

2014 Integrated Program Review

Additional Workshop Follow-Up Responses

July 10, 2014

Contents

POWER.....	2
TRANSMISSION.....	3
AGENCY SERVICES.....	7

POWER

Snohomish Request:

What is “overhead” in F&W?

BPA Response: F&W Overhead primarily consists of BPA salary and benefits, supplies and equipment, technical and supplemental labor support, and G&A allocations.

The overhead amounts included in the 2014 IPR Initial Publication are as follows:

Fiscal Year	Overhead Amount (\$ in thousands)
FY'15	\$17,989
FY'16	\$18,402
FY'17	\$18,743

Snohomish Request:

What are “appropriations” in federal hydro?

BPA Response:

The Corps and Reclamation receive most of their budget funding directly from BPA. BPA provides the “power” share of the budget and the Corps and Reclamation receive congressional appropriations for the “non-power” share. On average for the FCRPS, the BPA provided “power” share is about 80% of the total budget. BPA works closely with the Corps and Reclamation to ensure the budgets match the “power” and “non-power” share so it equals the IPR budgets. Occasionally however, during the annual federal budgeting process, congress will give the Corps or Reclamation additional appropriations budget for work deemed to be a priority. If that work has a power share it will be paid by BPA. An example of this occurred when congress passed the American Recovery and Reinvestment Act (ARRA) and included funding for work activities additional to the BPA IPR budget. Generally though, the amount of annual unknown or unforecasted congressional appropriations funding is small. For the FY 16 – 17 rate period, the Corps and Reclamation are forecasting about \$500K each annual additional appropriations funding.

TRANSMISSION

Workshop Request:

Why did the Transmission Services budget for Technology Innovation (TI) increase by \$2 million for FY 16/17?

BPA Response:

BPA has set a goal of dedicating 0.5% of gross revenues to investing in Technology Innovation. The amount that Transmission Services has budgeted for Technology Innovation has remained flat for the previous 6 years. This increase was to bring the Transmission Services budgeted amount more in-line with BPA’s goal of 0.5% of gross revenues.

PPC Request:

Provide the costs for the Wind Integration Team or its functional successor team or projects.

BPA Response:

The costs for the Wind Integration Team are contained in the Renewables sub-program budget of the Non-BBL Transmission Acquisition and Ancillary Services program. This budget is shown in the table, below:

**Non-BBL Transmission Acquisition and Ancillary Services
Transmission Renewables IPR Budget Proposal for FY16/17 Period**

Fiscal Year	2016	2017
SUPPLEMENTAL LABOR/SERVICE CONTRACTS	1,216,006	1,230,173
AGREEMENTS & GRANTS	27,620	26,843
PERSONNEL COMPENSATION	64,478	66,220
OTHER	4,500	4,500
TOTAL	1,312,604	1,327,736

PPC Request:

Provide the costs in the FY 2016-17 budget and costs expended in FY 2014-15 for each of the in-flight commercial transmission tariff improvements, including without limitations:

- 15-minute scheduling development and implementation
- R3T development and implementation
- Wind Power production forecasting development and implementation
- Network Open Season development and implementation

BPA Response:

- **15-minute scheduling development and implementation;**
For FY14/15, Transmission Services budgeted \$469,000 for 15-Minute scheduling. For FY16/17, costs for 15-Minute scheduling are contained in the budgets of the various Operations sub-programs as part of the overall Operations Program budget.
- **R3T development and implementation;**

For FY14/15, Transmission Services will incur about \$250,000 in costs, per year, for work related to the Real-time Reserve Requirement Tool (R3T). This is contained in the Renewables sub-program Budget of the Non-BBL Transmission Acquisition and Ancillary Services program.

For FY16/17, the tool will be operational and any costs are part of the overall budget within the Renewables sub-program budget of the Non-BBL Transmission Acquisition and Ancillary Services program.

- **Wind power production forecasting development and implementation;**
 The costs included in the BP14 VERBS rate for Wind Power Production forecast development and implementation are \$1,165,000 for FY14 and \$1,190,000 for FY15 in the Renewables sub-program Budget in the non-BBL Transmission Acquisition and Ancillary Services program. There is no specific proposed budget dedicated to Wind Power production forecasting development and implementation in Transmission Services to be direct assigned to the VERBs for the FY16-17 period. All costs for the development of Wind Power production forecasting is included in the Power Services budget proposals for that period.
- **Network Open Season development and implementation**
 Network Open Season is a subset of the Business Strategy and Assessment sub-program in the Transmission Marketing Program. NOS is not budgeted for through a specific line item, but rather the costs are embedded within the Marketing Business and Strategy Assessment sub-program and are approximately \$750,000 per year.

PPC Request:

Provide the costs in the FY 2016-17 budget and costs expended and forecasted in FY 2014-15 for participation in each improvement project in NWPP MC Phase 3 and future phases.

BPA Response:

The costs are shown in the following table:

Northwest Power Pool Market Committee Costs

Transmission Services

The IPR forecast for the NWPP MC effort is divided into three main categories:

1. NWPP MC Support Costs for Phased Approach
2. Market Operator Costs
3. Market Participant BPA Start-up and Ongoing Costs

Description	FY 14 Forecast	FY 15 Forecast	FY 16 IPR Forecast	FY 17 IPR Forecast
1. NWPP MC Phased Approach Forecast	\$0.3M	\$0.7M	\$0.5M	-
2. Market Operator BPA Share Forecast	-	-	\$1.5M	\$1.5M
3. Market Participant BPA Forecast:				
Start Up Total	-	-	\$1.7M	\$1.8M
Ongoing Total	-	-	-	\$0.4M
TOTAL	\$0.3M	\$0.7M	\$3.7M	\$3.7M

PPC Request:

Provide the costs incurred and expected to be incurred to implement PacifiCorp's requests for transmission service accommodations to permit its participation in the CAISO EIM. Please specify the costs that BPA has identified as those it will directly assign to PacifiCorp.

BPA Response:

To this point in the FY14/FY15 period, Transmission Services has incurred about \$380,000 in direct costs in the development of tools, systems and process to support Cal/ISO EIM implementation. These costs are being reimbursed to BPA by other parties.

For FY16/17, BPA's memorandum of understanding with PacifiCorp and the California ISO states that all costs incurred will be fairly allocated between parties. Transmission Services has begun to develop a strategy to address the impact of this, but it has not forecasted such allocated costs for FY16/17.

PPC Request:

It has become apparent that Transmission Operations (TOP) may be understaffed and have specific skill needs that are currently lacking or may become lacking due to retirements in the next several years. Does TS have a strategic plan for TOP in regard to staffing that details what, when, and how to improve staffing in regard to the level of staffing and specific gaps in skills?

BPA Response:

The May 28 2014, IPR Kick Off materials provide that BPA's **long term** goals include, among other things, planning for succession behind a workforce nearing retirement. In addition, the Operations programs note compliance with mandatory NERC and WECC standards has increased BPA's BA and TOP roles, complexities and responsibilities for monitoring and operating the power grid. New and different tools and systems are required and the demand for trained resources to reflect the evolving and changing requirements and responsibilities for operating the system continues.

Transmission Services recognizes the staffing challenges that System Operations is facing. System Operations is working within BPA's Human Capital Management system constraints to address those gaps, and explore alternative arrangements with contracting and student internship options. In addition, System Operations supports continuing training opportunities for current staff on changing requirements, tools and methods the organization faces. System Operations is also considering reorganization for more efficient delivery of its responsibilities.

PPC Request:

TOP also appears to lack sufficient data to populate its state estimator to provide BPA with an adequate forward view of the system in or close to real time operations. It is not acceptable for BPA to plan to lean on CAISO for system visibility and BPA needs to develop its own capability. Does BPA have a near-term plan to ensure that BPA has its own tools and data to provide it with system visibility and adequate controls over flows on the system and if so, what is that plan? If not, why not? What capital or expense items are needed to acquire that visibility?

BPA Response:

Thank you for your support of BPA's State Estimator capabilities. BPA has a fully functional suite of system visibility applications, including State Estimator (SE) and Real-time Contingency Analysis (RTCA) tools. BPA does not lean on the CISO or other entities for visibility of its system.

BPA's SE generally has sufficient system topology information (breaker/disconnect status, voltage, line flows, etc.). Timely transmission and generation outage coordination and inclusion of up to date outage data in the model is necessary. BPA's new outage coordination process contributes to efforts to obtain better outage information. Also, consistent naming conventions, and accurate and properly mapped lines, equipment and generation in service and planned and forced outages are equally important.

In addition, BPA continues to develop better and more accurate means to forecast system conditions. BPA has added additional real time data from neighboring entities to enhance the SE performance and real-time visibility. This increased use of real data helps to ensure that the SE actually solves and the solutions are more accurate. We also are exploring options for bringing additional forecast data into the Power System Security Tool (PSST) to facilitate better forward looking study capability in the current day/next day period. These tools, however, depend on accurate, timely and the right granularity of data collected.

BPA relies on the evolving flow forecasting capability used in its iCRS platform for the current hour and near future (i.e., +1, +2, +3) hours. BPA has been tapped by other entities (e.g., Peak reliability) to help develop their forecasting capabilities. System visibility can be improved by obtaining additional real-time and forecast information. Presently, however, information is limited to the data that is available through interconnection-wide data sharing arrangements. Until then, BPA relies on assessments based on historical data.

The 2014 IPR for FY2016 - 2017 addresses expenses only. The Operations, System Operations sub-program for Control Center budget includes costs for evolving and enhanced visualization and situational awareness tools, among other things. In addition, BPA continues to explore ways to improve forecast data for system visibility. BPA's System Operations Strategy effort is therefore considering ways to facilitate better forward looking study capability in the current day/next day periods.

AGENCY SERVICES

PPC Request:

We would like a detailed workpaper regarding how BPA calculated the amount of the undistributed reductions, for both power and transmission (along with corporate, if a portion of the undistributed reductions is assigned to corporate).

BPA Response:

The objective of the expense undistributed reductions is to assist executive-level decision making regarding IPR expenses. They provide an unbiased method for lowering expense levels beyond the results of the budget development process. As described in the Initial IPR publication on page 12, the undistributed reductions are based on analysis that shows “BPA has in recent years systematically underspent what was put into rates as a whole.” The following steps describe how the undistributed reductions are calculated:

1. Historical actuals are first compared to rate case forecasts for each cost pool from FY 10 through FY 12. FY 13 is excluded because actual personnel expense was skewed due to abnormal underspending related to hiring practices issues. Additionally, underspending related to indirect BPA expenses (Columbia Generating Station, Bureau of Reclamation, Corps of Engineers, the Fish & Wildlife Program and Energy Reimbursements) are excluded to focus on direct BPA expense. The low end of the underspending range (\$18.4 million) was selected to calculate the undistributed reductions.

Historical Underspending For Planning Pools- BPA Costs Only (FY 10 Through FY 12)

\$ millions	FY 10	FY 11	FY 12
Total Historical Underspending	51.1	18.4	39.0

2. Next, the allocation of underspending for each pool is calculated based on a weighted average of total underspending. To avoid the risk of under-collecting, 80% of the total FY 11 underspending (\$14.7 million) is used. BPA determined that it could tolerate a larger undistributed reduction than \$5.0 million for Power Services by including some of the historical underspending attributed to indirect BPA expenses mentioned above. The Agency decided on using \$20.0 million as the undistributed reduction for Power Services.

Allocation of Planning Pool Undistributed Reductions- FY 2016 & FY 2017

\$ millions	COO	Deputy	Power	Trans	Total
1 Total Reductions @ 80% of FY 11 Underspending	3.8	3.8	5.0	2.1	14.7
2 Proposed Undistributed Reduction	3.8	3.8	20.0	2.1	29.7

3. Finally, the undistributed reductions for the Deputy and COO pools are allocated to Power (48%) and Transmission (52%) consistent with the Agency Services general allocation methodology described in the IPR initial publication. The resulting effects are displayed below:

Integrated Program Review Undistributed Reductions FY 2016 & FY 2017

<u>\$ millions</u>	COO	Deputy	Power	Trans	Total
1 Undistributed Reductions By Planning Pool	3.8	3.8	20.0	2.1	29.7
2 Net Power and Transmission Undistributed Reductions			23.6	6.1	29.7

FINANCIAL DISCLOSURE

FY 2013 actuals have been made publicly available by BPA and contains 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.

This information has been made publically available by BPA on July 10, 2014 and contains information not reported in BPA financial statements.