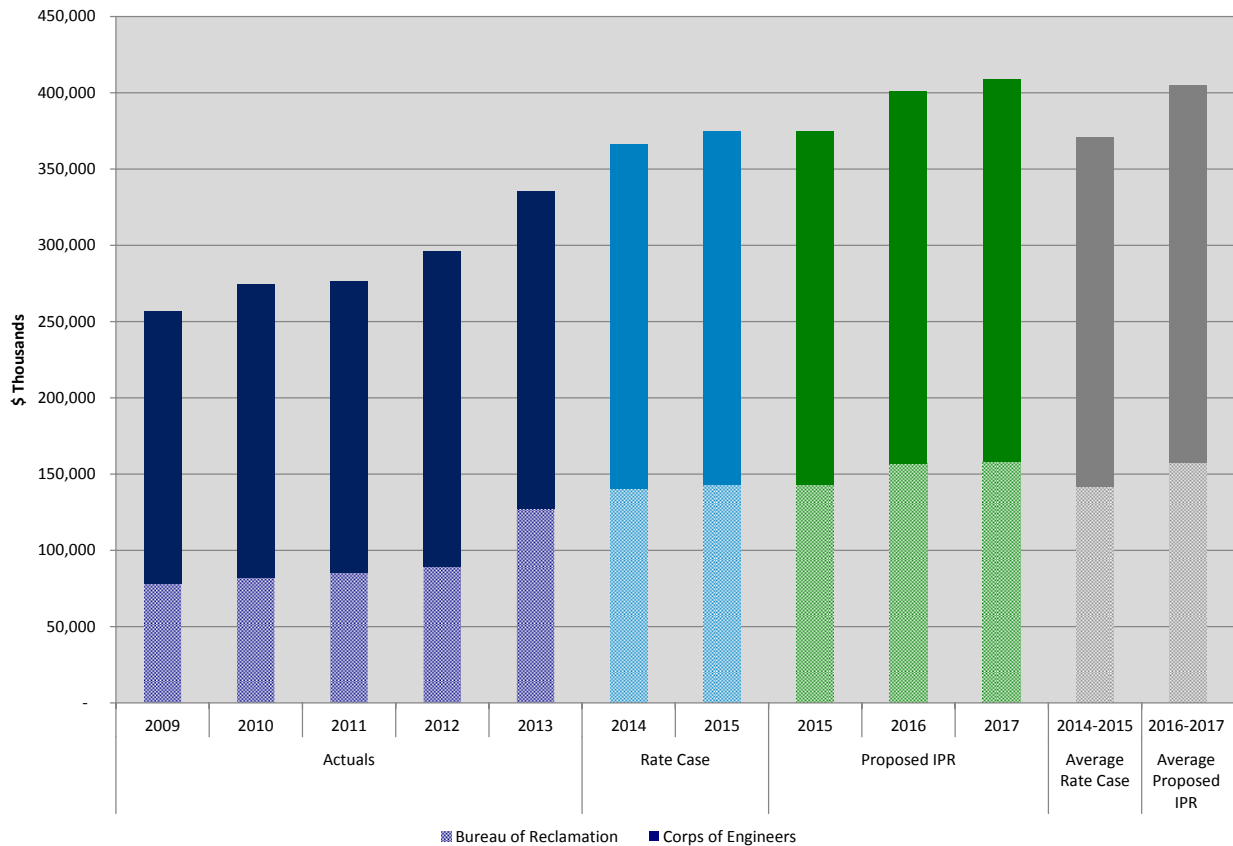
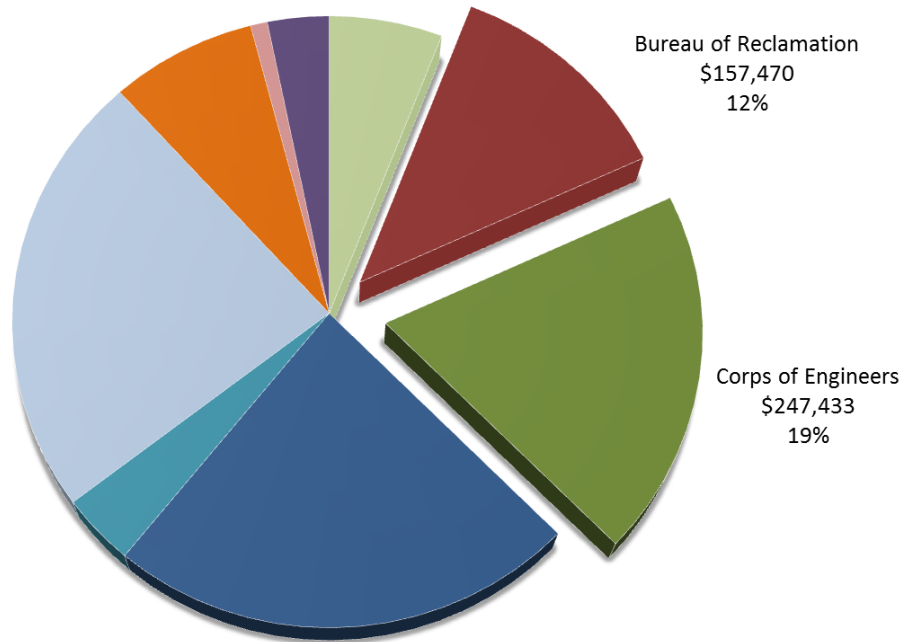
Challenges/Constraints

Some of the challenges and risks that exist for FY 2015-17 are as follows:

- Emergent equipment reliability issues
- Length of the refueling outages
- Regulatory fees
- Forced outages
- Increases in employee benefits
- Unknown regulatory mandates
- Additional Fukushima impacts
- Plant aging and equipment obsolescence
- License extension implementation

3.3 BUREAU OF RECLAMATION AND CORPS OF ENGINEERS

FY 2016-17 Average: Proposed IPR



Program Details

(\$ Thousands)	Actuals	Rate Case		Proposed IPR		
	2013	2014	2015	2015	2016	2017
Bureau of Reclamation	127,116	140,601	143,033	143,033	156,818	158,121
Corps of Engineers	208,096	225,687	231,878	231,878	243,885	250,981
Grand Total	335,212	366,288	374,911	374,911	400,703	409,102

Description, Purpose and Responsibilities

The Federal Columbia River Power System (FCRPS) comprises 31 hydroelectric plants – 21 owned and operated by the U.S. Army Corps of Engineers (Corps) and ten by the Bureau of Reclamation (Reclamation). The FCRPS has an overall capacity of 22,060 megawatts, delivering power worth nearly \$4 billion annually to the people of the Pacific Northwest. In addition, it provides flood protection and mitigation, as well as enhancement of fish and wildlife while mitigating hazards to native species.



BPA works with the Corps and Reclamation to fund operations and routine maintenance activities, non-routine extraordinary maintenance projects, security and WECC/NERC requirements, and fish and wildlife and cultural resources enhancement and mitigation activities.

The Corps and Reclamation’s proposed FY 2016–17 IPR levels are unchanged from the five-year O&M spending plan presented in the 2012 IPR.

In addition to the routine O&M funded by the program, subcategories include non-routine extraordinary maintenance (approximately 17 percent of proposed spending levels), fish and wildlife O&M (approximately 14 percent of proposed spending level), and cultural resources (approximately two percent of proposed spending level). In addition, the O&M Program manages about \$15 million per year in maintenance related small capital.

Goals

Provide low cost, reliable power, and be a trusted steward of the FCRPS.

Near-Term (FY 2014-17)

- Provide energy and capacity to meet our Regional Dialogue contract obligations (Tier 1) to our 130 plus publicly owned utility customers.
- Continue to ensure the FCRPS generators remain reliable and available to support the FCRPS during the Grand Coulee Third Power Plant (TPP) overhauls, during which successive 805/690 MW units will be removed from service over a period of 10 to 12 years.
- Continue to address the Northwest’s cultural resources and fish and wildlife mitigation responsibilities to enable its residents to realize the benefits of a low cost hydropower system.

Long-Term (FY 2014-19)

- Operation and expansion of FCRPS power facilities meet availability and reliability standards in the most regionally cost effective manner.

- Endangered Species Act, NW Power Act, National Environmental Policy Act, Fish Accords and other environmental responsibilities are met using a performance-based approach.
- BPA, the Corps, and Reclamation maximize the long-term value of FCRPS power and transmission assets through integrated asset management practices.

Continuing Issues Identified in the 2012 IPR

Long-term forced outages continue to be a concern for the FCRPS. For instance, there have been multiple forced outages of John Day turbines due to blade linkage/pin failures caused by a design flaw that had been previously identified on this family of generating units. A mitigation plan was developed and implemented, providing an interim repair plan (blocking the blades on the Kaplan turbines) until they can be rebuilt. In addition, Bonneville Powerhouse 2 has had several long-term forced outages associated with the generators that may indicate a systemic problem associated with those units. Also, there have been long-term forced outages at McNary and Grand Coulee recently. These failures have increased the forced outage factor for the FCRPS, are a significant risk to reliable system performance, and require non-routine extraordinary maintenance funds to address the problems. Generally, non-routine maintenance funding pressures have increased as work originally planned for execution in the FY 2014-15 rate period was deferred into the FY 2016-17 rate period. Given the age and condition of the system, BPA expects these pressures to continue into future rate periods.

WECC/NERC reliability compliance requirements continue to increase as well, including the work associated with recurring audits. Both Seattle District and Portland District were audited by WECC last year. Although they were very successful, the audits require a high level of resources in order to respond to data calls by WECC, and cost a total of nearly \$900,000. These audits can be expected to occur every few years for both the Corps and Reclamation.

Reclamation is continuing to increase staffing levels to the level approved in the last IPR. The staffing increase reflects recommendations received from third-party peer review assessing industry best practices, and includes staff for the project management program, O&M engineering support, and the safety program. As work activities have dramatically increased at Grand Coulee due to greater reliability requirements, increased routine and non-routine maintenance needs, and ongoing capital improvements, staffing levels have not increased in proportion. As a result, work crews are spread too thin.

New Requirements

Compliance activities associated with WECC/NERC have continued to increase and are becoming more stringent. Enforcement activities and required audits are greatly increasing the need for additional personnel to address auditor and documentation demands. One example of compliance impacts is the upcoming Critical Infrastructure Protection (Critical Infrastructure Protection) 005 requirements. The cyber security hardening required for Walla Walla District alone is forecasted to cost up to \$11 million annually due to the determination that all six power facilities are critical cyber assets. In addition, cyber and physical security threats are increasing and protection/preventative measures are becoming more necessary and complex. Highly skilled personnel are needed to develop, certify, and manage the power plant control systems (e.g., Generic Data Acquisition And Control System) and other security programs. For the Corps, Department of Defense cyber and physical security regulations must be complied with in order to obtain the necessary certification to operate the hydropower projects.

In addition, the Corps has identified \$16 million in critical spare equipment required across their facilities. This equipment is needed to prevent long-term outages and return units to service quickly. These items (transformers, bushings, and bearings) have very long lead times associated with replacement and BPA has recently experienced long outages due to a lack of available spares.

A significant new requirement since the last IPR is the O&M activities associated with Columbia River Fish Mitigation-funded fish passage investments at Corps facilities. These critical assets were built with appropriated capital funds provided by the Columbia River Fish Mitigation program. Now that they are in service, these new facilities require funding for their maintenance needs. These new routine O&M activities represent over \$4 million in additional annual funding requirements.

Lastly, about 65 percent of the O&M program hydropower spending levels are required to pay employee salaries and benefits. A majority of those employees are classified as trades and crafts (T&C). T&C wages are set based on a regional survey of the hydropower industry. During the federal wage freeze, Corps T&C employee wages were frozen along with the rest of the Corps employees, but Reclamation T&C employee wages were not. However, non-Corps hydropower industry employees (both inside and outside of the region) have seen substantial wage increases while federal wages have been frozen. Now that the federal pay freeze has been lifted, salaries and benefits for the FCRPS T&C employees will be realigned with prevailing rates. Expectations are that the cost associated with this will be significant for the Corps (as much as 5 to 7 percent or ~\$10 million total). Pay increases are expected before the end of FY 2014. Regular wage increases will resume after that, which have typically averaged 3 percent per year for T&C employees.

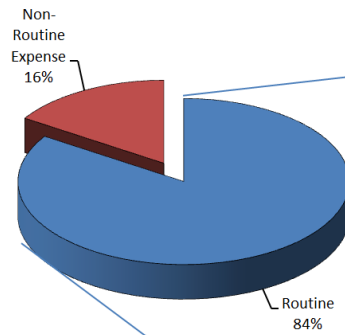
Operating at Proposed Funding Levels and Associated Risks

The proposed funding levels for the Corps and Reclamation represent the minimum spending levels necessary for maintaining the hydro system's safe and reliable performance during the upcoming Third Powerplant (TPP) overhauls at Grand Coulee. In order to keep the rest of the FCRPS generating units available to support the loss of 805 MWs from the system during the overhaul of the first three units, the Corps and Reclamation need to be appropriately staffed and have sufficient resources to address the operations, routine maintenance, and non-routine extraordinary maintenance required across the system.

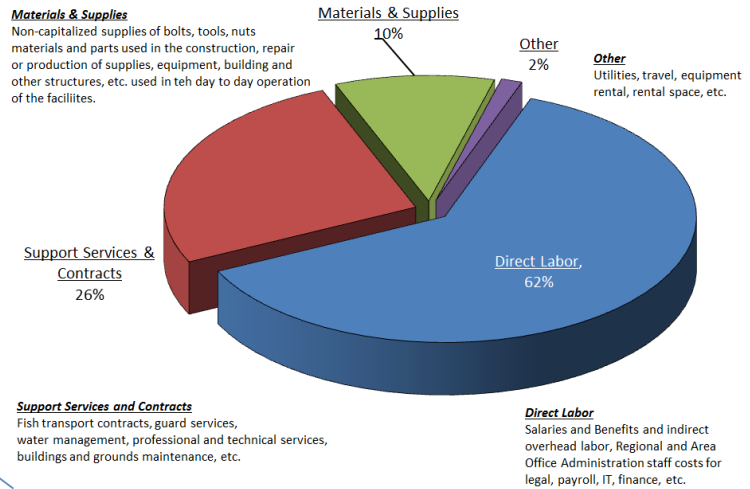
The Corps and Reclamation use a baseline budgeting process to develop program requirements for a routine O&M program. These baseline spending levels have outlined a minimum effort to successfully and consistently maintain the facilities for acceptable reliable performance. The routine, or base level items, are required in order to perform minimal required maintenance at the facilities while meeting regulatory mandates required for operation. Typical spending levels consist of two-thirds labor and one-third devoted to contract support (which includes security, fish and wildlife and cultural resources mitigation) and materials and supplies required for operations and maintenance.

To illustrate how funding is distributed, the pie chart on the next page shows routine O&M actual costs for FY 2013.

FCRPS Expense Program Breakout



FCRPS Routine Expense Breakout



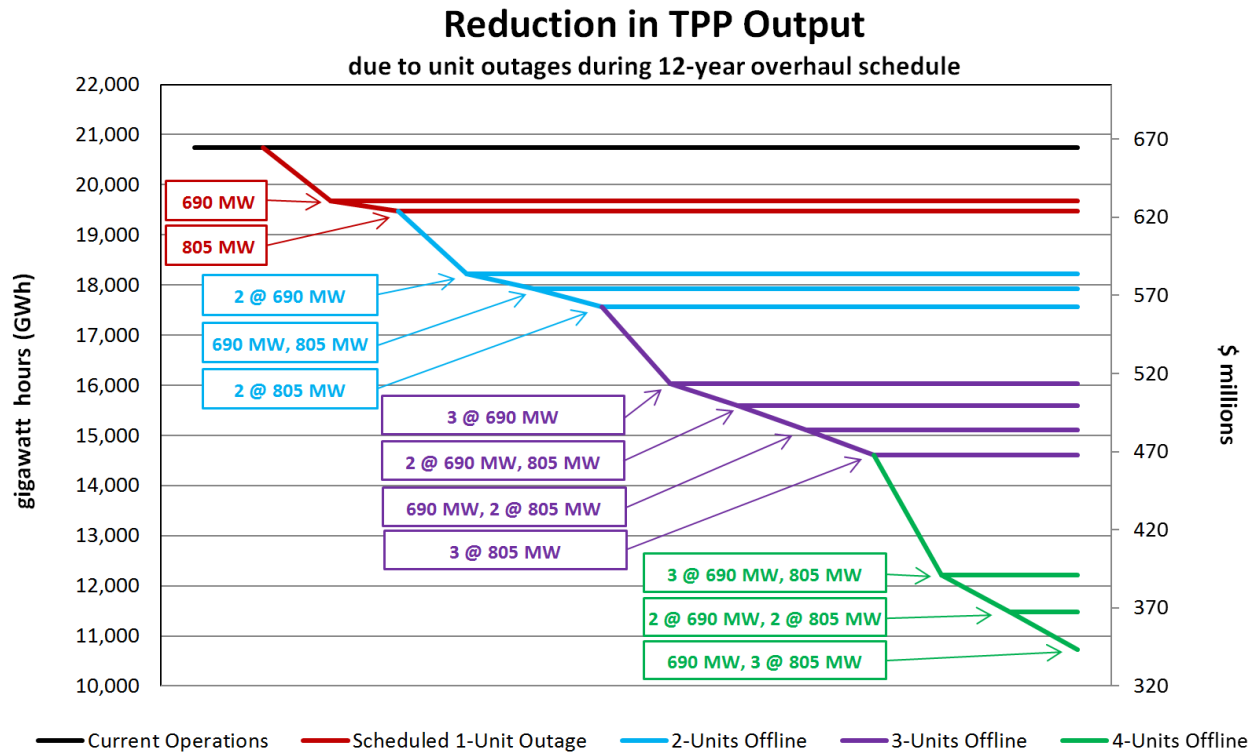
The Grand Coulee TPP overhaul is the most significant single critical action for maintaining the value of the hydro system. Because of its age and condition, the equipment in the facility requires a significant amount of non-routine maintenance funding to ensure its long-term reliable operational performance. These costs are significant, but not funding this work would have a much larger impact on Grand Coulee’s ability to generate revenue and provide long-term value to the region. A significant forced outage due to a mechanical failure would take one of the large units down indefinitely, shifting additional load requirements to the remaining units. The lost revenue associated with losing the first unit for a year is about \$34 million. Once the overhaul begins, if two additional units were lost for a year, the loss in revenue would be about \$124 million.

Across FCRPS generating facilities, similar age and equipment conditions and risks as those described for Grand Coulee exist. Reclamation has identified a number of items requiring non-routine maintenance in addition to the Grand Coulee TPP Overhaul. This includes spillway/drum gates, penstock gates, penstock and draft tube coatings, turbine rehabilitations/overhauls, cavitation repair at Grand Coulee and Hungry Horse, crane overhauls, and fire systems rehabilitations. The Corps has identified the following list of non-routine needs as well:

- Spillway gate rehabilitation and maintenance at Chief Joseph, The Dalles, McNary, Bonneville, and throughout the Willamette Valley
- Baldwin Lima Hamilton family of turbines at John Day and the Lower Snake plants which have high potential for blade linkage failures due to design flaws; several of these units have experienced failures
- Repairs to units at Bonneville 2nd Powerhouse due to design flaws in the thrust collar and thrust runner (among other issues, these flaws contributed to the Unit 11 long-term forced outage)
- Additional Corps HQ-mandated maintenance requirements, including turbine integrity inspections at all facilities which were developed after the catastrophic failure at the Sayano-Shushenskaya hydro plant
- Monolith joint repairs at Chief Joseph, John Day, and Dworshak
- Trash rack replacement and transformer refurbishment at John Day
- Cavitation repair at Lower Granite
- Headgate refurbishment at McNary

The Corps, Reclamation, and BPA are managing these growing non-routine extraordinary maintenance needs within the proposed funding level, but they will continue to put reliability at risk and increase cost pressures on the O&M expense proposed spending levels.

The value of making investments and maintaining the reliable generating capability of the FCRPS is illustrated in the following graph. It shows the lost revenue as a result of potentially losing one, two, three or four units in the TPP at Grand Coulee. Also, the graph illustrates the increased value associated with the rest of the generating units across the FCRPS as a result of the lower system availability during the TPP overhauls.



*Assumes a baseline 5-year average availability of 77.3% at Grand Coulee

*Assumes a 12-year (2013-2024) levelized energy value of \$46.93/MWh (based on the current forward price curve from BPA's Common Agency Assumptions as of July 2013)

The red line indicates the output and generation with the Grand Coulee TPP overhaul underway. The blue line indicates scenarios of losing one additional unit (either 805 or 690). The purple indicates combinations for losing two additional units in addition to the overhauled unit, and the green indicates losing three additional units after the overhaul begins.

As illustrated in the above graph for the TPP output, understanding the systems operational availability and ability to generate is of vital importance. Beginning in 2012, the three agencies have annually developed a five-year plan to assess FCRPS availability and production capability. System availability is currently lower than in years past due to the overhaul work at Grand Coulee and some longer term forced outages at several Corps plants. During the next five years, availability is projected to remain at similar levels. During this period, the Corps and Reclamation are focusing on maintaining high reliability and availability across the rest of the plants in the FCRPS. During this period, adequate equipment spares and manpower are essential to quickly address breakdowns and return units to service as rapidly as possible.

The proposed IPR FY 2016 -17 spending levels are based on required performance of routine system operations and maintenance activities, as well as addressing reliability requirements for WECC/NERC compliance, accomplishing critical non-routine maintenance (especially at Grand Coulee, John Day, and Chief Joseph), managing reliability and safety issues associated with obsolete drawings, dam safety and employee safety requirements, funding significant increases in stewardship/mitigation requirements for Cultural Resources, and funding large non-routine maintenance requirements (especially the Third Powerplant Overhauls at Grand Coulee, as well as dealing with catastrophic equipment and generating unit failures and aging infrastructure at both Corps and Reclamation facilities). Maintaining qualified staff at all facilities is a necessity. Power plant training programs and an engineering intern program are essential to ensure a pool of highly skilled and qualified employees. This is especially critical because a high proportion of the workforce is eligible for retirement. Additionally, many projects are struggling to attract and retain qualified staff, particularly at remote work locations. The proposed spending levels to meet the needs described above have outlined a minimum effort to successfully and consistently maintain the generating facilities for acceptable reliable performance.

Non-funded Items

The Corps and Reclamation are generally funding all critical activities at the proposed FY 2016-17 program funding levels. However, there are some areas of concern.

Potential changes in security and cyber security requirements (re: Federal Information Security Management Act) are not clearly defined at this point, but generally become more severe and require more resources in FY 2016-17. WECC/NERC requirements for cyber security are increasing dramatically. Cyber vulnerabilities of power plants are an issue of great concern in the Department of Defense. The Corps is governed by Defense policy and must comply with Defense standards for cyber security. This is an issue for Reclamation as well, particularly with Grand Coulee having national icon status in the Department of Interior.

Corps and Reclamation joint-funded facilities need additional work. Fish passage facilities, hatcheries and joint feature items at the dams are the same age and condition as the power facilities and in need of maintenance and investment. Reclamation and the Corps must get matching appropriations for these items, which may prove difficult with flat or declining appropriations.

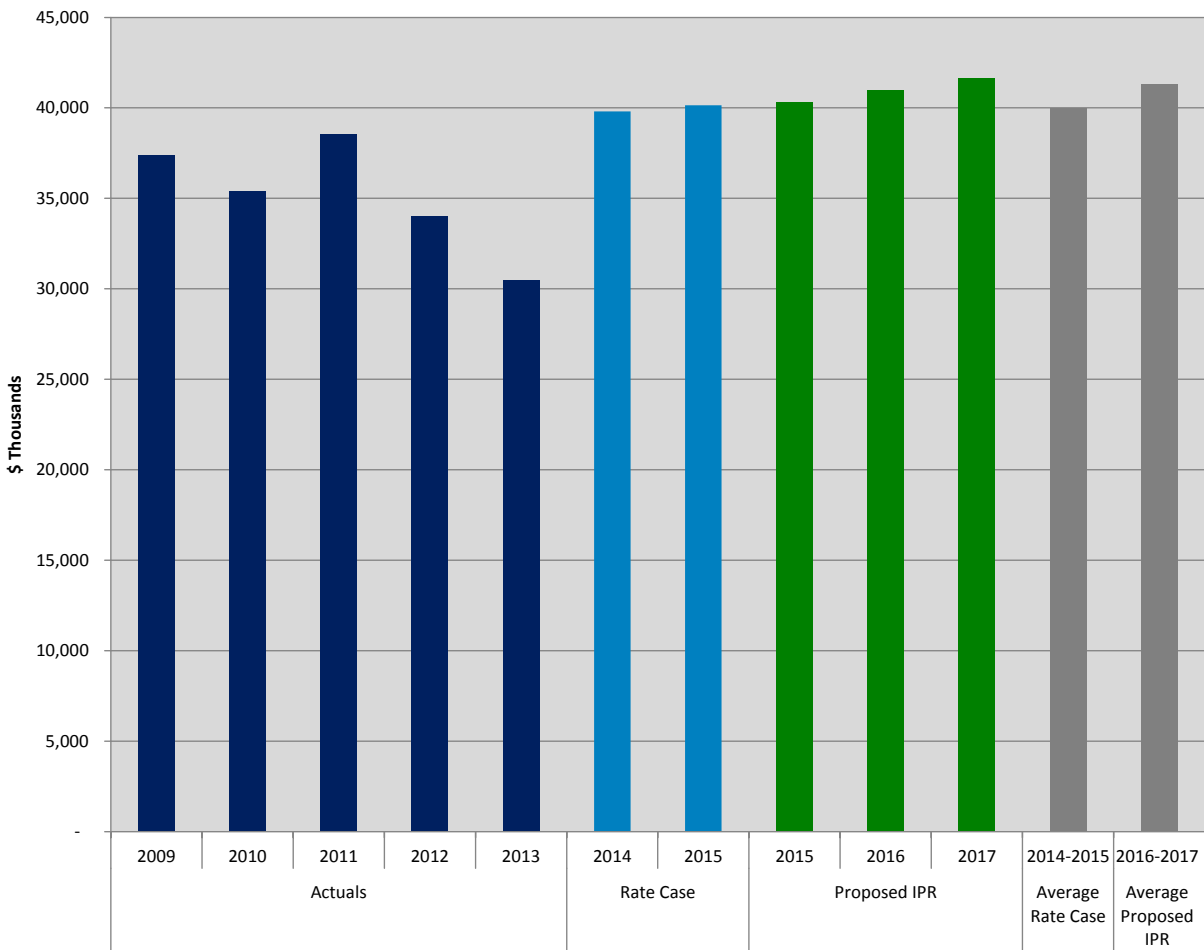
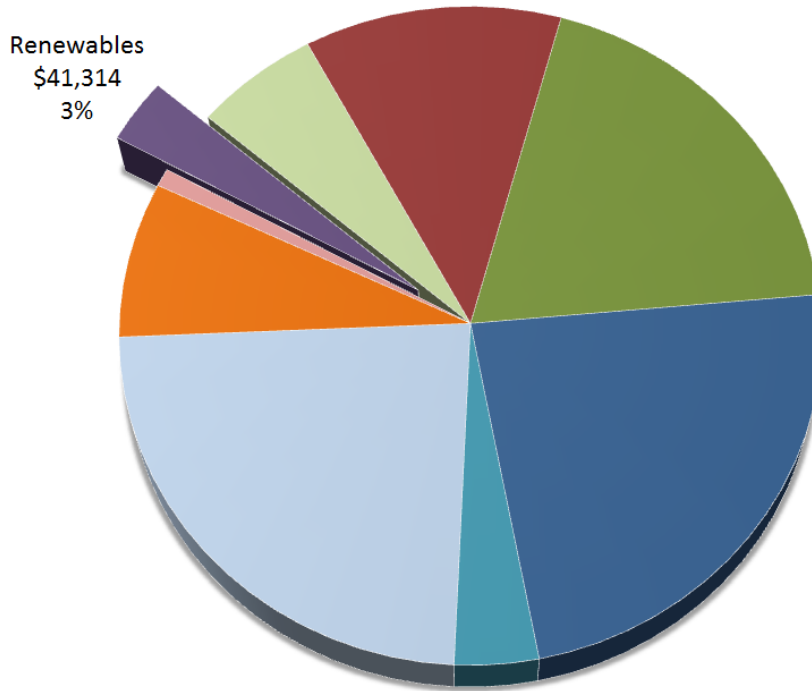
Risks of Operating at Levels below the Proposed Spending Levels

Operating and maintaining the facilities at less than the proposed spending levels results in deferring maintenance that puts the reliability of the hydro system at risk. Maintaining adequate levels of maintenance is critical with aging infrastructure, as older worn out equipment requires more maintenance, and much of the equipment is operating past its intended design life. The average hydroAMP condition rating of major power train components has declined from 7.8 to 7.3 over the past five years. About 25 percent of equipment has exceeded its design life at the Main Stem Columbia, Headwaters, Snake River, and Southern Idaho generating projects. For the small local area generating projects, nearly 40 percent of equipment has exceeded its design life. If the Corps and Reclamation were to operate at spending levels lower than those proposed, they would again be required to make significant reductions in the O&M program, increasing risks to both generation and transmission reliability and generating availability and the ability to generate revenue.

The proposed spending levels were based on safety, regulatory and reliability requirements, and growing non-routine maintenance needs at the generating facilities. For Reclamation, the overhauls in the Third Powerplant and other non-routine projects would need to be halted or scaled back, and a staff reduction at Grand Coulee would be necessary. Reclamation's ability to respond to forced outages and return units to service would be negatively affected. For the Corps, the non-routine maintenance program would need to be reduced or possibly eliminated and with the potential for units to remain forced out for extended periods of time. Additionally, staffing cuts would need to be made, and the engineering intern program would be cut back or eliminated. Also, spare parts inventory will be reduced or eliminated, lengthening the return to service time associated with major forced outages.

3.4 RENEWABLES

FY 2016-17 Average: Proposed IPR



Program Details

(\$ Thousands)	Actuals	Rate Case		Proposed IPR		
	2013	2014	2015	2015	2016	2017
Renewables	30,463	39,799	40,147	40,331	40,987	41,641
Grand Total	30,463	39,799	40,147	40,331	40,987	41,641

Description, Purpose and Responsibilities

In the 2007 Long-Term Regional Dialogue Record of Decision (ROD), BPA proposed to base its renewables program goal on the Council’s forecasted renewable generation and public power’s share of regional load growth. The ROD calls for BPA to assess public power’s renewable acquisitions and acquisition plans, load growth and revisions to the Council’s Plan to determine if the target is being met. BPA is proposing to continue this strategy through the FY 2016-17 rate period. Using the Sixth Power Plan and public power’s resource plans, BPA has concluded that the publics are likely to purchase sufficient renewables to meet BPA’s goal through 2017.



Goals

Meet existing contract obligations while seeking opportunities to reduce costs. Maintain existing program functions.

Short-Term Strategy: Continue to purchase the output of six wind projects. Maintain the solar and wind monitoring networks (used in forecasting). Cover fees/costs associated with the management of Tier 1 Renewable Energy Certificates. Retain the existing Resource Development proposed spending levels to cover infrastructure development, generation options, pilot programs, or permitting which either help meet BPA’s stated renewable generation goal or reduce Tier 1 exposure to capacity risks. An example of a Resource Development activity is Power Services’ share of the funding for Demand Response Advanced Demonstrations costs at \$1.6 million per year for FY 2014-15. Also the Resource Development funds were used in FY 2012-13 for software development in order to enable integration of third-party balancing reserves into BPA’s systems. In the event of a windy year, any unused Resource Development proposed spending levels would be available to offset wind production costs above the forecast at the six wind projects.

Changes from the 2012 IPR

- Renewable power purchase expenses have been updated.
- The Foote Creek 2 Power Purchase Agreement will expire in June 2014.
- Power Services’ share of the funding for the Demand Response Advanced Demonstrations will be \$1.6 million each year from the Renewables Resource Development category

- The Project Development portion of the proposed spending has been reduced by about \$300,000 per year as no specific projects have been identified for development.

Risks of Operating at Levels below the Proposed Spending Levels

Maintain \$4 million per year for Resource Development which funds the pre-energization costs associated with acquisition of non-federal resources (permitting, etc.). The Resource Development category definition was previously expanded to cover a wider range of resource activities such as infrastructure development, generation options, and permitting pre-energization. If this spending is reduced, there may not be enough funding available to acquire unplanned resources in a timely manner. No inflation was applied to the \$4 million proposal for Resource Development.

Also in the event of a windier than forecast year, any unused Resource Development spending would be available to offset wind production costs at the six wind projects.

Renewables power purchases was credited with a \$2,384,350 payment due to a supplier not meeting a Federal Energy Regulatory Commission obligation. This artificially deflated the cost of purchases. For planning purposes, the \$2,384,350 credit was removed from the FY 2013 actuals used for the baseline, because it has no bearing on actual FY 2013 expenses.

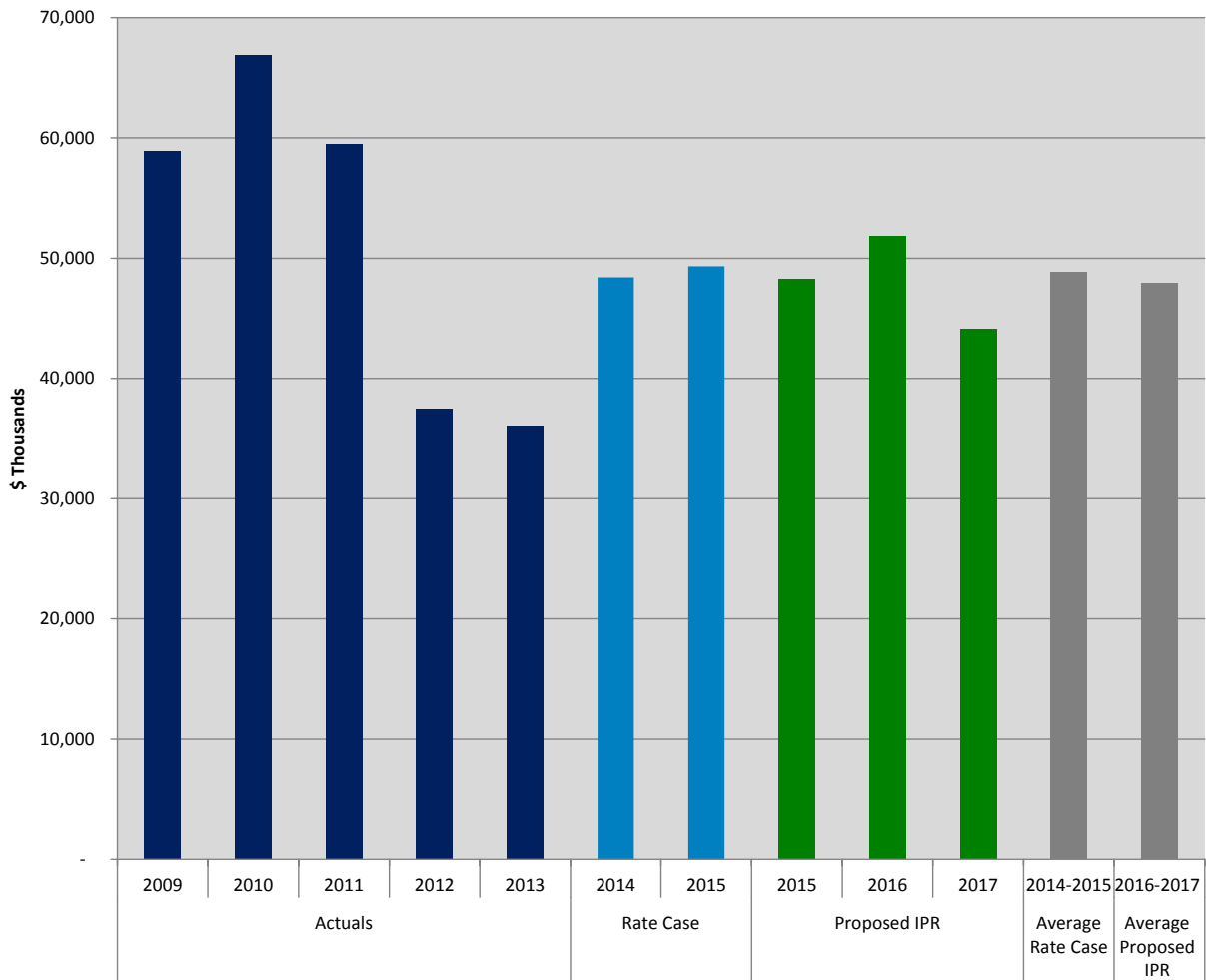
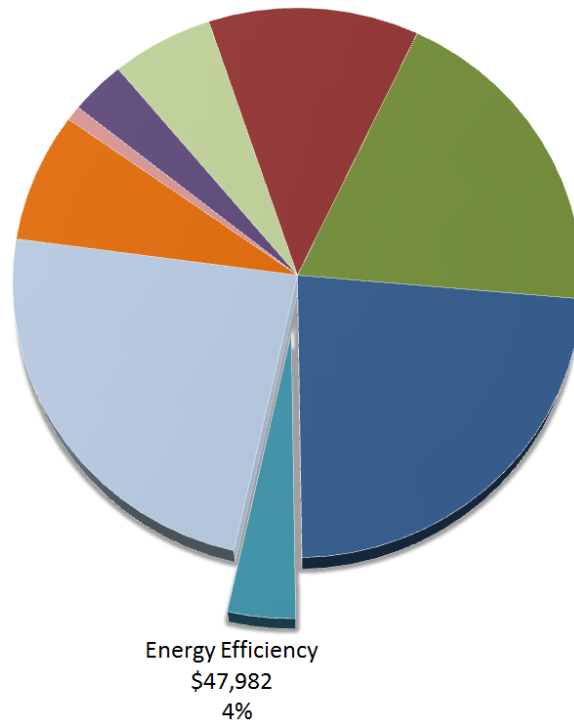
Challenges/Constraints

The majority of the proposed spending is associated with existing wind power purchase contract obligations.

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3.5 ENERGY EFFICIENCY

FY 2016-17 Average: Proposed IPR



Program Details

(\$ Thousands)	Actuals	Rate Case		Proposed IPR		
	2013	2014	2015	2015	2016	2017
Demand Side Management Technology	1	0	0	0	0	0
Conservation Acquisition	10,394	16,444	16,754	14,692	14,632	14,642
Low-income Energy Efficiency	5,025	5,155	5,252	5,252	5,336	5,422
Reimbursable Energy Efficiency Development	5,368	11,859	12,083	13,000	15,000	7,000
Legacy	773	1,031	1,050	605	605	605
Market Transformation	14,517	13,919	14,180	14,748	14,996	15,236
Demand Response & Smart Grid	-	-	-	1,825	1,245	1,245
Grand Total	36,078	48,408	49,320	50,122	51,814	44,150

*Note: Demand Response and Smart Grid was previously embedded in Conservation Acquisition.

Description, Purpose and Responsibilities

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. Expense funding is used towards this goal in three ways. First, the funding is used for program support such as technical service providers and the research and evaluation needed to quantify non-programmatic savings and substantiate reported achievements. Second, it is used to acquire a subset of the savings target set by the Power Plan. These savings include market transformation savings, savings realized from our Low Income Energy Efficiency grants and reimbursable work with regional federal entities (energy efficiency development) where public power can capture the savings. Including non-programmatic, the savings acquired with the proposed expense spending levels are forecast to make up nearly 25 percent of the total annual savings reported towards the Sixth Plan. Third, expense funding is used to pay for services and labor that supports the conservation program (see Conservation Support in the Non-Generation Operations program for proposed spending levels).



Support from Agency Services

Energy Efficiency works closely with Finance, Information Technology (IT), and Office of General Counsel. Eliminating or reducing this support would adversely affect spending level development, systems development, and legal counsel for Energy Efficiency, also putting at risk the successful implementation of the energy efficiency program.

Goals

Along with meeting public power’s share of energy savings as aligned with the Council’s Power Plan, BPA’s Long-Term Regional Dialogue Policy is to pursue conservation equivalent to all cost-effective conservation in the service territories of those public utilities served by BPA. The savings are acquired in partnership with public utilities at the lowest cost to BPA. The proposed spending levels will be used to enable capital acquisition of energy efficiency and to achieve approximately 25 percent of BPA’s share of the savings target.

Conservation Acquisition

- **Program Infrastructure Support:** Develops policies to encourage conservation, improves the region's ability to achieve energy efficiency through regional programs, engages with customers and other project implementation stakeholders, designs and implements program support such as regional contractor skill-building for energy efficiency project implementation, conducts research and evaluations, and provides technical support for project implementation and innovation in new technologies. These expense funded initiatives support BPA Energy Efficiency's capital program that provides incentive dollars to achieve cost effective conservation.
- **Non-Programmatic Savings:** Non-programmatic savings target energy efficiency occurring through codes and standards as well as savings created outside of utility programs or market transformation efforts. For instance, thousands of compact fluorescent light bulbs are purchased and installed in the region without the use of utility incentives, making these efforts extremely cost effective to count toward public power's target. A portion of the Conservation Acquisition expense proposed spending levels covers the necessary research, data collection and evaluation to capture these savings. Part of funding to the Northwest Energy Efficiency Alliance (market transformation) also helps with this initiative.

Demand Response

- Demand Response helps BPA and utilities adapt to variations in loads and generation sources and is a promising approach to mitigating the region's capacity challenges. BPA has several demand response pilots in the residential, commercial, and industrial sectors, as well as some in multiple sectors.

Low Income Conservation State and Tribal Grants

- BPA administers a grant program to the four Northwest states and recognized tribes within the region for the purpose of improving efficiency levels in qualified low-income residences. Grants to states are determined formulaically on a proportional basis using the most current census data of households with incomes below federal poverty guidelines. Grants to tribes for low income services are made on an application basis and take a variety of factors into consideration including geographic dispersion, prior participation and local needs.

Energy Efficiency Development (Reimbursable Activities)

- BPA provides assistance in a number of ways to other federal agencies in an effort to leverage energy saving achievement. The scope of activities is defined through inter-agency agreements and can include scoping audits, developing statements of work, facilitation of third party financing actions, construction procurement, project management, quality assurance, and reporting. Both direct and indirect costs for these services are fully paid for by the client agency, thus making these activities rate neutral to BPA and its customers.

Legacy Programs

- Funds still owed to regional entities for prior conservation work. The upfront funding to finance these measures was raised by others rather than BPA. BPA continues to pay costs from those past agreements.

Market Transformation Savings

- Market transformation leverages the regional market's power to accelerate innovation and adoption of energy-efficient products, services and practices. Examples include collaborating with manufacturers to integrate conservation into their product designs and with architects and builders to promote early adoption of energy efficient designs and practices. BPA partners with and is the largest funder of the Northwest Energy Efficiency Alliance (NEEA), which promotes market transformation in the Northwest.

Changes from the 2012 IPR

In 2012, BPA began operating under a new framework designed in the Post 2011 process. This framework, which focuses on utility equity, has prompted several changes to how BPA designs and implements programs. After two years of implementation, the Post 2011 framework is under review and BPA is currently seeking feedback from customer workgroups.

As described in more detail below, other program changes are a regular aspect of BPA's approach to energy efficiency.

New Programs/Projects

Program size and scale is evaluated and modified in response to customer and market needs. Energy efficiency integrates new technologies to obtain savings. Examples include ductless heat pumps, heat pump water heaters and variable speed drives for HVAC systems. Energy efficiency also builds programs to serve evolving market opportunities. For example, BPA is launching an HVAC Trade Ally Network to provide resources and training to improve the delivery of efficiency improvements in heating, ventilation, and air conditioning systems.

To keep a consistent savings pipeline BPA plans to ramp investments in program and project evaluations and developing new measures. Because energy efficiency is a reduction in future load, when energy efficiency savings are reported, additional quality assurance is essential to prove its reliability and persistence. With the ramp-up of savings delivered for the Sixth Plan, BPA will be increasing its project and program evaluation efforts for that quality assurance. Additionally, there is an increased need for new measure research to keep the savings pipeline full as previous measures mature and saturate the region.

Such new measure and new program development are supported in the proposed spending levels.

Risks of Operating at Levels below the Proposed Spending Levels

BPA's proposed spending levels are expected be adequate. If spending levels were reduced, BPA would put its energy efficiency objectives at risk.

To achieve lower spending levels BPA would need to take actions that would curtail services tied to current energy efficiency acquisition, future development of energy efficiency measures, QA/QC of delivered savings, or the piloting and scale-up of agency-prioritized demand response activities. Therefore, such potential reductions have not been integrated into the energy efficiency proposed spending levels.

For example, to achieve lower spending levels, energy efficiency could

- Reduce its energy efficiency contract staff roster. Doing so reduces bandwidth to develop and implement programs, drive pilots and research, and provide support services. With generally flat federal headcount allocations, energy efficiency has leveraged contract staffing to tackle the work required to double the scale of BPA's energy efficiency program.
- Reduce planned evaluation activities. BPA is currently ramping evaluation activities to gain compliance with Regional Technical Forum guidelines on evaluation. Reducing planned evaluation investments increases the risk of BPA continuing programs or offerings which evaluation may show require adjustment or warrant elimination.
- Reduce investments in program design and implementation. Doing so reduces BPA's regional infrastructure which provides critical assistance to utilities in achieving energy efficiency. BPA's programs are designed to build economies of scale and overcome inertia. Decreasing program investments may lead to lower acquisitions overall or may lead to less cost efficient savings.
- Reduce investments in demand response. The majority of requested funding for demand response program support comprises contract staff costs. Reducing this investment materially constrains the organization's bandwidth available to cultivate market-scale projects and build the strategic plan for the long-term leverage of demand response by BPA.

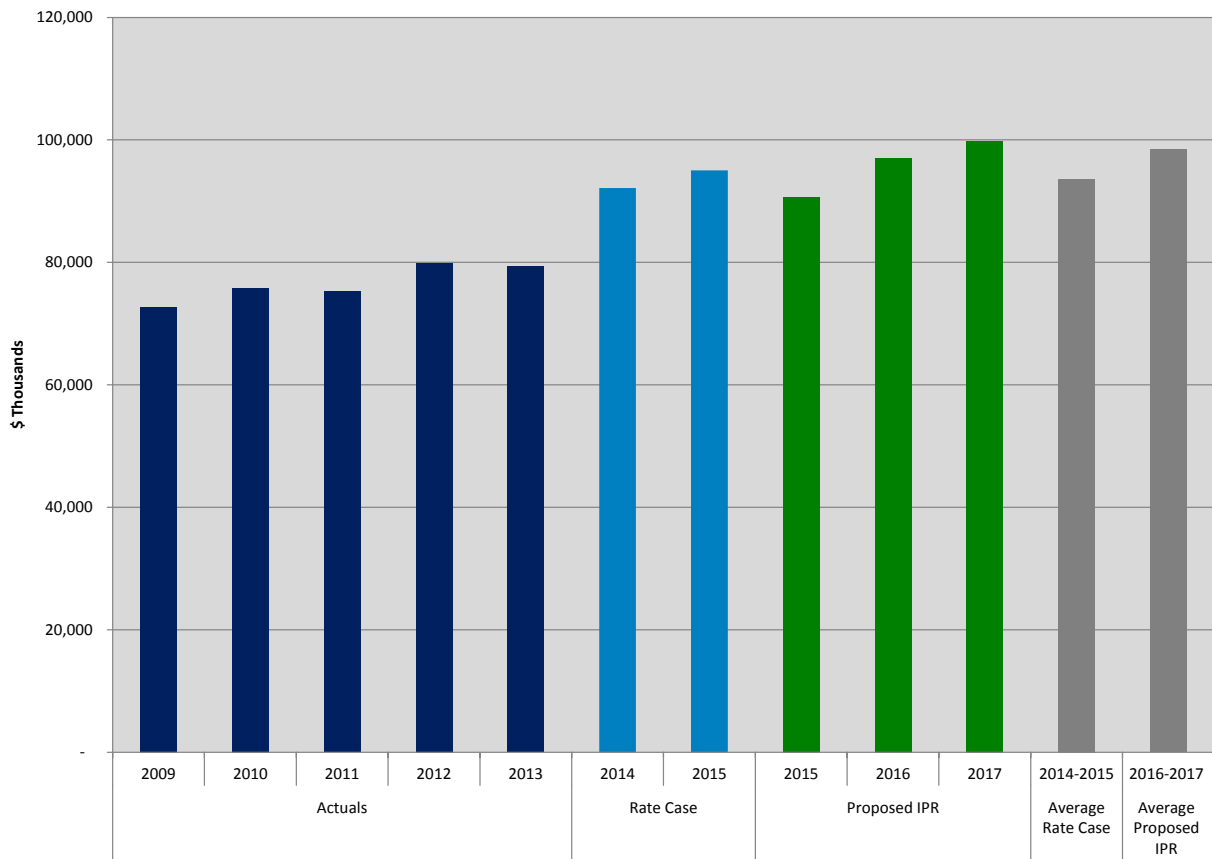
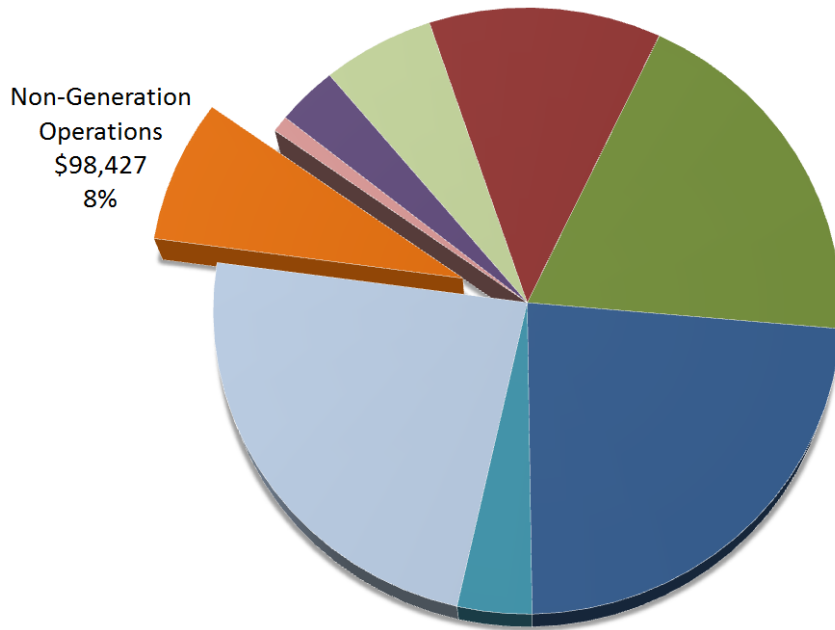
Challenges/Constraints

Proposed spending levels reflect the funding necessary for a stable trajectory of programmatic, market transformation, and nonprogrammatic energy efficiency efforts. BPA is forecasting cost amidst several areas of uncertainty, including the 7th Power Plan and its associated trajectories for energy efficiency have not been produced. The Post-2011 Review Process is underway. The Northwest Energy Efficiency Alliance is finalizing its spending level proposal. Each of these concurrent efforts could sway the level of funding needed to achieve BPA's energy efficiency objectives.

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3.6 NON-GENERATION OPERATIONS

FY 2016-17 Average: Proposed IPR



Program Details

(\$ Thousands)	Actuals	Rate Case		Proposed IPR		
	2013	2014	2015	2015	2016	2017
Information Technology	5,881	6,602	6,735	5,728	5,805	5,910
Generation Project Coordination	7,423	7,126	7,268	7,625	7,735	7,845
Slice Implementation	854	1,099	1,126	1,077	1,101	1,131
Operations Scheduling	8,426	10,398	10,621	9,830	10,307	10,496
Operations Planning	6,444	7,641	7,948	6,936	7,100	7,255
Power R&D	6,186	5,816	5,936	6,028	6,033	6,046
Sales and Support	18,822	20,951	21,339	21,376	22,525	24,765
Strategy, Finance and Risk Management	13,559	19,263	20,360	18,913	22,628	22,256
Executive & Administrative Services	3,804	4,166	4,369	4,152	4,326	4,402
Conservation Support	7,902	9,094	9,309	8,965	9,456	9,731
Grand Total	79,302	92,156	95,010	90,628	97,018	99,836

Description, Purpose and Responsibilities

This section covers Power Services internal operating costs plus the costs charged to Power for agency services support. Power Services’ internal operating costs include the salaries and benefits for 345.5 employees (full time equivalent), plus supplemental labor, awards, and some contract costs.



These costs fall into the three main spending level categories described below.

Power Services Systems Operations (\$15 million – FY 2016-17 Average): Includes IT, Generation Project Coordination, & Slice Implementation

Proposed funding levels for Power Services Systems Operations include about \$8.3 million per year for the Power Services’ staff and contractors that oversee federal hydropower projects, contracted generating resources, slice operations, and fish operations. It also includes nearly \$6 million per year for the IT hardware, software, and systems that support Power Services. Drivers for increased IT costs include: IT costs compliance with North American Electric Reliability Corporation Critical Infrastructure Protection regulations and implementing a Security Operations Center. Other corporate costs for environmental compliance and legal support are also included.

Power Services Scheduling (\$18 million – FY 2016-17 Average): Operations Scheduling and Operations Planning

Proposed funding levels for Power Services Scheduling support staffing costs associated with power operations planning, generation scheduling, and scheduling coordination.

Power Services Marketing and Business Support (\$66 million – FY 2016-17 Average): Includes Power R&D, Sales & Support, Strategy, Finance & Risk Management, Executive & Administrative Services, and Conservation Support]

Proposed funding levels for Power Services Marketing and Business Support includes approximately \$33.6 million for staffing costs associated with requirements marketing, bulk marketing, and energy efficiency along with Power Services’ awards and benefits loadings for all employees.

- Northwest requirements marketing functions include customer service, power account services, power transfer services, and residential exchange.
- Bulk marketing functions include market analysis and pricing, long term sales and purchases, bulk marketing contract support, and trading floor activities.

- Energy efficiency functions include planning and evaluation, program implementation, contract administration and smart grid.

In addition, this proposal includes about \$32 million in corporate allocations including \$6 million per year in funding for technology innovation, \$2.5 million for environmental compliance, \$3.4million for corporate strategy, and \$3.4 million for legal services.

Goals

Continue to retain and hire staff with the skills necessary to deliver reliable, low-cost power to the Pacific Northwest. See individual Power program executive summaries for more details.

Changes from the 2012 IPR

In the face of hiring challenges and ongoing retirements throughout FY 2014, Power Services is likely to end the year with staffing levels up to 10 percent below the level reflected in the 2012 IPR. FY 2015 proposed funding levels reflect a gradual return to normal staffing levels. FY 2016 and FY 2017 spending levels reflect full staffing.

Risk and Impact of Operating at Below Proposed Levels

Power Services expects proposed funding levels to be adequate. If additional unforeseen external requirements or regulations are placed on Power Services or workload for ongoing activities increases beyond expectations (for example, Columbia River Treaty, oversupply management or wind integration), there would be additional upward cost pressure on this program. In that case, either additional workload prioritization would be required to keep spending at the proposed level, which would result in some work being delayed or not getting done, or additional funding would be required for Power Services to continue to meet its statutory obligations and customer service priorities.

For more information on the risks and impacts of the Agency Services organizations operating below proposed levels, see the Agency Services sections.

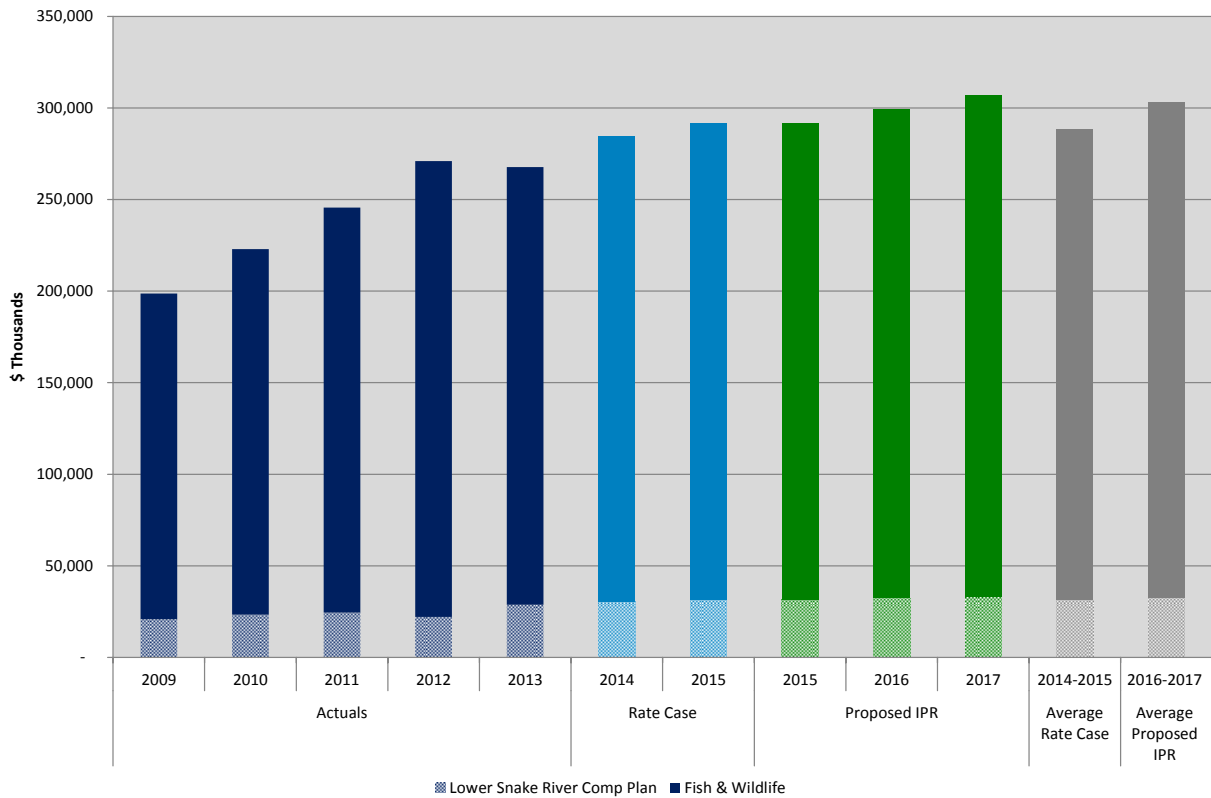
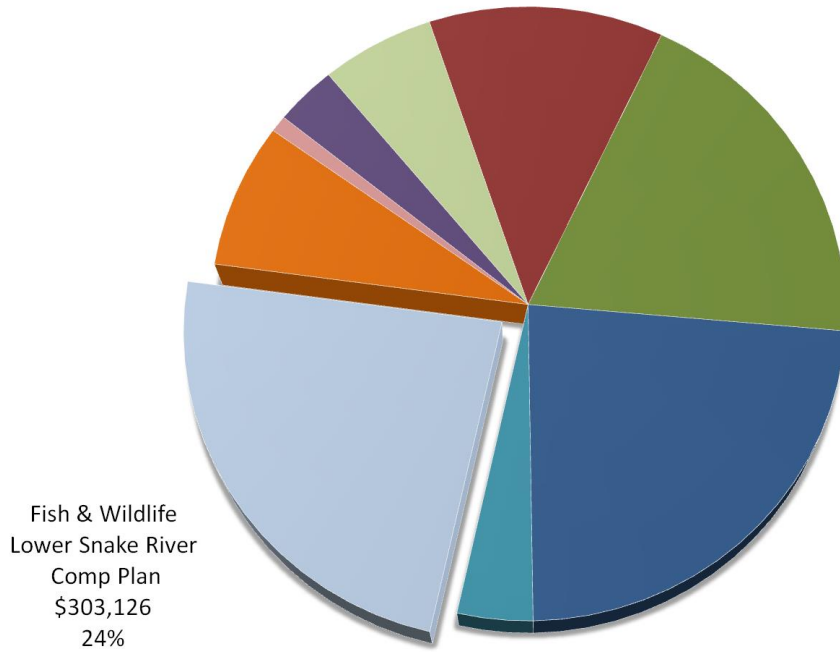
Challenges/Constraints

As with much of BPA, Power Services is faced with the potential for a large number of retirements from key positions in the next three to five years. The challenge is to develop current staff, hire additional staff and complete sufficient succession planning to allow Power's business to continue with minimal disruption. To aid in succession planning, Power Services plans to continue its student program as well as a rotational program for employees to cross train in other areas of Power Services.

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3.7 FISH AND WILDLIFE, LOWER SNAKE RIVER COMP PLAN (LSRCP)

FY 2016-17 Average: Proposed IPR



Program Details

(\$ Thousands)	Actuals	Rate Case		Proposed IPR		
	2013	2014	2015	2015	2016	2017
Fish & Wildlife	238,984	254,000	260,000	260,000	267,000	274,000
Lower Snake River Comp Plan	28,700	30,670	31,670	31,670	32,303	32,949
Grand Total	267,684	284,670	291,670	291,670	299,303	306,949

Description, Purpose and Responsibilities

BPA’s Fish and Wildlife Program (the Program) implements hundreds of projects each year to mitigate for the impacts of the FCRPS dams. These actions are designed to satisfy obligations under the Northwest Power Act, the Endangered Species Act (ESA) and trust and treaty responsibilities to affected Indian Tribes. They provide compliance with ESA biological opinions (BiOps), the Columbia Basin Fish Accords, wildlife settlements and other agreements.



The Program includes hydro actions to improve fish survival, tributary and estuary habitat protection and restoration actions, hatchery production to compensate for hydro fish losses and to aid conservation efforts, predator management, and research and monitoring. BPA implements these actions in coordination with the Northwest Power and Conservation Council (Council) and independent science review. The Program relies on a performance-based approach, for example, 96 percent dam survival for juvenile spring migrating fish.

The Lower Snake River Compensation Plan (LSRCP) operates and maintains a network of eleven hatcheries and eighteen satellite facilities to mitigate for the losses of salmon and steelhead from the construction and operation of the four lower Snake River dams: Ice Harbor, Lower Monumental, Little Goose and Lower Granite. The program includes expenses for operations, evaluations and nonrecurring maintenance. Over 65 percent of the hatchery facilities constructed under this program are over 25 years old. BPA funds the LSRCP through a direct funding agreement with the U.S. Fish and Wildlife Service (a separate line item cost distinct from the Fish and Wildlife Program).

Support from Agency Services

Environment, Fish, and Wildlife

- Environmental Planning & Analysis provides environmental review, conducts consultations for proposed projects (for example, National Environmental Policy Act, permitting, ESA consultations and cultural resource consultations with tribes and state historic preservation officers) and initiates public notification for land acquisitions. Pollution, Prevention and Abatement reviews potential land acquisitions for hazardous materials.

Supply Chain

- Procurement administers several hundred contracts each year to implement the fish and wildlife program. These contracts support achievement of BPA’s mitigation responsibilities that are central to the Agency’s primary responsibility under the Northwest Power Act and Endangered Species Act.

Information Technology

- Information Technology supports development and maintenance of systems integral to fish and wildlife operations (for example, Pisces and Taurus). Program development and management, contracting, invoicing, tracking of finances, and reporting on results are all supported by the IT systems.

General Counsel

- General Counsel supports Fish and Wildlife in the development and implementation of the Program, including biological opinions, Accords, MOUs, MOAs and long-term settlements, reviews pre-acquisition land documents and makes recommendations on Program development and interpretation.

Realty Services

- Realty Services provides a variety of support functions to Fish and Wildlife, including pre-acquisition activities (appraisal review, perfection of water rights and the like) for potential land acquisitions, closings on acquisitions and post-acquisition tracking. Realty services are provided by Transmission Services on a reimbursable basis.

Goals

BPA is committed to fulfilling its mitigation responsibilities and commitments under the Program, FCRPS and other BiOps, the Columbia Basin Fish Accords, wildlife settlements and other agreements. Program goals rely on an “All H” or lifecycle approach: hydro actions to improve fish survival, tributary and estuary habitat protection and restoration actions, hatchery production to compensate for hydro fish losses and to aid conservation efforts, predator management, and research and monitoring. A primary goal is increased returns and survival of ESA listed species. BPA uses performance standards and other biological criteria to set priorities for actions and monitor implementation. Implementation occurs in collaboration with the Northwest Power and Conservation Council, State and local agencies, affected Indian tribes, and Non-Government Organizations.

Short-term goals for the LSRCP are primarily focused on maintaining fish production at current levels, planning for future reforms to achieve best management practice, and addressing high priority deferred maintenance actions.

BPA has retained program and LSRCP spending levels from previous years, so funding levels are considered stable, with adjustments only for modest inflation. BPA has put management tools in place to increase its ability to actively manage funding levels within and across fiscal years. This includes active contract management, flexibility for spending between fiscal years and between the Program and LSRCP, and flexibility to exceed estimates in limited situations when necessary to meet binding commitments.

Long-Term Objective

The Program’s long-term goal through FY 2018 is the same as its short-term goal.

Other than inflation, increases are not anticipated in the projected capital and expense spending for the Program. New potential commitments will be sequenced or reprogrammed from within existing Program spending to the extent possible. For example, BPA may explore additional fish or wildlife settlements with interested agencies and tribes within long-term spending constraints. Following the expiration of the FCRPS BiOp and the Columbia Basin Fish Accords in FY 2018, there is the possibility of updated BiOp commitments and renewed Accord agreements for future priorities.

The LSRCP long-term strategy builds on its short-term goals with continuing improvements in rearing technology that allow for increased fish production using available water, expanding hatchery reforms to further advance best management practices, implementing cost-effective energy conservation initiatives for pumping and heating/cooling water and developing and implementing preventative maintenance as well as addressing deferred maintenance.

Changes from the 2012 IPR

Ongoing BiOp litigation has resulted in a remand and an updated BiOp released January 2014.

Risks of Operating at Levels below the Proposed Spending Levels

At proposed funding levels, BPA expects that it will be able to meet its commitments under the Columbia Basin Fish Accords, various BiOps, wildlife settlements and the Council Program. At the proposed funding levels, BPA expects to cover the management costs for the Lower Snake River hatchery program based on priorities set in a 20 year Asset Management Plan. This includes routine and preventative maintenance, production reform and ESA compliance. It does not include capital improvements over \$1 million in one fiscal year, which are not funded by BPA.

The Program also faces the following challenges and constraints that would be exacerbated if funding levels were reduced from proposed levels:

- Legal challenges to the FCRPS BiOp and the ongoing remand create future uncertainty for implementation of the Program, particularly for tributary and estuary habitat actions. The potential for additional requirements and ESA listings exists.
- Another challenge involves the implementation of the Fish Accords. In the early years of the Accords, partners were ramping up projects at a slower rate than expected and portions of the annual funding amounts were underutilized. Accord partners have subsequently, per the flexibility in the Accords, moved unspent funding to current and future fiscal years. A significant challenge is to make these underutilized funds available while continuing to support other commitments.
- Larger land acquisitions pose challenges to spending allocations. These large land acquisitions are difficult to plan as numerous uncertainties surround them (availability and permitting, for example); nevertheless, BPA must absorb these opportunities into available spending levels.
- The costs associated with implementing the FCRPS BiOp have risen (for example, habitat restoration in the estuary). The program has absorbed these increasing costs into existing funding amounts through aggressive project management and spending efficiencies.
- Congressional appropriations may be limited for capital hatchery improvements/reforms at LSRCP facilities.

Additional Risks: Failure to fully support the Program could affect BPA's ability to meet its commitments under the Columbia Basin Fish Accords, various BiOps, wildlife settlements and the Council program. The Fish Accords, various BiOps, wildlife settlements and BPA overhead account for approximately 80 percent of program spending, while approximately 20 percent is for other projects under the general program (that is, non-Accord and non-BiOp).

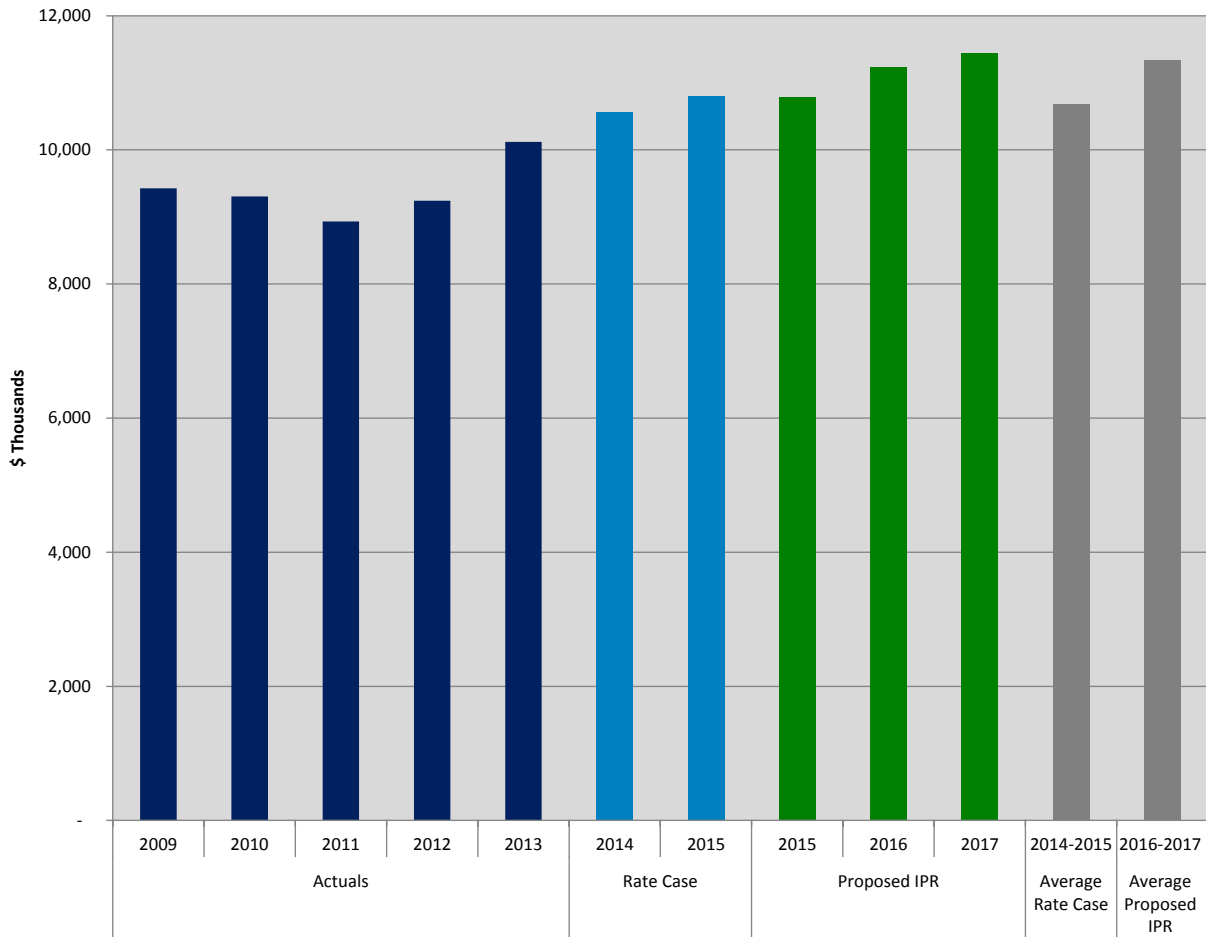
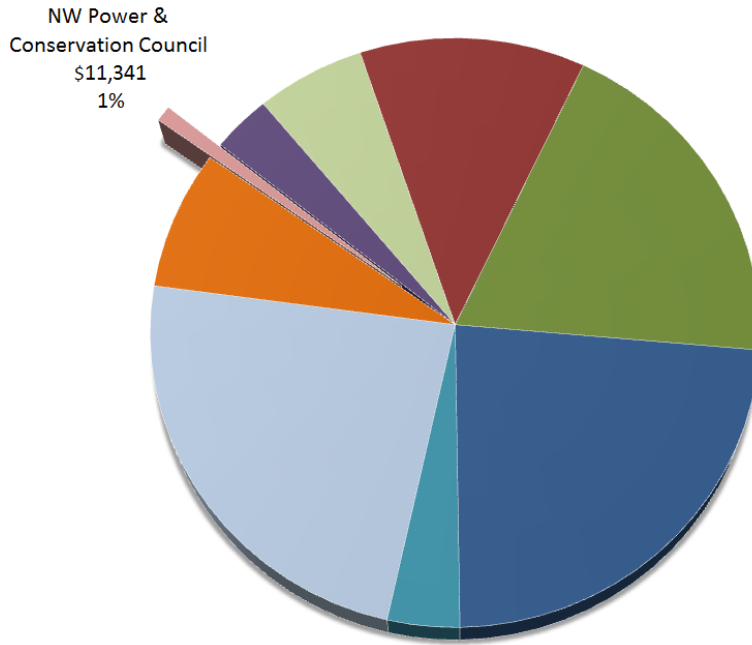
If not funded, there are two classes of LSRCP activities that would pose additional risk: deferred maintenance (including energy conservation and preventative maintenance) and activities to meet best management practices as recommended by the Hatchery Science Review Group and Hatchery Review Team. The consequences of reduced preventative maintenance or continued deferral of maintenance are typically higher future operating and capital costs. There is also a possibility of equipment failure that could result in

emergency equipment replacements (typically at higher cost) or loss of fish. Reduced implementation of best management practices could result in risk to ESA-listed stocks.

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3.8 NORTHWEST POWER AND CONSERVATION COUNCIL (NWPCC)

FY 2016-17 Average: Proposed IPR



Program Details

(\$ Thousands)	Actuals	Rate Case		Proposed IPR		
	2013	2014	2015	2015	2016	2017
NW Power & Conservation Council	10,118	10,568	10,799	10,784	11,236	11,446
Grand Total	10,118	10,568	10,799	10,784	11,236	11,446

Description, Purpose and Responsibilities

The Northwest Power and Conservation Council (Council) was authorized by Congress and established by the states of Washington, Oregon, Idaho, and Montana as part of the Northwest Power Act of 1980. The primary duties of the Council are (1) develop a regional power plan, (2) develop a fish and wildlife program as part of the power plan, and (3) provide for broad public participation in these processes. BPA provides funding for the Council under a formula specified by the Power Act and is required by the Act to make certain decisions in a manner that is consistent with the Council’s current Power Plan and Fish and Wildlife Program.



Goals

The Act requires the Council to review its Regional Power Plan no less than every five years, beginning with a review and updating of the Fish and Wildlife Program. The Council is scheduled to complete its review and revision of the Fish and Wildlife Program in September 2014. The Seventh Power Plan is expected to be issued in late 2015. BPA will continue to work closely with the Council and its staff, utility customers, and other parties to review and inform the supply, demand, and price forecasts in the Power Plan, as well as issues related to the plan’s resource portfolio strategy - in particular, conservation targets for the region, BPA and public utilities.

BPA also will work closely with the Council, project sponsors, and other stakeholders to ensure that implementation of mitigation projects supporting the Fish and Wildlife Program provide the best benefit to fish and wildlife at the least cost to BPA ratepayers.

Long-Term Objective

Continue to work collaboratively with Council members and staff to implement the Fish and Wildlife Program and develop and implement the Seventh Power Plan, including continued integration of BPA’s legal responsibilities under the Northwest Power Act, the Endangered Species Act, and other applicable statutes to protect, mitigate, and enhance fish and wildlife impacted by the Federal Columbia River Power System while providing an adequate, efficient, economical, and reliable power supply.

Changes from the 2012 IPR

Changes in the wholesale power market such as decreasing natural gas prices, lower-than-forecasted load-growth, and increased wind capacity in the Northwest has influenced outcomes related to the implementation of the Council’s Sixth Power Plan. The Council addressed some of these potential effects in the mid-term review of the Power Plan in 2012, but others will be reviewed and addressed in developing the Seventh Power Plan. In addition, the Council will be updating its Regional Portfolio Model. Because of the important relationship between the Council and BPA’s own resource planning efforts, BPA will work closely with the Council to inform this process.

Risks of Operating at Levels below the Proposed Spending Levels

Given the Council's status as an independent regional body with important responsibilities related to energy and fish and wildlife, BPA does not exercise direct control over Council spending levels. Instead, the Council goes through its own public, spending level-setting process. As described below, the Administrator may increase Council funding from 0.02 mill to 0.10 mill multiplied by the kilowatt hours of firm power forecast to be sold, upon a showing by the Council that it cannot perform its functions under the Act without additional funds. The Council provides this showing to BPA through its spending level review process.

The Council released its Draft FY 2016 Budget for public comment during its May 2014 meeting. BPA has reviewed the Council's proposal and concurs that the proposed spending level is necessary to meet the Council's responsibilities under the Act. The Council's Draft FY 2016 Budget is reflected in the Integrated Program Review.

To help provide certainty for future funding obligations and to avoid any unexpected cost increases, BPA and the Council traditionally have entered into a series of non-binding funding agreements. The current three-year funding agreement expires in FY 2015 and the Council and BPA are discussing a new funding agreement for future years. While helpful for planning for both BPA and the Council, the non-binding funding agreement does not excuse the Council from making an annual showing of need for increased funding.

Challenges/Constraints

In the upcoming process to develop the Seventh Power Plan, BPA intends to monitor and help inform the Council's effort by actively participating on advisory committees and working directly with Council members and staff. Among other issues, BPA will work with the Council, customers and other regional interests to determine conservation potential, regional targets, and maintain a consistent level of achievable cost-effective conservation savings.

The Fish and Wildlife Program is comprehensive, with available funds fully allocated to address existing priorities and commitments. Currently, costs incurred by BPA ratepayers for fish and wildlife are nearly one-third of power rates. While some may seek to increase the Program funding, others may not consider the current funding levels to be sustainable. BPA will discuss with stakeholders the Fish and Wildlife Program funding levels and drivers associated with various priorities through the IPR process. BPA will also continue to work closely with the Council and stakeholders to prioritize use of available funds on activities of greatest benefit to fish and wildlife and consistent with law.

Update on Council Funding Formula

BPA is required to fund the NW Power and Conservation Council's operations based on a formula found in sections 4(c)(10)(A) and (B) of the Northwest Power Act. The statutory formula has both a minimum level and a maximum level of BPA funding. Specifically, the formula is:

- Funds provided by the Administrator for such payments shall not exceed annually an amount equal to 0.02 mill multiplied by the kilowatthours of firm power forecast to be sold by the Administrator during the year to be funded.
- [U]pon an annual showing by the Council that such limitation will not permit the Council to carry out its functions and responsibilities under this chapter the Administrator may raise such limit up to any amount not in excess of 0.10 mill multiplied by the kilowatthours of firm power forecast to be sold by the Administrator during the year to be funded.

The statutory calculation has two components. The first is a statutorily established fixed rate of 0.02 to 0.10 mill. The default rate is 0.02 mill, which can be raised to 0.10 mill if the Council makes an “annual showing” to the Administrator that such increase is necessary. The Council typically makes such a showing to the Administrator through its budgetary review process.

The second component is the “firm power forecast to be sold by the Administrator during the year to be funded.” To derive the “firm power forecast to be sold,” BPA begins with its firm power sales included as part of the White Book (which includes, among other sales, PF sales, Long-Term Surplus, and Residential Exchange Program sales). Over the past few budget cycles, a number of issues have been raised regarding BPA’s calculation of the “firm power forecast to be sold,” which have resulted in some clarifications and adjustments to the forecasts.

Residential Exchange Program Sales and the 2012 REP Settlement

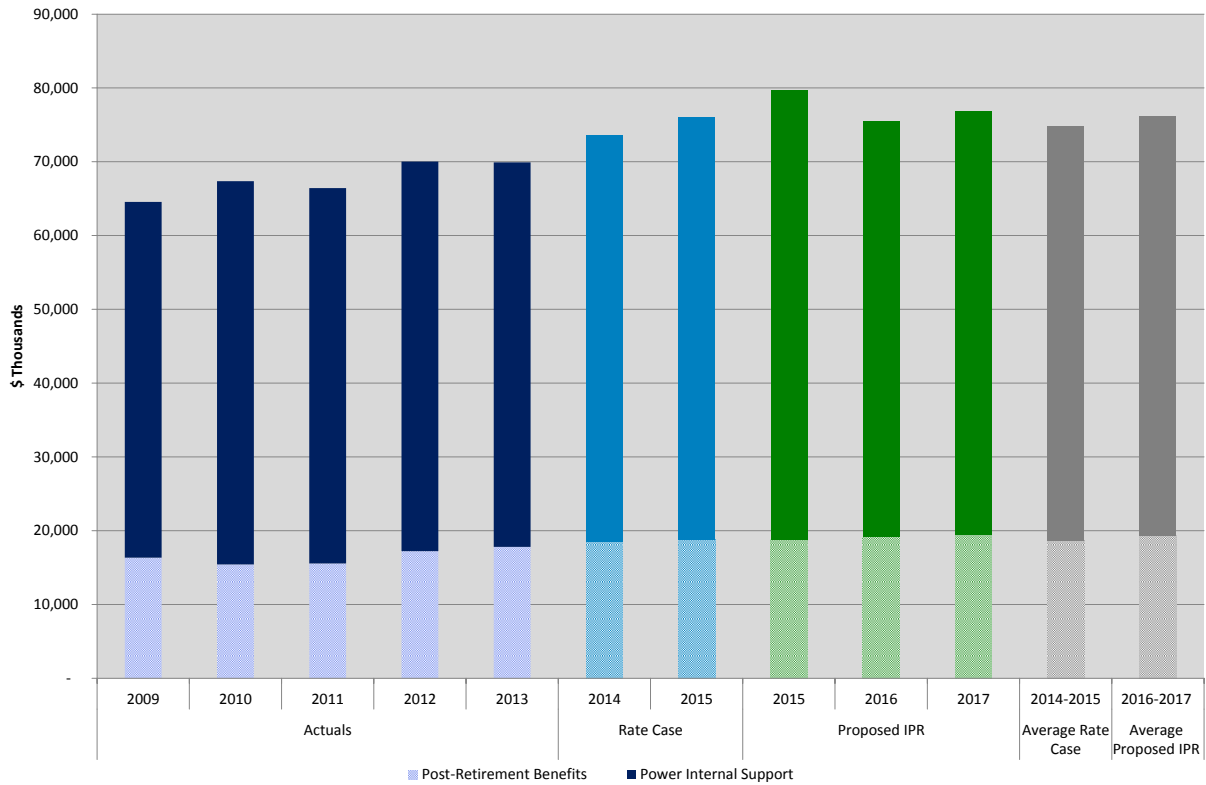
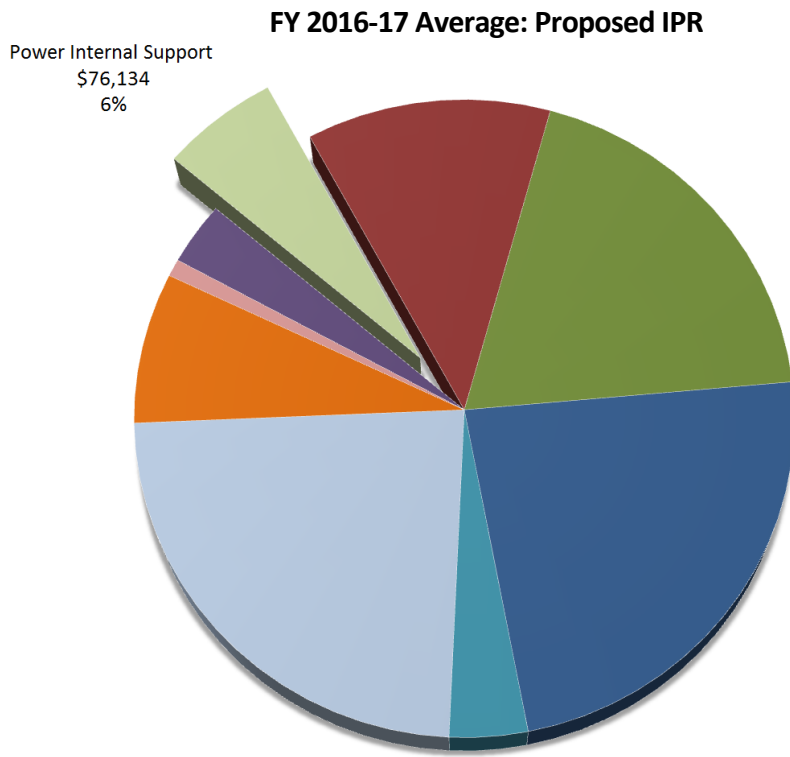
Since the inception of the Council, BPA has always included in its calculation of the “firm power forecast to be sold” the power sold under the Residential Exchange Program (REP). A complication occurred in 2002 when BPA executed the 2000 REP Settlements. Because the 2000 REP Settlements were not an “exchange” of power, BPA no longer included its REP sales to Investor Owned Utilities (IOUs) in the White Book as firm power sales, thereby dramatically reducing the “firm power sales” included in the Council funding formula. BPA subsequently interpreted section 4(c)(10)(A)-(B) to include power supplied under an REP settlement.

BPA formalized its interpretation in 2007 with a short public process where BPA concluded that even though the REP was operating under a settlement, BPA’s inclusion of projected REP loads in the Council’s funding formula was consistent with sections 4(c)(10)(A) and (B). Thereafter, in 2008-2011, the REP was reinstated, and actual REP sales were added back into the statutory formula. In 2011, the REP was once again settled as a result of the 2012 REP Settlement Agreement. The 2012 REP Settlement, however, retained the traditional “exchange” of power. Therefore, BPA intends to continue to include in the calculation of the “firm power forecast to be sold” the exchange loads submitted by the IOUs in their annual Average System Cost filings.

Short-Term Surplus Sales

In early 2010, BPA reviewed the types of power sales that would be eligible for inclusion in the calculation of the “firm power forecast to be sold.” As part of this review, BPA considered for the first time whether to include in this forecast BPA’s short-term surplus sales. After an internal review, BPA concluded that it was reasonable to include a forecast of short-term surplus sales as part of the forecast for firm power sales for purposes of calculating the Council’s budget cap. Short-term firm power sales are sold as firm for the hour in which they are sold and BPA traditionally includes a forecast of short-term sales as part of its rate case process. A forecast of secondary surplus sales was therefore included in the formula starting with the 2010 Council budget. BPA is willing to discuss in more detail the inclusion of short-term surplus sales in the funding formula for FY 2016 and beyond as requested.

3.9 POWER INTERNAL SUPPORT



Program Details

Corporate Programs Recovered Directly Through Power Rates

(\$ Thousands)	Actuals	Rate Case		Proposed IPR		
	2013	2014	2015	2015	2016	2017
Additional Post-Retirement Benefits	17,820	18,501	18,819	18,819	19,143	19,478
Power Internal Support	52,108	55,102	57,215	57,825	56,270	57,376
Grand Total	69,928	73,603	76,034	76,644	75,413	76,854

Description, Purpose and Responsibilities

Internal support consists of two separate programs, Additional Post Retirement Benefits Contributions and Power Agency Services G&A. The internal support program is included in both the power and transmission revenue requirements. Since the program is the same for each business unit, the full narrative is captured here in the Power business unit section and only a brief summary and corresponding table are included in section [4.10](#) for the Transmission business unit.

Additional Post-Retirement Benefits Contribution:

Both federal employers and their employees contribute a percentage of eligible employee compensation toward funding the employees’ post-retirement benefits. The Agency and employee contribution rates under the Civil Service Retirement System (CSRS) are 7 percent each. Under the Federal Employees Retirement System (FERS), the contribution rates are 11.7 percent and 0.8 percent, respectively. The Federal Government has determined these contributions are not sufficient to fully fund the future cost of post-retirement benefits, leaving the plans underfunded. Employees also usually participate in the Federal Employees Health Benefits Program (FEHB) and/or the Federal Employees’ Group Life Insurance Program (FGLI); these plans are similarly underfunded. Beginning in 1998, the BPA Administrator elected to include an additional post-retirement contribution as an operational expense as part of power and transmission rates for the FCRPS. Therefore, BPA voluntarily remits to U.S. Treasury each year, in the year-end payment, a contribution as an effective offset to the underfunded portion. The contribution includes component amounts that represent both BPA retirees and the retirees related to the power producing operations of the Corps and Reclamation.

Agency Services G&A:

BPA has fourteen G&A cost pools: Executive; IT Applications System Support; Security; Legal Services; Human Resources; Finance and Accounting; Safety; IT Management and Administrative; IT Infrastructure; IT Cross Agency Projects; Workplace Services; Public Affairs; Supply Chain Purchasing; and Dedicated Workplace Services for Power; and Dedicated Workplace Services for Transmission.

These pools are used to spread shared corporate costs to the Power and Transmission business units. The G&A allocation rates are reviewed and updated on a bi-annual basis. Each pool is examined to determine the appropriate drivers of cost. The cost drivers are used to determine the allocation rates. The costs associated with these pools are assigned to the Agency Services G&A program for each business unit.

In addition, BPA has nine business support pools. These are: Strategic Integration; Risk; IT Dedicated Projects for Power; Dedicated Projects for Transmission; Supply Chain Administration; Supply Chain Purchasing; Technology Innovation; Billing and Metering Services; and Contracting and Forecasting Services. These Business Support pools are assigned to the Power Services and Transmission Services programs that are directly benefitted by the services provided. The description of these services can be found in each benefitting program summary.

The G&A and Business Support pools are collections of costs from the centralized Agency Services organizations. The description of products and services provided by these organizations can be found in the individual organizations executive summaries.

Goals

The Agency Services organizations seek to provide governance and support to the business units at the lowest possible cost, with costs being allocated appropriately.

The near-term and long-term objectives for each of the organizations contributing to the Agency Services G&A pools can be found in the individual organization's executive summaries.

Changes from the 2012 IPR

Agency Services G&A:

Before each IPR process, BPA's Accounting and Reporting group conducts a review of the [Agency Services cost allocations pools](#) and the cost drivers used to assign Agency Services costs to power and transmission rates. As part of this review, they meet with key managers and their analysts to review the makeup of the cost pools, possible changes in services, and update the cost drivers. Potential changes to allocations are presented to the Accounting Officer manager for review and approval. They are then implemented in the IPR, the upcoming year's spending levels and the next year's rate percentages used to allocate actual Corporate costs. For further discussion, see [section 6.1](#). The significant changes for each of the organizations contributing to the Agency Services G&A pools can be found in the individual organizations executive summaries.

Risks of Operating at Levels below the Proposed Spending Levels

The Agency Services G&A funding levels are determined by the level of service required to support the business units. If funding for Agency Services is reduced from the proposed levels, there would be some services that could no longer be provided. Those services are outlined in each of the individual organizations executive summaries.

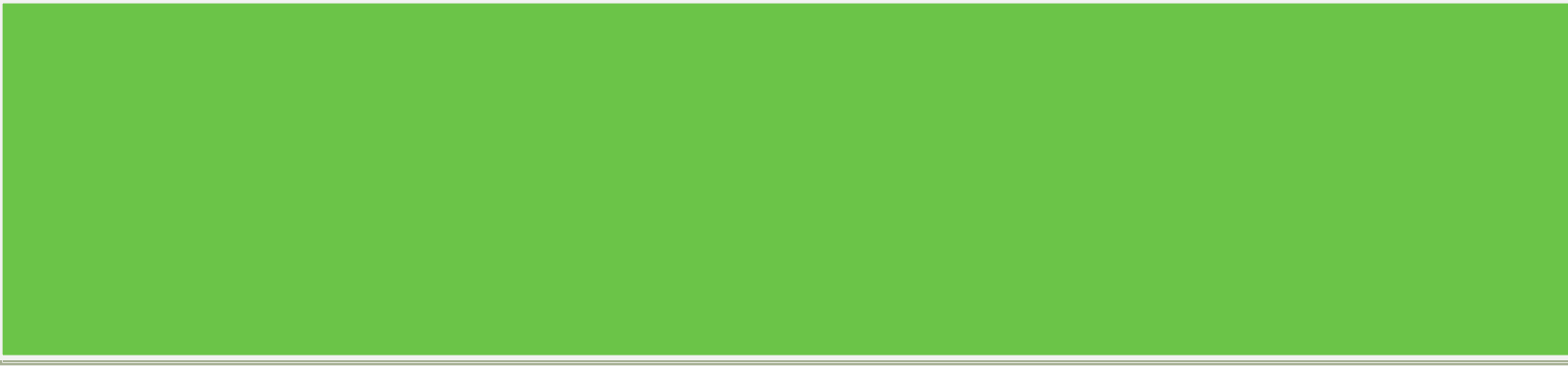
Challenges/Constraints

Agency Services G&A:

The Agency Services organizations continue to seek efficiencies. The challenges and constraints for each of the organizations contributing to the Agency Services G&A pools can be found in the individual organizations executive summaries.

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TRANSMISSION SERVICES



4.1 TRANSMISSION OVERVIEW

The proposed Transmission Services’ program for FY 2016-17 builds on BPA’s longstanding legacy of transmission system reliability by cost-effectively managing and maintaining our assets, and developing a strategic framework, built upon a foundation of regulatory and statutory compliance that delivers innovative products and market-based solutions for Northwest customers.

BPA’s Transmission Services organization owns and manages about three-fourths of the Northwest region’s high voltage transmission assets, an interconnected network of more than 15,000 circuit miles of transmission lines and nearly 300 substations, delivering electric power to more than 12 million people. BPA’s Transmission System includes more than a thousand individual facilities, 43,500 steel and aluminum towers, and more than 195,000 acres of right-of-way corridors. The average age of many of these components is now approaching 50 years, and many are well past the end of their economic life-cycle.

To manage these vast resources, Transmission Services’ relies on a proactive strategic approach derived from a foundation of technologies and processes. These efforts include the exploration of technological innovations such as synchrophasors with the potential to optimize operations to increase the capacity and utilization of our existing Transmission system and to recognize and respond proactively, rather than reactively, to changing system conditions. BPA is also prioritizing Transmission system expansion and improvement projects based on market-driven commercial criteria. Finally, BPA is responding to industry and ratepayer needs and a rapidly-shifting energy marketplace by exploring new ways to provide transmission service, including new market constructs such as energy imbalance markets (EIM), and deploying intra-hour scheduling and demand response.

The ever-changing mandatory compliance landscape is exerting tectonic pressure on BPA’s workforce and spending levels. The integration of an extensive network of wind and other variable generation resources has strained the Federal Columbia River Power System’s ability to provide balancing reserves, and BPA must bring new sources of non-federal balancing reserves into the system. At the same time, BPA must maintain and improve the reliability and capacity of an aging Transmission system, and all the systems that support it.

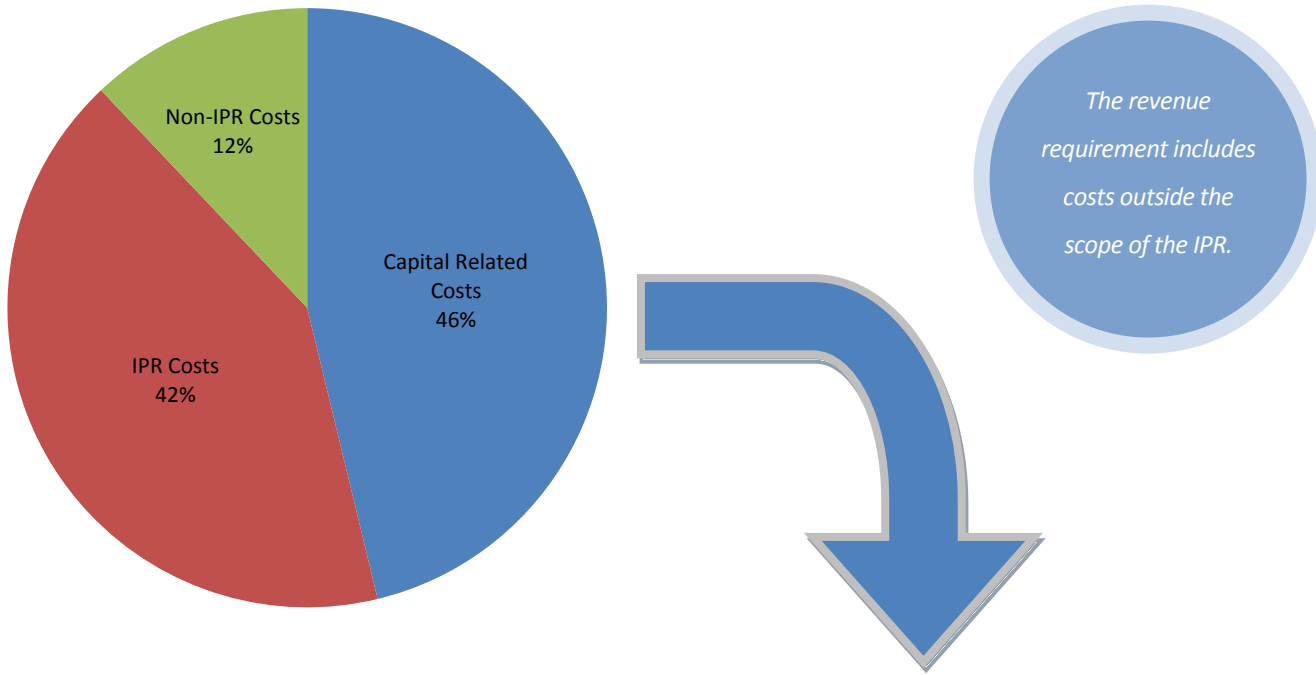
The vast majority of Transmission Services’ products are required, rather than discretionary. As the major provider of bulk electric Transmission service in the Northwest, BPA must comply with all applicable statutory requirements, reliability standards and orders, cultural and environmental regulations, with the provisions of its Open Access Transmission Tariff, with its contractual obligations, and with its internal business practices and strategies. Transmission Services’ goal is to meet the agency’s compliance requirements while ensuring the continued economic viability and reliability of the Transmission system, now and in the future, at the lowest possible cost consistent with sound business practices.

In FY 2013, the pace of change in the compliance, maintenance and market transformation arenas increased, imposing significant workflow and resource challenges on the Transmission Services organization.

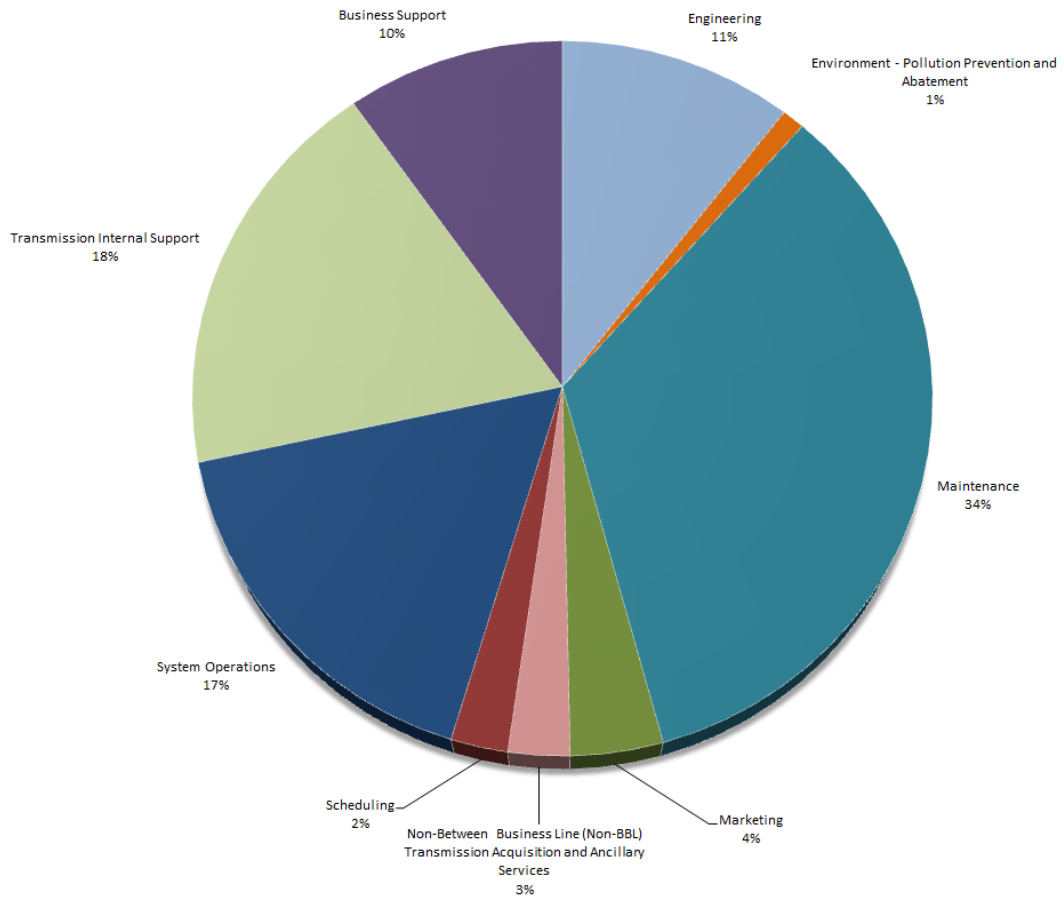
Transmission Services’ actual FY 2013 IPR costs were \$398.5 million. During the upcoming rate case period (FY 2016-17), Transmission Services expense spending levels are expected to increase by 17 percent over FY 2013 actuals in order to accomplish required compliance, reliability and market transformation activities.

	2012 Final IPR	2014 Proposed IPR
	FY 2011 Actuals to FY 2015 Final IPR	FY 2013 Actuals to FY 2017 Proposed IPR
Overall 5-Year Change	22.1%	17.1%
Compound Annual Growth Rate	5.1%	4.0%

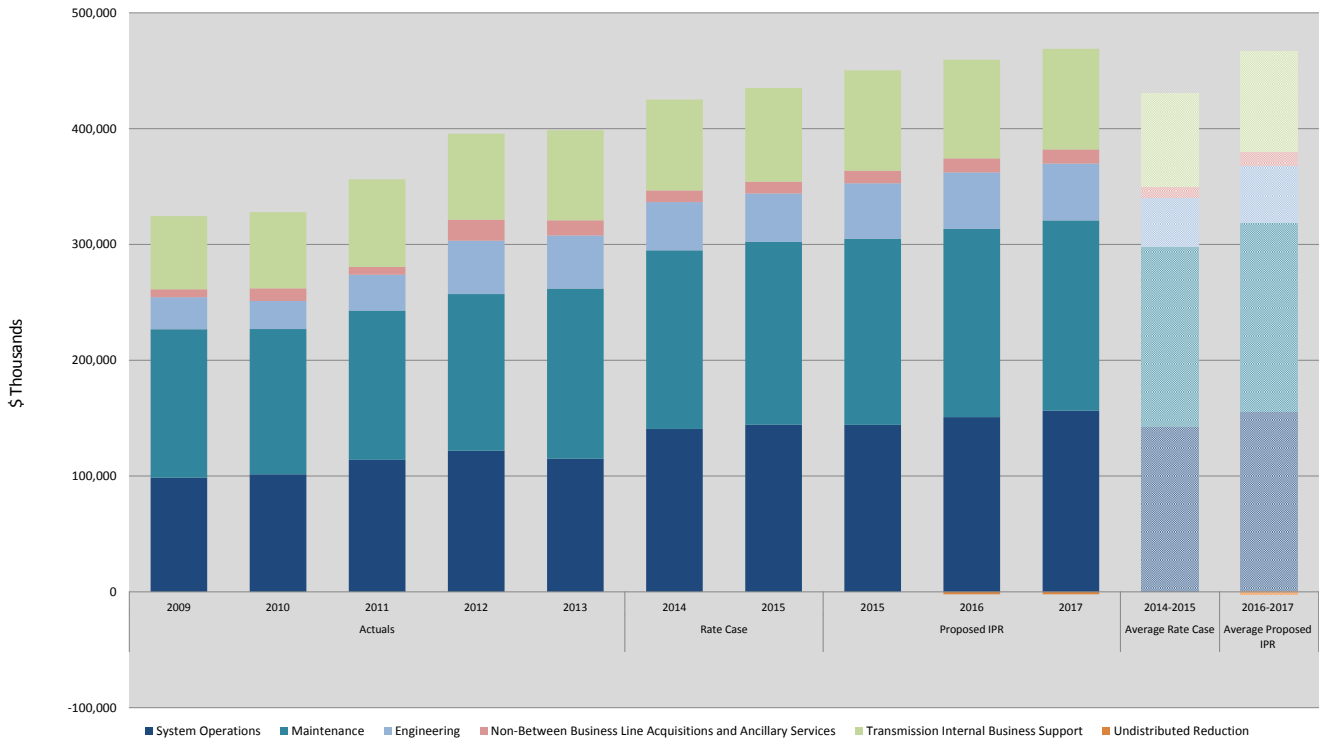
Transmission Potential Revenue Requirement



FY 2016-17 Average: Proposed IPR



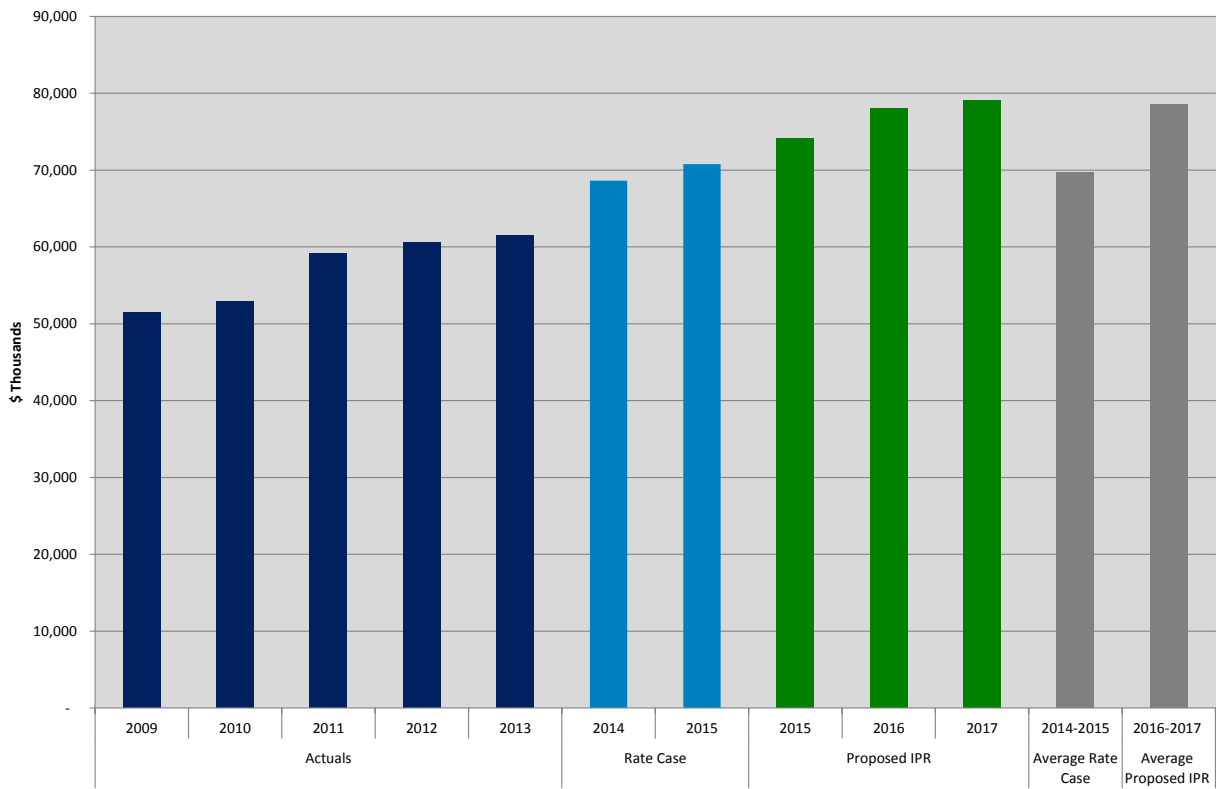
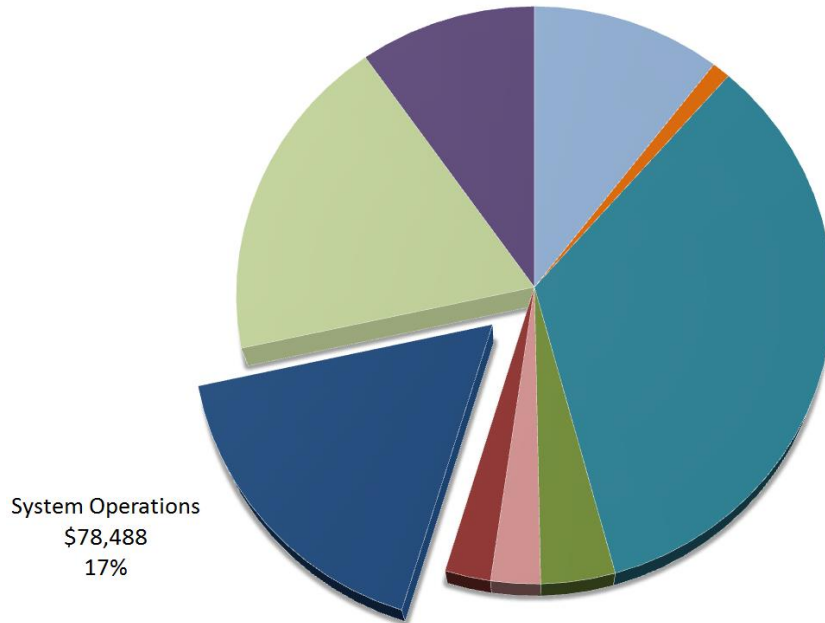
Transmission Services Expense Summary



(\$ Thousands)	Actuals	Rate Case		Proposed IPR		
	2013	2014	2015	2015	2016	2017
Costs Described in IPR						
Operations	114,942	140,729	144,346	144,186	150,932	156,458
Maintenance	146,933	154,233	157,893	160,775	162,552	164,272
Engineering	45,876	41,638	41,769	47,709	48,746	49,147
Non-Between Business line Acquisitions and Ancillary Services	13,116	10,096	10,212	10,924	12,138	12,153
Transmission Internal Support	77,689	78,428	80,902	86,569	85,106	86,915
Undistributed Reduction					(2,100)	(2,100)
Costs Described in IPR Total	398,555	425,125	435,122	450,164	457,373	466,845
Other Costs						
Between Business line Acquisitions and Ancillary Services	143,692	121,191	124,033	130,490	130,556	136,818
Reimbursables	27,225	10,530	10,745	10,745	9,641	9,735
Other Costs Total	170,917	131,721	134,778	141,236	140,197	146,553
Grand Total	569,472	556,845	569,900	591,399	597,570	613,397

4.2 SYSTEM OPERATIONS

FY 2016-17 Average: Proposed IPR



Program Details

(\$ Thousands)	Actuals	Rate Case		Proposed IPR		
	2013	2014	2015	2015	2016	2017
Information Technology	9,115	7,415	7,568	10,339	10,377	10,558
Power System Dispatching	12,155	13,589	14,123	13,402	13,536	13,671
Control Center Support	14,062	18,562	19,298	18,388	18,572	18,757
Technical Operations	4,410	6,745	6,974	10,885	14,094	14,195
Substation Operations	21,750	22,307	22,815	21,070	21,399	21,817
Grand Total	61,490	68,618	70,779	74,084	77,977	78,999

Description, Purpose and Responsibilities

Information Technology: Implements and maintains non-grid operations automation solutions to meet Transmission business needs, including transmission asset tracking systems, Fiber Management Systems (TCMS), and geospatial solutions (eGIS).

Power System Dispatching: As a NERC - certified Balancing Authority (BA) and Transmission Operator (TOP), BPA operates and manages two regional control centers, provides dispatching and control services, monitors and manages risk to ensure safe and reliable operation of the federal Transmission system, and directs real-time actions during normal, planned and emergency conditions.

Control Center Support: This sub-program provides full life-cycle support of control center assets used by power system dispatchers for the secure and reliable operation and control of the Transmission grid, including 24/7 monitoring of Control Center automation and the system-wide communications network. The support activities include planning, engineering, design and build, project management, and operations and maintenance (O&M) of control center assets and infrastructure. Control Center Support (CCS) also has a key role in implementation of and compliance with regulatory standards, including National Institute of Standards and Technology (NIST), Federal Information Security Management Act (FISMA), and Critical Infrastructure Protection requirements. CCS also supports BPA and regional strategic initiatives.

Technical Operations: This sub-program optimizes use of the Transmission system while maintaining known safe operating limits by providing products and specialized technical and operational support for real-time dispatch of the Transmission system. It coordinates the development and management of near-term operational transfer capabilities, provides outage coordination support, and develops control center automation requirements. This program also provides operational technical oversight for crucial Transmission reliability functions such as Remedial Action Schemes (RAS), Automatic Generation Control (AGC) and renewable integration, and disturbance monitoring and event reporting systems.

Substation Operations: Field Substation Operations is responsible for substation inspections, switching and clearance procedures, control of access to energized facilities in the field, overall security of the substations, first response to Transmission system events and emergency outages, safety response, and coordinating initial outage planning and outage requests to the central outage office.

Goals

Information Technology: Long-term objective is to maintain a reliable and secure infrastructure. Near-term goals include prioritizing and delivering solutions based on business value, which includes development of cloud-based Software as a Service (SaaS) solutions such as Transformer Oil Analysis, Transmission Shift Scheduling, Millennium Aircraft System, and the vegetation management system.

Power System Dispatching: The goal of this sub-program is to maintain a safe and reliable power system by:

- Enhancing BPA’s ability to respond to real-time events on the power system
- Enhancing BPA’s ability to coordinate required outages by embracing new technology as it becomes available
- Training system dispatchers in best industry practices and current and emerging technical systems and tools.

Control Center Support: The goal of the CCS program is to furnish critical control center systems that provide real-time monitoring and control of the power grid, improved tools for dispatchers, optimize management and maintenance of these systems, and support emerging initiatives, many of which are driven by statutory or regulatory requirements.

Technical Operations: Provides technical engineering support, including system studies, to ensure reliable operation of the federal Transmission system in compliance with NERC and WECC reliability standards and September 8, 2011 Southwest Outage mitigation recommendations, analyzing system disturbances, increasing real-time and near-term visibility of system conditions, and developing more accurate modeling tools to enhance system protection and reliability.

Substation Operations: The goal of this sub-program is to maintain continuity of substation operations including field operation inspections and substation and equipment security, switching and clearance responsibilities, capability as first responders to transmission system problems, effective resolution of real-time technical Transmission and safety issues, and current and emerging policy, procedure and work standards support.

Changes from 2012 IPR

Information Technology: The impact of several emerging drivers was not fully understood when IT’s 2012 IPR spending levels were developed. The drivers impacting transmission include: (1) automating Transmission’s asset management and work planning and scheduling processes; (2) the adoption of Software as a Service (SaaS) solutions; and (3) evolving compliance requirements.

Power System Dispatching: Changes to Power System Dispatching’s role and responsibilities include increased responsibilities and complexities associated with BPA’s NERC-certified Balancing Authority and Transmission Operator roles, support for enhanced coordination and approval of planned outages, and support for emerging BPA and regional strategic initiatives, including:

- Current and emerging enhanced visualization and situational awareness tools
- Current and emerging congestion management tools (system forecasting capability, hour-ahead curtailment capability)
- Current and emerging Remedial Action Scheme (RAS) program requirements (review Dispatcher Standing Orders [DSOs] for RAS sufficiency and accuracy, emerging system protection, and special protection systems)
- Alignment with EOP-008 Loss of Control Center Functionality standard requiring redundant systems and staffing at each Control Center, and with WECC initiatives
- Integration of current and emerging BPA and regional market strategies (e.g., 15-minute scheduling, energy imbalance market [EIM] proposal monitoring and management capabilities, and Demand Response capability) with system dispatch tools
- Additional September 8, 2011 mitigation actions

Control Center Support: Changes to Control Center Support’s role and responsibilities since the conclusion of the 2012 IPR include increased costs and workload demands associated with implementation of NERC and WECC standards and federal cyber-security standards, changing software licensing requirements, significant changes to systems and tools used for system operations and reliability, including enhancements to congestion management tools and new and emerging tools such as synchrophasor technology, power system situational awareness capability, RAS automation, evolving support for Optical Multi-Gigabit Ethernet Transport (OMET), Network Operations Center (NOC) and the Systems Operations Center (SOC), Peak Reliability development, and integration with emerging agency and regional strategic initiatives.

Technical Operations: Changes to Technical Operations’ role and responsibilities since the conclusion of the 2012 IPR include increased compliance support requirements for NERC and WECC standards, implementation of September 8, 2011 Southwest Outage recommendations, alignment with WECC SOL Methodology and other emerging initiatives, increased support for BPA and Peak Reliability RAS asset strategy, and for emerging energy market changes (including EIM, enhancements to BPA’s long-term balancing reserve strategy, and demand response).

Substation Operations: Changes to Technical Substation Operations’ role and responsibilities since the conclusion of the 2012 IPR include implementation of the Human Performance Initiative, monitoring, tracking, and reporting on the error reduction and database development efforts, and increased physical and cyber-security compliance requirements.

Risks of Operating at Levels below the Proposed Spending Levels

For the System Operations program as a whole, reduced funding could significantly increase pressure on program managers to prioritize core functions over crucial agency and external initiatives, such as 15-minute scheduling, EIMs and other market initiatives. Other risks to BPA and to the region include:

- Non-compliance with NERC or WECC mandatory reliability standards, including CIP version 5 requirements
- System reliability risks, including increased probability of outages and curtailments
- Loss of benefits to the agency and region if BPA’s significant capital investment in new technology (e.g., synchrophasors) is not fully utilized

Information Technology: Automation helps BPA meet evolving business needs and compliance requirements, and improve workflow and cost efficiency. Risks associated with reduced funding include impaired ability to implement cloud-based technology, which requires expense, rather than capital, dollars. Additional risks include reduced ability to respond to unforeseen compliance or business requirements.

Power System Dispatching: The primary risk associated with reduced funding for this sub-program is insufficient funding to maintain core Power System Dispatching functions, putting the operation of the Transmission system at risk. At current funding levels, knowledge and training on the use of emerging tools capable of monitoring system awareness or evaluating secure system conditions is not available. Dispatchers cannot operate in unstudied conditions, which could lead to the employment of default limits, possible load shedding and risk of non-compliance with mandatory reliability standards.

Control Center Support: The demands and complexities imposed by compliance with reliability and security standards and changes in industry and market initiatives have increased reliance on enhanced systems and emerging tools for reliable operation of the system. Reduced support for this sub-program will compromise BPA’s ability to monitor, troubleshoot the operation and maintenance of the control center assets, and systems and tools comprising the network (e.g., AGC, SCADA, synchrophasors) and communications system infrastructure (e.g., fiber, microwave system, RAS) used to control the power grid, and make improvements to optimize, manage and maintain these critical control center assets, systems and tools, including critical cyber-assets.

Technical Operations: The ever changing system conditions and complexities of the system require additional studies, including of light load hour conditions. The primary risk associated with reduced funding for this sub-program is insufficient staffing to maintain this core technical (TO) function, putting the operation of the Transmission system at risk. At current staffing levels, TO is hard-pressed to complete all required studies in a timely fashion, resulting in unstudied conditions and the use of default limits, possible load shedding, and risk of non-compliance with mandatory reliability standards.

Substation Operations: Field substation operations would be negatively impacted if limited to base funding levels for this sub-program. At such funding levels substation operator apprenticeship, training and certification programs and development of work standards and technical field operations procedures addressing emerging practices and standards would be impeded, including responsibilities for new initiatives and regulations, such as implementation of CIP version 5.

Challenges/Constraints

Information Technology: Challenges facing the IT sub-program include an industry trend towards cloud-based solutions, new operations and maintenance expenses associated with new systems, and new compliance requirements. Other challenges include the integration of new technologies and upgrades to existing systems.

Power System Dispatching: Challenges and constraints affecting the Power System Dispatching sub-program during the upcoming rate period include staffing, equipment and workload pressures associated with the evolving changing mandatory compliance landscape, changes to BPA’s Balancing Authority (BA) and Transmission Operator roles and responsibilities, and support for emerging BPA and regional strategic initiatives, including visualization and situational awareness tools and improvements to congestion management tools.

Control Center Support: Control Center Support is facing the following significant challenges and constraints:

- Escalating costs and workload associated with mandatory compliance with changing standards and regulations (NERC and WECC reliability standards, and NIST, FISMA and CIP V requirements), evolving systems and tools supporting Transmission system operations and reliability, and alignment with agency business strategies and emerging initiatives
- Software licensing cost increases
- Changing RAS program requirements
- Workload and staff support for emerging Peak Reliability specifications that require Balancing Authority and Transmission Operator interface tools, communication links and data exchange capability
- Increased workload and staff to support development, O&M of systems and tools to integrate and accommodate emerging BPA and regional initiatives, including commercial initiatives requiring additional criticality of scheduling and monitoring tools, support for Power System Security Tool (PSST)/Real-Time Contingency Analysis (RCTA) tools and improvements to system visualization and situational awareness capability, and other system and tool requirements to support emerging energy market changes, including changes to BPA’s long-term balancing reserve strategy, emerging Energy Imbalance Market programs, and demand response initiatives.

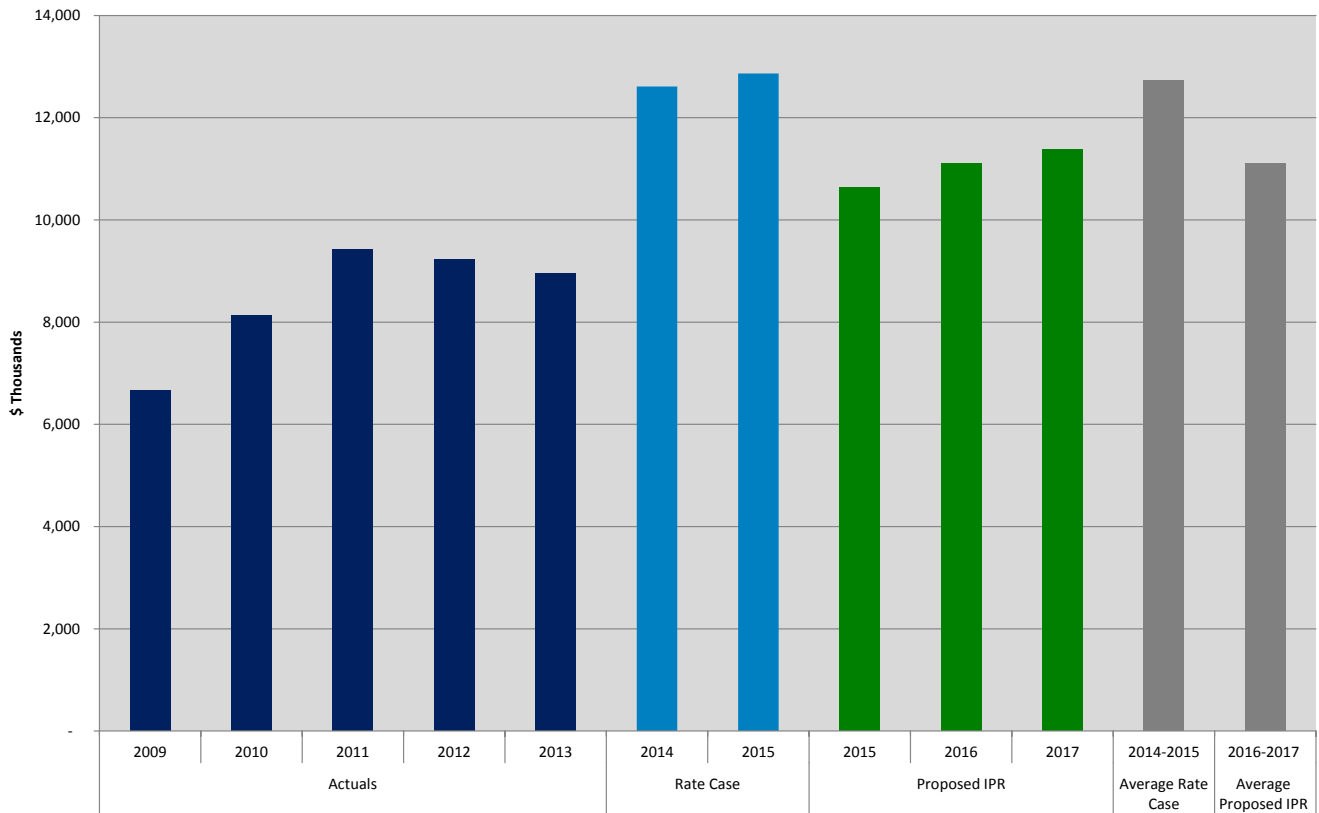
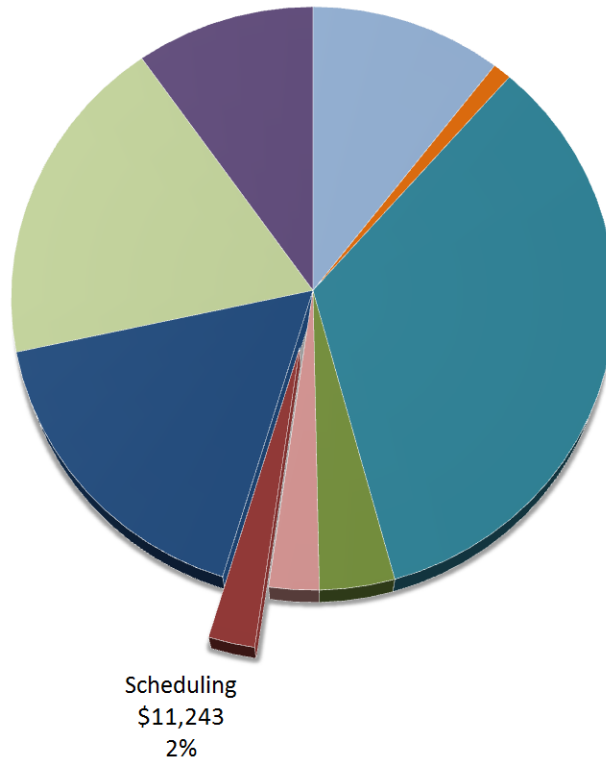
Technical Operations: Technical Operations faces the following challenges and constraints:

- Increased compliance support requirements for NERC and WECC standards
- Workload and resource pressure associated with implementation of September 8, 2011 Southwest Outage recommendations, (including development of 24/7 study group and use of Power System Security Tool (PSST)/Real-Time Contingency Analysis (RCTA) tools and system visualization and situational awareness) tools for real-time study of the system
- Escalating staffing and workload needs for conducting system studies for system conditions for a range operating horizons.

Substation Operations: Substation Operations' challenges and constraints include staffing and workload necessary to implement mandatory NERC, WECC and DOE compliance initiatives, including physical and cybersecurity improvements required by Critical Infrastructure Protection version 5, as well as staff succession challenges.

4.3 SCHEDULING

FY 2016-17 Average: Proposed IPR



Program Details

(\$ Thousands)	Actuals	Rate Case		Proposed IPR		
	2013	2014	2015	2015	2016	2017
Reservations	4,160	5,697	5,816	1,328	1,362	1,383
Pre-Scheduling	240	246	252	261	268	276
Real-Time Scheduling	3,879	5,436	5,537	4,708	5,038	5,169
Technical Support	432	1,007	1,031	4,064	4,161	4,259
After-the-Fact Scheduling	236	224	229	273	281	289
Grand Total	8,948	12,611	12,865	10,634	11,110	11,376

Description, Purpose and Responsibilities

BPA’s Transmission Scheduling program provides overall management of Transmission scheduling, reservation transaction processing and analytical support for the long-term and short-term Transmission sales, consistent with BPA’s Open Access Transmission Tariff (OATT), business practices and procedures. BPA’s Transmission Scheduling Program has the following sub-programs:

Reservations: This sub-program consists of the Reservation Desk and Capacity Desk functions. The Capacity Desk coordinates and posts system outages according to published timelines, consistent with Transmission business practices and BPA’s OATT. The Reservation Desk function performs the following activities:

- Manages available long-term Transmission Capacity inventory and conducts analysis to determine whether Transmission Service Requests can be granted, subject to requirements of the OATT and FERC orders
- Runs long-term market competitions; provides customer support for Transmission Service Requests and the Open-Access Same-Time Information System (OASIS)
- Coordinates all planned and unplanned system outages with the Transmission Operations Outage Office within prescribed timelines
- Manages the information posted on BPA’s OASIS related to known constraints that result in a limitation on commercial Transmission paths.

Pre-Scheduling: This sub-program performs the following activities:

- Conducts sales and scheduling of Transmission for next-day(s) operations per the WECC pre-schedule timeline
- Conducts analysis to determine whether specific Transmission requests can be granted, subject to the requirements of BPA’s OATT and FERC orders
- Assists customers with questions about their Transmission Service Requests
- Operates BPAT’s OASIS during the WECC pre-schedule timeline.
- Ensures that checkouts with adjacent Balancing Authority Areas (BAAs) are accurate and timely, and that day-ahead energy and Transmission levels are balanced.

Real-Time Scheduling: This sub-program is responsible for the following activities:

- Conducts sales and scheduling of Transmission services for next-hour and intra-hour delivery
- Curtails schedules in-hour as system conditions require
- Develops, operates, and maintains systems and processes that support congestion relief
- Ensures that hourly and sub-hourly checkouts with adjacent BAAs are accurate and timely, and that hourly and intra-hourly energy and Transmission levels are balanced
- Provides after-hours operations for posting operating capacity, managing OASIS transactions, and Transmission scheduling issue resolution.

Technical Support: This sub-program establishes and documents policies, processes, procedures and guidance to support the other functions within the Transmission Scheduling program:

- Conducts technical analysis of scheduling operations to ensure compliance with external regulations, WECC and BPA business practices
- Facilitates the development, implementation and support of capabilities for the other functions within the Transmission Scheduling program
- Works with IT providers, internal groups, regulatory organizations and customers to implement changes to the software in order to comply with new regulations and/or accommodate changes to BPA business practices.

Scheduling After-the-Fact: This sub-program is responsible for verifying net scheduled and net actual interchange, and investigating and resolving discrepancies, through the following activities:

- Conducts comprehensive analysis of Transmission product and service transactions, including investigation, reconciliation, reporting and resolution of discrepancies involving scheduled Transmission activities and billing disputes in accordance with WECC scheduling and business practices
- Coordinates with the Customer Support Services function to furnish information for billing and other reporting requirements.

Goals

Real-Time Scheduling: The Real-Time Scheduling function has the following goals:

- Modify and implement systems, processes and procedures to support ongoing BPA wind initiatives, to manage new network flowgates and develop, to support the enhanced BPA Balancing Authority and Regional Imbalance markets and to support FY 2016-17 Transmission Services rate-case outcomes
- Implement common congestion management tools to be shared by Transmission Operations Dispatch and Transmission real-time scheduling designed to manage interties, network flowgates and 15-minute scheduling intervals
- Implement new and revised services related to generation inputs, such as Variable Energy Resource Balancing Service (VERBS) and Dispatchable Energy Resource Balancing Service (DERBS).

Technical Support: The goals of this sub-program are participation in national standards development with North American Energy Standards Board (NAESB), including OASIS and other commercial business standards, as well as the development of business requirements for implementation of Transmission applications related to:

- NERC Available Transfer Capability (ATC) methodology through the Transmission Services STAR function
- Network Open Season (NOS) and Generation Integration (GI) reforms within the Transmission Scheduling program.

Near-Term Strategies

Reservations: This sub-program has the following near term strategies:

- Implement Tariff filing in order to maintain compliance with Tariff
- Implement long-term ATC strategy
- Implement Network Integration Transmission Service (NITS) – NAESB
- Run the cyclical NOS and GI model

- Participate in the review of multiple FERC/NAESB initiatives that will require BPA to look at changing the way we currently do business
- Retain a talented workforce, including succession planning, for the upcoming workload.

Real-Time Scheduling: Near-term strategies for this sub-program include the following:

- Recruit additional real-time scheduling competencies, including a formal training program to support the development of a skilled workforce to implement increasingly complex scheduling practices in compliance with mandatory reliability standards
- Maintain and improve concurrent Transmission scheduling system operations at the Dittmer and MSC facilities
- Ensure all scheduling functions are NERC, WECC, NAESB, and FERC compliant
- Provide adequate staffing for the Munro Scheduling Center (MSC) and Dittmer, including additional real-time scheduler positions.

Technical Support: This sub-program has the following near-term strategies:

- Ensure sufficient staffing to efficiently perform in key areas, such as O&M on Commercial System Infrastructure
- Develop greater agility in commercial operations to respond to market and regulatory changes
- Ensure that the Commercial System Infrastructure remains compliant with FERC, NERC, WECC and NAESB standards
- Ensure that the Commercial Systems Infrastructure adheres to BPA's OATT
- Ensure that the Commercial Systems operate at an optimal performance level for all transactions.

Changes from 2012 IPR

The Scheduling program has undergone the following changes since the conclusion of the 2012 IPR:

- Begun preparations to implement NITS on OASIS that meets NAESB and tariff requirements and customer needs
- Implemented automation projects associated with tariff provisions, NOS and GI
- Worked to integrate new tools and processes with other regional planning processes, supported the development and implementation of new tariff initiatives (such as FERC Order 1000)
- Begun preparation for operations in the new MSC. This facility will provide full redundancy in an emergency situation impacting operability at the Dittmer location
- Preparing for permanent staffing at the MSC

Reservations: This sub-program has had the following changes since the 2012 IPR:

- Modifications to existing systems to support wind generation resources
- New implementation requirements for Generation Inputs, such as VERBs and DERBs

New Projects

Reservations: New projects for the Reservations sub-program include:

- Implement NITS-NAESB that meets the Tariff and NT customer needs
- Run the cyclical NOS and GI models and work to integrate with other regional planning processes
- Multiple FERC/NAESB initiatives that impact the way BPA currently does business.

Technical Support: New programs and projects for Scheduling Technical Support include participation in the development of new operating procedures to limit or curtail wind generators to either their schedules or actual generation amounts, identified under Dispatcher Standing Order (DSO).

Scheduling Technical Support is overseeing the following new activities:

- NERC reliability standards - mandated changes in ATC methodology
- Commercial Business System Reinforcement - supporting industry standard OASIS and scheduling functionality
- 7-FN tagging for Network Integration (NT) - to support NT re-dispatching
- Implementing improved Operational Transfer Capability (OTC) Reporting Capability in OASIS
- Implementing removal of Network Composite Point of Delivery (POD)
- Implementation of Electric Industry Data Exchange (EIDE) notification of changes in Total Transfer Capability (TTC) for shared path owners
- Implementation of the short-term firm network product, which allows NT customers to purchase firm Transmission on a short-term basis to meet load
- Increased Conditional Firm (CF) inventory availability to long-term market
- Addition of flowgates to address sub-grid issues.

Risks of Operating at Levels below the Proposed Spending Levels

Lower-than-requested funding for the Scheduling program will create challenges in the implementation of reliability standards and other changes in commercial activities including the following:

- NOS and GI reform, flowgates, curtailments, tariff implementation, wind integration, rate case initiatives and core activities driven to support mandatory compliance and requests
- High risk of violating NERC, NAESB, and FERC standards
- Staffing the MSC could be delayed and the Real-Time sub-program could lack full redundancy in an emergency situation
- Staff support for the implementation of 15-minute scheduling could be reduced
- Staff and resource support for continuing implementation of the NERC ATC Long-Term Strategy (STAR) could be impacted
- Implementation of NOS V and NOS VI could be negatively impacted
- Implementation of GI Reform could be negatively impacted
- Automatic posting of forecast information to OASIS could be delayed, as could full implementation of NITS
- Multiple Reciprocity initiatives, including Financial Middleman for Resales, the Resale Market Monitoring-Stop Button (reciprocity), Conditional Firm for System Conditions, and Conditional Firm on the Interties, could be negatively impacted.

Challenges/Constraints

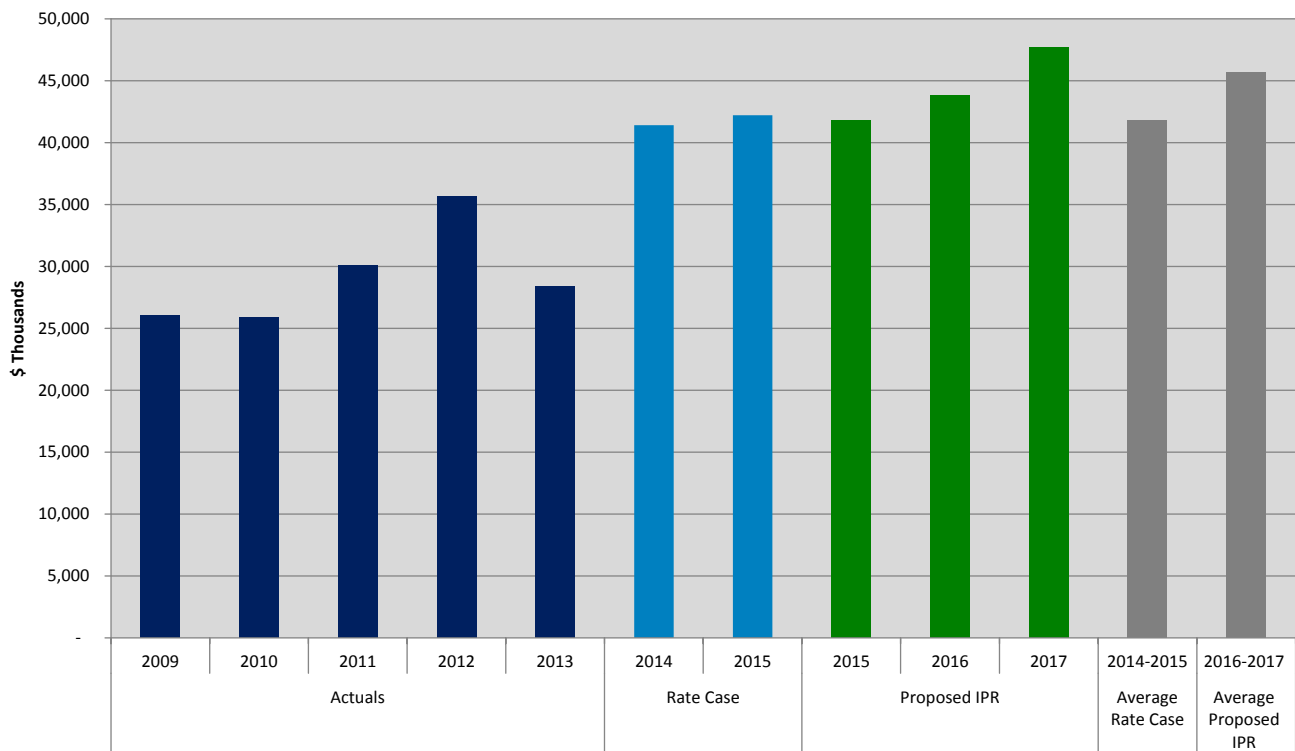
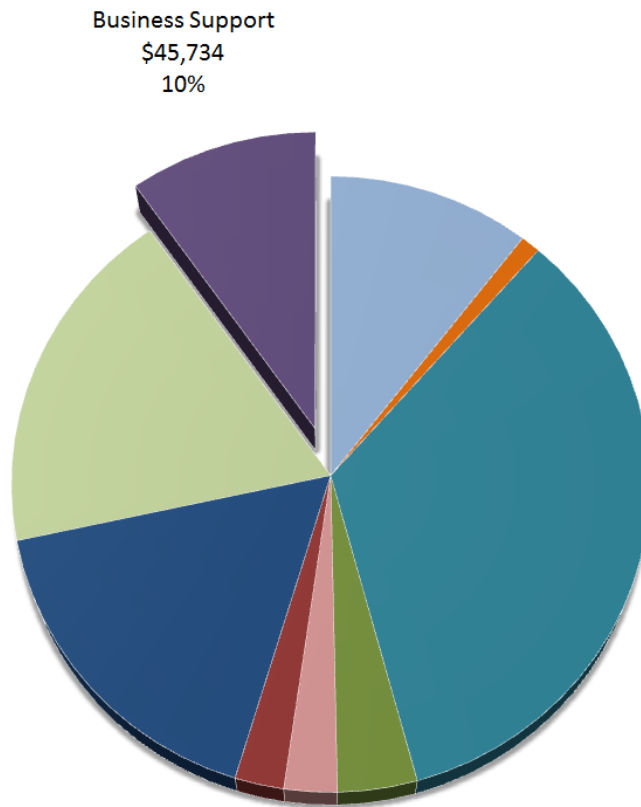
The Scheduling Program faces the following challenges and constraints during the upcoming rate period:

- Increasing complexity of implementing mandatory NERC, NAESB, and FERC compliance standards
- Lack of systems and reporting tools to monitor BPA's compliance status
- Retirement of staff with critical knowledge and expertise
- Increasing e-Tag volume is pushing BPA's current scheduling automation systems to their performance limits
- Increasing complexity of congestion management tools
- Increasing complexity of the implementation of the Failure to Comply process
- Higher penetration of wind resources exacerbates current reliability issues.

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4.4 BUSINESS SUPPORT

FY 2016-17 Average: Proposed IPR



Program Details

(\$ Thousands)	Actuals	Rate Case		Proposed IPR		
	2013	2014	2015	2015	2016	2017
Executive and Administrative Services	10,364	13,774	14,106	17,836	20,235	23,540
Legal Support	2,240	3,877	3,951	4,107	3,331	3,548
General Administrative	9,199	15,743	16,025	12,799	12,961	13,135
Aircraft Services	1,205	2,030	2,294	2,108	2,205	2,230
Logistics Services	4,710	5,014	4,947	4,167	4,325	4,488
Security Enhancements	705	966	878	813	754	716
Grand Total	28,423	41,402	42,201	41,830	43,811	47,657

Description, Purpose and Responsibilities:

Executive and Administrative Services: Transmission Services Management including executive and manager labor, outplacement training, and student tuition assistance and travel. Expenses in this program are primarily from the Transmission organization.

Legal Support: The Office of General Counsel (OGC) provides legal advice and representation for all BPA activities. It charges directly to Power and Transmission Services when supporting projects for those business units. Costs in support of general BPA initiatives and activities are also allocated to Power and Transmission.

Internal General and Administrative Services: Provides support for Transmission Services, including training, Office Workers Compensation (OWCP), awards, efficiency projects, strategic performance management, A-123, business case support, benchmarking, and root cause analyses/lessons learned.

Aircraft Services: This sub-program provides aviation support to ensure the reliability of the transmission system. BPA’s fleet consists of two fixed-wing aircraft, flight crew, mechanics and a scheduler. The fleet is used to transport employees to support the transmission system.

Logistics Services: Provides Supply Chain Services (SCS) logistics services required to support Transmission Services, including procurement, materials management, supplemental labor management and logistics services, while ensuring ethical, risk-appropriate business practices that are compliant with internal controls. SCS is a corporate organization; the logistics services it provides are charged directly to Transmission.

Security Enhancements: Protects critical transmission assets by conducting security system performance testing, security risk assessments, coordination and liaison with local, state, and federal law enforcement, and management and oversight of capitalized physical security projects at critical transmission sites. Security Services are provided jointly by the Transmission Field Services organization and by the Office of Security and Continuity (OSCO), a corporate organization. OSCO is responsible for the design and implementation of a security infrastructure that complies with ever-evolving regulatory requirements while balancing the operational needs and acceptance of infrastructure owners such as Transmission Services (T).

Goals

Executive and Administrative Services: One key goal of this sub-program is to recruit highly-qualified students who will later fill the jobs of retiring BPA employees. This succession program allows T to rotate and train students in mission-critical Transmission functions, and prepare them for full-time employment as retirements create vacancies.

Legal Support: OGC's goals and priorities are to continue to provide sound advice related to, and defend actions associated with, BPA's widely varying functional areas: Treaty review, authority issues, contracts and activities associated with the environment program, human resources and possibly cyber-security issues.

Internal General and Administrative Services: Goals of this sub-program include ongoing training and support for Integrated Program & Process Improvement (IPPI) applications as well as support for other Transmission applications currently in use. IPPI provides business analyst support for assessment of operational risks associated with the Asset Register. The goal of BPA's recognition system is to communicate and support BPA's values, standards, and expectations, and encourage workforce behavior that contributes to the achievement of BPA's mission and objectives. Application of root cause analysis practices is an integral part of continuous improvement and operational excellence.

Aircraft Services: The goal for this sub-program is to provide aerial support to meet emergency call-outs with a 90 percent aircraft operations scheduling effectiveness rate.

Logistics Services: Supply Chain Services is focused on operational excellence as measured by leading practices, peer and customers. SCS delivers optimal value through collaborative partnerships utilizing effective and efficient processes.

Security Enhancements: Implement the Critical Asset Security Plan (CASP) to improve protection of BPA's critical assets. Update aging security systems to a more efficient design. Reduce long-term security system maintenance costs and improve security system reliability.

Changes from 2012 IPR

Executive and Administrative Services: Two new initiatives – the jointly-funded \$140 million Puget Sound Area Northern Intertie (PSANI) Transmission improvement project, and the North Mid-Columbia Joint Transmission Project (a \$14 million high-voltage Transmission line in central Washington) – are driving an increase in expense funding for this sub-program. Transmission was also asked to absorb half of the cost for the Agency Demand Response project. BPA is also ending its participation in the Western Interconnected Electric Systems (WIES) insurance program in FY 2014, because it duplicates coverage already in place through BPA's general liability policy. This will result in annual expense savings beginning in FY 2015.

Legal Support: Recent changes include an increased focus on alternative financing, personnel, procurement, lands, EIM, the Freedom of Information Act (FOIA), the National Environmental Policy Act (NEPA), and oversupply management. The marked increase in personnel related work due to recent Office of Personnel Management (OPM), Department of Energy (DOE) and Inspector General (IG) audits has resulted in significantly increased workload, including an unprecedented amount of FOIA work. Outside counsel costs have increased due to the increased use of tax and bond counsel associated with nonfederal financing solicitations, tax audits, and state taxation issues.

Internal General and Administrative Services: In FY 2014, Internal General and Administrative Services began overseeing the Strategic Priorities Development and Implementation Key Transmission Target (KTT). The project has identified key outcomes for four Transmission strategies: System Operations, System Reliability and Compliance, System Infrastructure, and Commercial Success. A team of four BPA strategists is developing, prioritizing, staffing, and administering comprehensive implementation plans for each key outcome. The program delivery, project integration, asset management, and technology outcomes identified for each strategic priority will be implemented throughout the upcoming rate period, with the desired end-state for each strategic priority achieved by 2018.

Logistics Services: Logistics Services implemented consolidated Fleet Management, which will ultimately help offset future fleet costs at BPA. BPA's Supplemental Labor Management Office (SLMO) has experienced tremendous growth resulting in the need for more staff to support the contractor workforce. Logistics Services is experiencing increased demand to accommodate requests for more materials and new unique field storage yard requirements.

Security Enhancements: System Performance Assurance, Component Testing and Preventative Maintenance Program (SPAP), and Personal Identify Verification (PIV) and Personal Risk Assessment (PRA) Policies, which contain the protection requirements that drive BPA's security enhancement strategies, are updated continually in response to NERC CIP and other compliance requirements.

New Projects

Internal General and Administrative Services: While many of the recommendations under development by the KTT Strategists will include projects that are already underway, such as EIM and 15-Minute Scheduling, there may be additional budgetary requirements for implementation of other KTT recommendations during the FY 2016-17 rate period. Specific requirements will not be known until recommendations are finalized in FY 2015.

Aircraft Services: This sub-program is implementing a new scheduling program that will allow multiple users to take advantage of trips that have empty seats, lowering the cost per flight hour.

Logistics Services:

- Asset Suite upgrade
- Enhancing contract compliance through education and process improvement
- LEAN enhancements throughout the organization to improve productivity
- Data analytics to improve warehouse storage and efficiency
- Improving supplemental labor practices to support the agency's increased reliance on supplemental labor.

Risks of Operating at Levels below the Proposed Spending Levels

Legal Support: The primary increase in proposed spending in this area is for bond and tax counsel. Without the increases, work in the areas of taxation, bonded indebtedness (e.g., Energy Northwest bonds), lease financing, and securing alternative sources of financing would have to be prioritized. Refinancing and other work dependent on specialized counsel would suffer. Refinancing results in significant savings to the agency, and a portion of those savings would be lost.

Internal General and Administrative Services: Funding for NERC CIP contracted staff is being reduced for the FY 2015-17 period to help BPA meet overall financial thresholds. The risk to the agency is potential inability to fully support implementation of NERC CIP version 5, with attendant risk of self-reporting, required mitigation actions, and potentially-severe financial consequences. In addition, the decision to reduce funding for the KTT strategists during the FY 2016-17 rate period may result in lost opportunity to make key business process, system infrastructure, reliability and compliance, and system operations improvements.

Aircraft Services: BPA's two fixed wing aircraft are scheduled for manufacturer and FAA required engine overhauls in late FY 2016. If these engine overhauls are not performed during this period, they will be grounded.

The additional funding is requested for machinists are to fill vacant positions. Inability to fill these positions will affect routine and emergency aircraft maintenance, and aircraft availability for normal and emergency missions.

Logistics Services: Supply Chain Services is a derived-demand organization, meaning that it must ramp up and ramp down its efforts in response to the needs of the Transmission Business Line. If Transmission activities increase at a rate greater than inflation, demand for logistics services will exceed the organization's ability to support them. Risks include delay or inadequacy in the delivery of contracting services, material and equipment, resulting in project delays, longer Transmission outage windows and impaired response to emergencies.

Security Enhancements: Lower-than-requested funding for OSCO projects will result in delayed implementation of improvements to the aging security infrastructure at BPA's Transmission substations. Operating at the spending levels would also defer replacement for critical components during a scheduled system-wide maintenance initiative. Delayed maintenance means a greater risk of failing critical components which may impact security system reliability, as well as increased emergency maintenance costs.

Challenges/Constraints

Executive and Administrative Services: The primary challenge facing the Transmission Student Program is competing with outside industry for highly-qualified students.

Internal General and Administrative Services: Continued IPPI program support is needed to address management systems and implement a responsible, integrated, coordinated approach to continuous improvement. Lack of an integrated approach to continuous improvement degrades both the effectiveness and efficiency of Transmission's improvement efforts and creates additional corrective actions and rework.

Aircraft Services: This sub-program faces the following challenges and constraints

- Maintenance for the fixed-wing aircraft is mandated by the FAA; reduced funding would put the use of the aircraft at-risk resulting in inability to meet the needs of BPA staff and executives
- Additional aircraft machinists are needed to restore Aircraft Services to normal operations. Insufficient financial support puts safety at risk and compromises Aircraft Services' ability to complete all required activities.

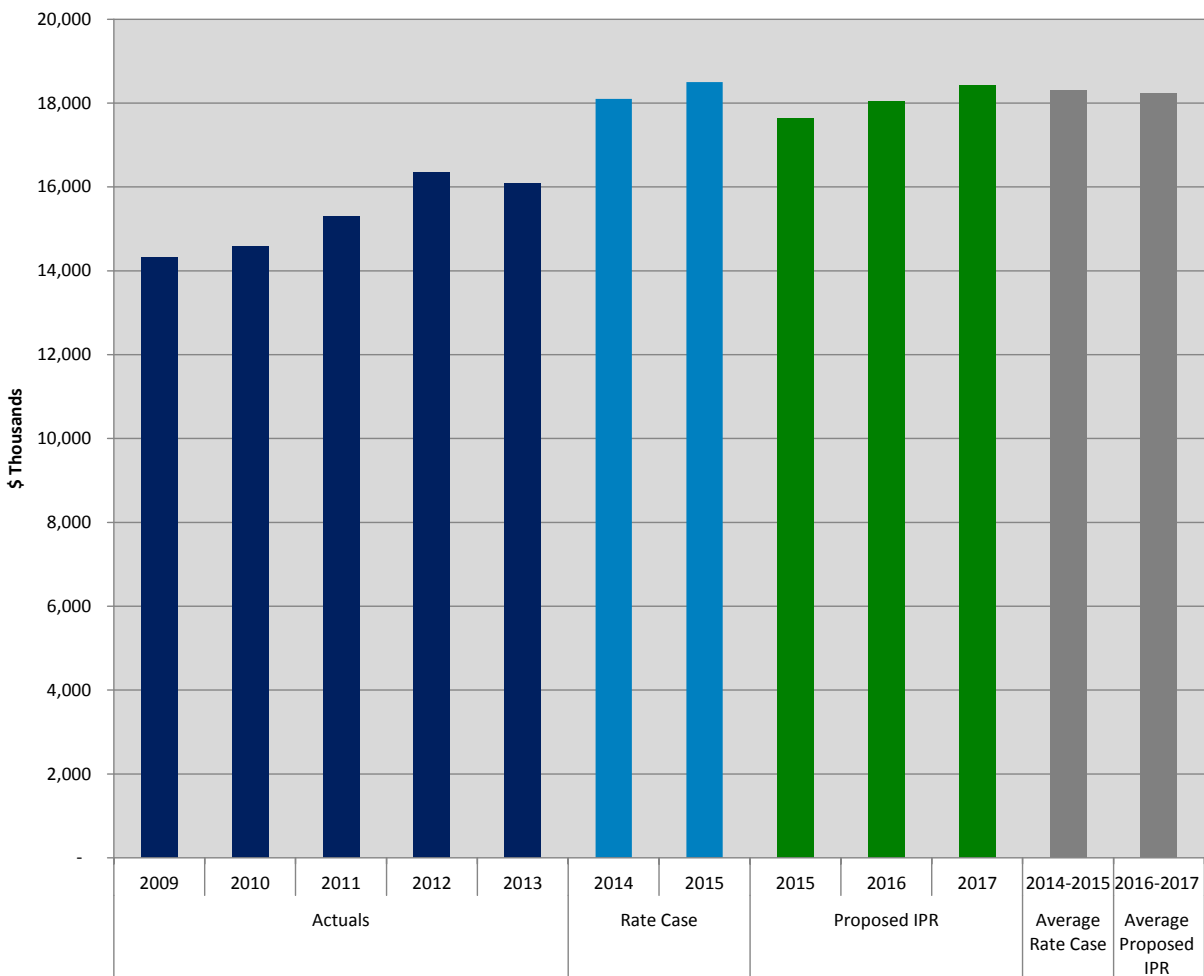
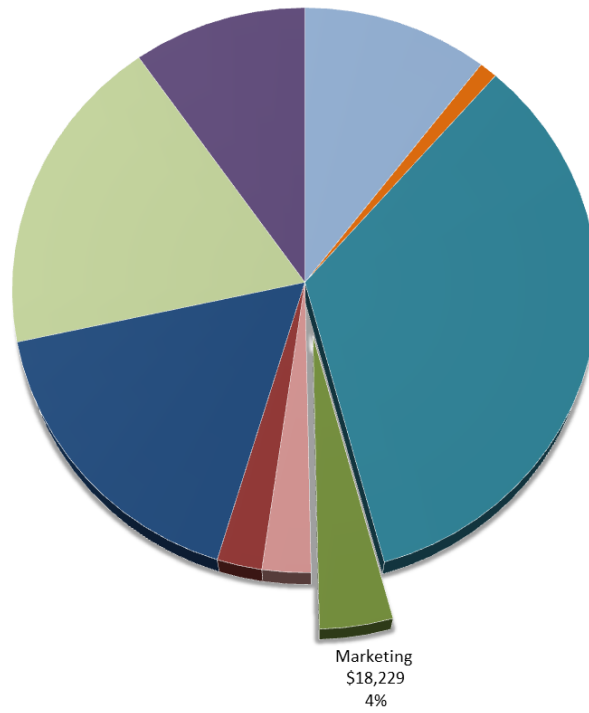
Logistics Services: Supply Chain Services relies on technology to facilitate work product efficiencies. As technology has progressed, the agency has been slow to transition to newer, more user-friendly and sophisticated software. SCS still relies heavily on labor-intensive manual processes that introduce greater margin for error and increased cost.

Security Enhancements: Multiple capital enhancements are scheduled for the FY 2015-17 timeframe, which will increase both the quantity and complexity of the security systems in the field. The increased cost of managing these additional assets including performance testing, maintenance and renewal will impact the program three to five years after deployment. The near-term challenge is to gain efficiencies where possible to position OSCO to absorb these costs to the greatest extent possible.

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4.5 MARKETING

FY 2016-17 Average: Proposed IPR



Program Details

(\$ Thousands)	Actuals	Rate Case		Proposed IPR		
	2013	2014	2015	2015	2016	2017
Transmission Sales	2,509	2,994	3,062	2,628	2,700	2,775
Transmission Finance	(6)	0	0	0	0	0
Contract Management	4,498	5,291	5,405	4,666	4,862	4,984
Transmission Billing	2,528	2,858	2,930	3,177	3,301	3,377
Business Strategy and Assessment	6,552	6,955	7,103	7,169	7,171	7,291
Grand Total	16,081	18,098	18,501	17,639	18,033	18,426

Description, Purpose and Responsibilities

The Transmission Marketing program provides frontline customer service and support by negotiating, updating and managing Transmission contracts, responding to customer issues and inquiries, and revising and establishing BPA policies and business practices in response to changing market needs and compliance responsibilities. These activities include:

- Provides open access to the federal Transmission system consistent with the Open Access Transmission Tariff (OATT)
- Leads the development and administration of long-term and short-term Transmission services agreements
- Provides ratemaking and margin management for BPA’s Transmission marketing and sales efforts including market intelligence, research, analysis, and support for the establishment of cost and revenue targets
- Manages the reservation and sale of all Transmission services associated with the OATT in a nondiscriminatory manner and ensures commercial compliance oversight and direction for all Transmission commercial functions
- Leads the Network Open Season (NOS), business practice and policy development processes.

The Transmission Marketing program includes the following sub-programs:

Transmission Sales: This sub-program leads the negotiation, development, and administration of long-term and short-term Transmission service agreements. Account Executives (AEs) are the primary point of contact for BPA transmission customers. AEs perform the following activities:

- Coordinate communications outreach with customers and provide leadership on customer-related issues
- Coordinate customer account teams with agency representatives to resolve and manage customer accounts and issues
- Coordinate the development and implementation of contract templates, providing a liaison function with the Customer Support Services sub-program
- Coordinate the Transmission service application process with customers.

Marketing Contract Management: This sub-program provides expertise and support to the AEs for Transmission customer issues including contract development and finalization, quality control review of Transmission contracts, analysis, customer issue resolution and front-office contract administration.

Customer Support Services: This sub-program provides all agency load forecasting, customer billing, revenue metering and contract administration services. Customer Support Services (CSS) Information systems are critical to overall business management and operation, data stewardship, and integration with other customer service Information systems. CSS provides core business services and leadership central to the customer experience while meeting marketing and sales governance requirements.

Marketing Business Strategy and Assessment: This sub-program provides leadership and direction in formulating business rules and strategies in support of BPA's governing practices, consistent with regulatory requirements, federal law, and BPA's OATT. This sub-program consists of the Transmission Policy Development and Analysis function and the Business Assessment function.

The Transmission Policy Development and Analysis function develops, analyzes and implements the business practices and policies associated with BPA's marketing and sale of Transmission and ancillary services

- Development, interpretation and maintenance of the OATT
- Available Transfer Capacity (ATC) policy development and analysis
- Development of new Transmission products
- Participation in and analysis of activity at external policy forums
- Regular interaction with FERC staff on technical issues associated with the OATT
- Development of business cases.

The Business Assessment function provides the following functions:

- Develops, facilitates workshops, and implements rates for Transmission and ancillary services
- Generates revenue forecasts for BPA Transmission Services
- Provides market research on business fundamentals driving sales of Transmission capacity
- Conducts quantitative and business analysis in support of commercial business transactions.

Goals:

Transmission Sales: This sub-program has the following goals:

- Achieve customer satisfaction ratings of > 7.0, supporting BPA's ability to succeed in the highly competitive market for wholesale electric power and Transmission services
- Work with BPA's external customers to resolve customer issues and inquiries, participate in meetings, and efficiently execute and tender contracts
- Implementation of national standards developed by NAESB, including OASIS and other commercial business standards, as required.

Marketing Contract Management: The program has established the following goals for the FY 2015-17 period:

- Implementation of national standards developed by NAESB for OASIS and other commercial business regulatory processes, as required
- Develop and maintain agency Contract System Automation requirements, including implementation of the Customer Information Service Delivery systems
- Policy development to reflect NERC, NAESB, and FERC requirements
- Improve data quality management process for contract development
- Review and conversion of approximately 450 legacy operations and maintenance (O&M) agreements.

Customer Support Services: Goals of this sub-program include:

- Complete enhancements in CSS Information systems to maximize benefits to BPA and customers, such as the Customer Portal

- Implement a cross-functional data quality management program to foster continuous improvement, ensure data and information is accurate and up-to-date, and minimize manual and duplicate data inputs
- Train and develop staff to consistently deliver high quality results as well as broaden and deepen staff understanding of BPA's business relationships
- Implement benchmarking, metrics, and corrective action programs for operational excellence.

Marketing Business and Strategy Assessment: The Marketing Business and Strategy Assessment sub-program provides policy assistance on issues ranging from ATC management and inventory to interconnections to NOS and Generation Interconnection (GI) reform, and is responsible for managing and maintaining the OATT consistent with regulatory guidelines. It files revisions to the tariff as necessary to reflect consensus-generated deviations, BPA needs and/or ongoing orders. Sub-program goals include the following:

- Overseeing tariff compliance
- Providing leadership in ancillary services specifications such as the provision of balancing reserves
- Overseeing development and analyses of rate cases
- Addressing wind integration issues during interconnection policy development
- Participating in national standards development with NAESB, including OASIS development
- Leading customer outreach efforts, including quarterly customer forums and other meetings.

Near-Term Strategies

Transmission Sales: The Transmission Sales sub-program's near-term strategies include the following:

- Ensure appropriate AE staffing levels to support BPA's external customer relationships, to resolve customer issues and inquiries, and to efficiently execute and tender contracts
- Ensure that AE teams are staffed to efficiently meet the business needs of more than 300 Transmission customers including, but not limited to, planning, operations, policy, contract development, customer service engineers, compliance, and risk groups
- Business implementation responsibilities include NERC standards, implementation of NITS/NAESB in compliance with applicable regulations, running the cyclical NOS and GI model, integration with other regional planning processes, and Energy Quarterly Reporting (EQR) to FERC.

Marketing Contract Management: This sub-program's near-term strategies include:

- Ensure continuity in staffing and expertise to maintain forward momentum on key issues, including contract development and customer service
- Establish, implement, and oversee customer contract policies, procedures, standards, and internal controls
- Manage the development and operation of the centralized Customer Contract Management (CCM) system, including contract data stewardship.

Marketing Business Strategy and Assessment: The near-term strategies for the Marketing Business Strategy and Assessment sub-program include the following:

- Support the development and analyses of two rate cases so that BPA will be able to recover its total costs, including obligations to repay its debt to the Federal Treasury, during the period covered by this IPR, including all associated workshops and processes
- Lead the regional development of the Enhanced Bonneville Balancing Authority end state model that could include an EIM market and other characteristics
- Manage the impact on BPA's systems and customers of the California Independent System Operator (CAISO) EIM
- Develop a strategy and implementation plan for the Northwest Power Pool (NWPP) EIM

- Continue implementation of the Tariff obligations and FERC Orders as appropriate.

Changes from 2012 IPR

Transmission Sales: This sub-program has assumed the following responsibilities since conclusion of the 2012 IPR process:

- Various initiatives to address compliance with new or additional requirements pursuant to NERC reliability standards and BPA's OATT filing with FERC
- Development of a regional planning strategy that incorporates an EIM.

Marketing Contract Management: Changes since the 2012 IPR for this sub-program include:

- Contract changes due to submission of a new OATT to FERC
- Contractual implementation of BPA's interim policy on over-generation supply.

Customer Support Services: A coordinated data quality management program was developed to ensure accuracy of customer information and enhance cross-functional knowledge for its related Information systems. CSS is implementing five new Information system phases this year, Customer Portal (CP), Customer Contract Management (CCM), Customer Billing Center (CBC), Agency Metering System (AMS) – (includes the new reporting system, MDMR2), and Agency Load Forecasting (ALF).

Marketing Business Strategy and Assessment: This sub-program has addressed the following changes since the 2012 IPR:

- Analyzed BPA's policies and business practices to ensure consistency in the way BPA conducts business in the Mid-Columbia (Mid-C) area
- Review of BPA's segmentation policies and methodologies in support of the upcoming rate case, as well as analysis of rate case-related development and implementation issues
- Developing strategy and implementation plans to manage the impact on BPA's systems and customers of the CAISO and NWPP EIMs
- Balancing Authority
- Dynamic Transfer Capability on the Intertie and network.

New Projects

Marketing Contract Management: New programs and projects for this sub-program include the following:

- Comprehensive conversion effort to replace more than 450 outdated O&M agreements with 70+ updated and renegotiated contracts. This effort will eliminate redundant and outdated agreements from BPA's CCM system and clarify ownership, operation and maintenance responsibilities throughout the Transmission system, significantly streamlining this process for BPA and its Transmission customers
- NERC standard compliance agreements.

Marketing Business Strategy and Assessment: This sub-program has the following new projects:

- Implementation of the Conditional Asset Swap, a major regional project to allow BPA to serve south Idaho Network Integration (NT) customers holding long-term power and Transmission agreements
- Development and implementation of Dynamic Transfer Capability
- Assessment of responsibility of the Balancing Authority Area

Risks of Operating at Levels below the Proposed Spending Levels

Transmission Sales: Operating at the spending levels would put customer satisfaction goals at risk due to inability to implement initiatives that benefit customers.

Marketing Contract Management: The risks and impacts for this sub-program include the following:

- Potentially severe monetary consequences due to contractual noncompliance with NERC, FERC, and NAESB standard requirements.

Marketing Business Strategy and Assessment: This sub-program faces the following risks and impacts associated with operating below the proposed spending levels:

- Most of this sub-program's initiatives support mandatory compliance activities and the requirements of BPA's customers and statutory responsibilities. Risks associated with reduced funding for these programs include compliance violations and loss of revenue if customer needs are not met
- Risks of NERC, WECC, NAESB or FERC non-compliance include required mitigation actions and other financial consequences
- Risks of reduced funding for redispatch include increased congestion, customer curtailments, and non-compliance with the tariff requirements for NT redispatch
- Reduced funding for EIM support activities will impair the region's ability to optimize and coordinate the use of regional resources
- Risks of reduced funding for OATT compliance activities, including the following: (1) reduced ability to respond to new FERC initiatives; (2) generate new processes and tools; (3) develop regional consensus on OATT-related business practices; and (4) reduced staffing levels to monitor and address process breakdowns associated with tariff compliance.

Challenges/Constraints

Transmission Sales: Ongoing challenges and constraints for this sub-program include:

- Increasing complexity of mandatory NERC, NAESB and FERC standards compliance requirements
- The need to develop new business practices in response to compliance and business needs
- Continued development of contract templates
- Contract negotiations for legacy contract conversions
- Resolution of billing and settlement issues
- Participation in ongoing system upgrade and replacement discussions
- The potential need for significant analysis surrounding OATT gap, Mid-Columbia BA and contract issues, implementation of NITS/NAESB standards, and EIM development
- Implementation of NITS/NAESB standards
- Development of the EIM strategies for CAISO and NWPP.

Marketing Contract Management: This sub-program faces increasing non-base load work and implementation responsibilities in the following areas:

- Implementation of new business requirements
- Increasing complexity of mandatory NERC, NAESB, and FERC compliance standards
- Implementation of NITS on OASIS NAESB standards
- Succession planning/workforce development
- Continued development of contract templates
- Develop new business practices in response to compliance and business needs.

Customer Support Services:

- Succession planning to replace a large potential retirement cohort
- The rapid evolution of industry and federal requirements requires great flexibility in responding to and implementing new policies and requirements
- IT funding is needed for implementation of system changes and/or operations and maintenance of existing systems. The funding allocation for this area is held within the BPA IT organization.

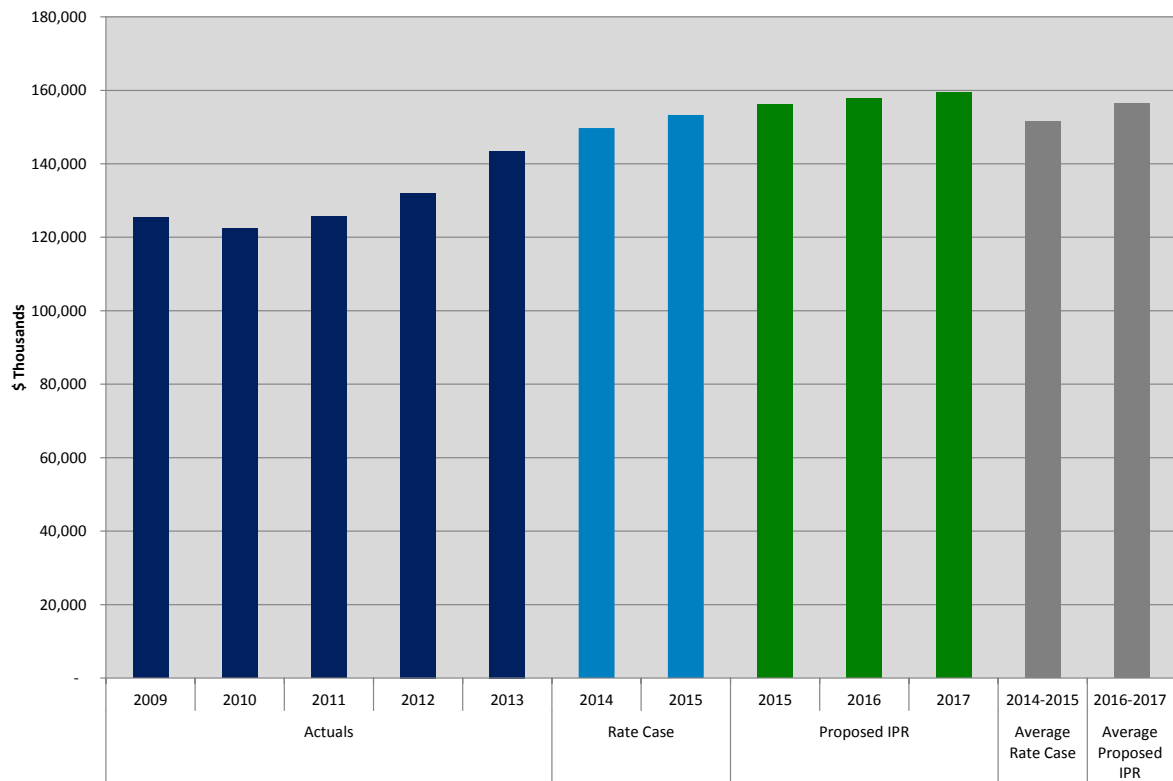
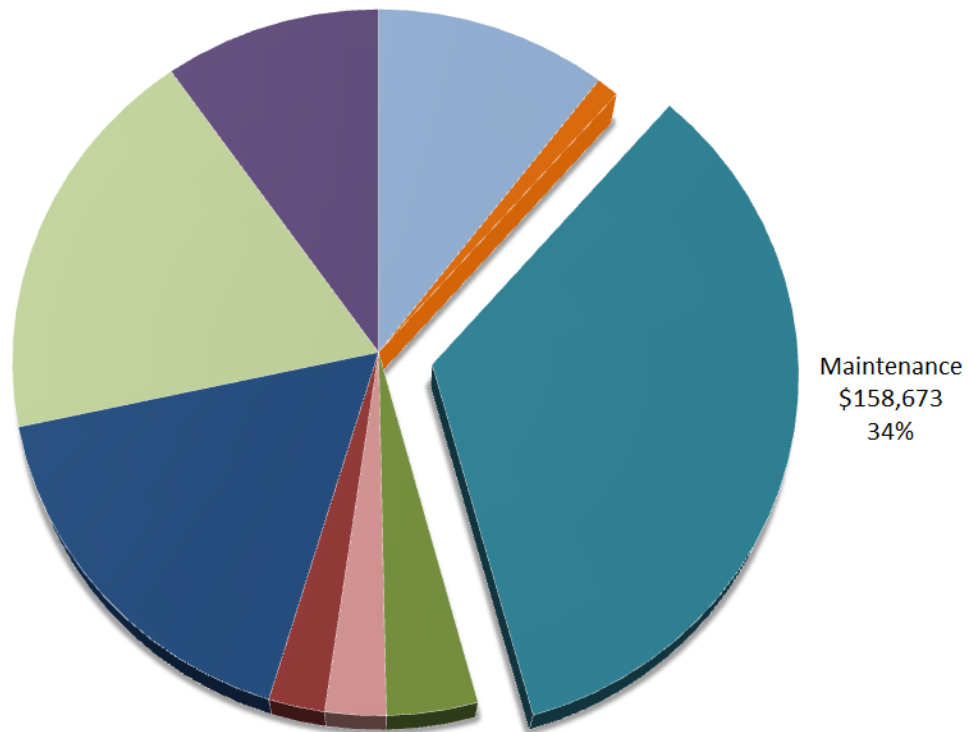
Marketing Business Strategy and Assessment: This sub-program will face the following challenges and constraints during the FY 2015-17 period:

- Implementation of NITS on OASIS, and Service Across Multiple Transmission Systems (SAMTS)
- Implementation of FERC Order 1000 requirements in alignment with BPA business practices and statutory requirements
- Ensuring sufficient staffing and resources to continue to provide regional leadership and guidance on compliance issues
- Continuing to address the market's evolving Transmission service needs with new products and services despite addressing limited capital, an aging infrastructure, and evolving technologies.

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4.6 MAINTENANCE

FY 2016-17 Average: Proposed IPR



Program Details

(\$ Thousands)	Actuals			Rate Case		Proposed IPR	
	2013	2014	2015	2015	2016	2017	
Non-Electric Maintenance	25,204	27,303	27,853	30,054	30,750	31,424	
Substation Maintenance	27,726	31,121	31,777	27,937	28,566	29,043	
Transmission Line Maintenance	26,572	26,139	26,820	26,804	27,054	27,482	
System Protection Controls	11,869	13,096	13,381	13,046	13,541	13,741	
Power System Maintenance	17,623	16,904	17,582	17,654	18,239	18,507	
Joint Cost Maintenance	123	1	1	109	111	113	
System Maintenance Management	7,076	6,434	6,574	9,816	9,954	9,556	
ROW Maintenance	7,298	8,428	8,597	10,008	10,098	10,162	
Heavy Mobile Equipment Maintenance	(125)	0	0	0	0	0	
Technical Training	2,211	3,201	3,269	2,314	2,368	2,418	
Vegetation Management	17,928	17,135	17,471	18,465	17,181	17,039	
Grand Total	143,506	149,763	153,324	156,207	157,861	159,485	

Description, Purpose and Responsibilities

The BPA Maintenance program is responsible for maintaining about three-fourths of the Northwest Region's high-voltage transmission assets, including 15,100 circuit-miles of Transmission lines and towers, 299 substations, 195,000 acres of right-of-way corridors and 11,860 miles of access roads. Maintenance supports functions in the following sub-programs:

Non-Electric Facilities: The Non-Electric Facilities program is responsible for maintaining buildings, sites and associated mechanical and communications systems that support the functionality of BPA's Transmission system. BPA's non-electric facilities include critical infrastructure such as control centers and substation control houses, maintenance shops, administrative offices, research labs and warehouses. BPA's Facilities Asset Management (FAM) program, which provides key services including the creation and tracking of maintenance requests, the generation of construction requirements for new buildings, facility repair and renovation functions, the identification of facilities-related risks, and the development and implementation of mitigation activities, is also a part of the Non-Electric Facilities sub-program.

Substation Maintenance: This sub-program provides service and repair of more than 32,000 pieces of BPA-owned high voltage (HV) power system equipment, including the following:

- Power transformers , circuit breakers and switchgear
- Shunt and series capacitors and reactors
- HVDC converter facility
- Instrument transformers and surge arresters
- Station AC and DC auxiliary power
- Substation bus, insulators and structures.

Transmission Line Maintenance: This sub-program maintains and repairs BPA's network of overhead Transmission lines and Transmission line structures and fixtures, including:

- More than 43,000 steel and aluminum lattice towers
- More than 73,000 wood poles and associated structures
- Insulators, insulator assemblies, overhead conductors and devices
- Fiber optic cable assemblies
- Obstruction warning devices
- Roads and trails associated with Transmission lines.

System Protection and Control Maintenance: SPC systems provide critical support to the primary circuit elements of BPA's Transmission system by maintaining overall reliability, gathering and storing operational data and ensuring public safety. The SPC program is responsible for 28,000 pieces of equipment in more than 950 locations, including BPA and customer-owned substations, power houses, maintenance buildings and control centers. Equipment includes protective relaying, sequential events recorders, fault recorders, revenue and interchange metering and control and indication equipment.

In addition, SPC Maintenance is BPA's technical expert on obsolete equipment no longer supported by the manufacturer, but still on BPA's system.

Power System Control (PSC) Maintenance This sub-program is responsible for the maintenance of crucial Transmission system fiber/telecommunications assets, Remedial Action Scheme (RAS), transfer/trip, Supervisory Control and Data Acquisition (SCADA), and telemetering equipment. PSC's responsibilities include more than 11,000 pieces of equipment at 732 sites, including:

- System telecommunications: SCADA/Telemetry/Supervisory Control
- Field Information Network (FIN)/Operational Networks
- Transfer Trip, RAS
- Fiber Optic Cable and system components
- Synchronous Optical Network (SONET)/Microwave (MW) radios
- Engine generators (emergency power backup systems for remote locations).

System Maintenance Management: This sub-program supports maintenance and general up-keep of capital plant, property, and equipment, and provides operational support including plant repairs and minor replacements from point of generation to the entrance to the distribution system.

Heavy Mobile Equipment Maintenance: BPA's Fleet Management group is responsible for the acquisition, maintenance, and overall asset management of BPA's Mobile Equipment Fleet, as well as the maintenance of over 150 emergency generators in unmanned sub-maintenance facilities. It functions as a clearing pool -- the costs of operating and maintaining the equipment and vehicles are accumulated in this project and then allocated monthly to the projects that use the equipment and vehicles.

Vegetation Management and Rights of Way Maintenance: This sub-program includes ROW Maintenance and Vegetation Management functions, charged with ensuring that BPA can safely access, construct, operate and maintain its Transmission facilities, and that BPA's ROW are clear of trees, brush, and encroachments that could affect the safety, accessibility, and reliability of the Transmission system. This sub-program ensures compliance with all applicable environmental and reliability standards, including the Endangered Species Act (ESA), the National Environmental Policy Act (NEPA), and NERC FAC-003, the standard covering vegetation-related outages on transmission rights-of-way and minimum ground clearance for Transmission lines.

Technical Training: This sub-program provides training and continuing education for electricians, linemen, operator apprentices, and craftsmen. In addition, it provides operator and engineer training, as well as professional training for Transmission Services annual employees in certain technical areas.

Goals

Non-Electric Facilities: This sub-program will develop and implement facilities asset management capabilities and industry best practices to meet the following goals:

- Establish and meet service level standards for critical facilities and assets
- Prioritize investments to meet mission requirements and agency strategic intent
- Deliver projects with predictable return on investments
- Manage assets to maintain reliability and safety.

Substation Maintenance: This sub-program's goals are to ensure acceptable performance and service life for more than 32,000 high-voltage substation components at nearly 300 substations, enhancing the reliability and efficiency of BPA's Transmission system, and preventing the loss of Transmission availability due to failure or substandard performance of substation equipment. To address BPA's extensive inventory of Transmission equipment that is beyond its useful life-cycle, the Substation Maintenance organization works to meet the following goals:

- Develop and implement predictive analysis tools using information from relays, sensors, cameras, and inspections, as well as data from SCADA and other maintenance databases
- Strategic placement of on-site spares for transformers and reactors to support emergency preparedness
- Effectively manage environmental compliance obligations
- Ensure the availability of resources necessary for maintaining and repairing substation equipment in compliance with applicable standards.

Transmission Line Maintenance: Key goals for the Transmission Line Maintenance program include:

- Effectively manage resources to maintain the reliability of BPA's Transmission network and meet sustainable replacement targets
- Meet planned and unplanned outage frequency and duration targets as measured via the System Automatic Interruption Frequency Index (SAIFI), which tracks the number of unplanned outages per line per year, and the System Automatic Interruption Duration Index (SAIDI), which tracks the total duration of unplanned outages per line per year
- Continue to develop a long-term strategy for inventorying, evaluating and mitigating the risks associated with an aging Transmission system
- Continue to develop and implement the Transmission Asset System (TAS) to provide a single-source asset data and maintenance work generation system for BPA's Transmission system.

System Protection and Control Maintenance: The SPC Maintenance program is responsible for the following mission-critical functions:

- Rapid isolation of equipment during fault conditions to prevent equipment damage, enhance system stability, and protect personal safety
- System control and monitoring that allows BPA operations and control center personnel to operate and maintain the power system
- Development of accurate meter data for scheduling and billing
- Collecting and disseminating fault and event data used by Maintenance personnel to locate, troubleshoot and correct system failures
- RAS implementation.

The overall goal of the SPC Maintenance program is to use risk-informed evaluation of strategic alternatives to reduce cost while preserving equipment integrity, maintaining reliability, gathering and storing operational data, and ensuring public safety.

Power System Control Maintenance: The PSC Maintenance sub-program is implementing a total economic cost analytical approach which will produce a replacement plan that reduces risk, and therefore cost, to BPA and its customers. Key elements include:

- Focus on replacing critical, at-risk equipment first, with less-critical, low-risk equipment allowed to run to failure
- Accumulated backlog of replacement work is addressed through planning based on economic lifecycle
- Coordination of replacement strategies with SPC program

- Enhance the reliability, capacity and compliance of BPA's communications network through technology upgrades, integration and life-cycle capabilities.

Heavy Mobile Equipment Maintenance: This sub-program has the following goals:

- Right-sizing and optimizing the Heavy Mobile Equipment fleet to ensure that BPA has the right vehicles, in the right locations, in the right configurations
- Improving the preventative maintenance program to reduce the need for emergency or corrective maintenance
- Performing life cycle analysis for all equipment.

System Maintenance Management: To accomplish BPA's compliance-driven and contractually obligated maintenance responsibilities as efficiently and cost-effectively as possible, ensuring the reliability of BPA's Transmission system through effective management of Maintenance resources.

Technical Training: The overall goal of the Technical Training (TT) sub-program is to train high voltage-qualified, field-experienced electricians and linemen, operators and other key workers to ensure worker safety and the continuity of BPA's maintenance activities. Another goal is to ensure that all workers are educated about and compliant with current and upcoming NERC CIP, Occupational Safety and Health (OSHA) and EPA requirements. TT is also developing a unified system to track training history and upcoming training needs for all Maintenance BFTE and CFTE workers.

Vegetation Management and Rights of Way Maintenance: Sub-program goals include ensuring regulatory compliance with FERC, NERC, and WECC guidelines for managing vegetation, to protect public safety, and to prevent unplanned Transmission outages. Through the implementation of integrated vegetation management (IVM) practices, this sub-program ensures that vegetation growth does not impede access to towers, and prevents the risk of arcing from energized lines due to tree encroachment.

Long-Term Objectives

Non-Electric Facilities: The overall, long-term vision for the Non-Electric Facilities sub-program is to optimize and fully leverage BPA's asset portfolio to provide reliable, sustainable non-electric assets that meet current and known future agency business needs, and to ensure performance and condition standards that comply with all applicable regulations while minimizing the life cycle costs.

Substation Maintenance: The long-term objective of the Substation Maintenance program is to ensure that system performance is sustainable for BPA's current and forecast inventory of Transmission facilities and substation equipment, using methodology that allows BPA to quantify equipment performance levels as forecast costs. This will allow the agency to ensure that its maintenance backlog remains below regulatory requirements and above minimum maintenance and performance standards.

Transmission Line Maintenance: To facilitate the long-term functionality and reliability of all overhead Transmission system components, and institute a proactive, economical and dynamic strategy for tracking, assessing, and mitigating aging assets over time, Transmission Line Maintenance is implementing the following long-term objectives:

- Proactively replacing overhead system components nearing end of service life
- Standard metrics for collecting and retaining asset condition data to identify condition trends, target and pace replacement efforts, and accurately predict remaining service life
- A standardized process for sampling and testing retired components and analyzing results to help Transmission pace and target replacements
- Document lessons learned to ensure that new projects are assembled with the best chance for a long and reliable service life.

System Protection and Control Maintenance: The long-term strategy of the SPC Maintenance program includes the following major elements:

- Improve the reliability of the Transmission system and lower SPC Maintenance program costs by replacing critical at-risk equipment
- Use equipment failure rate analysis to optimize replacement planning
- Meet outage management needs and availability targets through outage reduction.

Power System Control Maintenance: The long-term strategy of the PSC Maintenance program is to establish a pace of planned replacements that reduces the frequency of equipment failure and the need for corrective repairs and emergency replacements, reducing cost for BPA and its customers. By reducing the equipment replacement backlog, PSC Maintenance will achieve a steady state that allows BPA to better manage risk, cost, and resources.

Vegetation Management and Rights of Way Maintenance: This sub-program has the following long-term objectives:

- Prevent outages from vegetation infringements on transmission line ROW by maintaining appropriate clearance between transmission lines and vegetation
- Ensure rights of ways are safely and legally accessible to transmission paths and remote sites and meet environmental regulations
- Ensure BPA is compliant with all regulatory authorities
- Support BPA's relationship with landowner agencies.

Heavy Mobile Equipment Maintenance: Long-term HMEM objectives include the implementation of a planned maintenance strategy, the use of analytics and metrics, measured against risk, to ensure that agency needs are met in a cost-effective manner, the use of standardization to reduce acquisition, maintenance and inventory costs, freeing up funds for recruitment/training, and the development of life cycle analyses that take into account vehicle usage, condition, failure rates, maintenance and overall costs.

Changes from the 2012 IPR

Non-Electric Facilities: Non-Electric Facilities is requesting funding above the rate case due to the following factors:

- An increase resulting from the transfer of funds from Control Center Support sub-program to the Non-Electric Facilities Maintenance sub-program to account for maintenance/repair/replacement costs for critical systems. This change does not result in a net increase in cost to BPA, but rather a shift between expense programs within the FAM organization spending levels.
- An increase resulting from a conversion of funding for work performed by Supplemental Labor electricians in support of critical facilities projects. During the 2012 IPR these staff were forecast to work primarily on capital projects, but are now forecast to work primarily on expense projects due to the new interpretations of capitalization of the critical system replacement projects. This change results in an increase in requested expense funding and a decrease in capital for the critical facilities program
- An increase resulting from the application of municipal stormwater fees to BPA properties pursuant to the findings of *United States v. City of Renton*, which waived federal sovereign immunity and established responsibility to pay stormwater program charges in accordance with the Clean Water Act (CWA).

Substation Maintenance: The NFPA-70E-2012 revision contains several new required worker safety improvements, which will require a one-time expense to update BPA's worker safety program related to arc flash protection circuit identification.

Transmission Line Maintenance: Beginning in FY 2014, BPA will be developing fiber inventory, monitoring and management systems. This multi-year project will comprehensively inventory the components in BPA's 3,500-mile fiber communications network in preparation for the implementation of a fiber monitoring system that will provide real-time information on the status of all fiber lines in BPA's system, similar to the Transmission system's Supervisory Control and Data Acquisition (SCADA) system. This work will play a key role in the development of a comprehensive Fiber Management System, which will significantly enhance the reliability of BPA's fiber-based telecommunications and control network. The TLM program is also requesting funding above rate case for Sustain projects.

System Maintenance Management: This sub-program is requesting funding above the rate case for the FY 2016-17 rate period for the Asset Data Management (ADM) and Program Asset Register projects.

Vegetation Management and Rights of Way (Maintenance): An increase in the access roads sub-program spending level is required to ensure compliance with Endangered Species Act (ESA) and Clean Water Act (CWA) requirements and quicker response to transmission line outages. This work will include repair of access road erosion damage to address runoff and drainage issues for some roads.

Risks of Operating at Levels below the Proposed Spending Levels

Non-Electric Facilities: Lower-than-requested funding for this sub-program may lead to delays in consolidated construction projects at Bell, Alvey, Lane, Maple Valley and Eugene substations. Operational expenses will continue to increase as municipalities throughout the BPA service area begin to impose stormwater fees. These increased utility fees will compete for funding with facilities maintenance and repair work, further challenging FAM to maintain facilities at acceptable service levels.

Substation Maintenance: Arc flash protection is an NFPA-70E-2012 worker safety requirement. Lack of funding will expose BPA to worker safety, compliance and potential financial risks.

Transmission Line Maintenance: Failure to address corrosion issues and aging assets increases the risk to public safety and system reliability.

System Maintenance Management: The primary risk associated with lower-than requested funding for this sub-program is failure to comply with NERC CIP version 5, NERC PRC-005 (Protection System Maintenance), and WECC FAC-501 (Transmission Maintenance) requirements, resulting in findings of non-compliance and potential financial consequences. Another risk is lack of adequate data and required systems to inform BPA's asset strategy, resulting in potentially decreased reliability.

Vegetation Management and Rights of Way Maintenance: Risks associated with lower-than-requested funding for the ROW Maintenance program include significant system reliability issues, unplanned Transmission system outages, an increasing backlog of maintenance work and land management cases, and an attendant risk of WECC-sanctionable violations.

Challenges/Constraints

Non-Electric Facilities: The majority of the facilities portfolio (60 percent) is 30+ years old and in need of more intensive repair, maintenance, and/or replacement. Backlog of maintenance and repair (BMAR) has increased significantly over the past decade, driving facility reliability downward. Another challenge is the large number of asset/system failures prior to the expiration of expected useful life (EUL), driven by a lack of renewal.

Transmission Line Maintenance: More than 60 percent of the steel line assets in BPA's Transmission system have reached or are approaching the theoretical end of their useful life. Developing and implementing a sustainable replacement strategy that balances BPA's responsibility to maintain the reliability of this aging Transmission system with pressures to keep Transmission rates as low as possible is the primary challenge facing this organization. Interoperability problems across equipment vintages can cause derating, outages and other risks.

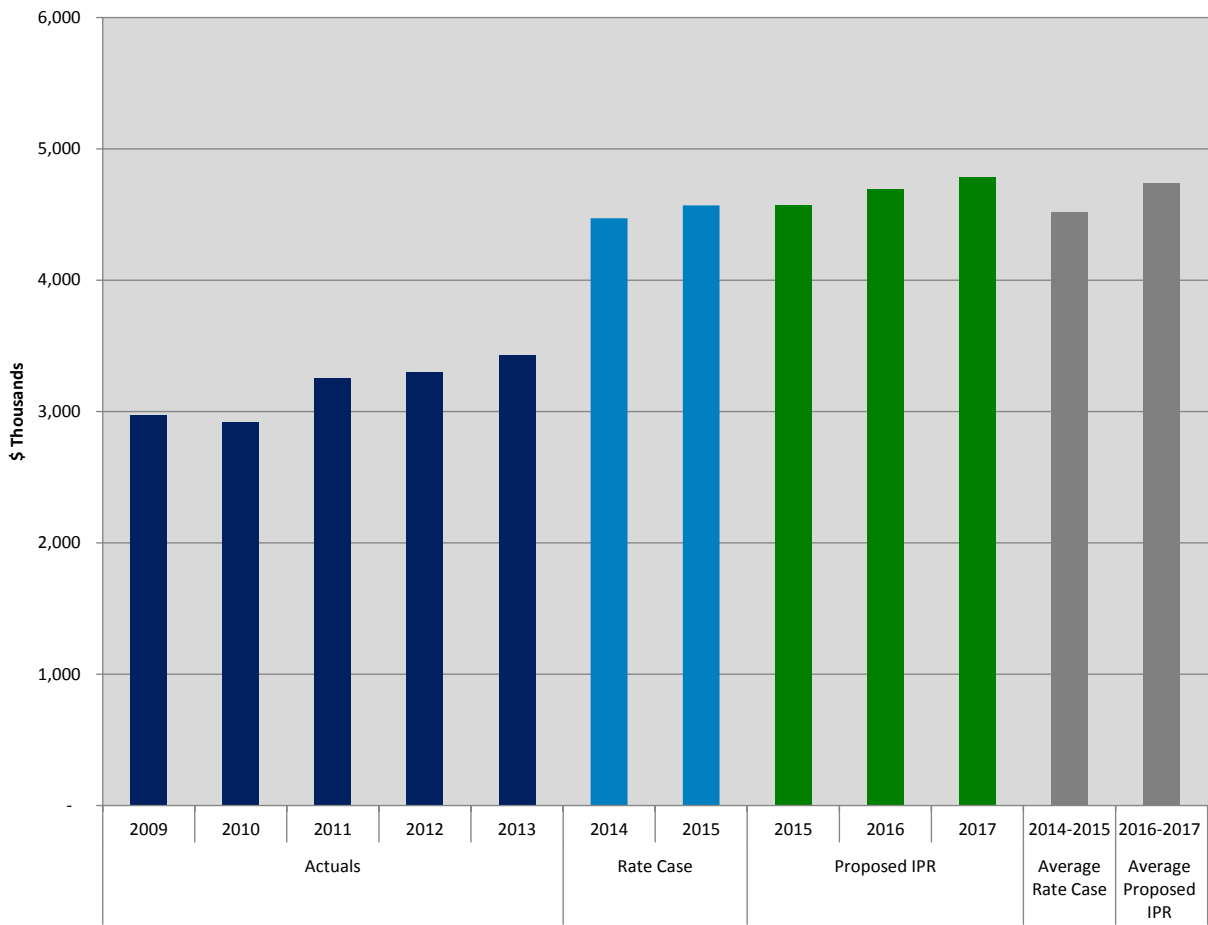
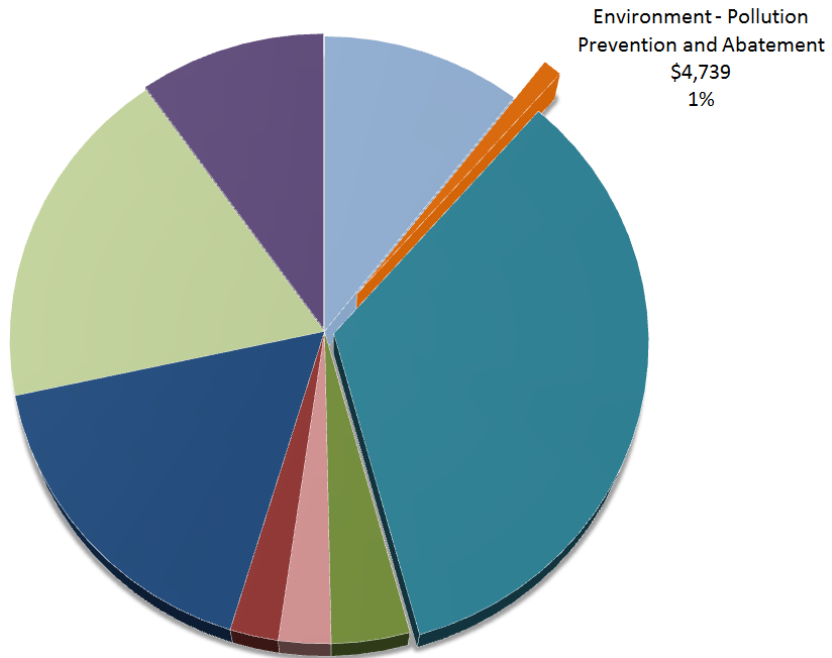
Power System Control Maintenance: Multiple generations of PSC equipment are installed on BPA's transmission system, and the increasing risk of PSC equipment failure is driving the development of a strategic approach. Rapid evolution of PSC technology means that some key elements of BPA's Power System Control network are now technologically obsolete; vendor support, spare parts, or both are often unavailable.

Technical Training: Currently, the primary challenge for this sub-program is hiring to fill vacant positions. A secondary challenge is the development or sourcing of a centralized system to track all training requirements, accomplishments and reporting.

Vegetation Management and Rights of Way Maintenance: Funding for this sub-program has fallen from a high of \$34.6 million in FY 2009 to \$25.3 million in FY 2013.

4.7 ENVIRONMENT – POLLUTION PREVENTION AND ABATEMENT

FY 2016-17 Average: Proposed IPR



Program Details

(\$ Thousands)	Actuals	Rate Case		Proposed IPR		
	2013	2014	2015	2015	2016	2017
Environmental Analysis	0	83	85	-	-	-
Pollution Prevention and Abatement	3,427	4,387	4,484	4,568	4,690	4,787
Grand Total	3,427	4,471	4,569	4,568	4,690	4,787

Description, Purpose and Responsibilities

The Environment - Pollution Prevention and Abatement programs develop, coordinate, and manage environmental compliance actions and programs associated with the operation, maintenance, and construction of BPA’s transmission system. Key organizational responsibilities include the development and implementation of appropriate environmental analyses and associated mitigation in accordance with the National Environmental Policy Act, the Endangered Species Act, the National Historic Preservation Act (NHPA), and other federal laws, management of BPA’s Water Resource Protection and Polychlorinated Biphenyl’s (PCB) reduction programs, and management of environmental investigations and remediation projects

This organization is responsible for developing, coordinating, and managing the implementation of environmental actions and compliance requirements associated with the operation, maintenance, and construction of BPA’s Transmission system. Specifically, Pollution Prevention and Abatement develops, coordinates, and implements water protection, hazardous materials management, herbicide applicator licensing, erosion control, and other pollution prevention measures. It is also responsible for environmental permits, plans and specifications for Transmission system projects, along with overseeing implementation of environmental requirements during the construction of new or upgraded Transmission facilities.

Goals

Ensure that all Transmission activities, projects and facilities are in compliance with applicable environmental regulations. Examples include the following:

- Minimize BPA’s environmental liability through Environmental Land Audits (ELAs) for proposed BPA land acquisitions
- Provide environmental support for Transmission maintenance and construction projects
- Provide guidance and direction on proper handling and disposal of regulated and hazardous materials generated by substation and facility construction projects by conducting a Pollution Abatement Review and issuing a Pollution Abatement Clearance (PAC)
- Conduct environmental review of access road maintenance projects, Transmission pole replacement projects, Transmission system vegetation management projects
- Provide on-site follow-up inspection and monitoring to ensure compliance with environmental requirements
- Ensure timely internal and external spill reporting and spill response, including the 24/7 availability of a PP&A spill response coordinator.

Near-Term Strategies:

Provide emergency response and cleanups, environmental guidance, environmental training, technical assistance, mitigation monitoring, facility inspections, and implementation of environmental requirements.

Changes from the 2012 IPR

Staffing levels and associated costs were lower in 2012 and 2013 than anticipated due to attrition. All vacant positions must now be filled in order to keep pace with the significantly increased transmission maintenance and construction workload.

Risks of Operating at Levels below the Proposed Spending Levels

Risks of operating at the spending levels below the proposed IPR program level include:

- Increased likelihood of legal and financial consequences due to non-compliance
- Increased likelihood of natural resource and property damage caused by off-site release of insulating oil from spills at BPA substations
- Increased risk of releases from Transmission facilities damaging critical habitat previously improved with funds from BPA's Fish and Wildlife program
- Costly delays and deferrals of Transmission construction projects.

Challenges/Constraints

Human resource limitations coupled with increases in process management requirements and increased transmission construction may increase the likelihood of future environmental non-compliance.

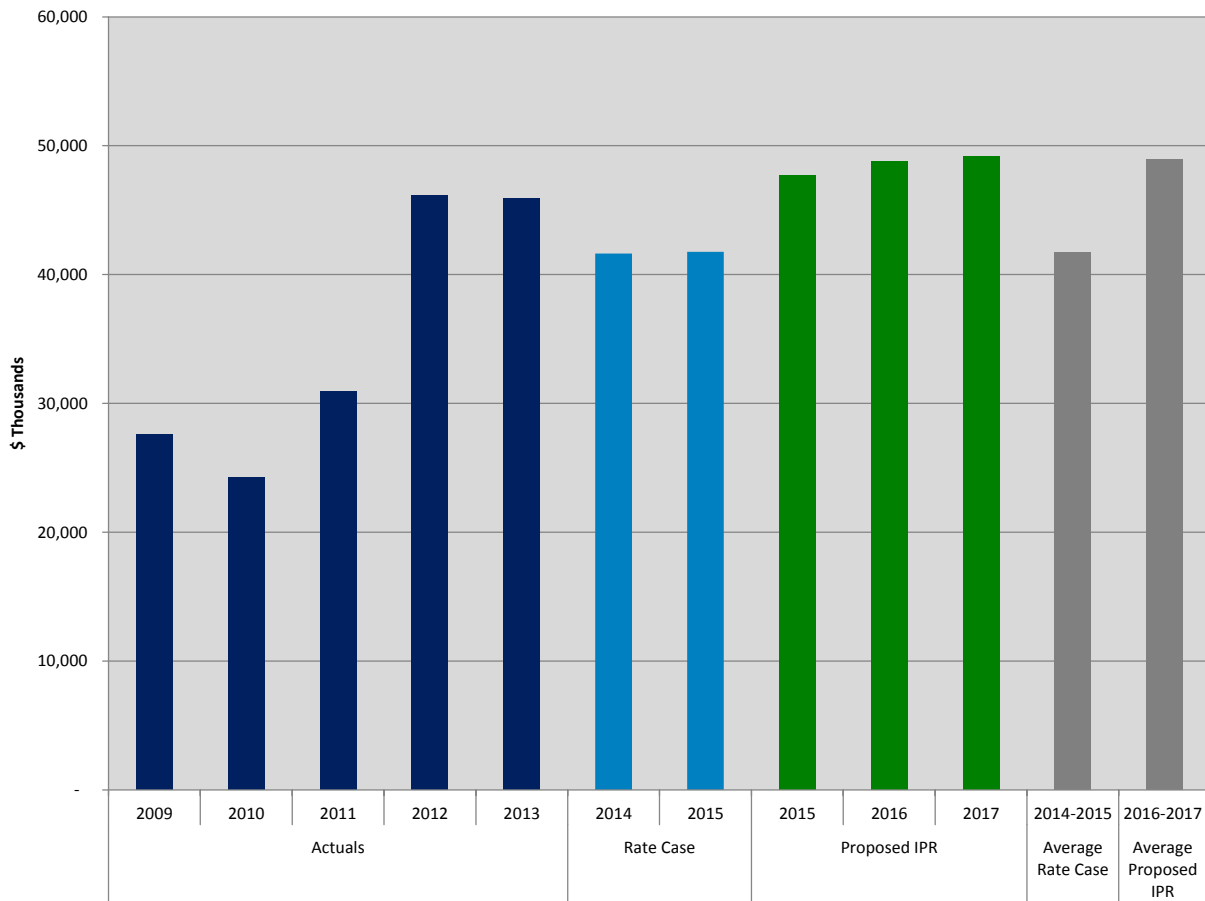
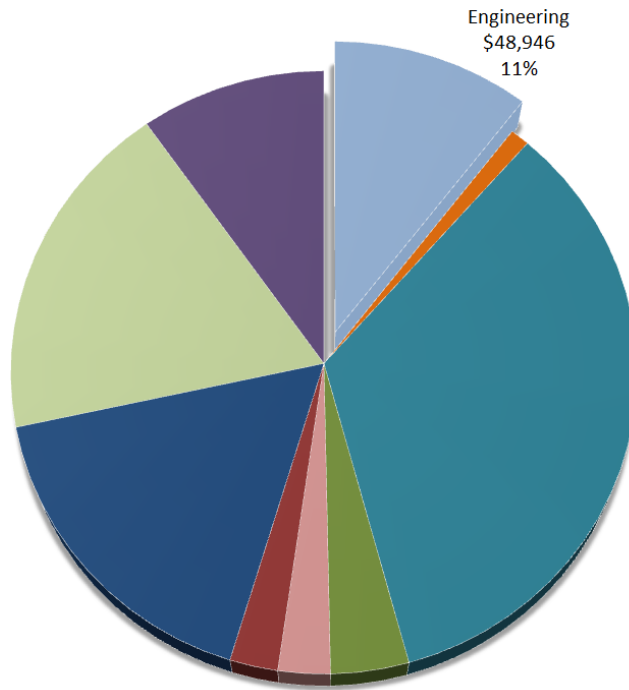
Non-Funded Items

The work of this organization is non-discretionary and required by federal regulation for all Transmission operations, maintenance and construction actions. Therefore, these activities can only be scaled back by scaling back or eliminating BPA Transmission operations, maintenance and construction actions.

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4.8 ENGINEERING

FY 2016-17 Average: Proposed IPR



Program Details

(\$ Thousands)	Actuals	Rate Case		Proposed IPR		
	2013	2014	2015	2015	2016	2017
Research and Development	6,657	7,782	7,940	9,452	9,522	9,555
TSD Planning and Analysis	16,060	14,013	13,289	15,934	16,486	16,738
Capital to Expense Transfers	7,068	4,124	4,202	4,247	4,307	4,351
NERC/WECC Compliance	13,056	12,015	12,561	14,331	14,636	14,654
Environmental Planning and Analysis	1,241	1,166	1,189	1,560	1,599	1,642
Engineering Line Rating	1,794	2,539	2,589	2,184	2,195	2,207
Grand Total	45,876	41,638	41,769	47,709	48,746	49,147

Description, Purpose and Responsibilities:

Research and Development: BPA's Technology Innovation (TI) initiative has an annual cycle of portfolio funding based on strategic needs identified in BPA's technology roadmaps. BPA's technology innovation projects include near, medium, and long-term projects undertaken to produce direct financial benefits to BPA and the region, and to address key technology needs associated with operational, market, regulatory, and environmental business challenges. The aim of BPA's TI program is to transform R&D into best practice applications that address BPA's most critical business challenges. BPA's Technology Innovation program has created nearly \$70 million in construction savings and other financial benefits to BPA and ratepayers; in 2013, its work in developing the most sophisticated synchrophasor array in North America earned BPA its first Platts Global Energy Award.

Transmission System Development - Planning and Analysis: Provides technical support and asset planning activities for the capital infrastructure program, such as Transmission system and asset planning studies in support of load service, transmission service, generation and line and load interconnection, reliability standards compliance, non-wires solutions, feasibility studies, pilot projects, grid modeling, asset replacement and potential system enhancement requirements. This also includes developing plans of service for system reinforcements.

Capital to Expense Transfer Program: When capital projects are initiated, they are analyzed by the Asset Accounting organization to ensure that they qualify for capital funding consistent with capitalization policies and written guidance in the Plant Unit Catalog. BPA's Investment Recovery Center (IRC) coordinates and manages the disposal of all BPA-owned equipment and inventory, in compliance with Federal law. They assist all BPA organizations in achieving the most efficient use of materials and equipment, and are responsible for recovering maximum value for materials and equipment that are either damaged or excess of BPA's needs.

NERC/WECC Compliance: The bulk of the funding for this sub-program supports staff resources for meeting NERC Orders 693, 706 and 761 for Critical Infrastructure Protection. This program addresses compliance with NERC and WECC mandatory standards, participation in the standards development process, implementing and maintaining compliance once standards are enacted, supporting annual NERC/WECC self-certification, and providing staff support for audits. This sub-program also includes costs for BPA's WECC and Peak Reliability dues, payments to WECC or Peak Reliability for Unscheduled Flow management, and Transmission Forum membership.

This program also includes funding for Sustainable Transmission that is Available and Reliable (STAR) sub-program, which was created to improve processes and procedures for commercial access to the Federal Columbia River Transmission System (FCRTS) that are also consistent with NERC ATC MOD reliability standards.

Environmental Policy and Planning: This organization provides comprehensive environmental planning and analysis guidance and direction for BPA's business decision-making, using state-of-the-art methods and tools, which ensures that all BPA activities undergo appropriate environmental analysis and compliance review in accordance with federal law. Environment-Pollution Prevention and Abatement provides this function for Transmission operation and maintenance activities; Environmental Planning and Analysis provides this function for all other Transmission projects, programs and activities, as well as all power projects, programs, and activities. Environmental Planning and Analysis also manages BPA's role in the FCRPS Cultural Resources Program undertaken jointly with the Army Corps of Engineers and the Bureau of Reclamation. BPA has delegated authority from the Department of Energy to undertake NEPA analyses and associated environmental compliance.

BPA's Engineering Line Rating program surveys BPA's entire 15,100-mile Transmission system to verify capacity ratings and performance.

Goals

Research and Development: The Transmission Technology Roadmap specifically addresses challenges facing BPA's high-voltage transmission system and its interactions with generation sources and the distribution systems of its customers. These challenges include planning, operational, and new technology integration, and are addressed through research into:

- Transmission system simulation tools, techniques and models
- Improved situational awareness — visualization tools, grid optimization (including synchrophasors)
- Data acquisition, transmittal, analysis and mining
- Transmission operations
- Power flow controls
- Transmission scheduling – shorter-durations Scheduling, outage and congestion management
- Changing generation resources — integration of variable resources, wind modeling
- End use (customer/utility) devices.

TSD Planning & Analysis: Comply with NERC reliability standards by achieving the following goals:

- Perform planning studies and develop plans of service to accommodate load growth and firm Transmission service obligations
- Develop Available Transfer Capability (ATC) base cases to comply with NERC MOD standards. Address pending Transmission Service Requests (TSR) by developing base cases to determine the existing ATC for long-term TSR
- Continue improving the Transmission asset management program through the development of integrated strategies and supporting tools
- Accurately assess long-term Transmission system needs to identify Transmission construction and reinforcement projects to support BPA business, policy and compliance, and reliability objectives
- Determine short-term and long-term Transmission capacity inventories
- Conduct periodic Network Open Seasons (NOS) and cluster studies to determine the impacts of Transmission service requests and identify Transmission reinforcements needed to accommodate the requests.

Capital to Expense Transfer Program: Conduct annual analysis of BPA's outstanding capital work orders to assess whether they should be expensed. As obsolete inventory is identified and disposed of, it is expensed to this program.

NERC/WECC Compliance: Goals of this sub-program include:

- Achieving and maintaining compliance through analysis of new and revised standards
- Analyzing equipment, tool, system, and process needs to achieve and maintain compliance
- Maintaining awareness of constantly-changing regulatory requirements and improving compliance-related analytical capabilities.

Environmental Policy and Planning: To facilitate environmental and cultural resources protection and compliance through integration of environmental considerations in BPA decision-making, and through timely development and completion of all analysis and documentation required under federal environmental and cultural resource laws. Environmental Planning and Analysis also provides environmental strategies for BPA programs and policies, and training to help BPA staff remain current with the rapidly-changing federal environmental compliance landscape.

Engineering Line Rating: The ELR program is using data from the ongoing LiDAR survey project to gather information about existing Transmission facilities to validate BPA's Line Rating Catalog through field observations and data. One purpose of that analysis is to identify sections of the Transmission system where additional capacity can be achieved through system improvements. Because factors such as vegetation growth and human construction (roads, structures) have changed in the 70+ years since BPA's Transmission system was initially constructed, another goal of the ELR program is resurveying all Transmission lines to ensure that minimum ground clearance standards are met, protecting public safety and system reliability. Finally, the ELR data will be used to ensure that BPA is in compliance with the 2010 NERC Current Field Conditions alert requiring all Transmission providers to verify their line rating catalog through field observations and data.

Near-Term Strategies

TSD Planning and Analysis: This organization's near-term strategies include:

- Perform system assessments to meet the NERC reliability planning standards. This includes studies for the near-term and long-term planning horizons to assess system performance and develop corrective action plans required to meet firm obligations (including load growth and firm transmission service)
- Perform cluster studies to determine the system expansion needed to address long-term Transmission service requests as part of the NOS process
- Conduct BPA's Regional Transmission planning coordination /process (Attachment K Process, participation in study teams or WECC rating process)
- Perform studies to reliably integrate new generation and new lines/loads into the BPA Transmission system
- Complete the Asset Management Strategy Total Economic Cost Modeling work. Continue to improve asset management planning life cycle processes, system, and data requirements.

Environmental Policy and Planning: Increase staffing and support levels to keep pace with a significant increase in environmental compliance workload associated with BPA activities, particularly for Transmission infrastructure needs. The number of major environmental analyses (Environmental Assessments (EA) and Environmental Impact Statements (EIS) the organization has underway has nearly tripled over the past five years, from about fifteen in FY 2010 to forty in FY 2014. Without additional environmental and cultural compliance staffing resources, BPA faces significantly greater risk associated with compliance violations, missed project deadlines, and mitigation costs. Strategies to achieve this sub-program's near-term goals include:

- Coordination and communication with Transmission planning and design staff to ensure that environmental considerations are integrated early in the process

- Effective utilization of contract resources (both supplemental labor and external consultants) to increase flexibility and cost-effectiveness; and
- Training for transmission project and program staff to increase awareness and consideration of environmental analyses in business practices.

Long-Term Objectives

Environmental Policy and Planning: The long-term objectives in support of BPA's environmental stewardship include: continued efforts to integrate environmental considerations as early as possible in BPA decision-making, developing programmatic tools as well as greater adaptation of information technology to make environmental processes more streamlined and more accessible to the public and customers

New Projects

NERC/WECC Compliance: With respect to BPA's Available Transfer Capability (ATC), BPA's available transmission inventory, this sub-program is developing a process improvement project to better integrate the efforts of multiple transmission organizations. In addition, the sub-program is now responsible for compliance work associated with Optical Multi-Gigabit Ethernet Transport (OMET) and synchrophasors, the expanded suite of control center cyber-assets to be covered under NERC CIP version 5, and maturing BPA's compliance response to all other standards, and for Peak Reliability dues.

Changes from 2012 IPR

Transmission System Research and Development: Minor accounting adjustments were made between programs to better align staff work with the appropriate program.

NERC/WECC Compliance: The STAR sub-program is focused on meeting WECC compliance requirements by August 2015 and thereafter. Other changes are focused on the implementation of the CIP Version 5 program

Engineering Line Rating: Initial LiDAR field data collection is expected to be complete by the end of FY 2014, although additional survey work may be needed in the out-years. The LiDAR data will be processed through engineering models to optimize system configuration and identify any ground clearance issues or potential additional capacity. The analytical phase of this work will continue through FY 2016. Design and construction of any required system upgrades or modifications will continue through at least FY 2021.

Risks of Operating at Levels below the Proposed Spending Levels

Research and Development: While this organization has committed to operate at the spending levels, it has never received its originally-budgeted funding level (0.5 percent of BPA's gross forecasted revenues). Benefits associated with increasing BPA's R&D spending level to that level include risk mitigation for the integration of wind resources, seismic and other extreme events, invasive species such as quagga mussels, and meeting Northwest Power Planning and Conservation Council energy efficiency targets. Potential benefits include construction savings, improved understanding of wind ramp events, synchrophasor applications for wide area control and oscillation damping, and smart grid-related research, all of which are key components of BPA's research portfolio.

TSD Planning and Analysis: The largest potential impact of reduced funding for this sub-program is decreased ability to support the capital infrastructure program by identifying and developing plans of service for needed Transmission reinforcements, which could lead to NERC and FERC compliance issues. This loss of capability to support capital infrastructure could result in under- or over-investment in BPA's Transmission system. Under-investment would aggravate existing congestion issues, with the potential for curtailments and unserved load, while over-investment would impact transmission rates.

NERC/WECC Compliance: Regulators can direct BPA to take action on an accelerated schedule if non-compliance is found, which could have unanticipated financial impacts when full implementation is required.

Environmental Policy and Planning: Operating below proposed spending levels could delay the implementation of BPA Transmission and Power activities due to insufficient staff to review and screen projects for environmental and cultural resource compliance. Failure to comply with federal regulations exposes BPA to serious legal/litigation risks.

Engineering Line Rating: Reduced funding for this sub-program could detrimentally impact BPA's ability to complete the initial phase of the LiDAR survey work increasing the likelihood that BPA will be out of compliance with the 2010 NERC alert. Other potential risks include the risk to Transmission system reliability and public safety from failure to identify facilities that are out of compliance with current ground clearance standards, as well as lost opportunity to increase system capacity by identifying lines and facilities whose ground clearance exceeds the data in BPA's line rating catalog.

Challenges/Constraints

Research and Development: BPA and the utility industry in general, lag far behind other industries in terms of R&D spending as a percentage of revenue. Other challenges include pressure to de-fund projects before they can show definitive results, and deciding which emerging technologies limited resources should be focused. The need to assess the potential compliance implications of new technologies is another challenge.

Transmission System Development - Planning and Analysis:

- NOS Program demands
- Development of Dynamic Transfer Capability and Energy Imbalance Markets
- Compliance with new and changing regulatory requirements including FERC orders and NERC reliability standards
- Increasing responsibility for regional coordination with other Transmission planning entities and planning coordinators including cost allocation under FERC Order 1000
- Changing usage of capacity on the BPA Transmission system creates challenges for modeling, studies and identifying reinforcements to optimize flexibility.

Capital to Expense Transfer Program: Challenges and constraints affecting this program include emergency repair of damage to minor equipment units, aging transmission equipment, and the fact that preliminary engineering work orders are issued to collect costs associated with specific preliminary planning, system study, and design activities. If a project is cancelled, these charges will be expensed to this program.

NERC/WECC Compliance: The dynamic regulatory environment, and limited staff and system tool resources to support these crucial compliance functions, is the primary constraint faced by the NERC/WECC Compliance program.

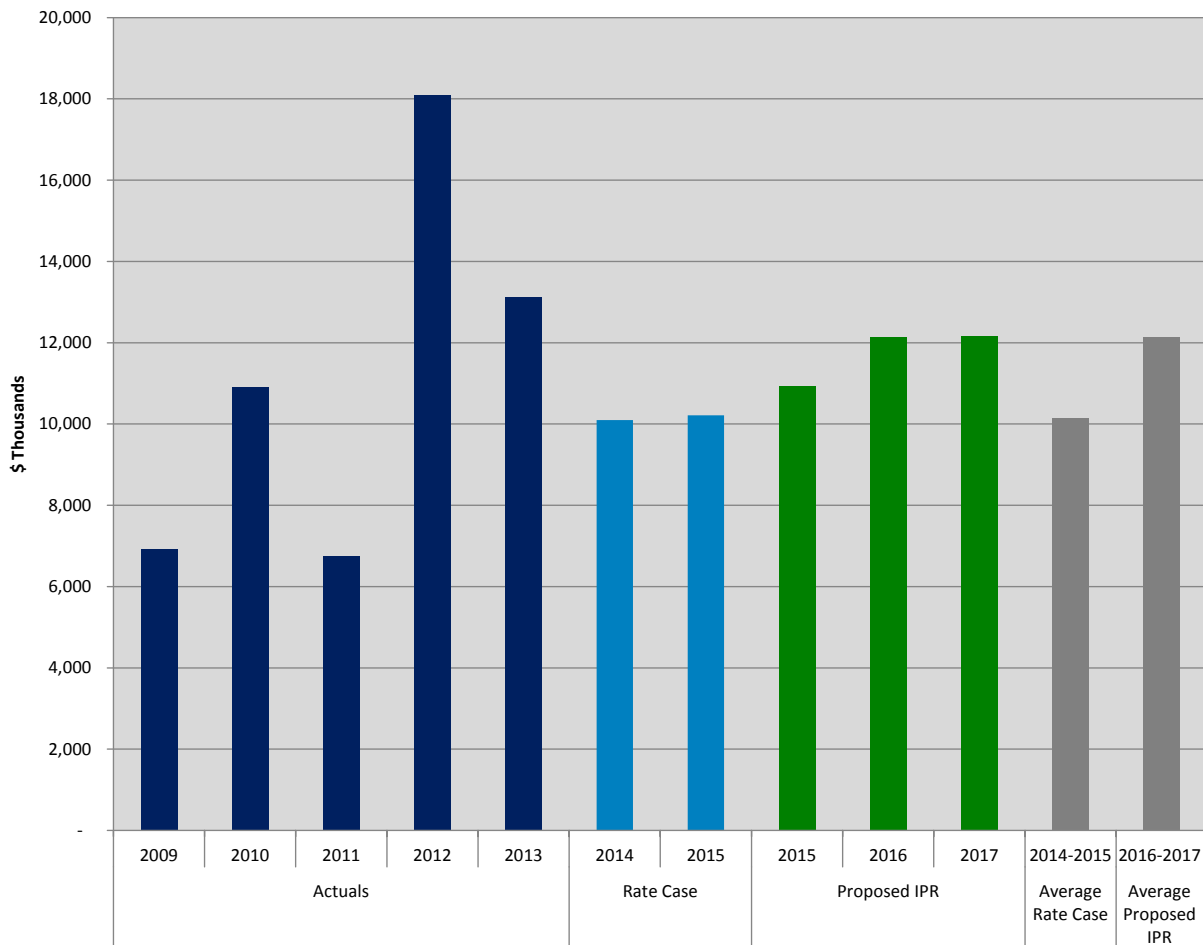
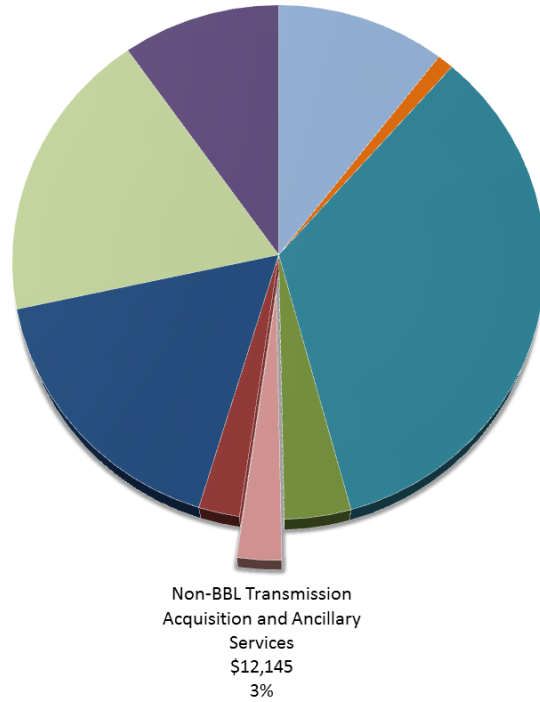
Environmental Policy and Planning: While Environment Policy and Planning's major compliance workload (the production of EISs and EAs) has nearly tripled since the end of FY 2010, staffing levels have not kept pace. Without additional staff and related support, EP&P will be unable to maintain BPA's basic environmental compliance responsibilities, let alone take on new or broader initiatives (such as additional programmatic environmental analyses to address large-scale BPA program areas, or other strategic or innovative measures).

Engineering Line Rating (ELR): Access to the necessary computer hardware and software – the data collection and analysis associated with ELR require significant IT resources. There may also be public safety issues that need to be resolved, in cases where safety issues, such as a lack of ground clearance, are discovered.

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4.9 NON-BETWEEN BUSINESS LINE (NON-BBL) TRANSMISSION ACQUISITION AND ANCILLARY SERVICES

FY 2016-17 Average: Proposed IPR



Program Details

(\$ Thousands)	Actuals	Rate Case		Proposed IPR		
	2013	2014	2015	2015	2016	2017
Leased Facilities	3,968	4,258	4,338	7,447	7,447	7,447
Settlement Agreements	5,569	516	525	18	18	18
Non-Between Business Line Ancillary Services	3,417	4,285	4,285	3,360	3,360	3,360
Transmission Renewables	162	1,037	1,063	100	1,313	1,328
Grand Total	13,116	10,096	10,212	10,924	12,138	12,153

Description, Purpose and Responsibilities

Leased Facilities: The Leased Facilities sub-function negotiates and administers agreements covering the lease of customer-owned Transmission lines, substations, and equipment (including related expenses) needed to provide reliable service on BPA's Transmission network.

Settlement Agreements: This sub-program is responsible for the administration of Transmission-related settlement agreements reached through BPA's dispute resolution process. Settlements are required due to equipment disruptions, transactional errors and contractual disputes. Key products and outputs include TS settlements paid to customers.

Non-Between Business Lines (Non-BBL) Ancillary Services: BPA provides Ancillary Services to support the transmission from resources to loads to maintain transmission system reliability. Non-BBL ancillary services are provided by a customer other than BPA Power Services: contingency energy deliveries, non-federal redispatch, stability reserves, non-federal Variable Energy Resource Balancing Service (VERBS) reserve acquisitions, and settlement actions for Avista parallel capacity support.

Transmission Renewables: This sub-program includes BPA initiatives designed to optimize use of the Transmission system and necessary support services through improved wind forecasting and more flexible scheduling capabilities, and the integration of additional resources to provide additional balancing reserve services to support BPA's Ancillary and Control Services Balancing Reserve acquisition policies, as well as third-party reserve and self-supply initiatives.

Goals

Leased Facilities: Create lease agreements and other costs of transmission, when such arrangements are feasible, cost effective, and least-cost to deliver power. Proactively manage lease arrangements to develop long-term strategies. This sub-program provides customer service, oversight and internal audit services to ensure the continued operational soundness and cost effectiveness of these agreements.

Settlement Agreements: The goal of the Settlement Agreements sub-program is to make timely payments to customers in the event a settlement is reached. Its near-term strategy is to minimize BPA's exposure to settlements.

Non-BBL Ancillary Services: The goal of the Ancillary Services sub-program is to efficiently provide the voltage support, scheduling, dispatch and other services necessary to maintain the reliability of BPA's Transmission grid. Ancillary Services' near-term strategies are focused on the efficient management of the resources needed to support the reliability of BPA's Transmission grid. They include:

- The cost-effective acquisition of VERBS capacity and energy from non-federal providers in accordance with the 2014-2015 Rate Case Settlement terms

- Ensuring that key Transmission reliability support services, including contingency energy delivery, stability reserves, and non-federal redispatch, are available when needed by BPA.

Transmission Renewables: This program includes BPA initiatives designed to optimize use of the Transmission system and support services through improved wind forecasting, more flexible scheduling capabilities, and integration of additional balancing reserve services, as well as third-party reserve and self-supply initiatives. BPA will continue to implement these initiatives, including improvements that allow market participants to make shorter-term purchases of balancing capacity to meet their variable energy resource needs. BPA and the region are exploring and developing additional processes and initiatives through the Northwest Power Pool (NWPP) Market Assessment and Coordination (MC) initiatives. This sub-program also includes BPA's participation in the Dispatcher Standing Order (DSO) 216 reserve management, Customer-Supplied Generation Imbalance (CSGI) reserve self-supply, intra-hour scheduling, and Enhanced Supplemental Service Systems Development processes.

Changes from the 2012 IPR

Leased Facilities: Beginning in FY 2015, BPA's lease payment obligations will increase significantly over this sub-program's 2012 IPR level. The change is due to moving the various settlement payments from the Ancillary Services program into this program.

Non-BBL Ancillary Services: This sub-program is responsible for the acquisition of VERBS capacity and energy acquisition needs in accordance with the FY 2014-15 Rate Case Settlement terms. These include resources in excess of the 900 MW Federal Columbia River Power System (FCRPS) VERBS capacity provided by BPA Power Services.

Transmission Renewables: This sub-program has undertaken the following new initiatives and programs since the conclusion of the 2012 IPR:

- Enhanced Supplemental Service (Third-Party Supply): Allows market participants to make shorter-term purchases of balancing capacity to meet their variable energy resource balancing needs
- Balancing Reserve Acquisition Decisions and Visibility: Developing and improving systems to facilitate acquisition of third-party-supplied balancing reserves by BPA and customers
- Dynamic Transfer: Implementing systems and process functionality to allow dynamic transfer and dispatch of resources in-hour
- Support for the wind integration initiatives.

Risks of Operating at Levels below the Proposed Spending Levels

Leased Facilities: Leased facilities payments are contractually obligated; most are long-term commitments. The risk of underfunding this program is inability to meet BPA financial obligations.

Settlement Agreements: Settlements are non-discretionary. Non-payment entails significant legal risk to BPA.

Non-BBL Ancillary Services: The services provided by this organization are integral to the reliable operation of BPA's Transmission grid, and are non-discretionary. Reduced funding for Ancillary Services could detrimentally impact the reliability of the Transmission grid and BPA's ability to meet its customers' Transmission needs. Higher-than-expected demand for variable energy balancing services could erode BPAT financial reserves more quickly than anticipated, resulting in increased financial risk to BPA.

Transmission Renewables: Wind resource development intensifies regional demand for balancing reserves. The FCRPS is approaching the limit of its balancing reserve supply capability. Curtailment of funding or FTE support for the Transmission Renewable program will limit BPA's ability to develop alternatives for the increasing demand for balancing services. Reducing the level of service BPA provides to wind parties could hamper renewable generation development in BPA's BAA and the region.

Challenges/Constraints

Leased Facilities: The challenge is forecasting potential new lease requirements and opportunities.

Settlement Agreements: This sub-program has two main challenges – forecasting the need for future settlements, and minimizing BPA's risk which may result in the need for a settlement in the future.

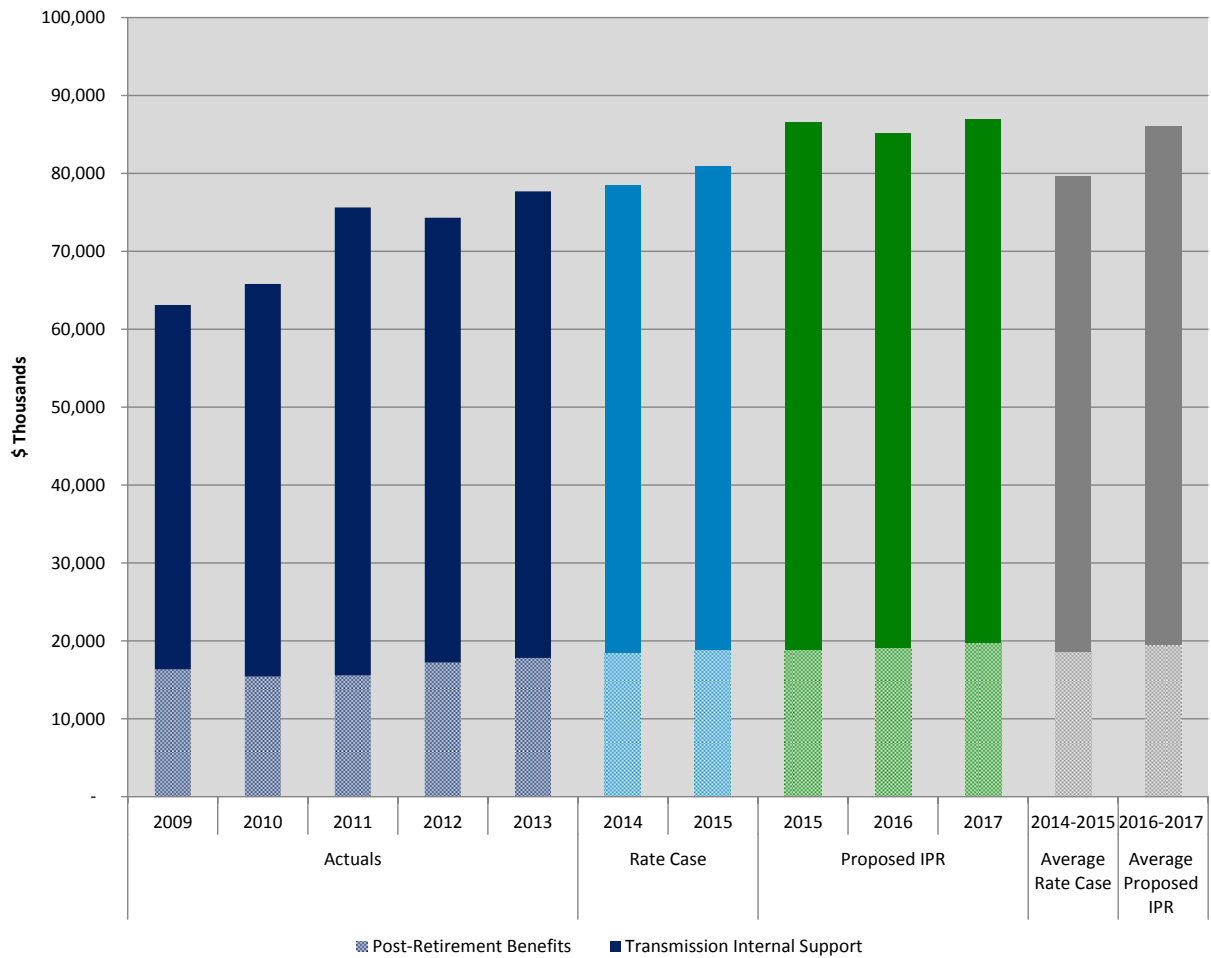
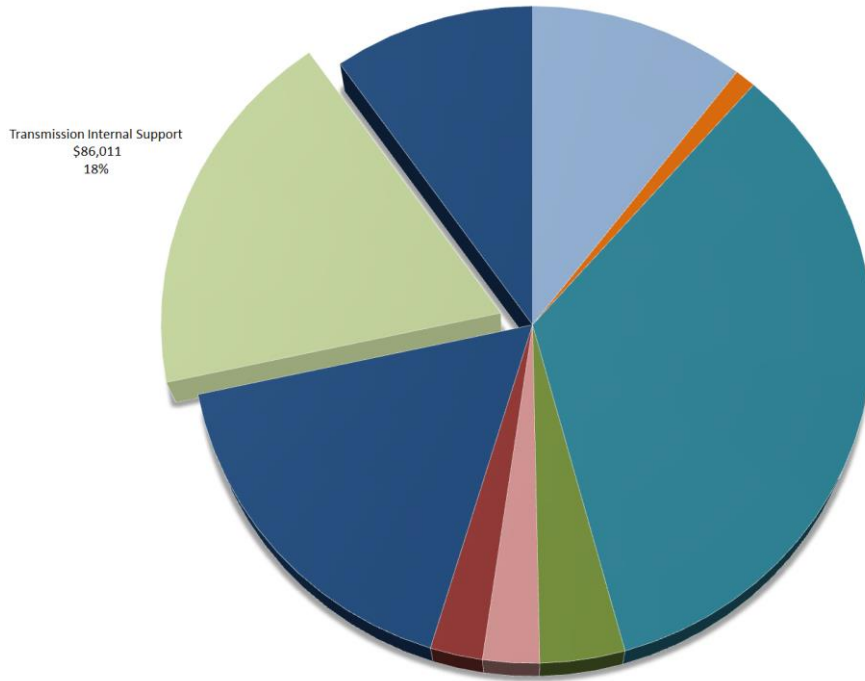
Non-BBL Ancillary Services: Challenges and constraints facing the Ancillary Services program include

- Monitoring and anticipating the balancing needs of a rapidly-changing variable energy generation landscape
- The need to anticipate and respond effectively to volatility in price and availability of balancing capacity in the future.

Transmission Renewables: Staffing for wind integration initiatives is supplied by both Transmission Services and Power Services, and competes with staffing demands for other high-priority and regional projects and initiatives.

4.10 TRANSMISSION INTERNAL SUPPORT

FY 2016-17 Average: Proposed IPR



Program Details

Corporate Programs Recovered Directly Through Transmission Services

(\$ Thousands)	Actuals	Rate Case		Proposed IPR		
	2013	2014	2015	2015	2016	2017
Additional Post-Retirement Benefits	17,820	18,501	18,819	18,819	19,143	19,748
Transmission Internal Support	59,868	59,927	62,083	67,750	65,963	67,167
Grand Total	77,689	78,428	80,902	86,569	85,106	86,915

Description, Purpose and Responsibilities

Internal support consists of two separate programs, Additional Post Retirement Benefits Contributions and Agency Services General and Administrative. The Internal Support program is included in both the Power and Transmission revenue requirements. Since the program is the same for each business unit, the full narrative is captured in the [Power Internal Support section](#).

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AGENCY SERVICES



5.1 AGENCY SERVICES OVERVIEW

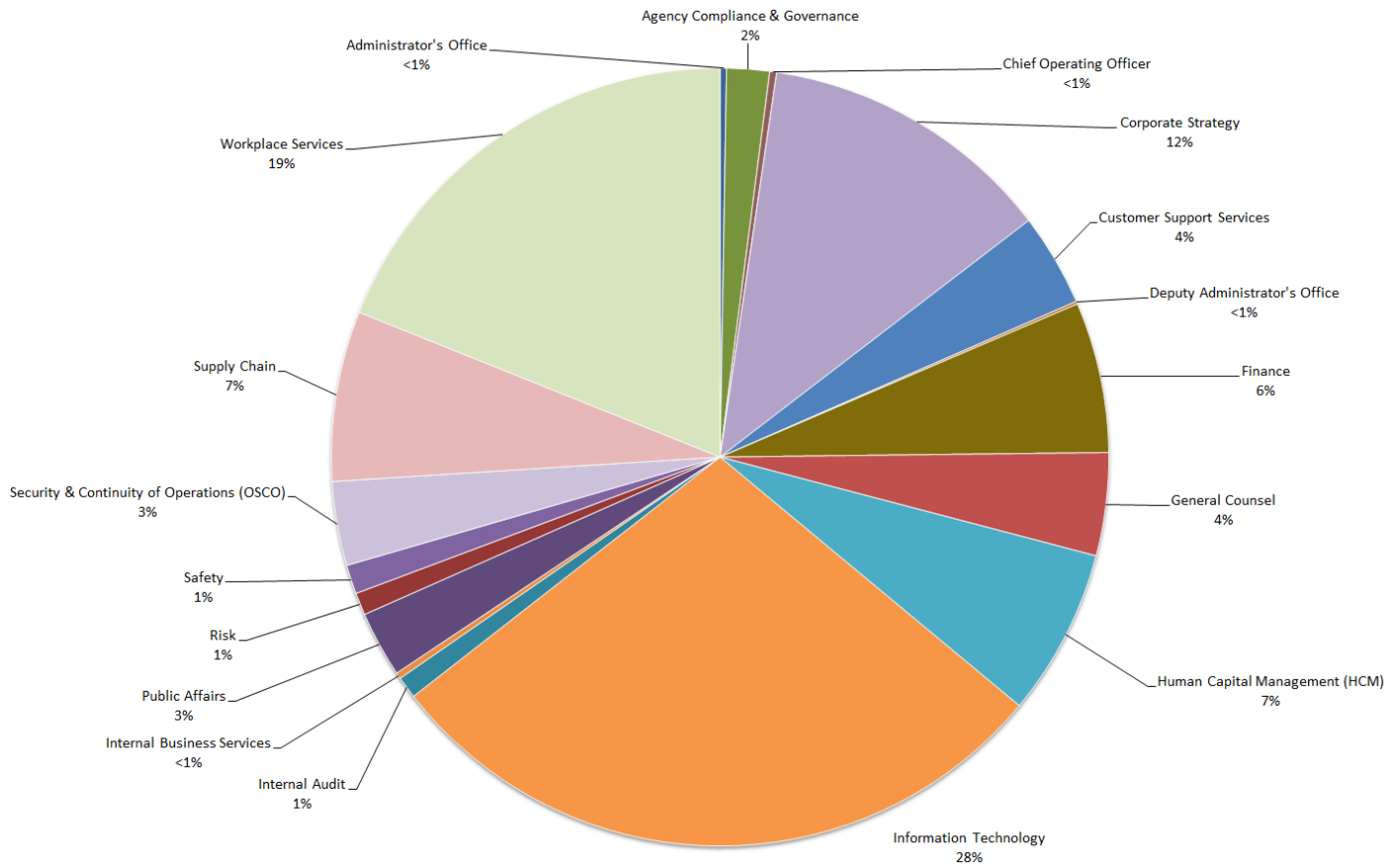
Agency Services is the term used to refer to all of the corporate organizations. These organizations provide benefits to Power and Transmission and their costs are ultimately covered by Power and Transmission rates. As described earlier, corporate organizations can directly charge into Power and Transmission operations and maintenance programs, if there is a direct benefit to the program. However, other costs are shared costs and are allocated to Power and Transmission Services via the Agency Services G&A and Business Support cost pools.

In this section of the report, the Agency Services organizations have provided information about the products and services they provide to Power and Transmission Services.

In FY 2013, the Agency Services proposed spending level was \$263 million. Actual expenses for the year were \$251 million, 95 percent of the proposed spending level.

	2012 Final IPR	2014 Proposed IPR
	FY 2011 Actuals to FY 2015 Final IPR	FY 2013 Actuals to FY 2017 Proposed IPR
Overall 5-Year Change	21.1%	19.2%
Compound Annual Growth Rate	4.9%	4.5%

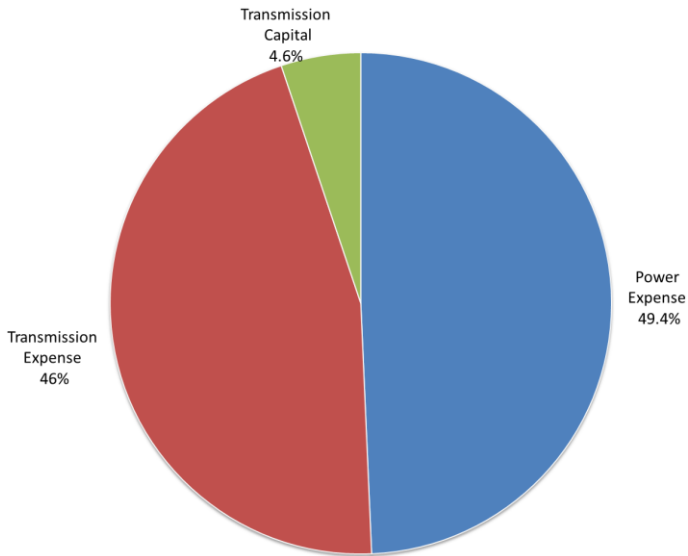
FY 2016-17 Average: Proposed IPR



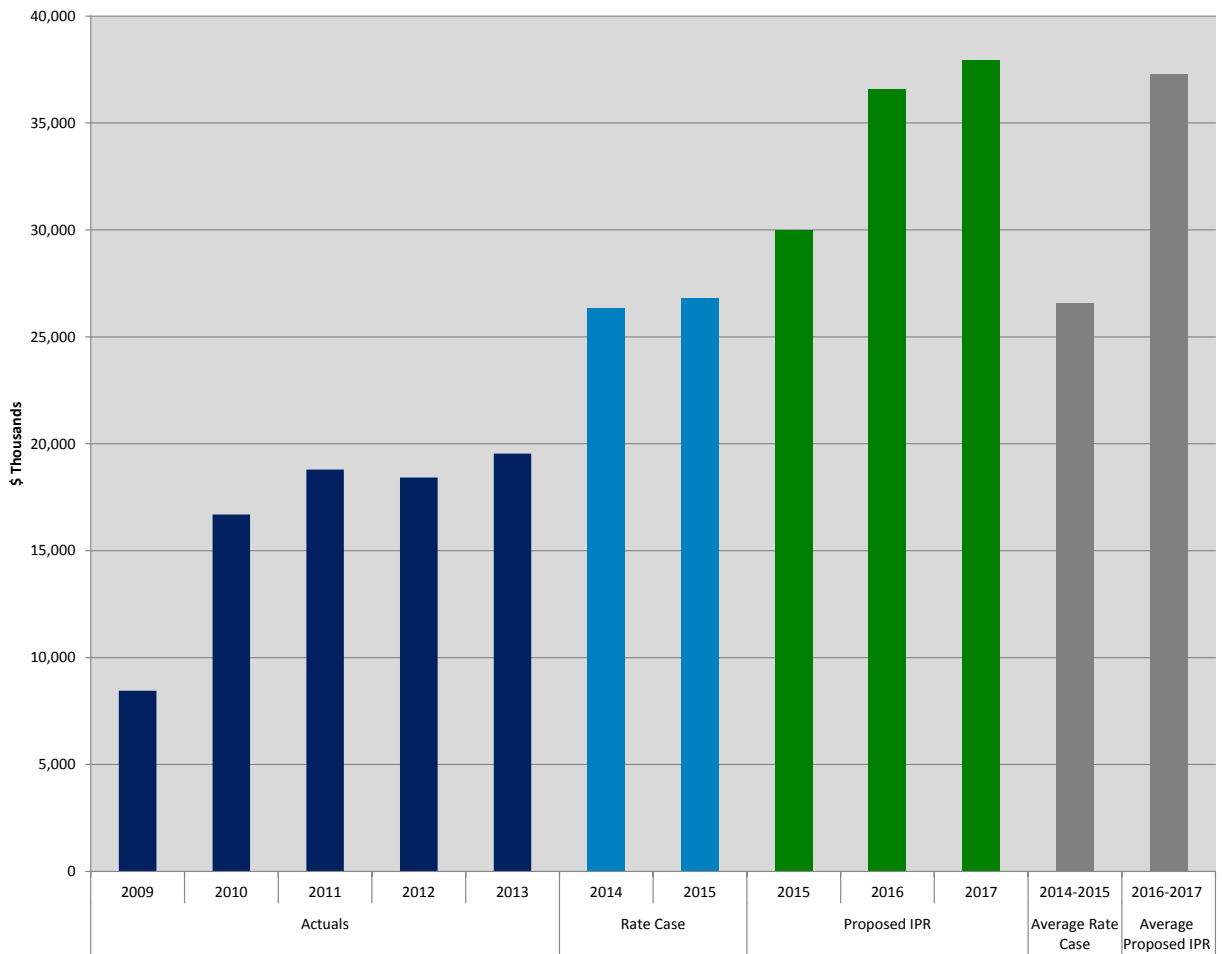
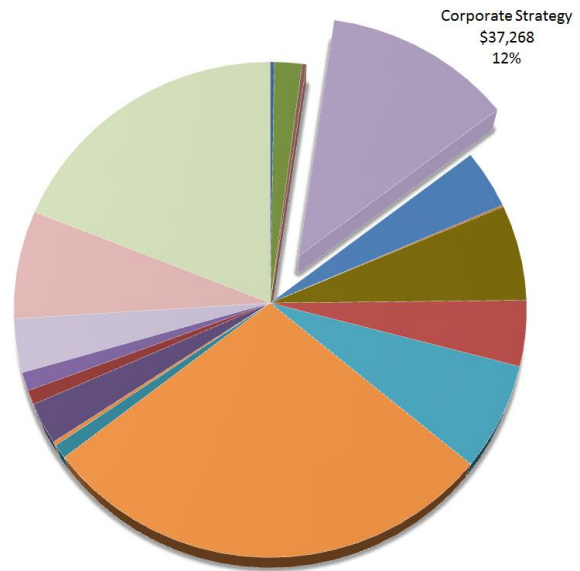
(\$ Thousands)	Actuals	Rate Case		Proposed IPR		
	2013	2014	2015	2015	2016	2017
Administrator's Office Total	699	829	850	773	791	809
Chief Operating Officer	2,252	896	916	855	870	885
Customer Support Services	10,259	11,312	11,599	11,193	11,560	11,845
Chief Operating Officer Total	12,510	12,208	12,515	12,048	12,431	12,730
Corporate Strategy Total	19,538	26,357	26,801	29,979	36,603	37,933
Agency Compliance & Governance	4,407	5,042	5,153	4,888	5,298	5,492
Deputy Administrator's Office	237	257	263	341	347	354
Internal Audit	2,517	2,667	2,735	2,652	2,756	2,817
Public Affairs	7,461	8,236	8,444	7,779	8,218	8,416
Risk	2,325	3,010	3,085	2,770	2,789	2,861
Deputy Administrator's Total	16,947	19,210	19,681	18,430	19,408	19,939
Finance Total	15,817	17,083	17,495	17,814	18,739	19,292
General Counsel Total	10,544	13,194	14,028	13,491	12,760	13,210
Information Technology Total	76,515	79,023	83,224	83,791	85,961	86,831
Human Capital Management (HCM)	19,316	20,208	20,265	20,543	20,867	21,343
Internal Business Services	328	1,160	1,183	759	774	793
Safety	2,719	2,936	3,006	3,343	3,628	3,697
Security & Continuity of Operations (OSCO)	9,482	11,075	11,440	10,304	10,525	10,711
Supply Chain	17,587	19,348	19,636	20,751	21,284	21,685
Workplace Services	49,150	53,598	54,659	55,947	56,955	58,101
Internal Business Services Total	98,583	108,325	110,190	111,647	114,033	116,330
Undistributed Reduction		(770)	(875)		(7,600)	(7,600)
Grand Total	251,153	275,460	283,910	287,973	293,126	299,475

5.2 CORPORATE STRATEGY

Allocation Distribution



FY 2016-17 Average: Proposed IPR



Program Details

(\$ Thousands)	Actuals	Rate Case		Proposed IPR		
	2013	2014	2015	2015	2016	2017
Agency Services G&A Allocations	10,974	15,012	15,226	16,966	23,581	22,840
Power Direct Support	5,186	5,816	5,936	6,028	6,033	7,673
Transmission Direct Support	3,378	5,529	5,640	6,985	6,989	7,420
Grand Total	19,538	26,357	26,801	29,979	36,603	37,933

Description, Purpose and Responsibilities

BPA’s Corporate Strategy organization works with internal and external stakeholders to ensure BPA has a clear vision and corresponding strategies that are robust and actionable. Given the rapid change in today’s industry environment, BPA must anticipate future challenges and stay well-informed by market intelligence and policy analysis of its strategies – and the actions BPA takes as an agency – are on the mark. The following four teams make up the Corporate Strategy organization.

The BPA Strategic Planning team works with BPA’s executive leadership to develop the agency’s long-term Strategic Direction, including the Agency Strategic Objectives, supporting multi-year strategies and Key and Cross Agency Targets and the targets of the business unit balanced scorecards. This organization also has responsibility for planning, directing and managing the Agency Asset Management program.

The BPA Strategy Integration team develops and coordinates the management of specific cross-agency strategic initiatives in anticipation of, or in response to, developments affecting BPA and the electric power industry. These include renewable resource integration, climate change, integrated resource and transmission planning, and balancing market development.

Bonneville’s Technology Confirmation/Innovation organization focuses the Agency’s technology initiatives in a coherent and disciplined approach and aligns them with BPA’s strategic objectives. The Chief Technology Innovation Officer leads development and management of the agency strategy for how BPA researches, develops, demonstrates and deploys new technologies.

The BPA Strategy Execution function delivers a platform for sustainable continuous improvement, and identification of performance metrics to benchmark based upon: agency-level strategy, key performance measures, peer comparators, and business unit commitments. It employs industry best practices on proven quality management systems and process improvement tools to help managers and employees pursue Operational Excellence.

Goals

Provide timely and relevant industry intelligence to develop strategies and policies to support achievement of BPA’s business objectives.

Drive excellence in agency-level performance management toward accomplishment of BPA’s strategic priorities through development of clear, measurable Key Agency Targets and Cross Agency Targets, and timely, accurate, and transparent progress reporting.

Continuously improve agency asset strategy (Transmission, Federal Hydro, Facilities, IT, Energy Efficiency, and Environment, F&W) development and implementation.

Define and execute BPA’s renewable resource integration and balancing reserve strategy.

Continue to drive the technology innovation research agenda and actively manage the technology portfolio to maximize the value of FCRPS assets.

Evaluate and prepare for the physical and legislative impacts of climate change.

Develop a sustainable strategy for meeting the long-term balancing requirements of the BPA Balancing Authority in a fashion that honors the non-power constraints on the Federal hydrosystem and BPA's statutory obligations.

Promote and mature Operational Excellence as a foundational value in the agency reinforcing its importance and visibility at all levels to improve performance through quality process management.

Risks of Operating at Levels below the Proposed Spending Levels

Technology Innovation: Research and Development funding is always a challenge, particularly in difficult economic times. Funding constraints put added pressure on BPA to de-fund projects before they can show definitive results, deciding which emerging technologies on which to focus the limited resources, and the possibility of loss of co-funding from external partners. The need to assess the potential compliance implications of new technologies is another challenge.

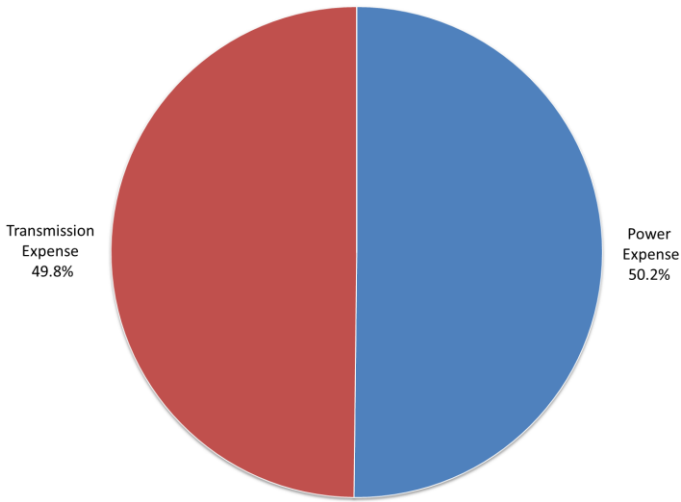
Strategy Integration: The Strategy Integration group holds the contracts with several regional entities (e.g. NWPP and Columbia Grid) in which BPA is a member. The increase in costs compared to the prior rate case is due primarily to increased workload associated with these contracts. Not being a part of these regional issues leaves BPA at risk of not benefiting from regional efficiencies and collaboration with others in these forums.

The increase primarily supports the Northwest Power Pool Market Committee work that the region is advancing at the moment. The projected increase reflects the estimated costs of supporting a market operator as well as the internal costs of supporting these activities. The risks of not funding this includes not helping design and receive the benefit of some of the reliability platforms currently being built, not helping shape key regional policy decisions that impact the hydro system and not helping shape a regional solution to a greater maximization of existing resources for balancing needs.

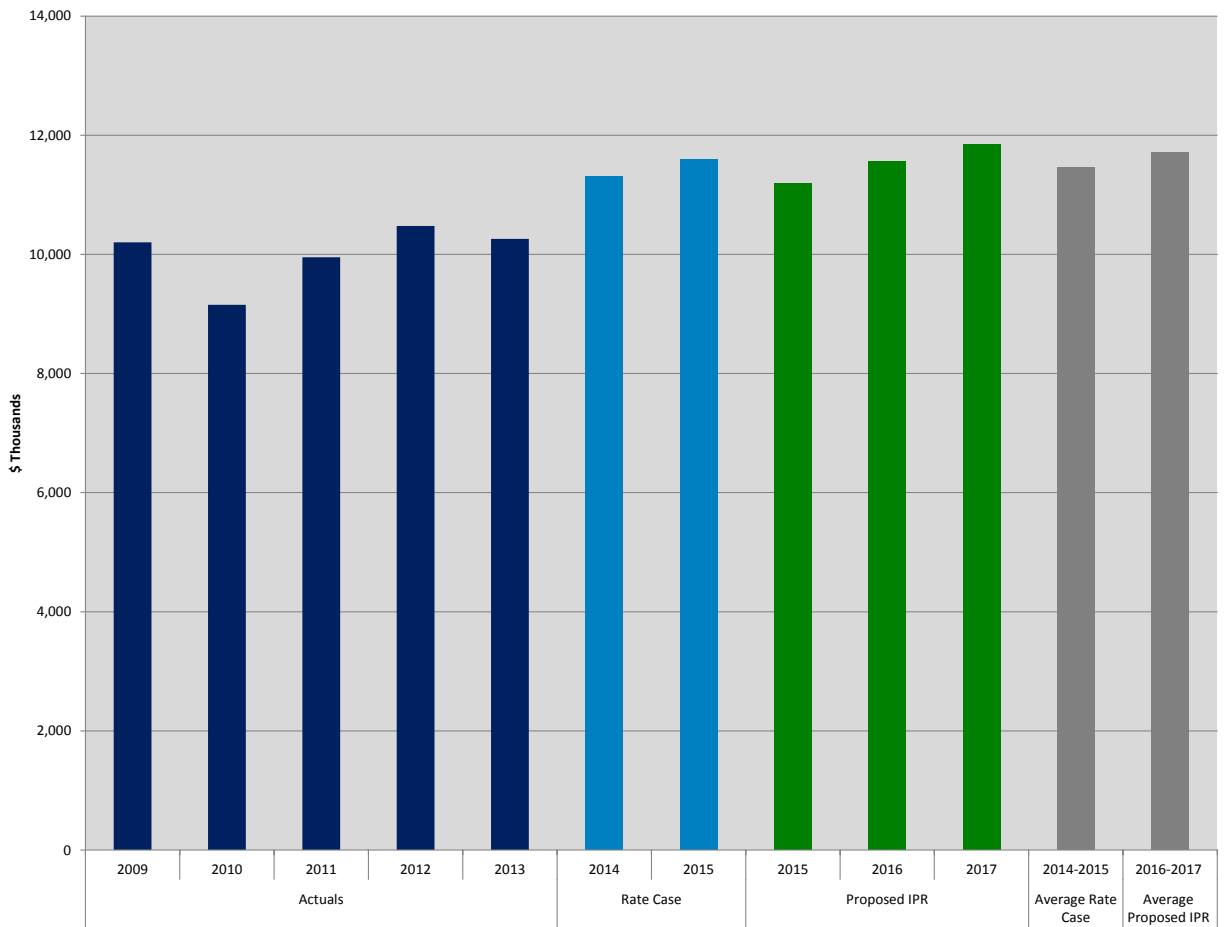
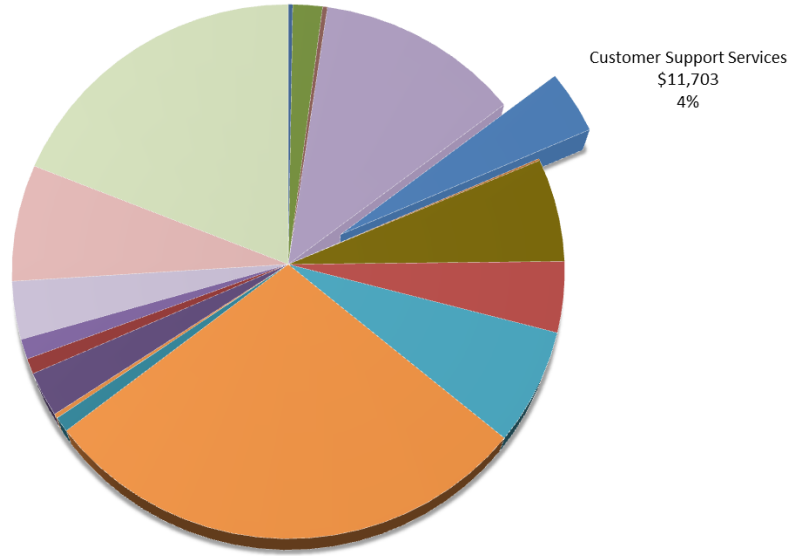
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5.3 CUSTOMER SUPPORT SERVICES

Allocation Distribution



FY 2016-17 Average: Proposed IPR



Program Details

(\$ Thousands)	Actuals	Rate Case		Proposed IPR		
	2013	2014	2015	2015	2016	2017
Agency Services G&A Allocations	10,247	11,312	11,599	11,193	11,560	11,845
Power Direct Support	11	0	0	0	0	0
Grand Total	10,259	11,312	11,599	11,193	11,560	11,845

Description, Purpose and Responsibilities

Customer Support Services (CSS) provides all agency load forecasts, customer bills, and oversees revenue metering services and contract administration. CSS’ quality Information Technology (IT) systems are critical to its work with responsibilities for overall business management and operation, data stewardship, and integration with other customer service IT systems. CSS provides core business services and leadership central to the customer experience while meeting marketing and sales back office governance requirements. It interfaces and works closely across the front office business organizations of Power and Transmission.

Goals

- Implement agency mission objectives through a holistic execution of back office functions.
- Complete enhancements in CSS IT systems to maximize benefits to BPA and customers, such as the Customer Portal.
- Implement a cross-functional data quality management program to foster continuous improvement, ensure data and information is accurate and up-to-date, and minimize manual and duplicate data inputs.
- Train and develop staff to consistently deliver high quality results as well as broaden and deepen staff understanding of BPA’s business relationships.
- Implement benchmarking, metrics, and corrective action programs to propel operational excellence.
- Raise awareness in Agency strategic initiatives and business and market trends such that CSS can assess impacts and respond in a timely manner to the changing energy landscape.

Changes from the 2012 IPR

A coordinated data quality management program was developed to ensure accuracy of customer information and enhance cross-functional knowledge for its related IT systems. CSS is implementing five new IT system phases this year, Customer Portal (CP), Customer Contract Management (CCM), Customer Billing Center (CBC), Agency Metering System (AMS – includes the new reporting system (MDMR2), and Agency Load Forecasting (ALF)).

Risks of Operating at Levels below the Proposed Spending Levels

Operating below the proposed funding levels would impact the ability to hire a short-term forecaster in the Load Forecasting and Analysis Area. This addition will focus on forecasting for transmission operations planning to help optimize transmission availability in the day to day operations of the transmission system. This activity will identify constraints on a real time basis based on weather and other conditions and allow transmission to take the necessary actions to keep the flows optimized to maintain grid reliability for customer use of the system.

Without adequate funding, the timely input of data into the cross-Agency Customer Contract Management (CCM), Customer Data Management (CDM), and Customer Portal (CP) systems will suffer. This impacts the downstream systems that rely on this timely data input. The effect will be processing new contract actions, researching executed contracts, compliance validations (validation ensures contracts receive appropriate internal review, contain necessary provisions, and delegated authority to execute contracts), and in responding to questions sent to the CCM, CDM, and CP support desks. Delays could affect the resolution of issues raised by external and internal customers.

Lastly, the inability to fill the program coordinator for the Customer Information Service Delivery (CISD) program would result in a risk of not developing procedural and technical roadmaps needed to guide long-term improvement initiatives for Customer Support Services over the next 3-5 years, and risking CSS sponsored IT projects slipping off track as project barriers are not identified and mitigated as early as possible. The CISD program coordinator is responsible for providing clear communications and leadership to enable the organization's staff, business partners and stakeholders to implement and culturally adapt to new processes, policies and system objectives.

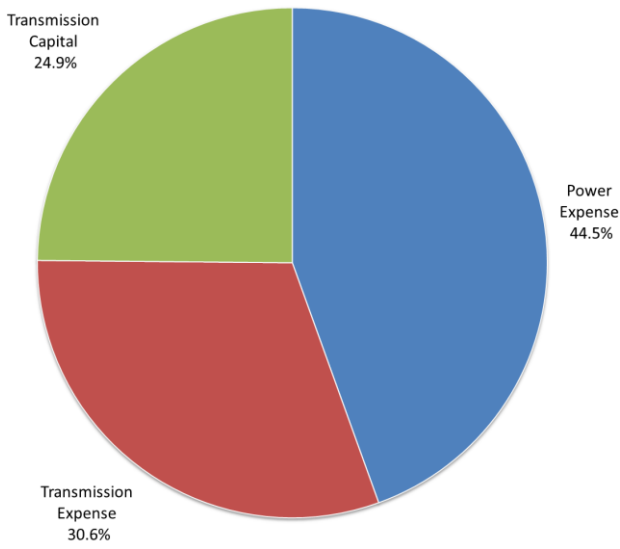
Challenges/Constraints

- Ensuring a continuous pipeline of skilled new employees to replace a large potential retirement cohort.
- The rapid evolution of the energy industry and Federal requirements requires great flexibility in CSS operations to be able to respond to and implement new policies and requirements.
- IT funding is needed for implementation of system changes and/or operations and maintenance of existing systems. The systems will be required to keep pace with the changing needs of the utility industry and the ability to make required and timely updates is a challenge. The proposed spending level allocation for this area is held within the BPA IT organization.

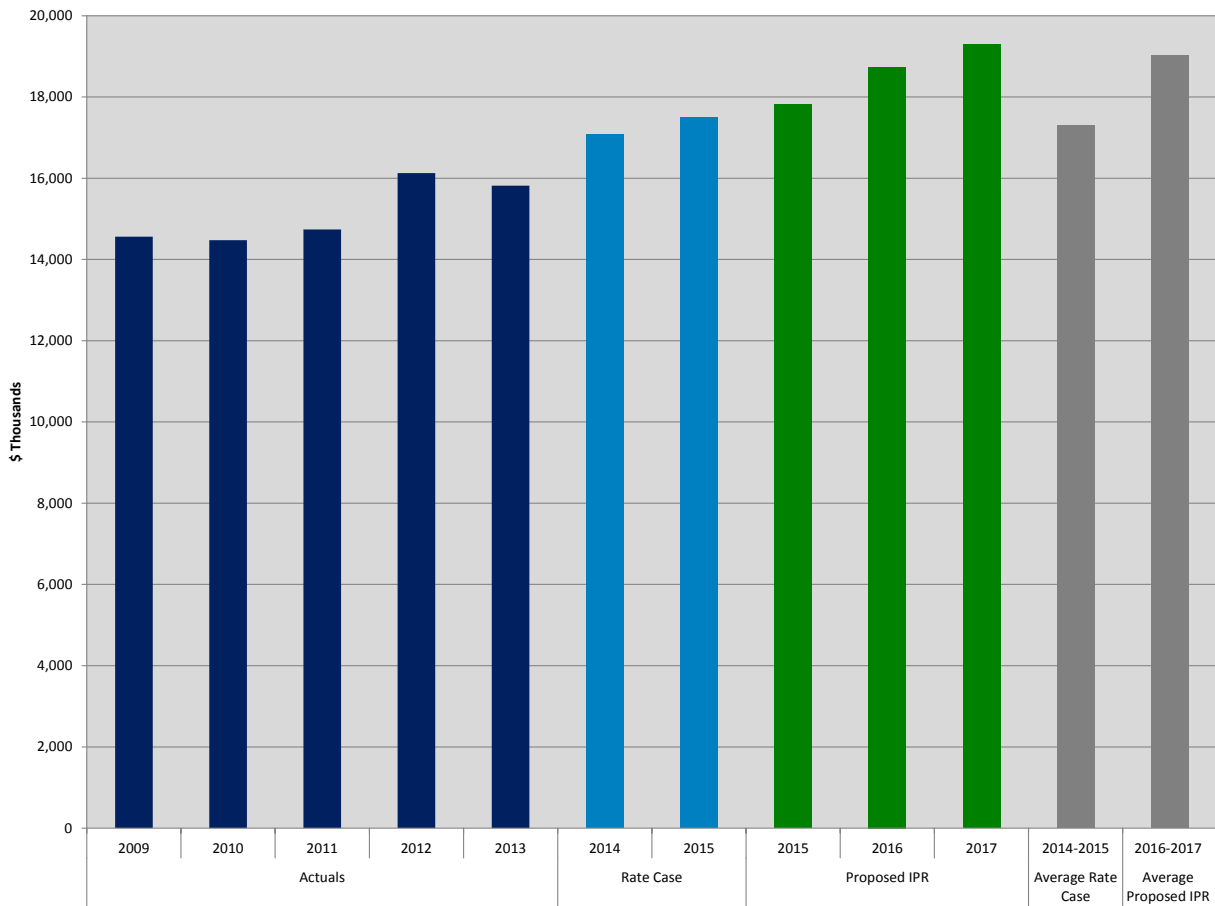
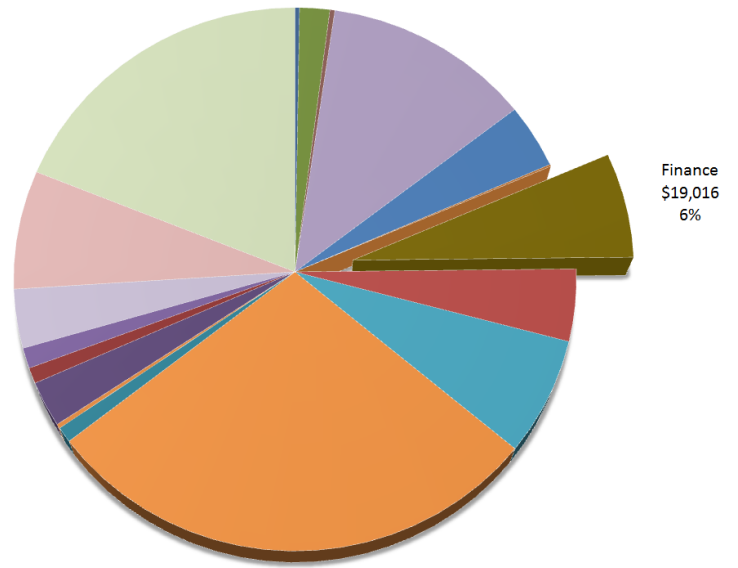
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5.4 FINANCE

Allocation Distribution



FY 2016-17 Average: Proposed IPR



Program Details

(\$ Thousands)	Actuals	Rate Case		Proposed IPR		
	2013	2014	2015	2015	2016	2017
Agency Services G&A Allocations	15,822	17,083	17,495	17,814	18,739	19,292
Power Direct Support	12	0	0	0	0	0
Transmission Direct Support	(17)	0	0	0	0	0
Grand Total	15,817	17,083	17,495	17,814	18,739	19,292

Description, Purpose and Responsibilities

Finance provides financial planning, accounting, and reporting for the FCRPS and BPA. The organization also provides economic and analytical support for rate case and regulatory proceedings, and plans, coordinates and executes all Treasury and non-Federal financing programs. The organization provides cash and reserves management. Finance has primary responsibility for relationships with Federal and non-Federal banking communities, rating agencies, investors and others in the financial community. It has primary responsibility for the development of agency spending levels. Finance performs oversight and transaction processing of accounts receivable, payables, payroll and travel.

Goals

- Continue to make all Treasury payments in full and on time by setting rates to recover costs, aligning spending levels to achieve this goal, and monitoring actual expenditures and revenues compared to spending levels, allowing BPA to make decisions when necessary to ensure making the annual Treasury payment.
- Assure appropriate accounting treatment and transparency to achieve an unqualified (clean) audit opinion.
- Continue to develop and follow strong internal controls (A-123).
- Maintain high ratings on BPA-backed bonds.
- Develop and implement alternative funding tools.
- Refine the capital budgeting process through prioritization to ensure BPA optimizes investments.
- Continue to manage and conduct the CIR, IPR, and QBR processes to provide financial information, adequate coordination and communication, and transparency to meet varying audience expectations.

Changes from the 2012 IPR

- Resources have been devoted to researching, analyzing access to capital funding tools and developing longer term debt management strategies.
- Finance has been increasingly investing the BPA Fund in market-based specials in lieu of earning interest-offset credits. This requires improvements to forecasting systems and active investment management.
- A department responsible for supporting BPA’s business systems was moved from IT to Finance.

Risks of Operating at Levels below the Proposed Spending Levels

Insufficient funding of the Finance function would put at risk the ability to meet federal and commercial accounting and reporting requirements, management of BPA's large debt portfolio, access to capital initiatives, and day-to-day fiduciary responsibilities.

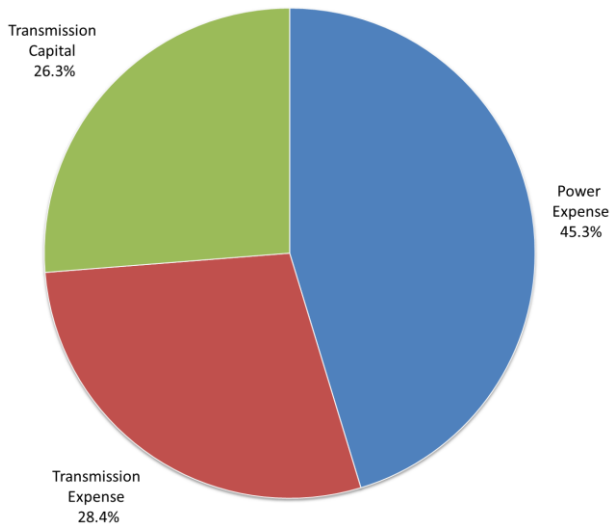
Challenges/Constraints

- Access to capital is a key challenge. BPA's borrowing authority is limited by law and capital investment is forecast to average close to one billion annually over the next ten years due to aging infrastructure. Coupled with the Debt Optimization Program, larger amounts of non-Federal debt are due for repayment through FY 2018 resulting in minimal replenishment of Treasury borrowing.
- Additional forms of capital such as lease financing are much more labor intensive to implement and manage than Treasury borrowing.
- As federal accounting requirements increase, particularly relating to intergovernmental financial reporting, more work with the financial and other agency systems will be needed to satisfy Department of Energy reporting requirements.
- Finance is forecasting an increased wave of retirements in the next five years.

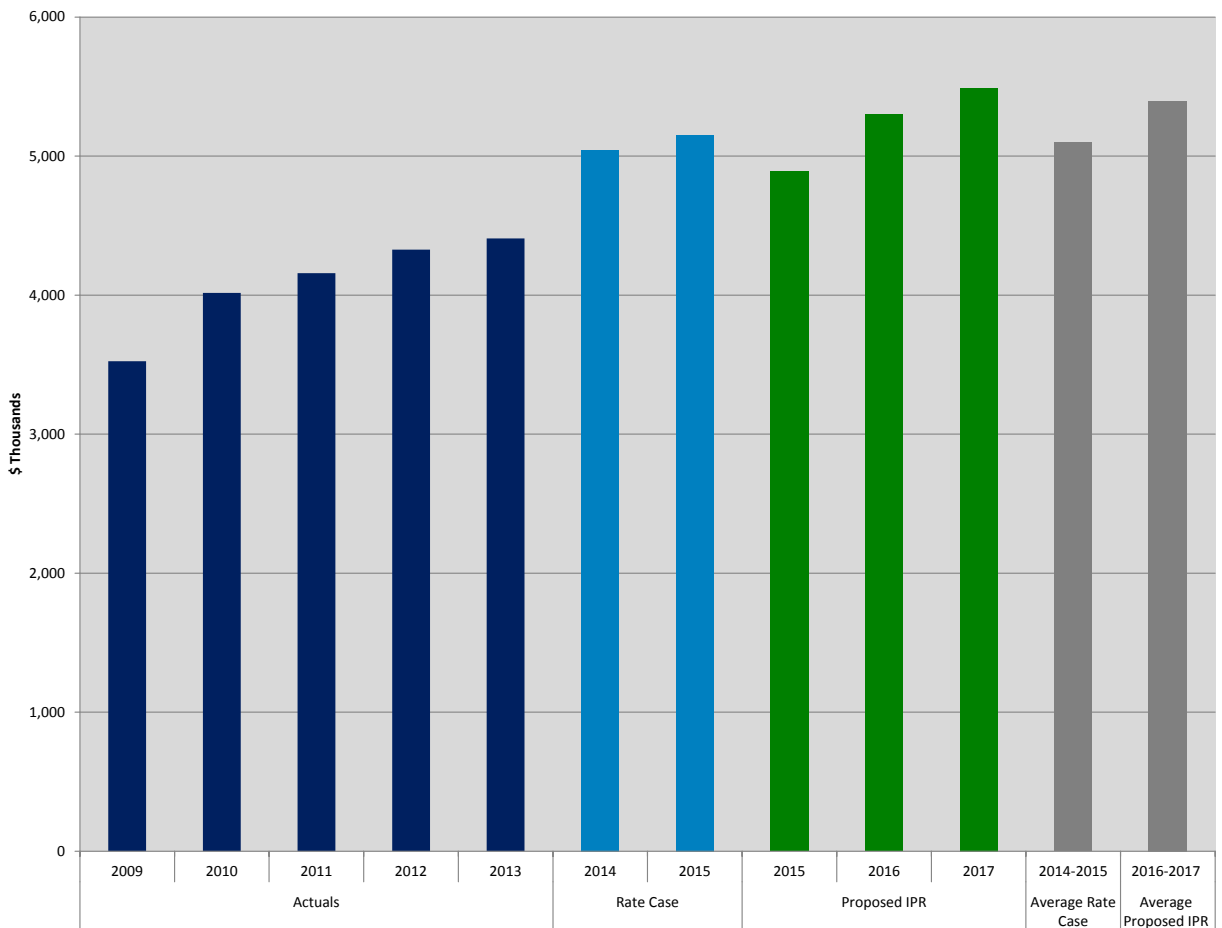
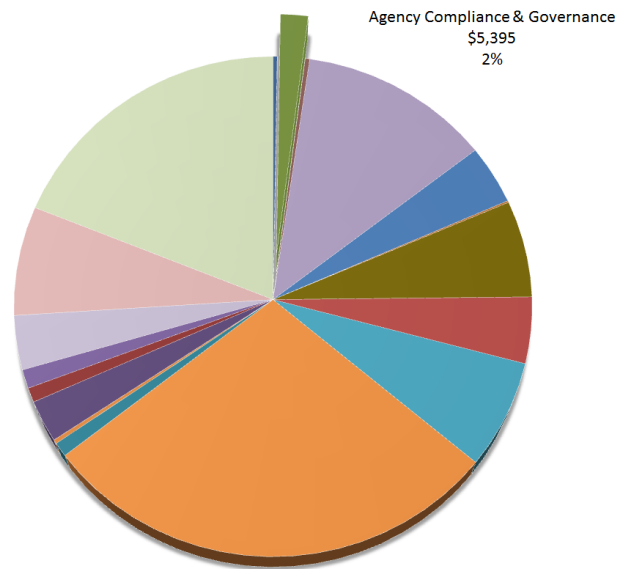
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5.5 AGENCY COMPLIANCE AND GOVERNANCE

Allocation Distribution



FY 2016-17 Average: Proposed IPR



Program Details

(\$ Thousands)	Actuals	Rate Case		Proposed IPR		
	2013	2014	2015	2015	2016	2017
Agency Services G&A Allocations	4,407	5,042	5,153	4,888	5,298	5,492
Grand Total	4,407	5,042	5,153	4,888	5,298	5,492

Description, Purpose and Responsibilities

Agency Compliance and Governance establishes and maintains a comprehensive regulatory compliance and ethics program which is aligned with and fully supports BPA’s mission and objectives. There are four programs included in this organization, Governance and Internal Controls, Civil Rights and EEO, FERC Compliance, and Purchasing/Property Governance. This organization manages these programs in partnership 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.

Goals

Continued ethics program management, including BPA’s Code of Conduct, BPA hotline, annual ethics survey, and ethics communication and training for employees.

Promote Equal Employment Opportunity counselors as a resource for conflict resolution regarding employment discrimination based on race, color, religion, sex and national origin and provide services to employees across the organization. Additionally, lead the effort to ensure BPA meets the EEOC’s criteria for a Model EEO Program.

In partnership with other BPA business units track federal legislative changes impacting purchasing and property policy. Additionally, partner with property management representatives throughout the agency to compile quarterly property loss data.

Coordinate with all agency partners to file all FERC, NERC and WECC reliability self-certifications by established deadlines.

Monitor and review agency performance against regulatory requirements. Define compliance risks and anticipate future risks or high risk trends.

Assist in developing agency-wide policies, procedures and guidelines to facilitate compliance with applicable laws and regulations, including those to be followed by BPA employees.

Develop and deliver training and education programs to keep BPA employees and contract staff informed of policies, procedures and regulatory events.

Monitor business activity to encourage continual compliance with established policies and procedures. Provide early identification of potential areas of noncompliance.

Detect and objectively investigate compliance program violations and misconduct that threaten BPA's reputation.

Coordinate with the Office of General Counsel and Internal Audit to respond to inquiries and perform investigations of regulatory violations or noncompliance.

Risks of Operating at Levels below the Proposed Spending Levels

The increase in regulations, the cost of complying with regulations and the consequences of non-compliance are risks to the compliance and governance programs. Four additional BFTE above DG's 28 BFTE allocation are required to standup and implement the Federal Energy Regulatory Commission standards related to the Open Access Transmission Tariff (OATT). Those additional BFTE will be hired during the FY 2014 and FY 2016 timeframes. Risks of not filling these positions are outlined below:

Compliance Reporting and Project Management

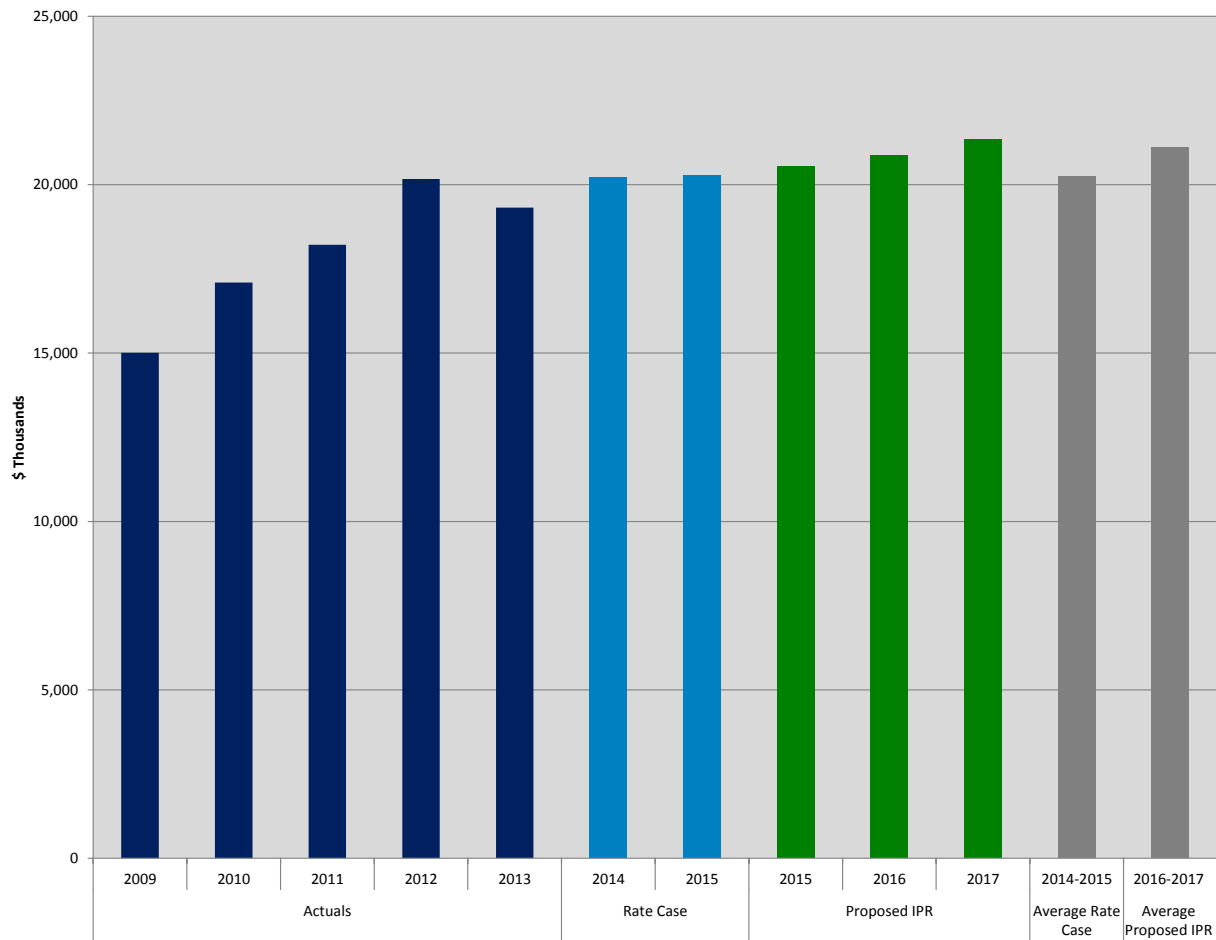
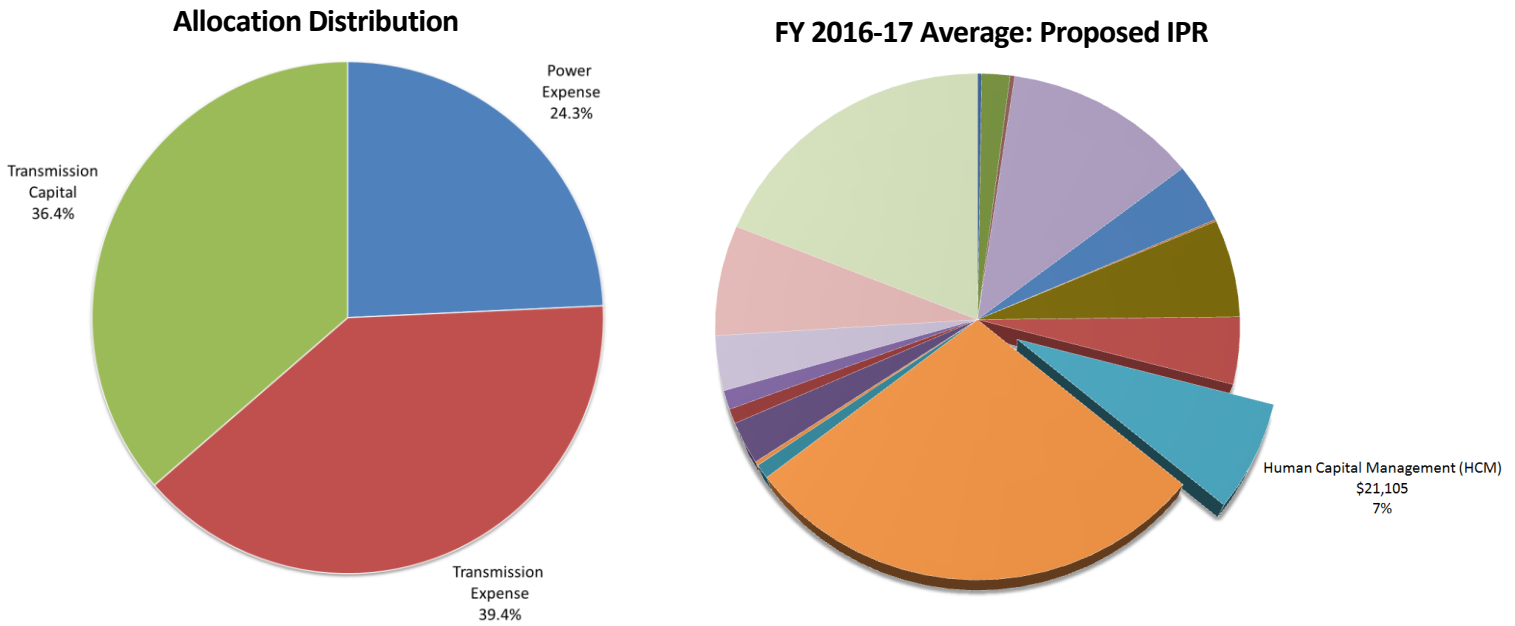
- The agency may not have the ability to survey and monitor compliance domains as identified within the Agency.
- If the agency is found to be non-compliant, then there is a reputational risk and possible financial risk.
- Continued improvement in efficiencies and effectiveness of the OMB Circular A-123, Appendix A project and support of other compliance initiatives may be lost.

Federal Energy Regulatory Commission standards related to the Open Access Transmission Tariff (OATT)

- If regulations increase, the cost of doing business may increase. This is a financial risk that may lead to increased regulatory costs through FERC or litigation costs through FERC and/or the court system.
- If FERC determines the agency is non-compliant, then BPA could incur reputational risk with its customers.

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5.6 HUMAN CAPITAL MANAGEMENT (HCM)



Program Details

(\$ Thousands)	Actuals	Rate Case		Proposed IPR		
	2013	2014	2015	2015	2016	2017
Agency Services G&A Allocations	16,019	16,393	16,379	17,194	17,462	17,883
Transmission Direct Support	3,296	3,815	3,886	3,349	3,405	3,460
Grand Total	19,316	20,208	20,265	20,543	20,867	21,343

Description, Purpose and Responsibilities

HCM plans, directs, and manages a comprehensive Federal human capital management program positioned to meet BPA’s mission and objectives. Delivery of business and HCM objectives is accomplished and delivered through six major program areas: Governance, Compliance, and Strategy; Business Unit Strategic Partnering; HCM Operations (Staffing and Position Classification); Employee and Organizational Development; Employee Services, and Employee and Labor Relations; and Information Systems Management. HCM is responsible for developing, communicating, and coordinating HR strategies, policies, and initiatives with the business units and corporate organizations through efforts defined in the HCM workforce plan, and according to operational and strategic initiatives.

Goals

BPA’s Business Operations Board identified three strategic objectives for BPA’s workforce necessary to achieve established business outcomes. These objectives are to have a workforce that 1) is the right size and composition, 2) possesses the right skills and competencies and 3) works in a positive environment. BPA incorporated these objectives into its strategy map, showing foundationally how BPA will build people and culture to deliver business outcomes.

BPA faces a number of gaps between its workforce needs and its current workforce capabilities. In 2012, as part of the Talent Management Strategy for FY 2013–14, these gaps were identified and prioritized in terms of the risk they pose to meeting business objectives. In order to reduce these risks, BPA’s Business Operations Board identified the following as priority initiatives:

- Drive high performance
- Acquire ready talent
- Strengthen internal talent bench

However, during the 2012 fiscal year, HCM found errors in its hiring practices that were confirmed by follow-up audits, findings and corrective plans that spanned the 2012-2013 fiscal year. The audit findings required a master corrective action plan for BPA HCM to remediate deficiencies in operations and skills gaps. This plan enumerated numerous corrective and developmental requirements. While the above priority risks are important, the revocation of HCM’s authority to hire is an enormous risk for the Administration. HCM’s focus remains on closing the gaps surrounding the Corrective Action Plan as a prerequisite to recovering its authority to hire personnel. Therefore, restructure, compliance and internal skills development are HCM’s top priority initiatives in FY 2014.

Changes from the 2012 IPR

HCM experienced serious challenges since the last IPR. During the summer of 2013, HCM lost its authority to administer its Federal Human Resources Program as a result of a joint triennial audit from the Office of Personnel Management (OPM) and the Department of Energy's Human Capital Management Accountability Program (HCMAP). Collaborating with DOE's Human Capital organization, BPA has negotiated a robust plan to recertify its staff, remedy internal skills gaps, and regain its authorities from OPM and DOE. To date, HCM has successfully executed on this aggressive and extensive plan to quickly restore HCM capabilities and functions. While DOE has already restored a number of BPA authorities, HCM fully anticipates the return of all authorities by the end of FY 2014. Furthermore, with the enormous investment made in retraining, development, oversight and operational improvement, combined with a strong commitment from BPA's leadership team, HCM is positioned to build the kind of foundation from which model HR Organizations are built.

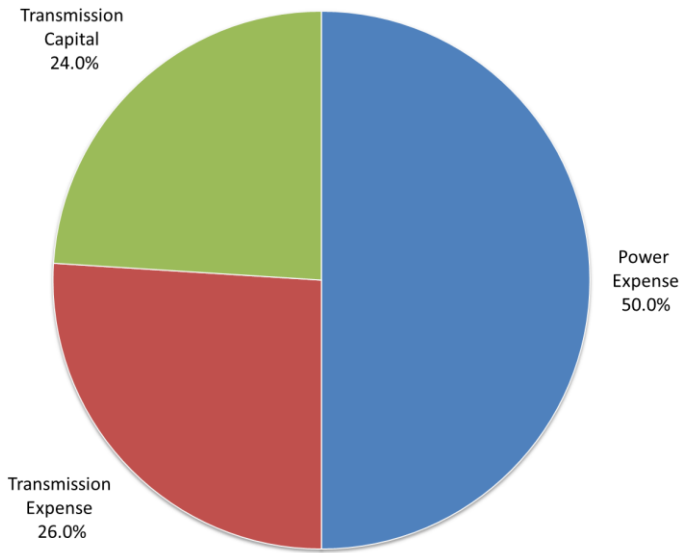
Risks of Operating at Levels below the Proposed Spending Levels

HCM is currently in a state of flux as it implements the DOE/OPM corrective action plan. Several management positions are vacant (filled with temporary "Acting" appointments), with hiring actions underway. Even with those additions, HCM will remain at the proposed spending levels. Operating at levels below the proposal would jeopardize the ability to meet the goals described above.

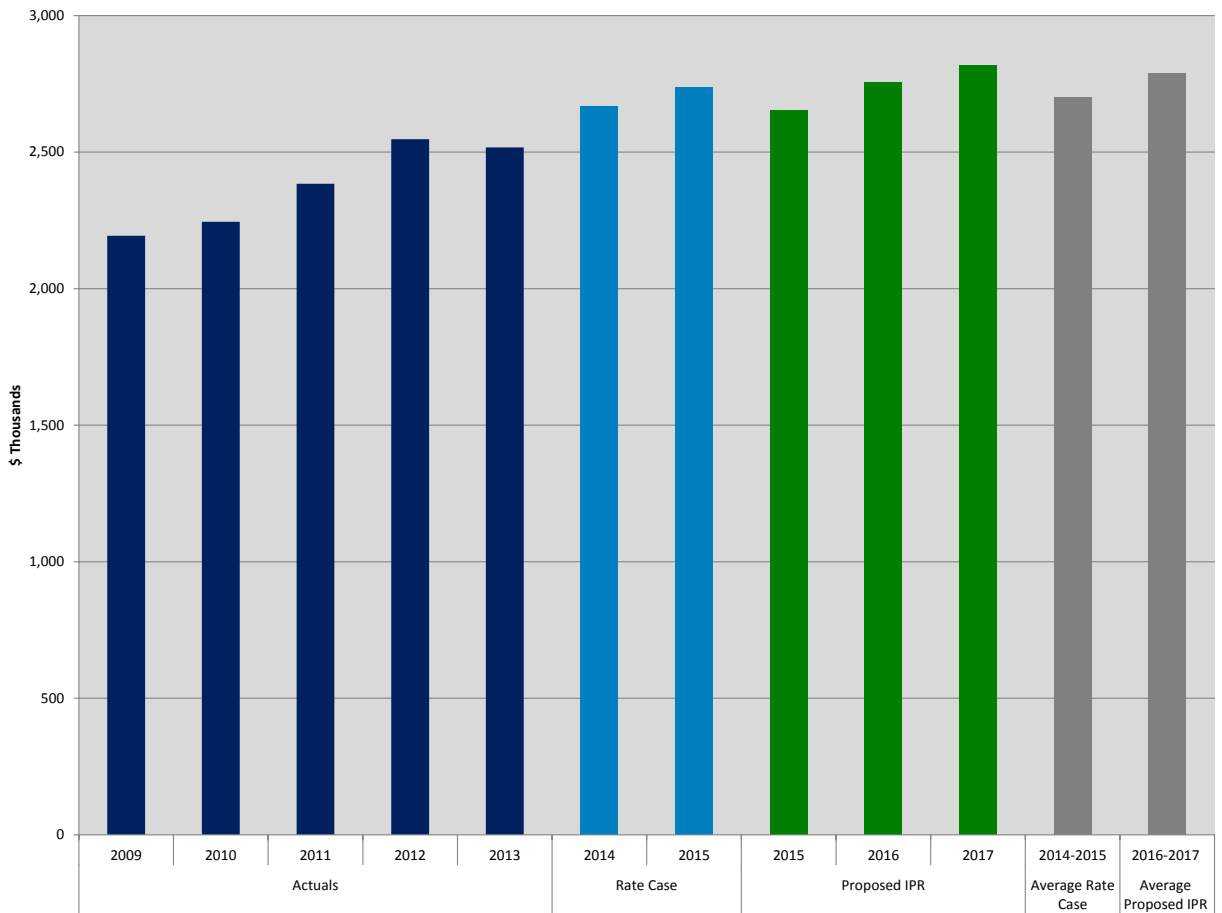
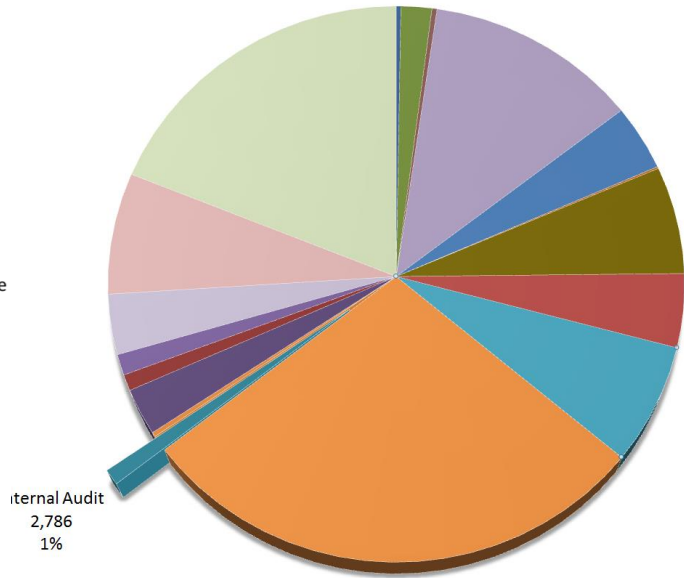
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5.7 INTERNAL AUDIT

Allocation Distribution



FY 2016-17 Average: Proposed IPR



Program Details

(\$ Thousands)	Actuals	Rate Case			Proposed IPR		
	2013	2014	2015	2015	2016	2017	
Agency Services G&A Allocations	2,517	2,667	2,735	2,652	2,756	2,817	
Grand Total	2,517	2,667	2,735	2,652	2,756	2,817	

Description, Purpose and Responsibilities

Internal Audit provides independent, objective assurance and consulting services designed to evaluate and help BPA by bringing a systematic, disciplined approach to evaluate and 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: management consulting to advise on risk and control considerations in the building and maintenance of effective processes and programs; contract-related audits and reviews that determine proper payments to contractors for goods/services or to customers for transmission facility use, and that assure contracts are completed in compliance with stated terms and conditions; coordination of reviews by the DOE-IG, the Government Accountability Office, and other external reviewers; implementation of internal and external surveys and analyses; and coordination with the DOE-IG and BPA Ethics Program staff on investigations and fact-finding concerning reported instances of fraud or mismanagement by BPA employees and contractors.

Goals

In support of the governance objectives of BPA executive management and the BPA Audit and Internal Controls Committee (AICC), foster development and mature the effective/efficient delivery of audit services by:

- Developing and maintaining an agency-wide, risk-based inventory of BPA programs and processes that provides for a more effective prioritization and risk focus of audit services.
- Partnering with Agency Compliance, Risk Management, Operational Excellence and business units to establish a shared understanding of the BPA Governance Model and the roles and responsibilities therein, as well as establishing and integrating common methodology and language for performance of those roles.
- Leveraging audit management software, improved operating standards, and enhanced staff engagement and business acumen to effectively and efficiently meet Internal Audit’s assurance role and responsibilities.
- Provide follow-up assurance reviews for assuring the effectiveness of management actions in response to internal and external audit recommendations.

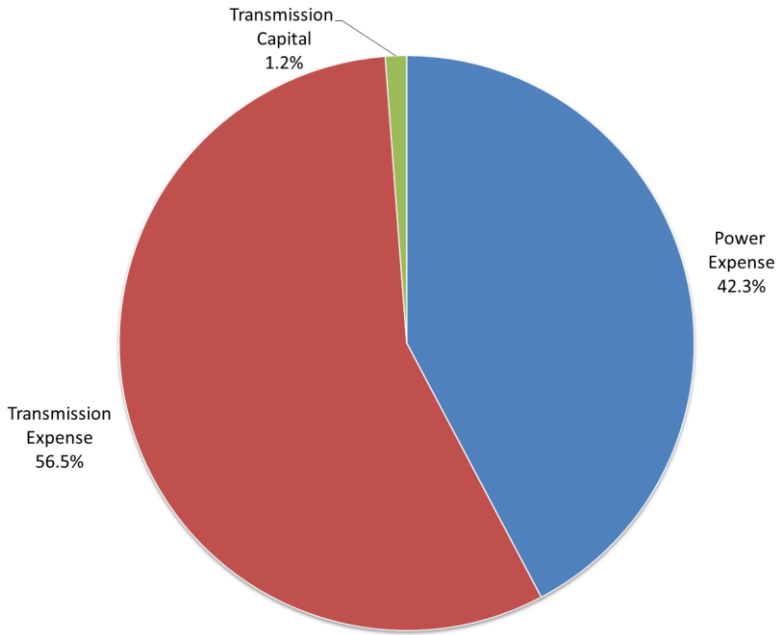
Risks of Operating at Levels below the Proposed Spending Levels

Reductions in Internal Audit resources results in a reduction in its ability to effectively/efficiently identify risks and apply audit resources to processes and procedures that provide management with a sufficient level of assurance and control over key objectives (strategic, operations, compliance, and financial reporting).

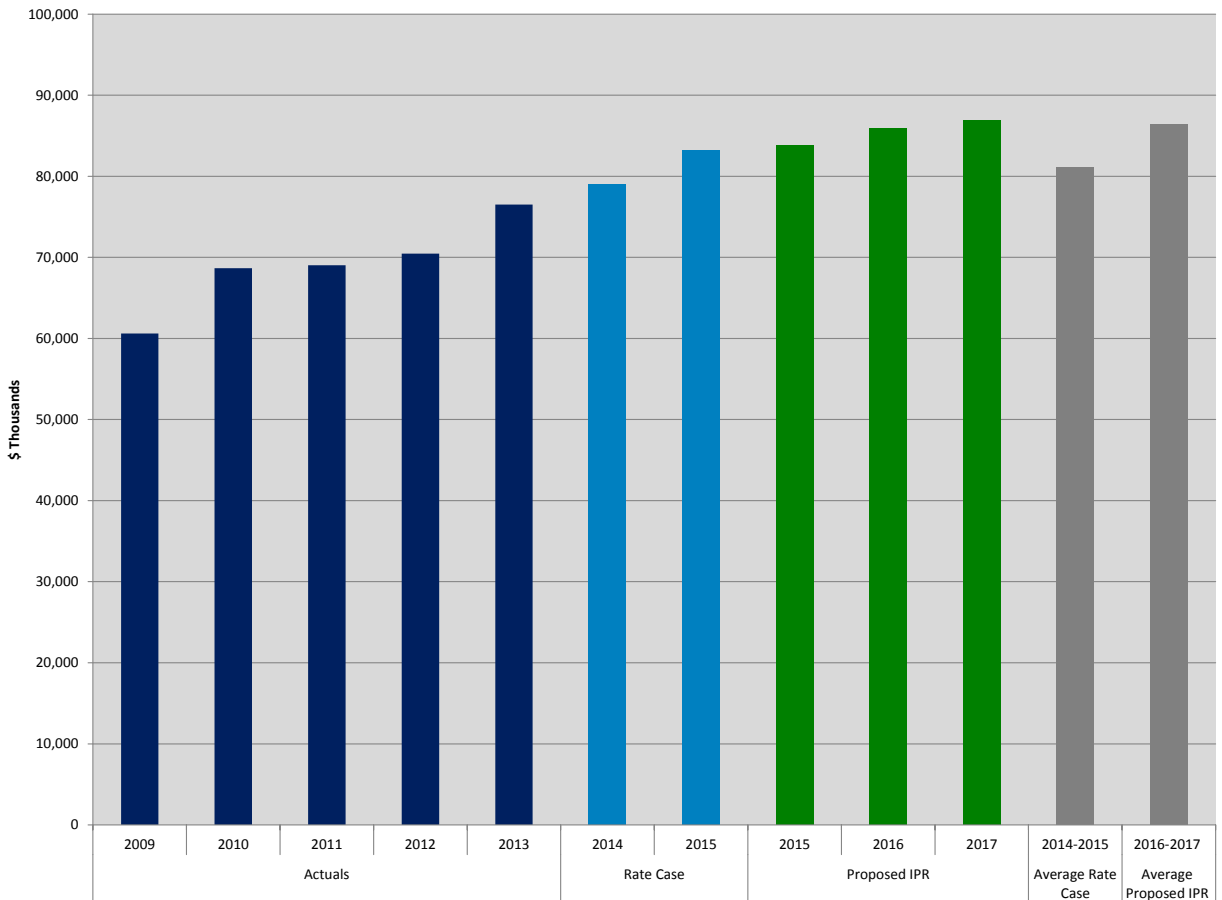
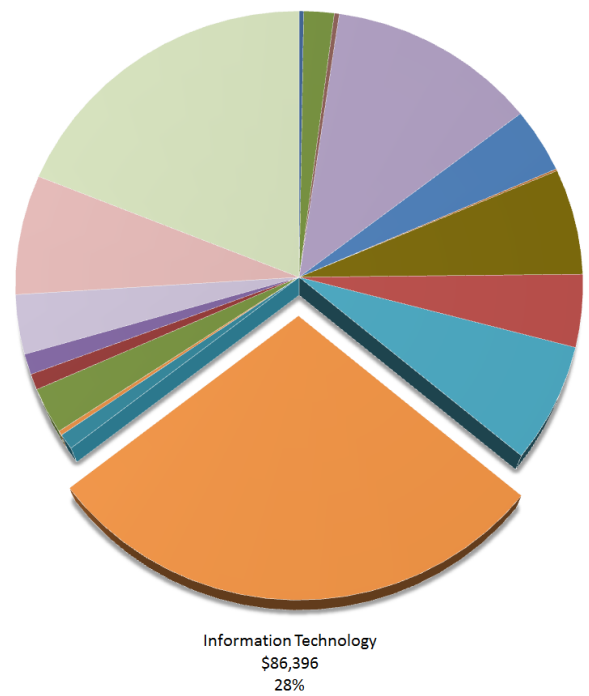
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5.8 INFORMATION TECHNOLOGY

Allocation Distribution



FY 2016-17 Average: Proposed IPR



Program Details

(\$ Thousands)	Actuals	Rate Case		Proposed IPR		
	2013	2014	2015	2015	2016	2017
Agency Services G&A Allocations	76,515	79,023	83,224	83,791	85,961	86,831
Grand Total	76,515	79,023	83,224	83,791	85,961	86,831

Description, Purpose and Responsibilities:

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.

IT has responsibility for maintaining assets including telecommunications components, circuits, servers, storage devices, desktop systems, printers, copiers, faxes, phone systems, and software. The software assets are categorized as critical business systems, general business systems, web applications and task systems. Critical business systems must operate and be available around the clock to enable power marketing and transmission scheduling functions. General business systems allow BPA to manage its staff, finances, facilities, supply chain, transmission assets and services such as managing circuits and work planning services. Task systems are small web based applications that enable BPA staff to perform work more efficiently.

Goals

Desktops and Mobile Devices

- Reduce the total cost per workstation through replacement of desktops and laptops with a virtual desktop infrastructure (VDI), zero clients and mobile thin clients
- Reduce operation and maintenance costs through automated software deployment and user provisioning
- Increase mobility and flexibility by implementing wireless network connectivity and access to BPA’s system from anywhere, anytime and on any device
- Reduce desktop software titles and associated costs

Network and Data Center

- Lower data center costs, footprint and power consumption through server virtualization and consolidation
- Reduce operating costs and complexities by consolidating field servers and moving to a more centralized data center model
- Improve system awareness and responsiveness by implementing end to end continuous monitoring solutions
- Reduce storage costs by implementing a tiered storage model that places less critical data on lower cost storage alternatives
- Replace end of life phone and voice mail systems with a voice over IP solution

Applications

- Improve system reliability and performance by maintaining business applications on current refresh cycles

- Deliver new and improved applications to meet the agency's business needs
- Reduce the total cost of ownership of business applications by increasing business self-service for administration, configuration and operations
- Improve business productivity by delivering greater business analytics and reporting capabilities

Operational Security

- Reduce security vulnerabilities by implementing an end to end patch management solution and program
- Increase threat awareness and responsiveness by implementing centralized logging and network monitoring solutions in support of a staffed Network and Security Operations Center

People and Processes

- Develop an IT workforce strategy that positions IT for the future and optimizes the balance of contract and federal employees
- Improve operational excellence through a broader use of standard processes, continuous improvement, and targeted measurement
- Identify focused improvement targets that will position Bonneville in the top quartile of utility IT organizations as benchmarked in UNITE, a consortium of 20 U.S. utility IT organizations

Long-Term Objectives

- Improve the security, reliability and extendibility of the Agency's network infrastructure by migrating to IPv6 protocol
- Reduce costs and improve flexibility and agility through increased adoption of cloud based solutions (software as a service, platform as a service and infrastructure as a service)
- Further drive reductions in the total cost of ownership of end user devices through continued deployment of VDI, standardized printing solutions, automated software deployment and user provisioning
- Further drive mobility and flexibility by adopting "bring your own device" policies and architecture

Changes from the 2012 IPR

The impact of several emerging drivers on IT's spending requirements were not fully understood when the 2010 and 2012 IPR spending levels were developed. These drivers include: (1) the support of new regional contracts; (2) automating transmission's asset management and work planning and scheduling processes; (3) the adoption of Software as a Service (SaaS) solutions; and (4) evolving compliance requirements.

IT experienced an unanticipated rapid ramp-up in projects to support these Power and Transmission initiatives. Beginning in 2012, IT began delivering over 20 new systems per year. To support this increase in work, IT required additional expense funds to carry out project planning. These new systems result in new vendor service contracts and new expense funding requirements.

The implementation of SaaS solutions requires expense dollars instead of capital dollars. And, because it is not possible to know in advance of planning, whether a project will adopt a SaaS solution, the portfolio spending balance between capital and expense requirements are somewhat unpredictable.

Risks of Operating at Levels below the Proposed Spending Levels

Automation provides the agency the means to meet evolving business needs, evolving compliance requirements, and to achieve efficiencies and cost savings. The IT spending represents a shaping of capital and expense dollars to meet the known requirements; however, there are risks with the proposed levels. These risks include the opportunity to deliver a more effective and lower cost solution from adopting a cloud based solution, which requires expense dollars where capital dollars were programmed. While this would reduce the need for capital, it requires expense funds that have not been programmed – a reshaping of IT capital and expense requirements. Additional risks are from unforeseen compliance requirements or new business requirements.

Challenges/Constraints

There are five main challenges impacting expense funding levels that IT is working to manage. These challenges can be categorized as:

- Industry trend towards cloud based solutions
- New operations and maintenance expense funding requirements resulting from implementing new systems
- New compliance requirements
- Consumerization of IT – increasing employees’ expectations to be able to use and leverage consumer technology, such as smart phones and tablets, in the workplace
- Delayed upgrades for existing older systems

Taken together, these challenges are putting upward pressure on the IT expense funding levels and in the case of cloud services, requiring a shift from capital to expense funding.

Cloud Services

Additional cloud based services, such as Software as a Service, Platform as a Service, and Infrastructure as a Service are subscription based services. Since these services are provided to BPA by commercial vendors, BPA is not acquiring any new physical assets with SaaS solutions that can be capitalized. In past IPR cycles, only capital funds were programmed for implementing project solutions. In this IPR cycle, expense funds are being programmed in anticipation of adopting new SaaS solutions. Our challenge is to estimate which projects may find SaaS solutions to be the best fit and estimate the associated expense requirements.

Adopting a larger number of SaaS solutions than anticipated or adopting a particular SaaS solution that has a higher cost than expected can cause wide variations between required and programmed capital and expense funding. Without accurate forecasts of how many projects will adopt and implement SaaS solutions, IT will be challenged with potential large variations in funding requirements.

New Operations and Maintenance

The IT Capital Portfolio has doubled in recent years, placing upward pressure on the IT expense spending by increasing the number of new systems with new operation and maintenance costs. In FY 2012 and FY 2013 IT placed 22 and 26 systems into service each year respectively. Historically, IT has not increased operational spending levels to cover the “expense tails” of delivered IT systems; the net result is IT absorbs the unfunded operations and maintenance costs.

The Regional Dialogue and the Transmission Process Improvement Program were the primary drivers that have resulted in the need for increased spending levels to support these programs. These new systems are delivered with new service contracts and operation and maintenance costs. Since these solutions are placed into service between IPR cycles, IT operates these new systems absorbing the operation and maintenance costs for several years before it has an opportunity to increase its expense spending to catch up with the operating costs. In prior years, IT has been absorbing these new operating costs by finding efficiency savings in infrastructure operations, using the savings from reduced infrastructure operations to offset these new service contract costs. IT will not be able to maintain this strategy to offset new costs and must now plan increases in expense funding to accommodate new operation and maintenance costs.

Regulatory

There are a number of emerging regulatory drivers that could affect the information technology expense forecast. Some of the more significant impacts will be associated with compliance to National Energy Regulatory Commission (NERC) Critical Infrastructure Protection (CIP) version 5, and meeting evolving National Institute of Standards and Technology (NIST) requirements to adequately secure IT assets in accordance with Federal Information Security Act of 2002 (FISMA).

The impact to IT spending levels from implementing NERC is for enhancing and expanding physical access control to additional sites. This will require additional expense funds to deploy additional digital cameras, readers and other networked security measures. In additions to NERC requirements, BPA is estimating achieving compliance with FERC Order 890. In addition, there will be additional costs for achieving compliance with NERC/WECC reliability requirements.

IT is continuing the phased implementation of a Security Operation Center (SOC) to provide enterprise-wide cyber security operational awareness to prepare for and defend its IT assets against cyber attacks.

The SOC will perform

- Threat analysis in conjunction with National, Industry, and Local threat and vulnerability analysis Operations Centers
- Cyber Security Monitoring
- Reporting
- Incident Handling Coordination

Consumerization

Smart phones and tablets are continually delivering a wide range of new capabilities to consumers, enabling the average user to have constant access to services from anywhere. There is a building demand for adopting these technologies in the workplace. Response to this demand will provide a combination of issues that will need to be addressed which include:

- Mobile management,
- Potential security,
- Rapid market changes to hardware and software, and
- Increased device variety which translates into increased support costs.

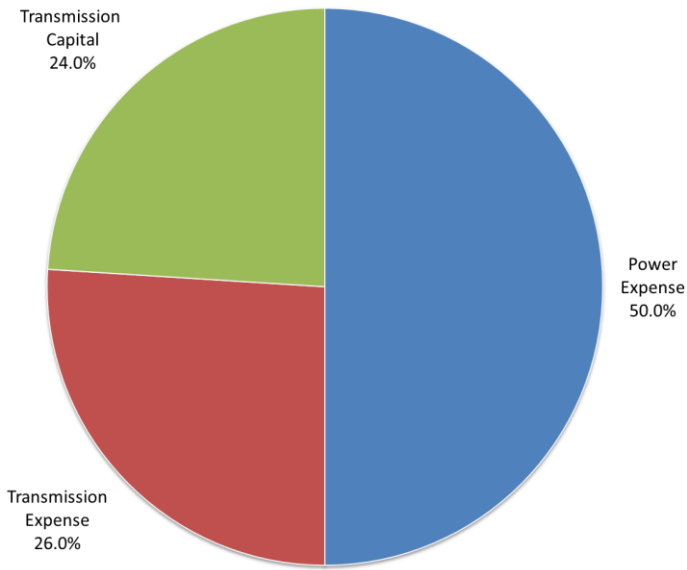
To date, IT has taken a “Just say no” approach to these devices; however, these issues must be resolved in order to attract and retain skilled staff and to provide the benefits these devices offer. The full cost of integrating these devices is uncertain. IT is also exploring Bring Your Own Device (BYOD) strategies to reduce impacts on expense funding and to enable end users greater flexibility with the devices they can use.

Delayed Upgrades

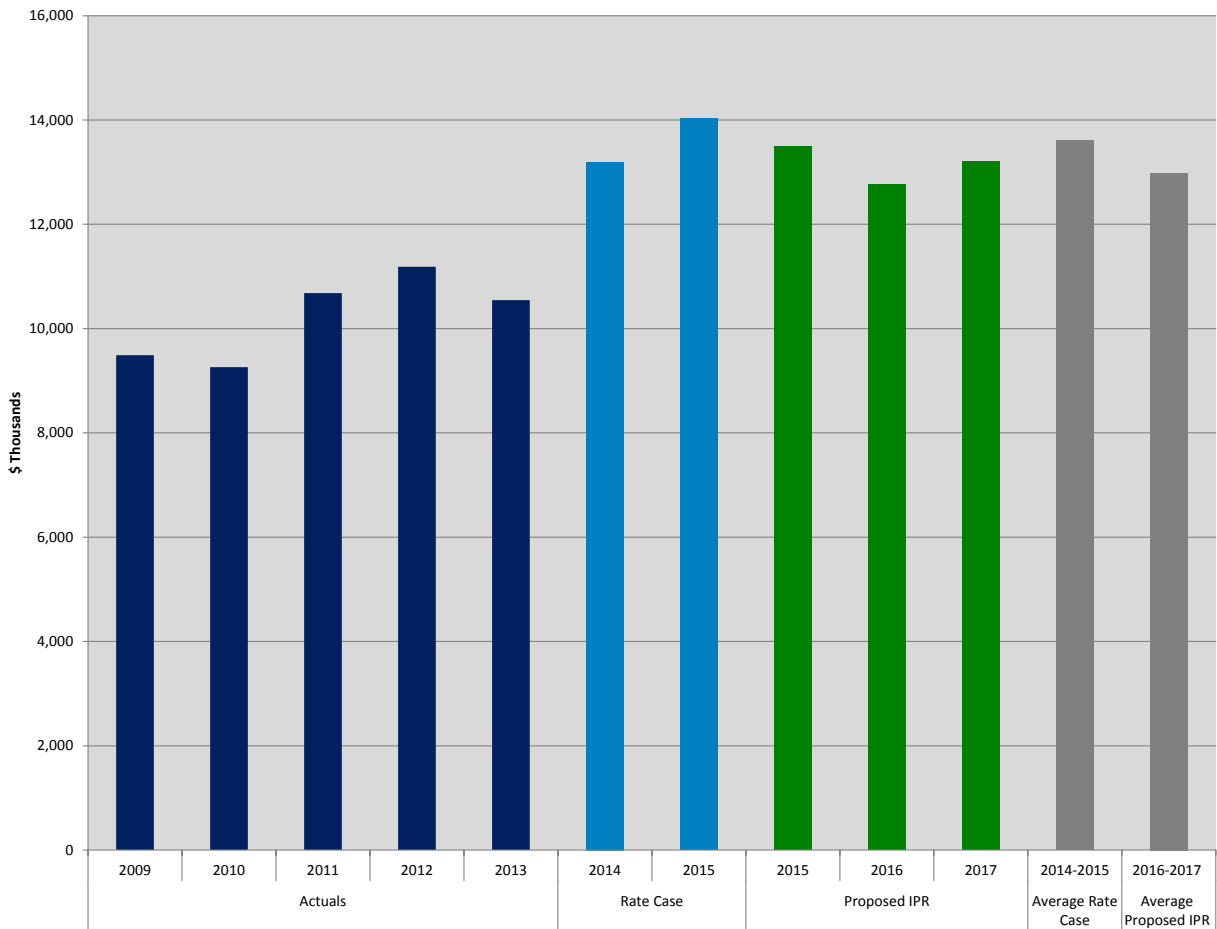
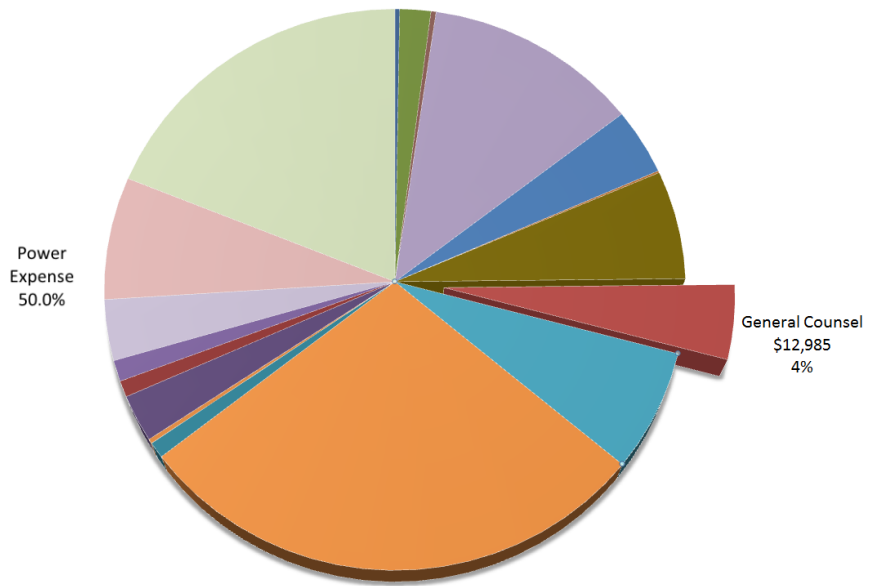
Since FY 2009, IT resources have been focused on delivering systems in support of Regional Dialogue and Transmission Process Improvement Program. As a consequence, many major upgrades to existing systems have been delayed. In some cases, the software is approaching end of vendor support. In other cases, current software version(s) will not run on the new server operating systems and requires IT to upgrade in order to host the application on new hardware running the up to date operating system. Not upgrading the software and staying in the current configuration increases risks due to a combination of the lack of vendor support for the application software and concerns that applying security patches on the operating system may break the application. Our enterprise applications will collectively have large expense requirements to bring them up to the current versions.

5.9 GENERAL COUNSEL

Allocation Distribution



FY 2016-17 Average: Proposed IPR



Program Details

(\$ Thousands)	Actuals	Rate Case		Proposed IPR		
	2013	2014	2015	2015	2016	2017
Agency Services G&A Allocations	3,503	4,027	4,124	4,564	4,929	5,014
Power Direct Support	3,715	5,290	5,954	4,819	4,501	4,648
Transmission Direct Support	3,326	3,877	3,951	4,107	3,331	3,548
Grand Total	10,544	13,194	14,028	13,491	12,760	13,210

Description, Purpose and Responsibilities

General Counsel provides legal advice and representation for or in connection with all Bonneville Power Administration activities. It charges directly to Power and Transmission Services when supporting projects exclusively for the business unit. However, it also has costs in support of general Agency initiatives and activities which are allocated to the business units. The support covers the gamut of legal representation from provision of legal advice to representation of the agency in all areas of claims, and administrative or judicial litigation. This general support function covers the Columbia River Treaty; storage agreements; corporate authority, governance and delegations; financial management; Tribal issues; fish and wildlife program support; procurement of goods and services; tort claims; Freedom of Information Act/Privacy Act; employee claims; ethics, including conflicts of interests and financial disclosure; human capital issues, including labor issues, disciplinary actions, reasonable accommodations requests, and EEO claims; copyright and patent issues; and security processes and procedures.

Goals

OGC’s goals and priorities are to continue to provide advice related to, and defend actions associated with, the widely varying functional areas identified above. All issues are important, but more activity is expected than is ordinarily the case associated with Treaty review; Bonneville’s Oversupply Management Protocol activities; Bonneville authority issues; contracts and activities associated with the fish and wildlife program; procurement issues associated with infrastructure development; human resources and possibly cyber security issues. Our goal is to assist the agency in making informed, risk-based decisions that are defensible; assist in documenting decisions so that they are appropriately thorough and articulated; and defend, or assist in the defense of, challenges to those actions.

OGC’s strategy to provide these services is to ensure attorneys are trained and knowledgeable in the area of representation, and teamed closely with policy and technical staff to assure responsive and collaborative representation. If outside counsel is needed in an area beyond OGC’s expertise, or can be more cost-effectively provided (e.g., specialized counsel such as tax or bankruptcy counsel), it will be secured.

Changes from the 2012 IPR

The primary changes have been the increased focus and the amount of work in the areas of alternative financing, personnel, procurement, lands, EIM, FOIA, NEPA, and over supply management. The marked increase in personnel related work due to recent OPM, DOE and IG audits has resulted in attorneys from other sections pitching in with the increased workload. The same area has generated an unprecedented amount of FOIA work. Procurement activities and challenges have necessitated the continued focus of two attorneys rather than one. Outside counsel costs have increased due to the increased use of tax and bond counsel associated with nonfederal financing solicitations, tax audits associated with prior financings, state taxation issues, and exploration of alternative sources of financing, lands and NEPA work has accelerated with proposed transmission builds.

Risks of Operating at Levels below the Proposed Spending Levels

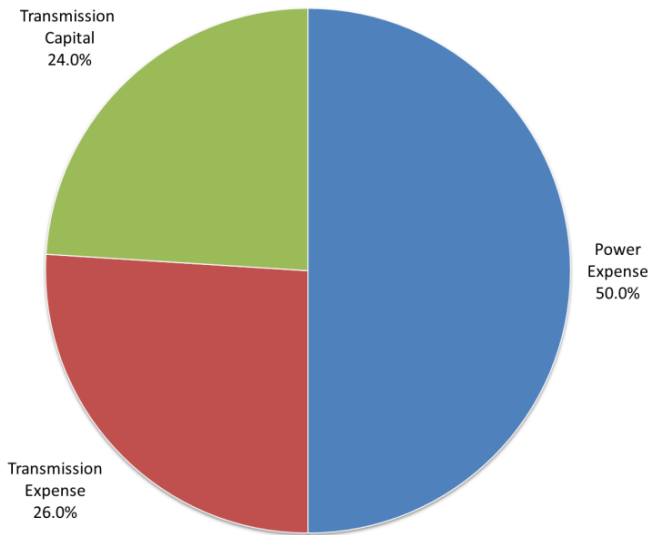
The primary spending level increase in this area is for bond and tax counsel. Without the increases, work in the areas of taxation, bonded indebtedness (e.g., ENW bonds), lease financing, and securing alternative sources of financing (e.g., Port of Morrow, prepaid debt) work would have to be prioritized to tax audits and unavoidable work. Refinancing and other work dependent on specialized counsel would suffer. Refinancing results in significant savings, and a portion of that would be lost. Similarly, work on alternative sources of financing would be inadequate due to the absence of outside counsel.

Second, a smaller part of the increase in this area is for an additional Assistant General Counsel (AGC) for general work. Previously one AGC managed over 30 BPA and contract staff. The breadth of responsibility and sheer numbers were cause for concern given the broad scope and importance of the AGC's work. BPA and contract staffs are now split between two sections.

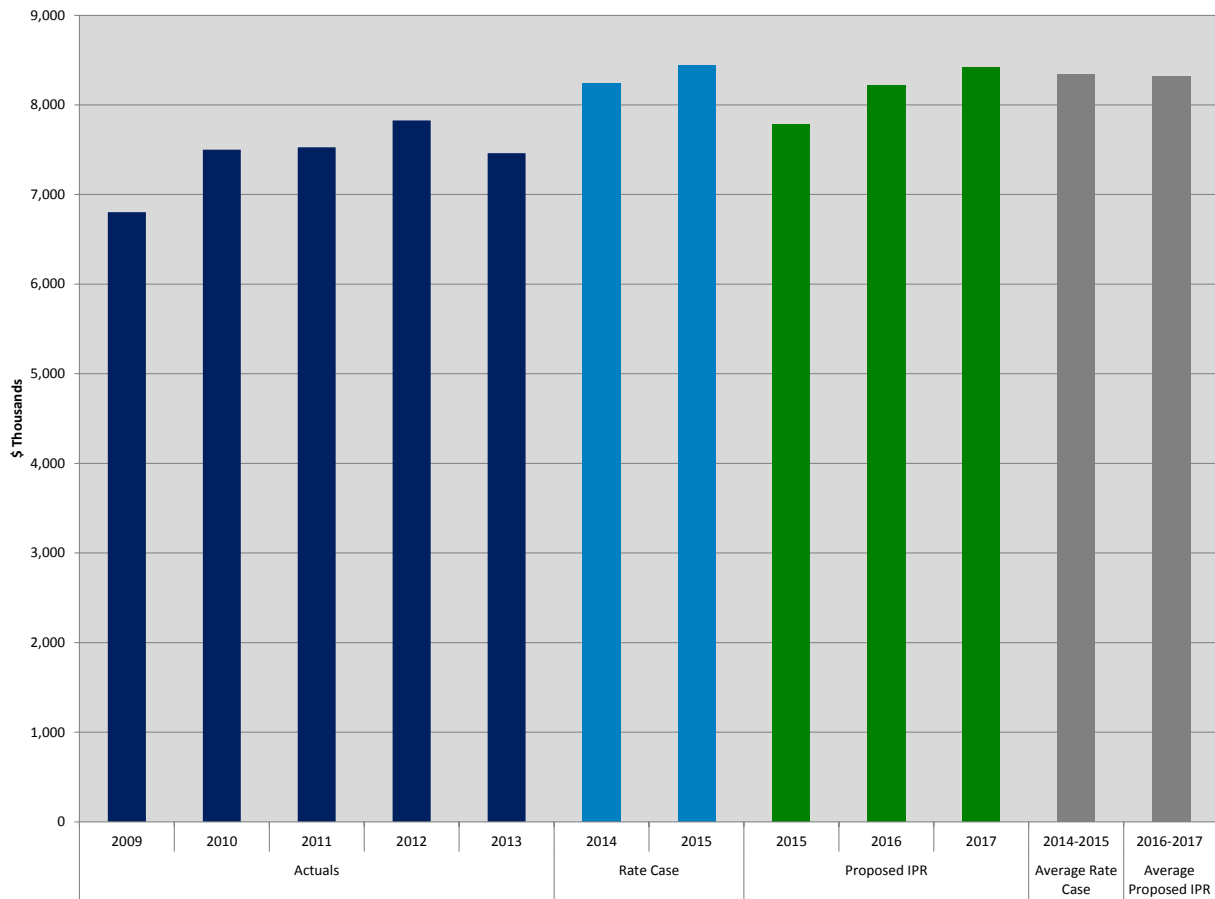
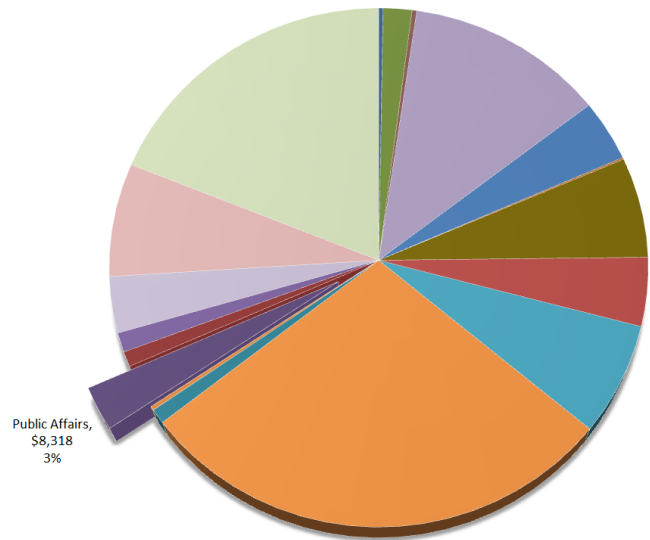
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5.10 PUBLIC AFFAIRS

Allocation Distribution



FY 2016-17 Average: Proposed IPR



Program Details

(\$ Thousands)	Actuals	Rate Case		Proposed IPR		
	2013	2014	2015	2015	2016	2017
Agency Services G&A Allocations	7457	8236	8444	7637	8070	8265
Power Direct Support	4			142	148	151
Grand Total	7,461	8,236	8,444	7,779	8,218	8,416

Description, Purpose and Responsibilities

Public Affairs is responsible for developing and managing the implementation of a comprehensive public affairs strategy. This strategy 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 programs are in place to secure appropriate public engagement in BPA’s decision-making processes.

Goals

Public Affairs works with each business line to provide the appropriate messages, materials, and outreach, both internally and externally, to improve understanding of the agency’s decisions and policies.

Near-term goals include:

- Support continued regional engagement for the Columbia River Treaty regional recommendation
- Support BPA initiatives to successfully integrate renewable electricity generation and mitigate for oversupply conditions
- Support regulatory and market solutions for transmission operations, balancing, and reliability
- Support employee engagement
- Support public and elected officials outreach for transmission infrastructure development
- Support the development and implementation of the FCRPS Biological Opinion and Fish Accords

Public Affairs works with tribes and local, state and federal governments, other constituents, and the media to promote a mutual understanding of the needs of the region and agency; to promote public engagement and awareness through public meetings and public comment processes and; participates as a partner with agency leadership to develop meaningful, clear messages that best define the agency’s goals and direction.

Long-term goals include:

- Support regional processes to address expiration of Columbia River Fish Accords
- Support operational decisions to address transmission operational challenges
- Support biannual rate case processes
- Support internal safety program

Risks of Operating at Levels below the Proposed Spending Levels

The impact of operating below the proposed spending levels would have visible impacts:

- Reduces funding for public meetings
- Reduces funding for public outreach through sponsorships, community relations activities, and tribal grants

- Reduces ability to purchase supplemental graphics services and materials
- Reduces ability to fund equipment upgrades/purchases for video/media team.

Challenges/Constraints

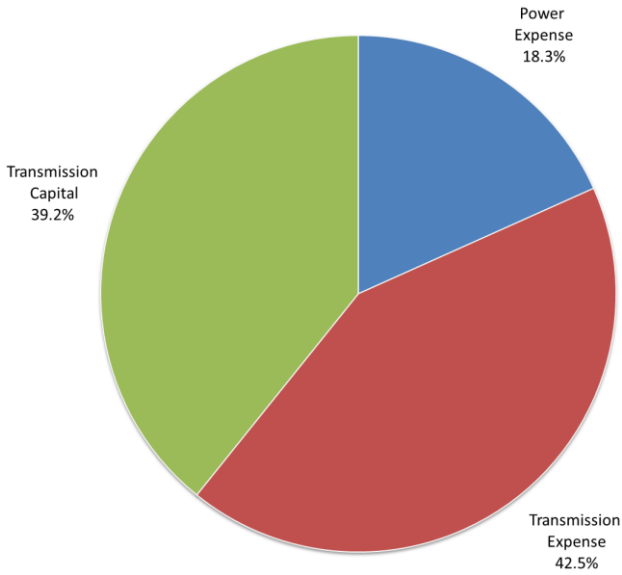
The current and near-term (FY 2015-17) challenges and constraints to the Public Affairs mission are:

- The degree of tribal and state coordination expected for the Columbia River Treaty
- The resumption of constituent coordination and outreach for revisions to the FCRPS BiOp
- The schedule of needed transmission system replacements, construction and upgrades
- Ongoing public communications for solutions to generation oversupply and cost allocation.

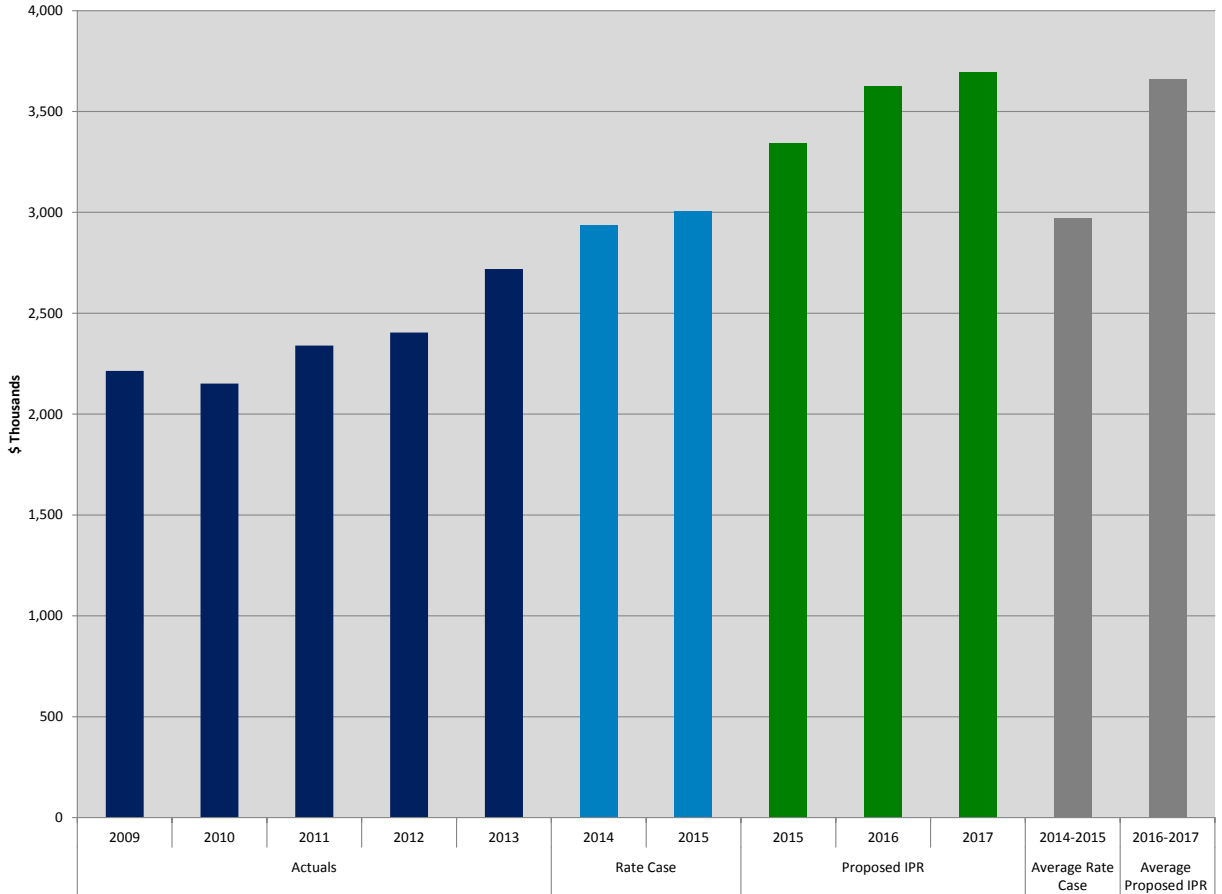
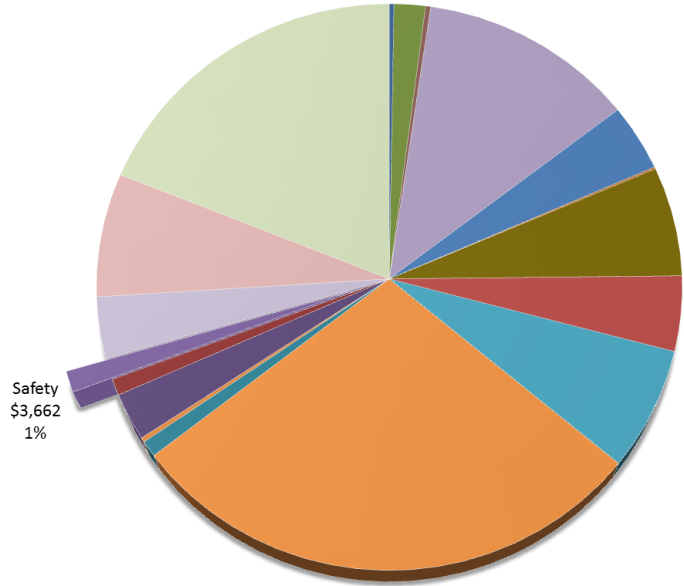
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5.11 SAFETY

Allocation Distribution



FY 2016-17 Average: Proposed IPR



Program Details

(\$ Thousands)	Actuals	Rate Case		Proposed IPR		
	2013	2014	2015	2015	2016	2017
Agency Services G&A Allocations	2,699	2,936	3,006	3,343	3,628	3,697
Transmission Direct Support	20	0	0	0	0	0
Grand Total	2,719	2,936	3,006	3,343	3,628	3,697

Description, Purpose and Responsibilities

The Safety Office supports BPA’s mission of providing a workplace that is free from all recognizable safety and health hazards by providing advice, information, and support to the BPA workforce. The Safety Office reviews contractor site specific safety plans and performs worksite audits in compliance with host utility responsibilities. The Safety Office is the point-of-contact with the Department of Energy (DOE) for the Federal Employee Occupational Safety and Health (FEOSH) Program. The Office also conducts inspections, investigations, and appraisals and makes recommendations concerning safe work practices and procedures.

Goals

In 2015, the Safety Office will expand its function within BPA to provide industry leading safety and health compliance recommendations and oversight. A complete review of safety procedures and policies will occur in FY 2014. Any recommendations for improvements will be implemented beginning in 2015. Beginning in 2015, the Safety Office will implement a Human Performance program focusing on leading indicators such as near miss reporting, workforce education related to identifying precursors to human performance errors, and certification of staff members in human performance techniques. This new program will assist in injury and incident prevention and provide another tool to help keep workers’ compensation claims and equipment costs low.

The Safety Office will utilize benchmarking data, workload studies, and independent third-party reviews of its organizational structure to determine the appropriate organizational structure and staffing levels. Additional staff resources will include a Certified Safety Professional, an Industrial Hygienist, a Fire Protection Engineer, and a Human Performance Specialist. The Safety Office will also realign the Deputy Safety Officer position and create three separate Program Directors in order to improve oversight and service delivery.

The Safety Office will continue to collaborate with executive management and the workforce to effectively implement a robust safety and health program and ensure that accident and injury prevention remain a priority. The Office will also monitor industry improvements in the safety discipline via participation in industry forums and benchmarking exercises, adapt health and safety best practices to fit BPA’s needs, and build a strong safety culture within BPA.

Changes from the 2012 IPR

- **Contract Oversight:** The amount of construction contract oversight continues to outpace staff’s ability to provide timely sight review services. BPA is continuing to provide additional staffing resources and reprioritize workload to balance workload and to mitigate risk.

- **Program Review:** BPA has performed extensive benchmarking with best of class utilities and other industry leading companies. An independent third-party review was also performed by a team of Safety Professionals from the Department of Energy (DOE). This review identified BPA safety programs that would benefit from an organizational restructuring. In addition, the review identified that additional resources are needed in order to perform a thorough review of BPA's safety program policies and update our industrial surveys. A Certified Safety Professional (CSP) and an additional Industrial Hygienist have been identified as the appropriate resources to fulfill this on-going work.
- **Human Performance:** Industry best practices have shown an upward trend in near miss incidents, including operational errors, inadvertent operations, and non-injury property damage incidents in recent years. The utility industry has recognized best practices used by the nuclear and airline industry and has begun to adopt Human Performance strategies into their daily operational routines. BPA recognizes this best practice as an opportunity to improve both safety and reliability and reduce risks to employees and transmission system infrastructure with the adoption of a Human Performance program. A Human Performance specialist is required to lead the development and implementation of the program. In our view, the potential cost savings from a reduction in safety incidents and improved system reliability has the potential for a cost neutral impact.
- **Staff Alignment:** The limited resources in the management structure of the Safety Office do not permit appropriate attention to program compliance requirements. Increased complexity in safety regulations, an increase in construction projects and the concomitant increase in contract labor has strained the ability of the Office to effectively manage employees, maintain program compliance oversight, and support continuous improvement efforts. Dividing the role of the Deputy Safety Officer into three director positions will allow the Safety Office to manage tasks more effectively.

Risks of Operating at Levels below the Proposed Spending Levels

BPA has identified improving the safety program as a critical operational goal. Failure to address resource needs, update policies and standard operating procedures, and reinforce safety as a core value creates the risk of a workplace environment that is not conducive to employee satisfaction, recruitment, and operational excellence. The inability to identify job hazards and mitigate those hazards increases employee costs due to lost time, lost productivity, and poor reliability. Organizations that invest in safety and have a strong safety culture maintain positions at the top of their industries in profit and efficiency.

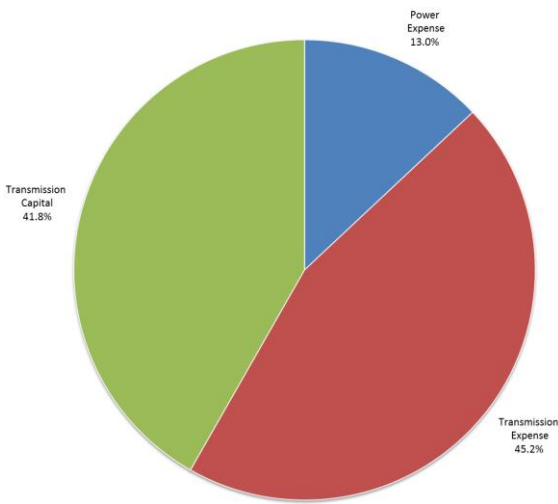
Challenges/Constraints

- **Retirement Profile:** The Safety Office is not immune to an industry-wide problem of retirements. Currently four of the eight Safety Managers are eligible for retirement and another two staff members are within 3 years of reaching retirement age. Hiring and training qualified Safety Managers has been identified as a business risk factor.
- **Increased Contractor Oversight Workload:** As the number of construction projects has increased so has the contract workforce; however, there has not been a corresponding increase in BPA staff. This rapid increase in projects and contract workforce has created workload and staffing issues that lead to insufficient safety oversight of both contract and BPA employees, and an increased risk to the BPA operations. One example is the difficulty in obtaining staffing resources to review Site Specific Safety Plans. Although BPA can and has used contractors (CFTE) to augment this function, finding qualified and available personnel has been difficult.

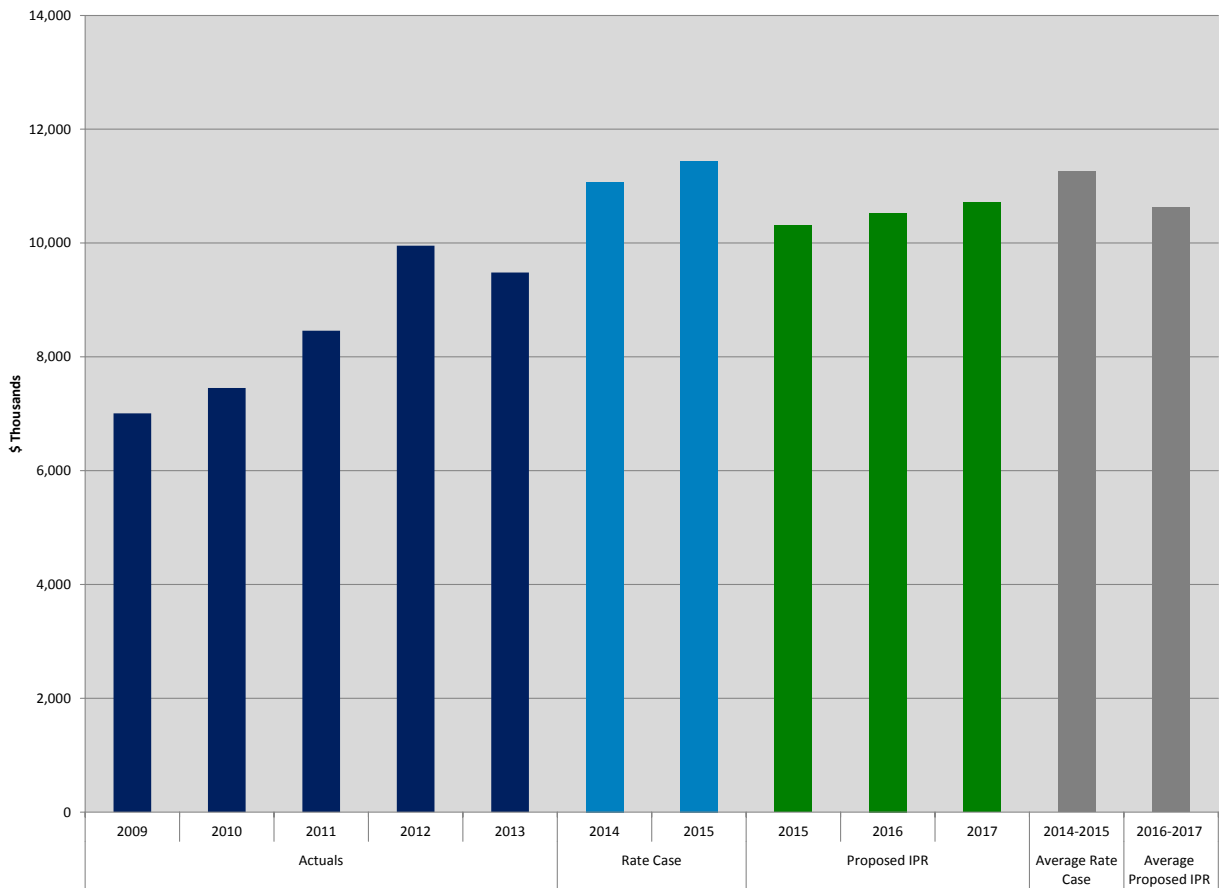
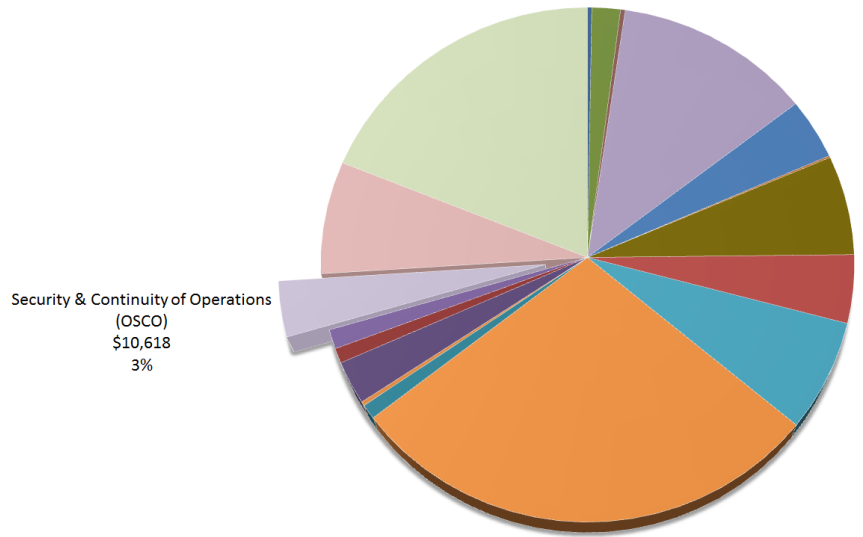
- Inability to improve safety programs: Both the DOE review and the Safety Policy Improvement Project has identified significant areas where BPA was unable to meet DOE Safety Program standards. The primary barrier to addressing these insufficiencies is staffing resource constraints.

5.12 SECURITY AND CONTINUITY OF OPERATIONS (OSCO)

Allocation Distribution



FY 2016-17 Average: Proposed IPR



Program Detail

(\$ Thousands)	Actuals	Rate Case		Proposed IPR		
	2013	2014	2015	2015	2016	2017
Agency Services G&A Allocations	8,877	10,482	10,700	9,564	9,845	10,070
Transmission Direct Support	606	593	740	740	680	641
Grand Total	9,482	11,075	11,440	10,304	10,525	10,711

Description, Purpose and Responsibilities:

The Office of Security and Continuity of Operations (OSCO) integrates the disciplines of security, emergency management, and continuity of operations to ensure the protection of BPA’s workforce, its operational systems, and the overall critical physical assets used to carry out its mission for the residents of the Pacific Northwest. This organization assists BPA’s headquarters and field organizations with strategies and logistics to achieve adequate security, supports response readiness in preparation for major disruptive events, and helps to mitigate the BPA’s security and emergency response risks.

OSCO ensures its planning strategies do not pose undue risks or costs to BPA customers, while meeting requirements prescribed by the North American Electric Reliability Corporation (NERC), Federal Energy Regulatory Commission (FERC), U.S. Department of Energy (DOE), U.S. Department of Homeland Security (DHS), Occupational Safety and Health Administration (OSHA), and Federal Continuity Directives (FCD).

OSCO encompasses three organizations which collectively provide the following services to BPA and its customers:

Physical Security

- Identify, define, and assess security risks and threats to BPA’s people and infrastructure.
- Develop, deploy, and manage security risk mitigation controls and solutions to address threats.
- Ensure BPA’s physical security policies, plans and procedures are in compliance with regulatory requirements.
- Inform and educate BPA staff on physical security matters.

Personnel and Information Security

- Ensure BPA’s personnel and information security policies, plans, and procedures are in compliance with regulatory requirements.
- Verify identity, process background checks, assess risk, issue workforce access credentials, and manage access control.
- Review and approve foreign visits and assignments.
- Oversee the identification and safeguard of BPA sensitive and classified information.
- Inform and educate BPA staff on credential handling and information protection matters.

Continuity of Operations

- Enhance BPA’s continuity capabilities to prevent, prepare, respond to, mitigate, and recover from natural, human-caused and/or technological disruptions and disasters through planning, training, and exercising.
- Identify, train, and maintain a staff to manage a disruptive event and successfully reconstitute capabilities or facilities.
- Identify, train, and prepare staff to relocate to alternate facilities to perform the operational functions that directly support BPA’s Mission Essential Functions (MEFs) – specifically, the ability to deliver power to load.

Goals

With focus on efficiency and continual improvement, OSCO will support its strategic objectives of *compliance, protection, life-safety, and disaster preparedness* by focusing on the strategic initiatives identified below.

Physical Security

- Protect BPA's critical assets as defined in BPA's Critical Asset Security Plan (CASP) and security asset management strategy to include implementation of NERC CIP Versions 4 and 5 which focus on protection of cyber assets, and a more comprehensive protection of BPA's critical facilities.
- Update aging security systems to a more efficient design.
- Reduce long-term security system maintenance costs and improve security system reliability.

Personnel and Information Security

- Prepare for anticipated increase in HSPD-12 Smart Card credentialing activities associated with:
 - government-wide renewals and updates,
 - the unanticipated addition of 600+ NERC/CIP required background checks for partner utilities, and
 - increased on-boarding activities due to employee turnover based on projected BPA retirement profile.
- Achieve Federal Identity Credential and Access Management implementation deliverables for Smart Card interoperability with logical and physical access systems.
- Ensure Smart Card integration with physical access control systems and centralized access management.
- Prepare for anticipated Federal changes in information management policy which will require revised multi-year Information Security Program strategy for sensitive and classified information.

Continuity of Operations

- Develop and execute a BPA-wide training and exercise program to ensure staffs know what is expected of them, have been trained to those expectations, have adequate facilities and systems to perform their function and have practiced performing that function through comprehensive exercises. Facilitate cross-agency continuity activity to develop redundant systems capable of running critical business functions in the event of a major disruption.
- Facilitate the conversion or development of plans that clearly document every process critical to deliver BPA's Mission Essential Functions.

Changes from the 2012 IPR

BPA continues to make great strides in strengthening its security posture and enhancing business resilience by accomplishing its initiatives, which include:

Physical Security

- Implemented NERC CIP Version 3 required enhancements.
- Initiated BPA's (non-NERC) Critical Infrastructure protection program with:
 - Completion of first enhancement at one of BPA's most critical substations,
 - Two critical sites currently being designed and prepared for installation in FY 2015, and
 - Five additional sites scheduled for implementation in FY 2016 and FY 2017.
- Reconfigured and automated BPA Headquarter access control systems.
- Processed more than 12,000 visitor access requests annually.

- Conducted over 100 field site visits in support of compliance obligations.

Personnel and Information Security

- Conducted nearly 1,700 recurring Personal Risk Assessments (PRAs) annually.
- Processed approximately 1,400 access credentials and 475 foreign national visitor requests annually.
- Completed first year annual assessment of adherence to BPA's Information Protection program.
- Developed BPA-wide information security incident tracking log to assess and evaluate information protection deficiencies and corrective actions.
- Successfully launched all employee required information protection web-based and classroom training for DOE and NERC CIP information protection requirements to increase employee awareness and understanding of responsibilities.
- Successfully met all audit activities and mitigation plan deliverables.

Continuity of Operations

- In accordance with multi-year strategy, implemented the Interim Alternate Scheduling Capability (ASC), completed BPA-wide Business Impact Analysis, identified and trained first wave of Emergency Relocation Group (ERG) members.
- Began construction of a new building which will provide alternate workspace to run critical scheduling functions for both transmission and power to meet BPA's Mission Essential Functions.
- Initiated the incident management training program using Federal Emergency Management Agency's (FEMA) Incident Command System (ICS) model and trained over 600 BPA personnel in initial incident assessment and initial incident management.
- Upgraded two-way radio system for building wardens (those who assist and direct employees during building emergencies).
- Successfully implemented an emergency notification system for employees.
- Developed and executed an ongoing personal and family preparedness program to improve BPA workforce's awareness of how to be ready for, respond to, and perform through a disruptive event.

Risks of Operating at Levels below the Proposed Spending Levels

BPA's Continuity Program has spent the last two years primarily re-aligning to meet Federal Continuity Directives (FCD) and DOE Order 150.1 to improve our ability to deal with emergency and catastrophic incidents. The program is now at the point where there is a heavy "front-end load" to train people and exercise plans to make sure BPA can continue to perform its primary Mission Essential Functions.

To the extent possible, funding has been reprioritized within OSCO to cover this new initiative and other increases in operating costs. This includes redistributing funds from an anticipated contract savings in physical security following a new contract award, and eliminating one contractor position in program management to free up funding. However, additional funding is still required to cover part of this new initiative to expand Continuity and Emergency Preparedness training and exercise program. BPA proposes to increase participation and capture the cost of Continuity efforts by paying for Continuity-related activities through a centralized cost center.

Without continued training and exercising our people and plans, BPA cannot be sure it will be ready or capable of carrying out its Mission Essential Functions (MEFs). The burdens of training and exercise costs are currently being borne within each organization and, since these costs may not be specifically funded in these organizations, participation in exercises is sometimes unpredictable or uneven across the BPA. Centralizing the proposed spending level burden for Continuity preparedness should increase participation and lead to an overall preparedness maturity that will help the agency to effectively handle disruptive incidents.

Challenges/Constraints

Compliance-driven programs dominate OSCO's activities and resource expenditures. Regulatory requirements in the physical security and information security arenas continue to increase in frequency, complexity, and cost. Overcoming these challenges, while adhering to budgetary constraints requires reprioritization of initiatives and adoption of new strategies to find efficiencies through process improvements, automation, and where appropriate, applying risk-informed reductions to re-deploy resources in support of core objectives.

Ongoing assessments of BPA's recovery capability and continuity program maturity indicate a steady improvement year-over-year. The program is now at the point where there is a heavy "front-end load" to train people and exercise plans to make sure BPA can continue to perform its primary Mission Essential Function to "Deliver Power to Load."

5.13 FREEDOM OF INFORMATION ACT (FOIA) AND PRIVACY ACT

For this IPR document, the funding for the FOIA/PA function has been included in the OSCO funding accounts. BPA is in the process of assessing the proper organizational structure for the FOIA/PA functions.

Description, Purpose and Responsibilities:

The Freedom of Information Act and Privacy Act program teams are responsible for reviewing and releasing BPA information to the public, while protecting the privacy of BPA employees and stakeholders. The FOIA program team is responsible for responding to requests for information, maintaining BPA's public reading room and electronic reading room, providing FOIA training to all BPA federal and contract workers, and reporting to DOE on FOIA compliance. The Privacy program team is responsible for ensuring that the use of technology or paper-based systems sustains and does not erode, privacy protections relating to the use, collection and disclosure of personal information.

Goals

While the FOIA/PA Program can be characterized on a maturity scale as "Managed," BPA's Privacy Program is, however, "Incomplete." Prior to the FY 2013 data breach experience by DOE HQ, DOE elements were less engaged and focused on Privacy requirements. Because of that, among other reasons, DOE is re-emphasizing its Privacy program, focusing on the appropriate collection, maintenance, use, protection and disclosure of personally identifiable information (PII). BPA must build its Privacy Program to ensure it properly protects both employee and the public's Personally Identifiable Information collections.

Changes from the 2012 IPR

The FOIA and Privacy functions were managed as collateral duty under the Office of Security and Continuity organization; however, the Privacy Program was never fully addressed.

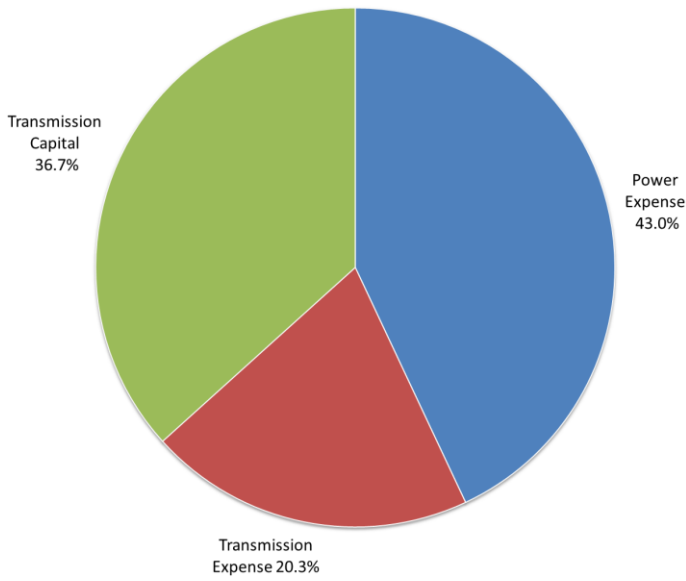
Due to unacceptable risk of privacy breach and a dramatic increase in workload following the HCM IG Audit and subsequent finding; it is BPA's risk-informed decision to staff and fund an organization that can provide the level of focus, service and compliance required by the President's Open Government Directive.

Risks of Operating at Levels below the Proposed Spending Levels

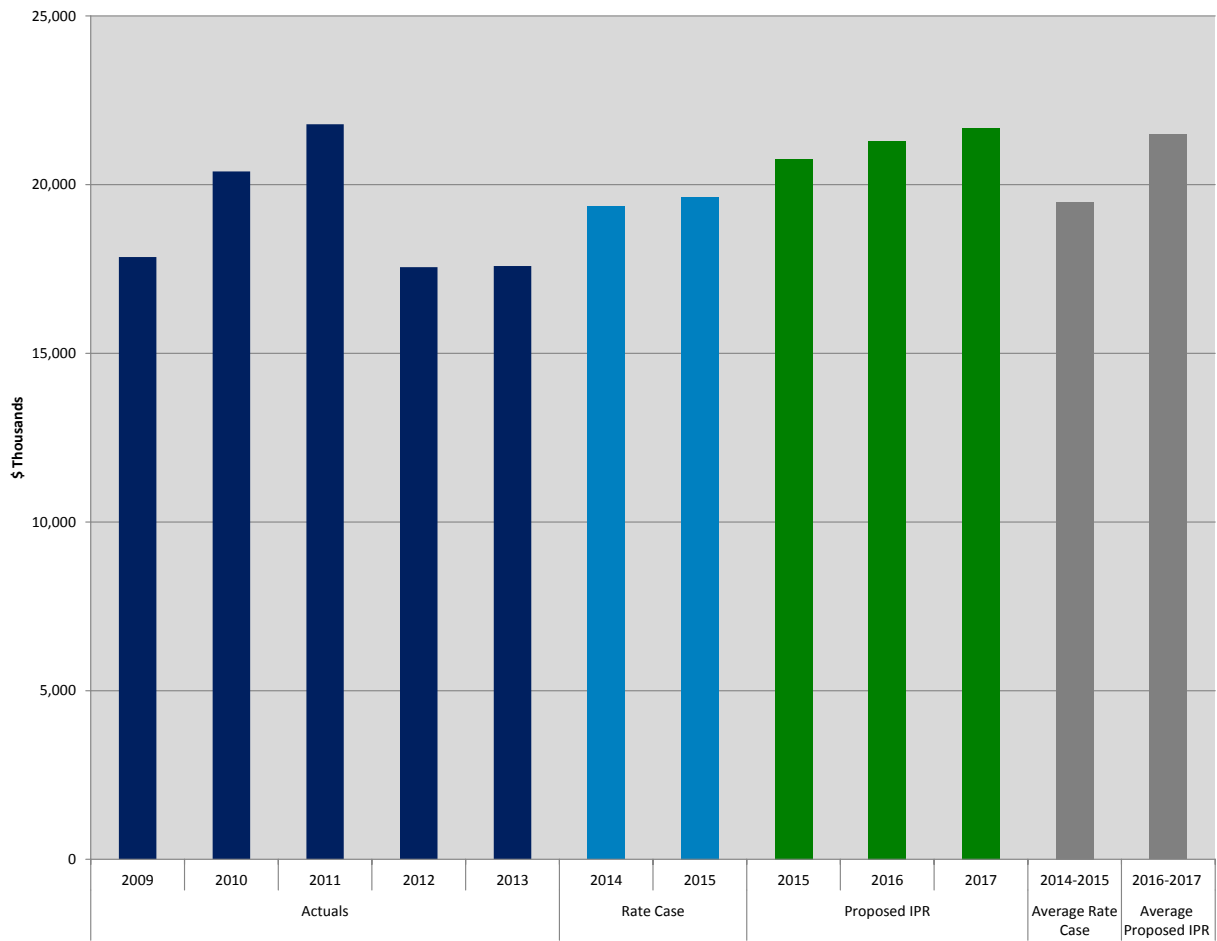
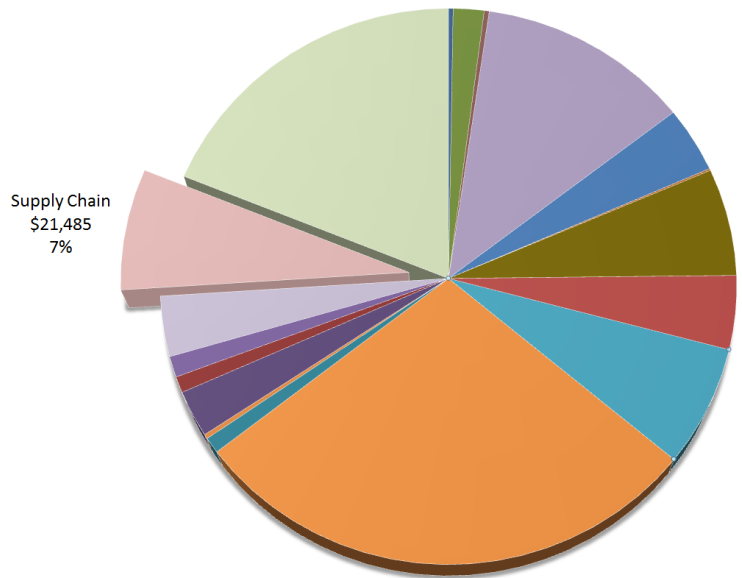
The International Association of Privacy Professionals (Government) notes that there are three potential risks when government privacy protections fail: 1) individuals may suffer harm ranging from identity theft, to discrimination, to loss of benefits; 2) relevant government organizations may need to expend considerable time and money responding to the issue or event, including possible investigations by both overseeing and legislative bodies; 3) to the extent that the events diminish trust in government privacy practices, the resulting loss of credibility and public confidence could seriously impair the government's ability to carry out necessary activities and missions.

5.14 SUPPLY CHAIN

Allocation Distribution



FY 2016-17 Average: Proposed IPR



Program Detail

(\$ Thousands)	Actuals	Rate Case		Proposed IPR		
	2013	2014	2015	2015	2016	2017
Agency Services G&A Allocations	4,604	5,466	5,594	5,754	5,940	6,108
Transmission Direct Support	12,983	13,882	14,042	14,997	15,344	15,577
Grand Total	17,587	19,348	19,636	20,751	21,284	21,685

Description, Purpose and Responsibilities:

Supply Chain Services (SCS) is a full service, demand sensitive provider of procurement, materials management, fleet, supplemental labor, and logistics services. SCS provides a method for obtaining equipment, materials, and services to support work requirements, while ensuring ethical, risk appropriate, business practices that are compliant with internal controls. SCS monitors and manages the timely and efficient execution and conduct of all Supply Chain functions across the BPA.

Goals

Supply Chain Services’ mission is to deliver the best value through collaborative partnerships, utilizing effective and efficient processes. SCS plans to achieve that mission by continuing to focus on LEAN (a process of streamlining systems) and applying those principles to all aspects of the services SCS provides. Where possible, SCS applies technology to facilitate efficient and effective solutions. SCS plans to continue its emphasis on BPA-wide, long-term strategic management and increasing performance through emphasis on metrics benchmarked against peers. SCS plans to continue utilizing the Contract Management Office (CMO) for as many projects as possible and continuing to work with customers earlier in the procurement cycle to maximize efficiency and minimize cost.

Over the long term, Supply Chain Services is focusing on efforts in four major areas:

- Building an integrated team through one SCS team.
- Increasing our competencies and performance through talent management and training.
- Ensuring compliant operations through appropriate risk management.
- Continually improving our value to BPA’s mission through continuous process improvement.

Changes from the 2012 IPR

- The consolidated Fleet Management organization is yielding efficiency improvements in fleet management through standardization and elimination of older unused equipment. Fleet’s priority is to acquire a system to track maintenance and use rates to ensure effective service and maintenance intervals. The increased volume of work associated with Transmission construction projects is resulting in increased usage of fleet equipment during a time when workplace attrition has decreased the availability of uniquely skilled workers. The increase in maintenance and service required to keep equipment safe and in service, and new tools needed to support the newer equipment, is straining fleet capacity.
- The Supplemental Labor Management Office has also experienced a dramatic increase in workload as BPA’s contract workforce has expanded to fulfill corresponding increases in BPA projects.

- As a result of several audits, procurement is placing an increased emphasis on compliance. Ensuring that our contracting tools and methods meet the demands of our customers while being compliant with rules and regulations has placed additional strain on the organization.
- Desired improvements in procurement and contracts compliance/quality along with increased contract volume has created a need for an automated contract management system that can deliver efficiency, compliance, and skill set maturity.

Risks of Operating at Levels below the Proposed Spending Levels

Supply Chain Services must respond to and support our customer's workload needs. Fleet, Logistics, Supplemental Labor Management, and Procurement workloads all increase with an increase in BPA projects and workload. An inability for Supply Chain Services to expand and improve operations has resulted in missed project timelines and milestones for Transmission construction projects, Energy Efficiency projects, and IT projects. Operating at levels below the proposed spending levels would have an on-going negative impact, including increased risk of non-compliant work output, continued high maintenance costs to support outdated systems, delays in major overhaul services to fleet, increased risk of equipment failures in the field, potentially resulting in safety incidents or a service reliability interruption. Warehouse operations may be negatively impacted due to increased risk of safety incidents related to outdated racking systems and efficiency opportunities may be lost due to failure to improve pick/pack/store/retrieve warehouse operations.

Challenges/Constraints

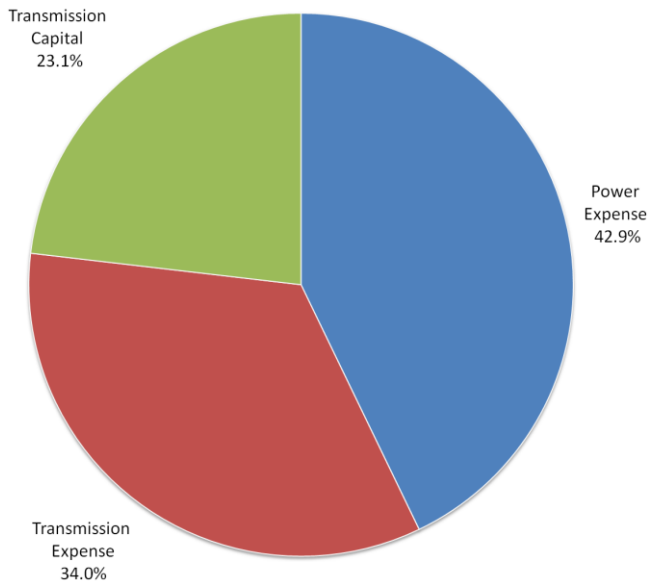
Supply Chain Services relies on technology to effectively and efficiently facilitate its work products. As technology has progressed, BPA has been slow to transition to newer more sophisticated and user friendly, software common in the industry today. The result is that SCS compensates with manual processes that require additional manpower and introduce a greater margin for error and increased cost.

The tremendous volume increase in workload throughout BPA corresponding to Transmission construction projects and implementing lease financing to fund those projects has resulted in more reactive solutions approach. SCS intends to use more systematic processes throughout the procurement cycle to gain efficiencies. Supply Chain Services also intends to utilize a more thorough planning process for contract resource allocation, utilizing standardized specifications for all materials and services procured at BPA.

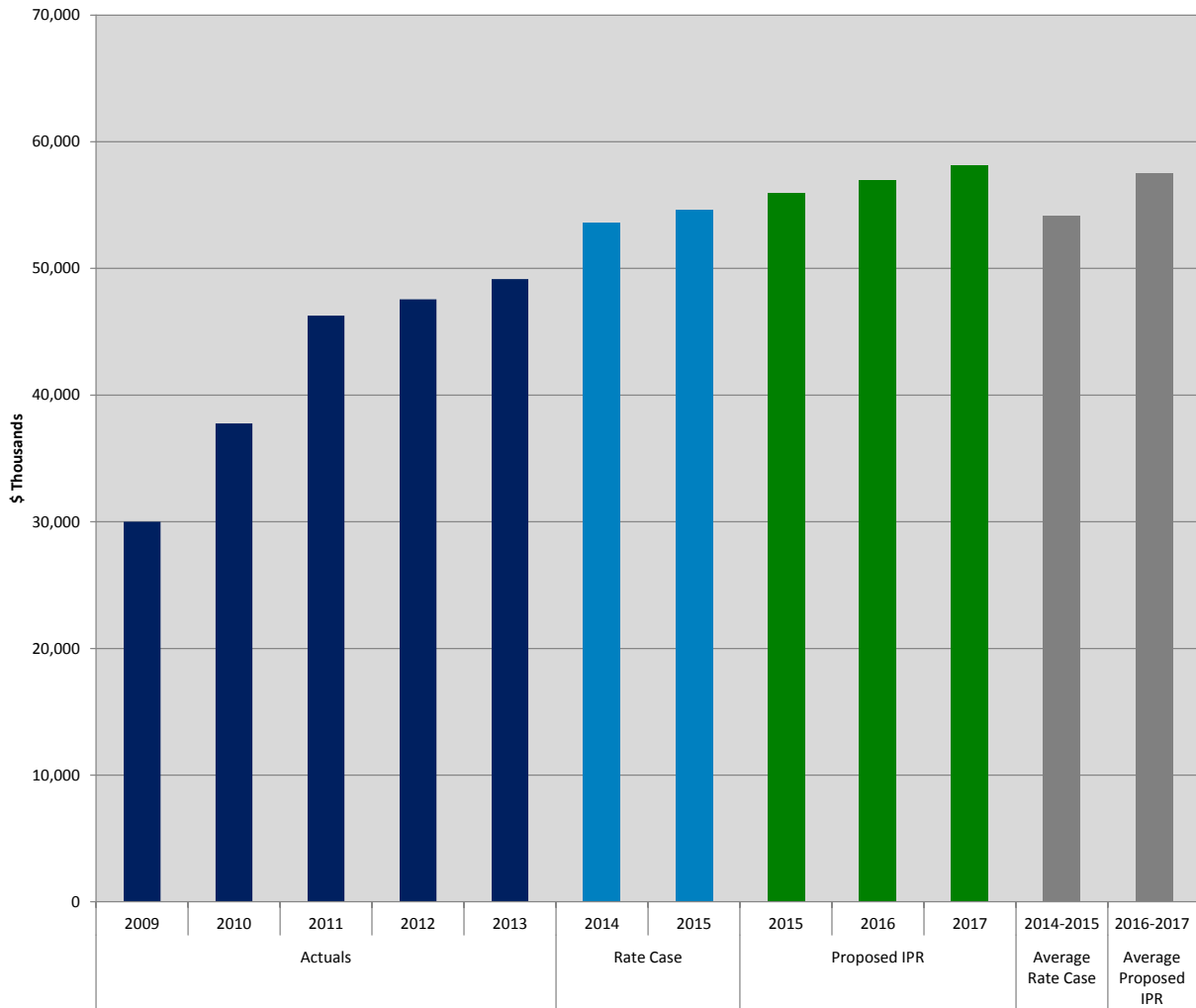
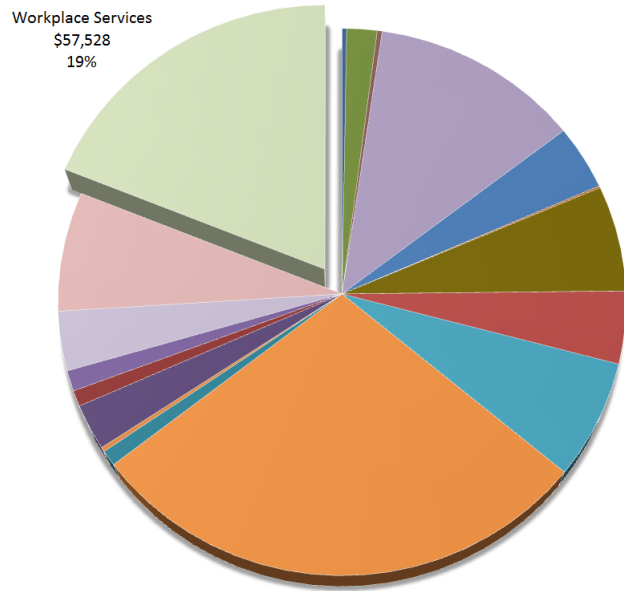
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5.15 WORKPLACE SERVICES

Allocation Distribution



FY 2016-17 Average: Proposed IPR



Program Details

(\$ Thousands)	Actuals	Rate Case		Proposed IPR		
	2013	2014	2015	2015	2016	2017
Agency Services G&A Allocations	30,397	31,716	32,352	32,697	33,295	33,872
Transmission Direct Support	18,753	21,882	22,306	23,249	23,660	24,229
Grand Total	49,150	53,598	54,659	55,947	56,955	58,101

Description, Purpose and Responsibilities

Workplace Services is responsible for overall direction, strategic planning, management and governance of BPA’s facilities, assets, maintenance and operations, space management, printing, mail and office services. The Facilities Management Officer (FMO) has the overall responsibility and accountability for BPA’s office facilities strategic planning and facilities (nonelectric) asset management programs. This includes establishing the business strategic objectives, financial targets, and performance standards that align with BPA’s strategic direction and Asset Management Council goals. The FMO provides oversight and management of program implementation.

Operations and Planning executes the office, mail, and printing services for BPA, and manages BPA’s Sustainability Program. Office services include purchasing expendable and/or durable office supplies and conference room scheduling, transportation, and parking programs. Printing services include bindery services, scanning, engineering records management, and photo archiving in accordance with Government Printing Office regulations.

Facilities and Space management operates and maintains the GSA delegated BPA Headquarters building, programs and oversees all office leased space, and manages all office space, including furniture life cycle management, office moves, and common area furnishings.

* The Facilities Asset Management (FAM) and Ross Facilities programs are included in the Transmission Expense (System Maintenance) narratives and proposed IPR levels.

Goals

- Continue to develop and support emergency and alternate facilities requirements that enable continuity of critical business functions and systems.
- Streamline the space management program to increase flexibility and efficiency in space use and staff movement, better response time, reduce impact on employees, increase reorganization mobility, and reduce cost of service.
- Research and implement cost-effective Sustainability Program business practices and facility improvements to drive down energy and water usage and costs.
- Ensure that all office related purchases are cost effective, timely, and sustainable, and recycle materials when possible to support Executive Order 13514 (Federal Leadership in Environmental, Energy, and Economic Performance).
- Promote sustainable commute options, which support Federal, State and municipal mandates.
- Apply continuous process improvement methodologies to identify and eliminate waste, inefficiency, and non-value-added activities.
- Support timely and accurate communications with BPA stakeholders and customers and also comply with Government Printing Office regulations

Changes from the 2012 IPR

- Mail and printing operations have improved their facilities and processes to ensure compliance with all applicable regulations that impact those business functions.
- Establish a Sustainability Program with strong oversight to enable BPA to meet the intent of Executive Order 13514 (Federal Leadership in Environmental, Energy, and Economic Performance).
- Implement a program for the operations and maintenance of back-up power and cooling systems to ensure continuity of critical business systems and to comply with BPA data center standards.
- Implement the Work Solutions program to identify work place improvements that will improve BPA work environment and employee productivity.

Risks of Operating at Levels below the Proposed Spending Levels

To the extent practicable, Workplace Services absorbed programmatic increases within existing budgetary limits. Below are potential risks and impacts to planned programs:

- Reduction in facility preventative maintenance activities that will accelerate asset life cycle replacement costs.
- Delays in planned projects necessary for priority business requirements.
- Delays in life cycle replacement of furniture systems that have exceeded their design life.
- Limiting business process improvements and/or adoption of best practices to only those programs specifically required to meet regulatory or mandatory compliance standards.

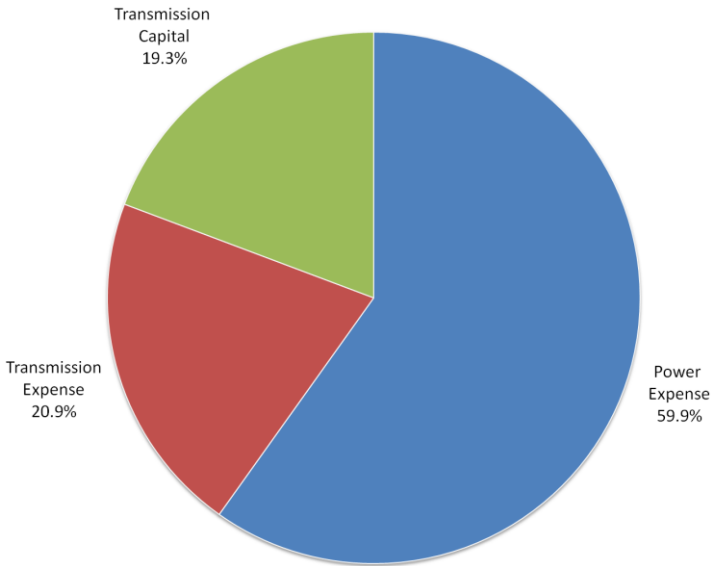
Challenges/Constraints

- Planning for increased space requirements to house short to near term headcount growth which is needed to support capital construction and other programs.
- Emerging facility requirements that range from new storm water fees, cable plant improvements, and critical utilities, such as back-up power and cooling systems that enable business continuity.
- The lack of a comprehensive maintenance management system and system of record to manage and document critical maintenance activities (including inspections) constrains operational effectiveness.
- New mission requirements to support Operations & Maintenance, Sustainability, and Print Shop operations with no additional BFTE resources.
- Continued reliance on contract personnel to operate programs that have increasing compliance requirements.
- Increased building occupancy levels are increasing utility costs proportionately as headcount increases.
- Building lease costs have increased from \$10.65 per square foot (FY 2011) to over \$19.93 per square foot in FY 2013 with continued increases in costs for lease space if capital improvement programs are not funded.
- Expanded IT operations have increased energy costs as a result of demands for continual cooling of IT equipment.
- Increased contractor headcount needed to implement critical BPA programs will require additional fiscal resources for space and office support.

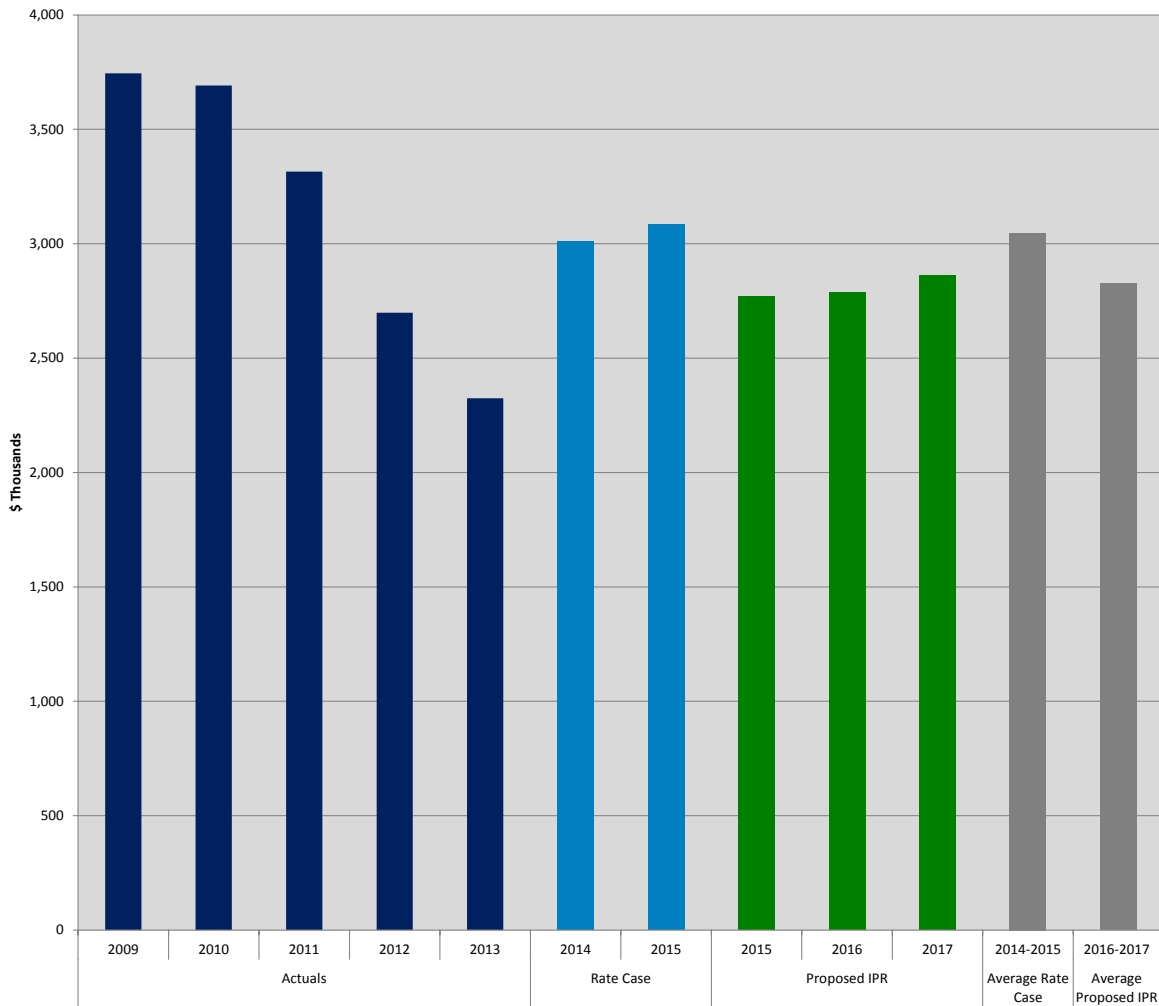
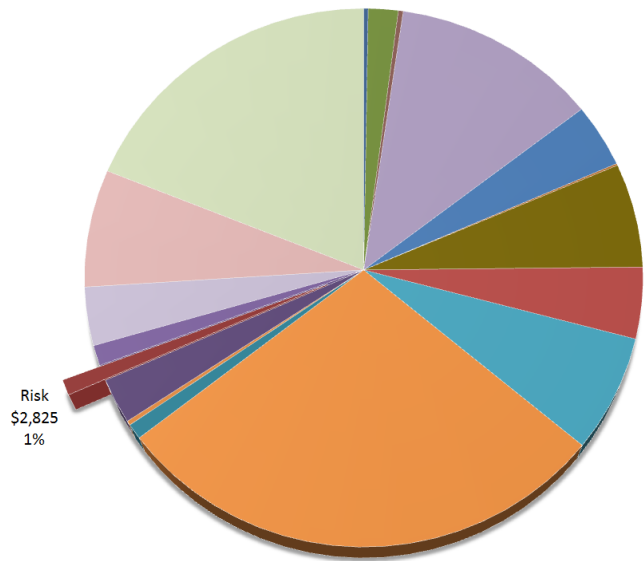
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5.16 Risk

Allocation Distribution



FY 2016-17 Average: Proposed IPR



Program Details

(\$ Thousands)	Actuals	Rate Case		Proposed IPR		
	2013	2014	2015	2015	2016	2017
Agency Services G&A Allocations	2,325	3,010	3,085	2,770	2,789	2,861
Grand Total	2,325	3,010	3,085	2,770	2,789	2,861

Description, Purpose and Responsibilities:

The Risk Management office is led by the Chief Risk Officer (CRO) and is comprised of the Enterprise Risk Management (ERM) and Transacting and Credit Risk Management (TCRM) functions.

Risk Management’s mission is to enable high quality and durable business decisions that improve the likelihood that the agency achieves its business objectives. Risk does this by ensuring decisions are “risk informed” - objectives are clearly understood, a broad range of alternatives are evaluated with consistent criteria, and significant risks are identified and appropriately treated, and by ensuring that all significant risks are systematically and effectively addressed by accountable organizations consistent with the agency’s risk tolerance. Risk Management provides independent assurance to executive management that significant risks to achievement of our strategic and business objectives are identified and appropriately addressed. Risk Management promotes consistent and disciplined consideration and treatment of risk as part of the agency’s day to day processes, making the risk management ethic a visible and integral part of BPA culture.

Goals

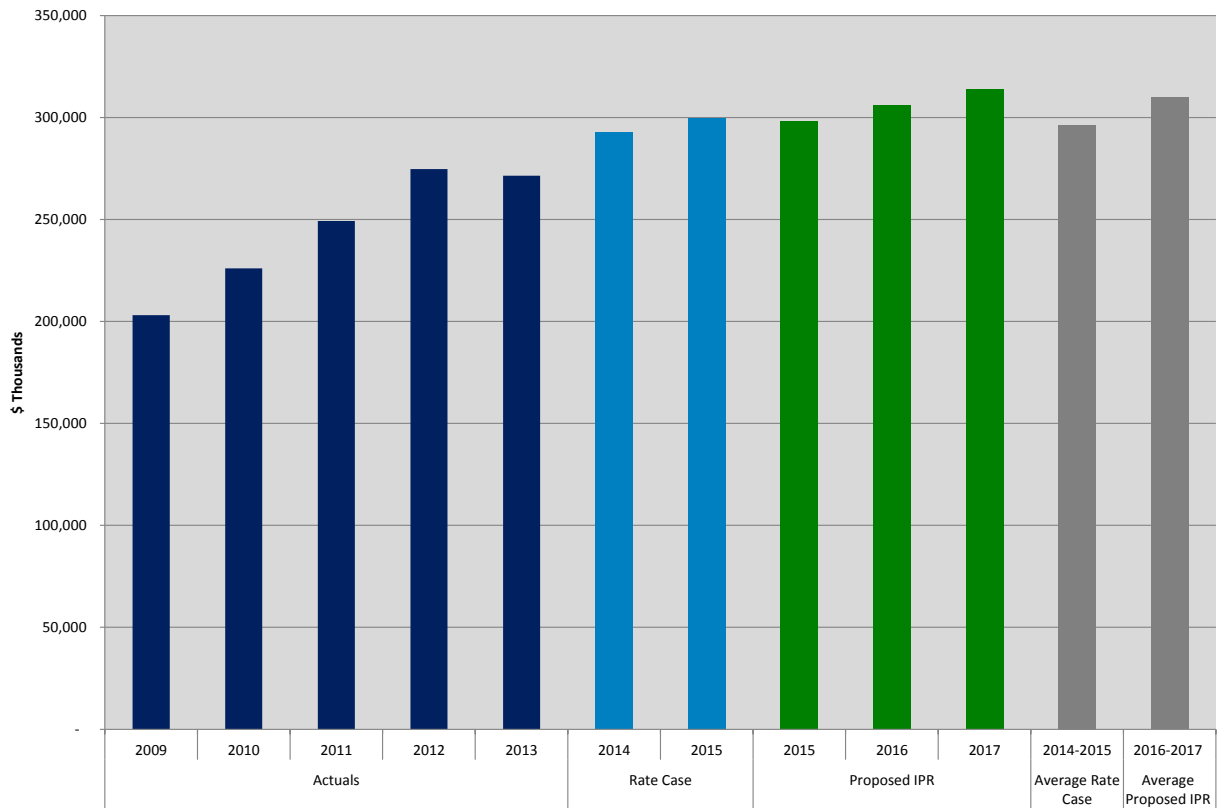
To work collaboratively with executive management and staff to effectively implement a more robust risk management program and ensure that effective risk management remains a priority for the agency. Keep abreast of improvements in the risk management discipline via participation in industry forums and benchmarking. Adapt risk management best practices to fit the unique characteristics of the agency.

- BPA’s strategic objectives are clearly defined, measurable, and reflect the agency’s risk tolerance
- Risks with agency-wide scope or impact are identified and addressed through a consistent and disciplined process
- Executive Management has visibility into business unit operations and is assured that key risks are appropriately managed. Emerging risks are dynamically identified and managed and ownership of risk management is promoted in the business units.
- Decisions and policy are based on a complete and shared understanding of objectives and a robust consideration of risks to delivering on, and alternative means for, achieving those objectives
- Consistent and disciplined consideration and treatment of risk is part of our day to day processes – risk management ethic is a visible and integral part of BPA culture

Risks of Operating at Levels below the Proposed Spending Levels

Operating at spending levels below the proposed levels would require significant reductions in contract and agency staff. This would effectively eliminate or attenuate significant elements of the agency risk management program.

5.17 ENVIRONMENT, FISH AND WILDLIFE



Program Details

(\$Thousands)	Actuals	Rate Case		Proposed IPR		
	2013	2014	2015	2015	2016	2017
Agency Services G&A Allocations	153					
Power Direct Support	267,150	286,816	293,860	292,015	299,611	307,310
Transmission Direct Support	4,101	5,832	5,958	6,093	6,254	6,395
Grand Total	271,404	292,648	299,818	298,108	305,865	313,705

The Environment, Fish and Wildlife (EF&W) organization reports directly to the COO. Because of this reporting structure, it is an Agency Services organization. However, EF&W costs are not allocated to the business units, as are typical Agency Services costs. The costs are directly charged to Power Services and Transmission Services.

Description, Purpose and Responsibilities

Environment, Fish and Wildlife (EF&W) is responsible for managing the environmental component of BPA’s transmission and power sales businesses. This includes environmental analysis and compliance for BPA projects, programs activities, and implementation and management of BPA’s Fish and Wildlife program. Within EF&W are three organizations; Environmental Planning and Analysis, Pollution Prevention and Abatement (PP&A), and Fish and Wildlife (F&W) Program.

Goals

EF&W ensures that all BPA business functions such as policies, programs, and initiatives are carried out in accordance with established environmental laws and their associated regulations (e.g., National Environmental Policy Act (NEPA), Clean Water Act, National Historic Preservation Act (NHPA), Endangered Species Act (ESA), Northwest Power Act, and relevant state and local regulations and requirements, legal mandates, and prudent business practices). EF&W participates in environmental coordination at the regional level through new and ongoing relationships with other federal agencies, Indian tribes, state and local government, privately and publicly owned utilities, major manufacturers, professional groups, research and development organizations, congressional delegations and committees, natural resource groups, and the general public.

Changes from the 2012 IPR

Environmental Planning and Analysis organization has experienced a significant increase in workload for major environmental analysis since this work has nearly tripled over the past five years.

Pollution Prevention and Abatement has experienced severe staffing challenges over the past year being unable to fill senior manager positions.

PP&A has begun development of environmental guidance to ensure compliance with the new federal and state stormwater management requirements.

Risk for Operating at Levels below the Proposed Spending Levels

The primary impact of operating below the proposed spending level is delay in the implementation of BPA Transmission and Power (including Fish and Wildlife) activities due to insufficient staff to review and screen projects for environmental and cultural resource compliance. There is an increased likelihood of compliance violations, with associated risk of damage to sensitive environmental and cultural resources, significant financial penalties, potentially-significant project delays while mitigation is implemented, and loss of reputation with regional stakeholders. Failure to comply with federal environmental laws and regulations such as the ESA or CWA also exposes BPA to serious legal/litigation risks.

Without additional staff and related support, EF&W will be unable to maintain BPA's basic environmental compliance responsibilities, let alone take on new or broader initiatives to address large-scale BPA program areas, or other strategic or innovative measures.

Failure to fully support the Fish and wildlife program could affect BPA's ability to meet its commitments under the Columbia Basin Fish Accords, various BiOps, wildlife settlements and the Council program.

More specific information on these organizations can be found in the specific Power and Transmission programs in which these organization charge.

6 FINANCIAL POLICIES AND METHODOLOGIES

6.1 AGENCY SERVICES GENERAL ALLOCATION METHODOLOGY

The G&A and Business Support pools are collections of costs from the centralized Agency Services organizations. The description of products and services provided by these organizations can be found in the individual organizations executive summaries.

BPA has fourteen General and Administrative (G&A) cost pools: Executive, Planning, Governance; IT Applications System Support; Security; Legal Services; Human Resources; Accounting and Finance; Safety; IT Administration; IT Infrastructure; IT Cross Agency Projects; Workplace Services; Public Affairs; Dedicated Workplace Services for Power; and Dedicated Workplace Services for Transmission.

In addition, BPA has nine Business Support pools. These are: Strategic Integration; Risk; IT Dedicated Projects for Power; IT Dedicated Projects for Transmission; Supply Chain Administration; Supply Chain Purchasing; Technology Innovation; Billing and Metering Services; and Contracting and Forecasting Services. These Business Support pools are assigned to the Power Services and Transmission Services programs that are directly benefitted by the services provided. The description of these services can be found in each benefitting program summary.

G&A and Business Support pools are used to spread shared corporate costs to the Power Services and Transmission Services.

Before each IPR process, BPA's Accounting and Reporting group conducts a review of the Agency Services cost allocations pools and the cost drivers used to assign Agency Services costs to Power and Transmission Rates. As part of this review, they meet with key managers and their analysts to discuss the makeup and drivers for the cost pools and recent or proposed changes to the organization or services performed.

Each pool is examined to determine the appropriate drivers of cost. The drivers are used to determine the allocation rates. The costs associated with these pools are assigned to the Agency Services G&A program or the benefitting O&M program for each business unit.

When the allocation rates are reviewed, these principles apply:

- Methodologies are equitable and fair
- Methodologies represent a causal relationship to the services provided
- Methodologies are defensible in a rate setting environment
- Methodologies are defensible with internal and external auditors
- Methodologies can be implemented and are cost effective
- Methodologies are direct and simple: improving understanding and transparency
- Methodologies are used to develop rates that will be implemented and unchanged on an annual basis

G&A and Business Support costs can be allocated either evenly to the Power and Transmission business units or based on specific cost drivers, such as number of employees or square footage occupied.

- Even Allocations - Traditional General and Administrative Costs: Cost pools that serve the general purpose of agency support functions (split 50/50 to power and transmission rates)
 - No consistent, measurable method of assigning support costs directly to the benefactor
 - Functions are general in nature and are not directly affected by changes in traditional cost drivers (i.e. FTE levels, proposed spending level levels, etc.)
 - Collection of costs or measurement of driver is cost prohibitive – it is uneconomical to attempt more precise allocations

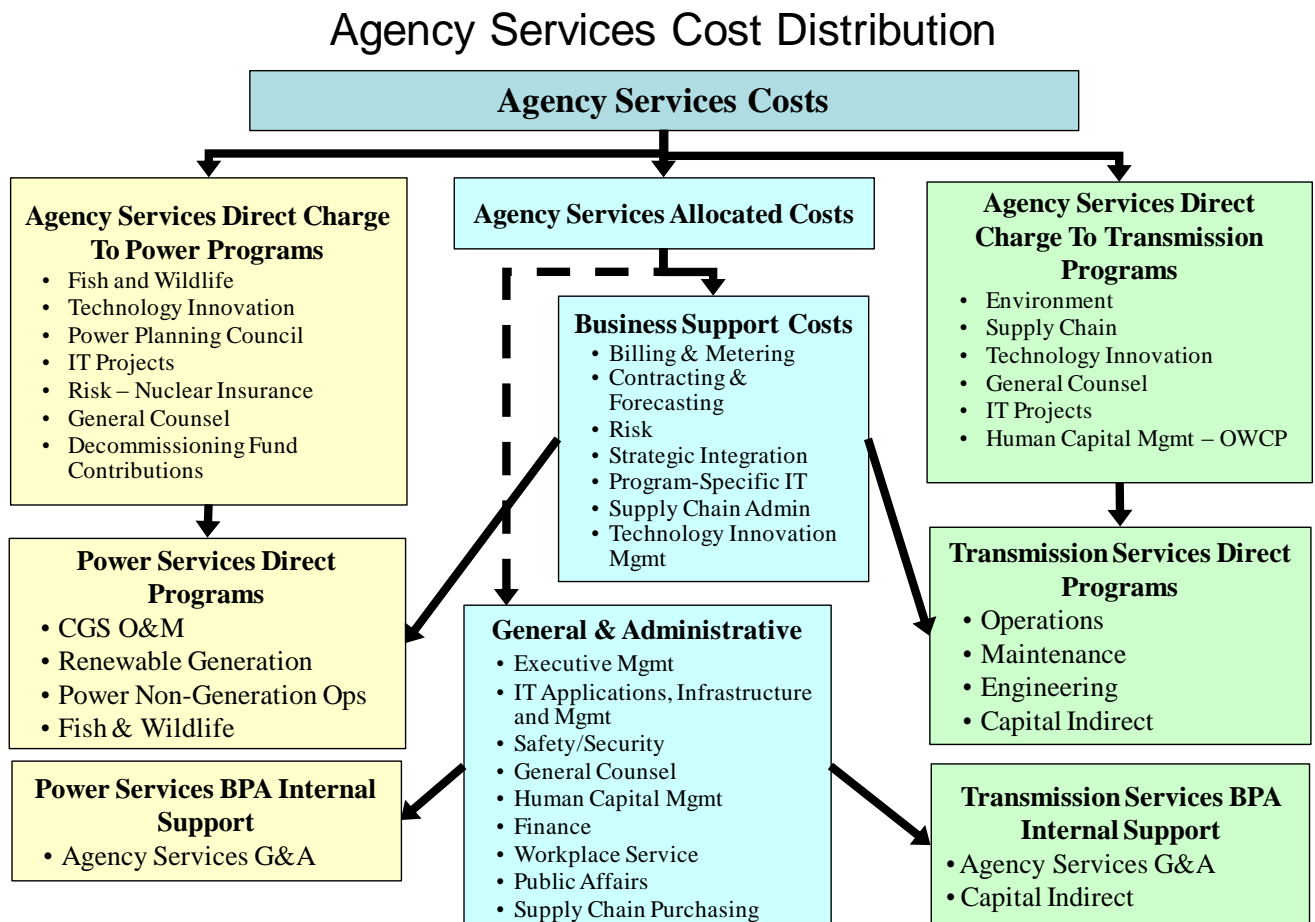
- Lack of causal relationship to benefactors prevents a clear distinction for assigning those costs
- Directed Allocation Pools: Cost pools that can be distributed with more precision, based on specific cost drivers (split other than 50/50 to power and transmission rates)
 - Activities are managed and budgeted centrally, but methods exist to assign costs to benefactors
 - Functions can be linked to cost drivers and can change based on those drivers
 - Direction of effort studies or other means can be used to allocate in a cost-effective manner

Upon completion of the cost pool review, potential changes to allocations are presented to the Chief Accounting Officer for review and approval. They are then implemented in the IPR, the upcoming year’s spending levels and the next fiscal year’s rate percentages used to allocate actual Corporate costs.

The accounting review for the 2014 IPR resulted in minor changes to a number of pools. The most significant change came in the portion of overheads assigned to transmission capital, which decreased due to the number of transmission capital projects not eligible to receive capital indirect allocations under accounting regulations. These include capital projects such as Information Technology and Land. A summary of the cost pool changes can be found on the next page.

The following graphic depicts how agency services costs are assigned to the business units.

Agency Services Cost Distribution



FY 2015 & 2016/17 IPR G&A Allocations

		COST POOL	2015/IPR Rates			2014 Rates			DRIVERS	COMMENTS
			POWER	F&W	TRAN	POWER	F&W	TRAN		
1	XXZA	G&A EXEC/PLANNING/GOVERNANCE	50%		50%	50%		50%	This is a 50-50% cost pool.	50-50% pools serve the general purposes of the agency. There is no consistent measurable method of assigning support costs directly to the beneficiary, they are not directly affected by changes in traditional cost drivers, and there is a lack of causal relationship.
2	XXZB	G&A APPLICATION SYSTEM SUPPORT	35%		65%	35%		65%	Preset IT application pool with WOs assigned to the pool based on BL benefits	There are two other cost pools for IT applications- one which applies a 50-50% rate and the other which applies a 100-100% rate. Applications put into this cost pool should benefit Power and Transmission 35-65%, respectively. The WO's in this pool are reviewed by the IT CMO office.
3	XXZC	G&A SECURITY SERVICES	10%	2%	88%	10%	2%	88%	Security* Tier 3 Dept support for Power and Trans	Allocation percents by department are provided by the Security Office. The percents by department are weighted by actual dollars spent by security departments.
4	XXZD	G&A LEGAL SERVICES	50%		50%	50%		50%	This is a 50-50% cost pool.	Legal Services direct charges a large portion of their costs. Costs not direct charged are posted to this cost pool.
5	XXZE	G&A HUMAN RESOURCE SERVICES	22%	2%	76%	20%	2%	78%	FTE count by Deptld by function	Update based on FTE count by Deptld. Dept FTE are assigned to Power and Transmission based on functions performed. FTE data comes from HR.
6	XXZF	G&A ACCOUNTING & FINANCE	45%		55%	45%		55%	Generally 50-50%; exceptions are Budget and Disbursements	Most Finance functions are allocated 50-50%. Exceptions are Budget and Disbursements. For these Depts, costs are allocated based on Power and Trans support by FTE for Budgets, headcount for Payroll, and number of Vouchers for Accounts Payable.
7	XXZG	G&A SAFETY	18%		82%	13%		87%	Allocation by Safety Office employee	Safety Office provides a list of employees and the percent of time they spend supporting Power, Transmission and Corporate.
8	XXZH	STRATEGIC INTEGRATION	50%		50%	50%		50%	This is a 50-50% cost pool.	As projects mature, they are passed to either Power or Transmission.
9	XXZI	RISK MANAGEMENT	60%		40%	60%		40%	CRO sets rate based on workload	Allocation percents by department are provided by the Risk Office.
10	XXZJ	G&A IT ADMINISTRATION	31%		69%	34%		66%	Underlying IT cost pools	This cost pool is based on all other IT cost pools.
11/12	XXZK	DEDICATED IT PROJECTS	100%		100%	100%		100%	Dedicated IT projects	There are two cost pools for Dedicated IT Projects--one exclusively for Power and the other one for Transmission.
13	XXZL	G&A IT INFRASTRUCTURE	23%	2%	75%	24%	2%	74%	Number of IT devices by Deptld/employee by function	IT provides a detailed list of devices by Deptld by Employee. These are assigned to high level agency functions in support of Power, F&W and Transmission.
14	XXZM	G&A CROSS AGENCY IT PROJECTS	50%		50%	50%		50%	Preset pool with WOs assigned to the pool based on BL benefits	Very few projects are charged to this 50-50% pool.
15	XXZN	G&A WORKPLACE SERVICES	42%	5%	53%	38%	4%	58%	Square feet for space, FTE for other services	Includes GSA and other leases. Other services include printing, mail services, employee services, space management, office supplies, and office furniture.
16	XXZO	SUPPLY CHAIN ADMINISTRATION	7%		93%	7%		93%	Underlying Supply Chain cost pools	Rate is based on the underlying rates for all other Supply Chain cost pools.
17	XXZP	G&A PUBLIC AFFAIRS	45%	5%	50%	45%	5%	50%	This is a 50-50% cost pool.	Allocation percents by department are provided by the Office of Public Affairs.
18	XXZQ	SUPPLY CHAIN PURCHASING SERVICES	39%	27%	34%	41%	26%	33%	Work Orders charged	The rate is determined by Work Order costs in this cost pool charged specifically to IT, EF&W, Power, etc.
19	XXZT	TECHNOLOGY INNOVATION	50%		50%	50%		50%	This is a 50-50% cost pool.	As projects mature, they are passed to either Power or Transmission.
21/22	XXZW	G&A WORKPLACE DIRECT PROJECTS	100%		100%	100%		100%	Dedicated workplace services projects	There are two cost pools for Workplace Direct Projects--one exclusively for Power and the other one for Transmission.
23	XXZX	BILLING & METERING SERVICES	47%		53%	52%		48%	Number of bills and metering support	Study looks at drivers such as the number of bills, complexity of bills, and metering services.
24	XXZY	CONTRACTING & FORECASTING SRVC	54%		46%	53%		47%	Number of contacts tasks and activities/forecasts	Based on manager analysis and input in support of contracting and forecasting.

Rates for Leave and Benefits, Aircraft Services, Workplace Services Capital for the Van Mall, and Transmission Capital Indirects will be set at a later date. G&A allocation dollars overall for G&A for Power and Transmission traditionally run 38%/62%, respectively.

6.2 BETWEEN BUSINESS LINE COST ALLOCATION METHODOLOGY

The proposed spending levels and revenue requirements of the business units include costs that must be charged to the other business unit for appropriate recovery in rates. Unlike when Power purchases service from Transmission to market secondary energy, these are costs that originate in one business unit, but are associated with a service or services provided by the other business unit.

Prior to establishment of business units, all costs were determined at the agency level and were "functionalized" to generation and transmission to be recovered in the appropriate rates. Now, the business units have responsibility for specific groups of assets, plan spending levels according to their responsibilities, have separate revenue requirements and recover costs separately. For inter-business unit costs to be recovered through the appropriate rates there must be an explicit charge to the other business unit and corresponding revenues that are recognized by the source business unit, both in forecast and actual financial statements.

These types of costs need to be quantified in the rate case, such as the total annual cost of transmission facilities at Corp and Reclamation projects. The transmission facilities at Corps and Reclamation projects have associated costs in various programs or cost categories: Corps and Reclamation Operation and Maintenance expenses, depreciation expense, net interest expense and, when necessary, Minimum Required Net Revenue. The total of these elements for the transmission facilities is billed to Transmission to be included in the appropriate transmission rates and Power recognizes equivalent revenues that it can credit against its total costs.

Any inter-business unit charge requires that the receiving business unit recognize the cost in its proposed spending/revenue requirement, include it in the development of specific rates, recover the cost in their revenue and then expense the charge from the other business unit. The originating business unit can then include the revenue in the forecast so that the expected revenue can be credited against the total revenue requirement ensuring that the costs are not double-recovered.

7 NEXT STEPS

If you need additional information, clarification on IPR materials, or wish to request a discussion meeting e-mail BPAFinance@bpa.gov by June 6.

- Follow-up information, and if necessary, detailed discussions are planned for June 18th and 19th in order to respond to any follow-up items.
- Close of comment on the IPR is July 1 in order to consider and reflect comments before finalizing the IPR spending levels for the BP-16 Rate Case.

Participants have an opportunity to submit public comments on BPA's Initial IPR Publication and proposed IPR levels during a ten-week public comment period beginning May 28, 2014 and concluding July 1, 2014.

Comments can be submitted [online](#); by [email](#); or by mail to: BPA, P.O. Box 14428, Portland, OR 97293-4428

Please send questions to: BPAFinance@bpa.gov

8 FINANCIAL DISCLOSURE

FY 2013 actuals have been made publicly available by BPA and contain BPA-approved Financial Information.

FY 2014-15 forecasts for Rate Case and Start of Year have been made publicly available by BPA and contains BPA-approved Financial Information.

FY 2015-17 IPR target and Proposed IPR levels have been made publicly available by BPA on May 23, 2014 and reflect information not reported in BPA financial statements.

9 ACRONYM GLOSSARY

ABC	Accurate Billing of Customer Contracts
AGC	Assistant General Counsel
aMW	Average Megawatts - The unit of energy output over a year, equivalent to the energy produced by the continuous operation of one megawatt of capacity over a period of time; also an average of one million watts transferred over a period of time (often a year, thus average annual megawatts).
APRB	Additional Post-Retirement Contribution
ASC	Alternative Scheduling Capabilities
ATC	Available Transfer Capacity - Measure of the transfer capability remaining in the physical transmission network for further commercial activity over and above already committed uses. Total transfer capability less existing transmission commitments, less a capacity benefit margin, less a transmission reliability margin.
BA	<i>Balancing Authority</i> - Synonym for Load Control Area agency. The responsible entity that schedules generation on transmission paths ahead of time, maintains load-interchange-generation balance within a Balancing Authority Area, and supports interconnection frequency in real time.
BAA	<i>Balancing Authority Area</i> - The collection of generation, transmission, and loads within the metered boundaries of the Balancing Authority. The balancing authority maintains load-resource balance within this area.
BC	<i>Business Continuity</i>
BiOps	<i>Biological Opinion</i> - Document resulting from formal consultation that states the opinion of the US Fish and Wildlife Service, or National Marine Fisheries Service, as to whether a federal action is likely to jeopardize the continued existence of listed species or results in destruction or adverse modification of critical habitat.
BPA	<i>Bonneville Power Administration</i> - The Federal power marketing agency under the Department of Energy responsible for marketing wholesale electric power from 31 Federal dams and one non-Federal nuclear plant throughout Washington, Oregon, Idaho, and western Montana and portions of California, Nevada, Utah, and Wyoming. BPA also sells and exchanges power with utilities in Canada and California. Also known as Bonneville.
BPM	<i>Business Process Management</i> - A holistic management approach focused on aligning all aspects of an organization with the wants and needs of clients.
CASP	<i>Critical Asset Security Plan</i> - Provides the agency's strategy for the implementation of safeguards and security programs as they relate to protecting critical assets.

CBC	<i>Customer Billing Center</i>
CCM	<i>Customer Contract Management</i>
CDM	<i>Customer Data Management</i> - BPA-wide centralized web-based source for account and contact information for customers, associations, and developers, sharing data widely with other agency business line applications and systems; operated by the Customer Support Services Contract Management & Administration group.
CGS	<i>Columbia Generating Station</i> - Nuclear power plant owned by Energy Northwest, for which BPA markets all power. Formerly known as WNP2.
CIP	<i>Critical Infrastructure Protection</i> - Coordinates all of NERC's efforts to improve physical and cyber security for the bulk power system of North America as it relates to reliability.
CP	<i>Customer Portal</i>
CRO	<i>Chief Risk Officer</i>
CSRS	<i>Civil Service Retirement System</i>
CSS	<i>Customer Support Service</i>
DCC	<i>Dittmer Control Center</i>
DOE	<i>Department of Energy</i> - A Department established in 1977 by the Department of Energy Organization Act to consolidate the major Federal energy functions into one cabinet-level department that would formulate a comprehensive, balanced national energy policy. Responsible for regulatory, research, and marketing programs related to energy production and use. BPA is an agency of DOE. For more information: http://www.doe.gov
DUF₆	<i>Depleted Uranium Hexafluoride</i> - Highly toxic, radioactive, corrosive, colorless crystals; soluble in carbon tetrachloride, fluorocarbons, and liquid halogens; it reacts vigorously with alcohol, water, ether, and most metals, and it sublimates; used to separate uranium isotopes in the gaseous-diffusion process.
DWDM	<i>Dense Wave Division Multiplexing</i> -An optical technology used to increase bandwidth over existing fiber optic backbones.
EBBA	<i>Enhanced BPA BA</i> - A concept that has been developed to begin the discussion with customers on the development of the BPA long-term balancing reserve strategy.
eGIS	<i>Enterprise Geographic Information System</i>
ELR	<i>Engineering Line Rating</i>

- EP** *Emergency Preparedness*
- EPA** *Environmental Protection Agency* - The Federal agency created in 1970 to permit coordinated and effective governmental action for protecting the environment by the systematic abatement and control of pollution by integrating research, monitoring, standard setting, and enforcement activities. For more information: <http://www.epa.gov>
- EPRI** *Electric Power Research Institute* - A nationwide research organization sponsored by 680 utilities and dedicated to discovering, developing, and delivering new technologies for electric power generation and transmission and for demand-side management.
- ERM** *Enterprise Risk Management* - Strategic business discipline that supports the achievement of an organization's objectives by addressing the full spectrum of its risks and managing the combined impact of those risks as an interrelated risk portfolio. ERM provides a disciplined process for managing risk and seeks to embed this discipline in existing business processes.
- ESA** *Endangered Species Act* - A 1973 Federal law, amended in 1978 and 1982, to protect troubled species from extinction. The National Marine Fisheries Service and U.S. Fish and Wildlife Service decide whether to list species as threatened or endangered. Federal agencies must avoid jeopardy to and aid the recovery of listed species. Similar responsibilities apply to non-Federal entities.
- FCRPS** *Federal Columbia River Power System* - The transmission system constructed and operated by BPA and the hydro-electric dams constructed and operated by the U.S. Army Corps of Engineers and the Bureau of Reclamation in the Northwest. Each entity is separately managed and financed, but the facilities are operated as an integrated power system.
- FCRTS** *Federal Columbia River Transmission System* - The electric transmission system in the Pacific Northwest built and operated by BPA. Often referred to as the Federal transmission grid, or the BPA grid.
- FEGLI** *Federal Employees Group Life Insurance Program*
- FEHB** *Federal Employees Health Benefits Program*
- FEOSH** *Federal Employee Occupational Safety and Health Program*
- FERC** *Federal Energy Regulatory Commission* - The Federal agency that reviews hydroelectric projects and applications for operating licenses, and regulates interstate aspects of electric power and natural gas industries. The agency to which BPA submits its proposed power rate adjustments for approval. Formerly Federal Energy Administration.
- FERS** *Federal Employee Retirement System*
- FMO** *Facilities Management Officer*

FTE	<i>Full Time Equivalent</i> - A full-time-equivalent staff-year, which is derived by dividing the number of paid straight-time hours accumulated during a period of time by 2,080 (26 annual pay periods 80 hours per period). This differs from the 2,087 hours used for payroll computations. FTE is a concept for managing the size of a workforce under which limitations are placed on the cumulative number of hours that can be paid during a given period to various categories of employees, as contrasted with concepts which place limitations on the maximum size of the workforce.
G&A	<i>General and Administrative</i>
GHG	<i>Green House Gas</i> - Gases, including carbon dioxide (CO ₂), methane (CH ₄), nitrogen oxides (NO _x), nitrous oxide (NO ₂), and water vapor (H ₂ O) that contributes to the greenhouse effect.
GI	<i>Generation Interconnection</i> - Provides services for interconnection to the Federal Columbia River Transmission System. BPA interconnection procedures adhere to the requirements of its Open Access Transmission Tariff.
GTA	<i>General Transfer Agreement</i> - Agreement between one utility and another wherein service is provided to a customer of the first utility which happens to be geographically located within the control area of the second utility.
HCM	<i>Human Capital Management</i>
HR	<i>Human Resources</i>
HRT	<i>Hatchery Review Team</i>
HSRG	<i>Hatchery Scientific Review Group</i> - An independent scientific review panel responsible for reviewing state, tribal and federal hatchery programs in Puget Sound and Coastal Washington, and in the Columbia River Basin.
FIGLM	<i>Information Governance and Lifecycle Management</i>
IH	<i>Industrial Hygiene</i> - The art and science dedicated to the anticipation, recognition, evaluation, communication and control of environmental stressors in, or arising from, the workplace that may result in injury, illness, impairment, or affect the well-being of workers and members of the community.
IPPI	<i>Integrated Process & Process Improvement</i>
IPR	<i>Integrated Program Review – Finance public process occurring every two years, prior to the upcoming rate case.</i>
IRC	<i>Investment Recovery Center</i> - Coordinates and manages the disposal of all BPA-owned equipment, including inventory, in compliance with Federal Law concerning the disposal of federally owned assets.

- IVM** *Integrated Vegetation Management* - is a strategy to cost effectively control vegetation with the most benign overall long-term effect on public health and safety and the ecosystem. IVM tries to maximize favorable effects and minimize potential negative effects.
- KW** *Kilowatts* - An electrical unit of power; one kilowatt equals 1,000 watts.
- LIDAR** *Light Detection and Ranging* - is an optical remote sensing technology that can measure the distance to, or other properties of a target by illuminating the target with light, often using pulses from a laser.
- LRP** *Long Range Plan*
- LSRCP** *The Lower Snake River Compensation Plan* - A series of 13 fish hatcheries on the Lower Snake to mitigate the damage done to fish by the construction of Lower Monumental, Little Goose, Lower Granite, and Ice Harbor dams. Authorized by Congress in the mid-1970s, constructed by the U.S. Army Corps of Engineers, operated and maintained by the U.S. Fish and Wildlife Service. Expenses are repaid to the U.S. Treasury by BPA from power sales revenues, except one hatchery with shared funding.
- MACC** *Market Assessment and Coordination Committee*
- MCC** *Munro Control Center*
- MOA** *Memorandum of Agreement*
- MOU** *Memorandum of Understanding*
- MW** *Megawatts* - The electrical unit of power which is equal to 1,000 kilowatts, or 1,000,000 watts.
- NAESB** *North American Energy Standards Board* - serves as an industry forum for the development and promotion of standards which will lead to a seamless marketplace for wholesale and retail natural gas and electricity, as recognized by its customers, business community, participants, and regulatory entities.
- NEIL** *Nuclear Electric Insurance Limited* - Mutual insurance company established to provide insurance coverage for replacement power costs resulting from an accidental outage at a member's nuclear site, and excess property damage and decontamination liability.
- NEPA** *National Environmental Policy Act* - A 1969 Federal law that requires evaluation of the environmental impact of Federally funded projects and programs. Generally requires an environmental assessment and/or an environmental impact statement be submitted to the Federal government before a project can begin.

- NERC** *North American Reliability Corporation* - A council consisting of nine Regional Reliability Councils/Corporations, encompassing virtually all of the power systems in the U.S. and Canada. Formed by the electric utility industry in 1968 and incorporated in 1975 to promote reliable and adequate supplies of bulk electric power.
- NOS** *Network Open Season* - Initiative to manage and respond to long-term firm transmission requests on the BPA network.
- NRC** *Nuclear Regulatory Commission* - The Federal agency that regulates, inspects, and oversees all activities involved with nuclear power plant generation to assure the safety of U.S. nuclear power plants. For more information: <http://www.nrc.gov>
- NWPCC** *Northwest Power and Conservation Council* - An eight-member council, established by the Pacific Northwest Electric Power Planning and Conservation Act. Comprised of two voting members from the four Northwestern states: Washington, Oregon, Idaho, and Montana. Helps guide BPA and the region with planning for conservation and generation resources and for protection, mitigation, and enhancement of fish and wildlife in the Columbia River Basin.
- O&M** *Operations and Maintenance*
- OASIS** *Open Access Same-time Information System* - Real-time information-sharing system that enables all buyers and sellers of electricity to access the transmission costs for all other buyers and sellers, to eliminate unfair advantages between utility transmission owners and their affiliates; a website used to communicate with customers, provide transmission system information, process requests for transmission service, and post SOC requirements.
- OATT** *Open Access Transmission Tariff* - Tariff for use of high-voltage transmission lines required by FERC under its Order 888. Designed to facilitate open, nondiscriminatory access to all transmission facilities by all power providers; terms and conditions by which BPA provides nondiscriminatory transmission service that is similar to the Federal Energy Regulatory Commission's pro forma tariff mandated for FERC jurisdictional utilities.
- OFS** *Optical Fiber Management System* - Looks for and monitors breaks in existing fiber networks, mobilizing maintenance personnel within minutes.
- OGC** *Office of General Counsel* - General Counsel provides legal expertise, which supports Bonneville Power Administration (BPA) programs through legal advice and representation, including but not limited to the general areas of transmission, natural resources, power, lands, federal resources and treaties, generation and finance, personnel, and ratemaking.
- OMET** *Operational Multi-gigabyte Ethernet Transport* - Next generation communication system for controls equipment requiring Ethernet.
- ONMS** *Optical Management System* - Looks for and monitors breaks in existing fiber networks, mobilizing maintenance personnel within minutes.
- OSCO** *Office of Security and Continuity of Operations*

PCB	<i>Polychlorinated Biphenyl</i> - Oily, persistent substance formerly manufactured for use in electrical equipment, primarily as a dielectric in capacitors. Banned from use in the manufacture of equipment in 1979 after research showed that PCBs cause skin disease and liver damage, and are a suspected carcinogen.
RAS	<i>Reliability Assessment Subcommittee</i>
ROW	<i>Right-of-Way</i> - An easement for a certain purpose over the land of another, such as the strip of land used for a road, electric transmission line, ditch, or pipeline. BPA usually acquires easements for its transmission lines, roads, and other facilities such as guys and anchors.
SaaS	<i>Software as a Service</i> - is a software delivery model in which software and associated data are centrally hosted on the cloud. SaaS is typically accessed by users using a thin client via a web browser.
SCADA	<i>Supervisory Control and Data Acquisition</i> - The centralized computer system that includes transmission of numerical quantities and alarms from substations to a control center.
SER	<i>Secure and Emergency Response</i>
SOY	<i>Start-of-Year Forecast</i>
SPCM	<i>System Protection & Control</i> - responsible for testing, checking, maintaining, and adjusting meters, relays, controls, and other equipment in BPA substations. SPCM is the technical expert on obsolete equipment no longer supported by the manufacturer, but still on BPA's system.
STAR	<i>Sustain Transmission that is Available and Reliable</i> - A long-term approach to optimizing transmission availability.
TCMS	<i>Transmission Curtailment Management Service</i> - A service BPA will provide to customers with a qualifying resource when a transmission curtailment occurs between such resource and the customer load.
TCRM	<i>Transacting and Credit Risk Management</i>
TE&ST	<i>Technical Evaluation and System Testing</i>
TI	<i>Technology Innovation</i> - Uses a cross agency Council of executives and technologists to guide its research and development efforts.
TLM	<i>Transmission Line Maintenance</i>
TPIP	<i>Transmission Process Improvement Process</i>
TPP	<i>Third Power Plant (Grand Coulee)</i> - 3,900 mW generating station located at Grand Coulee Dam

- VBARS** *Versioned Billing Determinants and Rate System*
- VDI** *Virtual Desktop Infrastructure* - Sometimes referred to as virtual desktop interface, is the server computing model enabling desktop virtualization, encompassing the hardware and software systems required to support the virtualized environment.
- WECC** *Western Electricity Coordinating Council* - 2002 successor to the Western Systems Coordinating Council as the organization responsible for coordinating and promoting bulk electric system reliability of transmission operators within the western interconnection. It was formed through the merger of the WSCC, the Western Regional Transmission Association and the Southwest Regional Transmission Association. It provides a forum for resolving transmission access disputes, and provides an environment for coordinating the operating and planning activities of its members. For more information: <http://www.wecc.biz/About/Pages/default.aspx>
- WIES** *Western Interconnected Electric System*
- WISP** *Western Interconnection Synchronphser System* - Synchronously-operated interconnected electric transmission systems located in the Western United States; Baja California, Mexico; and Alberta and British Columbia, Canada.
- WREGIS** *Western Renewable Energy Generation Information System* - Registry and tracking program intended to facilitate renewables policy and resource development.

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