BONNEVILLE POWER ADMINISTRATION

Integrated Program Review 2

Close-out report, April 2017

Letter from the administrator

The Bonneville Power Administration has completed the Integrated Program Review 2 – a second round of public discussions on a limited set of spending areas for fiscal years 2018 and 2019. Thanks to the collaboration of our partners and the hard work of our employees, we have reduced spending levels by an additional $56.6 million compared to the final IPR spending levels we shared in October 2016.

During the 2016 Integrated Program Review and Capital Investment Review, our initial publication reflected the significant rising costs of operating the federal power and transmission systems, and that was one of the primary concerns customers expressed in their comments. To address those concerns, we worked diligently to reduce programmatic costs, and by the end of the process we lowered spending increases for the upcoming two-year rate period by $45.8 million. We also reduced planned capital spending to more accurately reflect our ability to ramp up to the $300 million-per-year federal hydropower capital program we are working toward.

We conducted this second review in response to extensive feedback during the IPR, in recognition that we had more work to do in our effort to shift off the unsustainable rate trajectory of the past four rate periods. While we took important steps to reduce spending levels during the IPR, this additional round of discussions allowed us to build on that momentum of de-escalating costs and direct our attention to a few consequential elements of BPA's cost structure.

We were able to achieve the additional savings in IPR 2 by taking a new approach, which included engaging our customers and stakeholders in the process earlier and more often. With the support of our partners at Energy Northwest, we were able to further reduce operations and maintenance expenses for the Columbia Generating Station by $12.8 million.

The Bureau of Reclamation and U.S. Army Corps of Engineers worked with us to reduce operations and maintenance expenses by $9 million, without risking safe and reliable operations, and BPA remains committed to funding important cultural resource mitigation work. These savings will help offset costs to develop the new Columbia River System Operations Environmental Impact Statement, which we began working on this year.

Based on significant feedback and further project work following the IPR, we reduced spending on the Commercial Operations Key Strategic Initiative by $15 million over the rate period. This spending level will allow Bonneville to update key processes and systems and still provide optionality for participating in the Western energy imbalance market, if it becomes a viable path for BPA in the future. We believe the potential long-term benefits of building EIM flexibility into our commercial operations systems outweigh the near-term cost of approximately $2 million. Also based on comments, we will plan for engagements to inform you on the continued development of our commercial operations program.

We found $30.6 million in reductions for workforce spending. These savings reflect a more accurate projection of staffing levels based on our ability to hire and a new methodology for calculating the payment of post-retirement benefits.

When we launched IPR 2, we committed to presenting alternatives for your consideration and comment. We now have a better idea of what is required to provide more visibility into our spending level proposals and will be better prepared to provide you with more useful data in future spending-level engagements. Through the newly created Business Transformation Office, we are advancing our ability to prioritize and sequence work and to develop robust business cases in advance of public review. As well, the analytic capabilities we are developing in our Finance organization will support our goal of being able to share and evaluate the benefits and risks of proposed spending levels.

The steps we have taken to mitigate cost escalation for fiscal years 2018 and 2019 are significant, and we would not have been able to achieve these savings without our many partners and engaged stakeholders. The final proposed spending levels described in this document represent a focused effort to demonstrate BPA's strengthening capacity to deliver disciplined and enduring cost management practices. But there is hard work ahead of us, and I look forward to your continued engagement as we address the many other challenges and opportunities that will influence the cost of power and transmission services in the next rate period and beyond.

As we continue to focus on sustainable finances and rates, we also continue to balance the other elements of our agency strategy, which are essential to BPA's position as a motivating force of the Northwest economy and way of life. Through the talent of our people, we are maintaining and enhancing the region's investments in the federal physical assets; advancing policies and investments that result in reliable, efficient and flexible operations; and remain committed to mitigation actions and environmental enhancements that will continue to add value for years to come.

Sincerely,

Elliot Mainzer
Administrator and Chief Executive Officer

IPR 2 Close-out

1. INTRODUCTION

BPA conducted a second Integrated Program Review to see if further cost reductions could be identified in a few defined areas for fiscal years 2018 and 2019: capital spending as well as operations and maintenance expenses for the Bureau of Reclamation and U.S. Army Corps of Engineers; operations and maintenance expenses for the Columbia Generating Station; implementation of the Commercial Operations KSI; and workforce expenses.

The IPR 2 process, informed by stakeholder input, kicked off with educational webinars in December that provided level-setting information in each of the topic areas. Small group discussions held in January dove into the risks associated with cutting different program costs. These engagements led to formal workshops in February where new proposed spending levels were presented over two days. Customers and stakeholders submitted 18 comments that were considered in establishing the final IPR 2 spending levels outlined in this document. A summary of those comments is below.

Columbia Generating Station

- Energy Northwest has done great work to find long-term savings while maintaining a safe and reliable facility.
- Customers applaud Energy Northwest for making the tough decisions to do less with less.

Commercial Operations Key Strategic Initiative

- The need for this KSI work is understood and the new systems that are needed are crucial to BPA moving forward with commercial operations for a modern grid.
- BPA needs to provide a process where customers can learn more about proposed projects and provide feedback on where BPA should move forward.

Federal hydropower capital

- The $300 million capital program shows a thoughtful proposal and makes sense given the lack of incremental rate impact.
- BPA should continue to give customers the opportunity to review the program in the future to ensure the right investments are being made at the right time.

Federal hydropower expense

- Customers thank our federal partners for finding short-term cost reductions but are concerned about how they will achieve long-term savings.
- The projected costs for the Columbia River System Operations Environmental Impact Statement are higher than expected and there is some concern as to how these numbers were calculated.

Workforce

- Customers appreciate the exercise to create better projections for workforce expenses and look forward to hearing more about the workforce modernization effort and the long-term workforce strategy for BPA.

2. COLUMBIA GENERATING STATION

OVERVIEW

Energy Northwest reduced proposed expense spending at the Columbia Generating Station by $6.4 million per year.

Energy Northwest has worked on a long-term strategy to improve operations at the Columbia Generating Station and find long-term cost savings in operations. It identified reductions of $6.4 million per year in operations and maintenance expenses since the IPR close-out. These savings were found from increased efficiencies, reductions in the workforce through attrition and a decrease in the amount budgeted for risk reserves, or funds set aside for contingencies. Energy Northwest had already been in discussions about shifting some of their risk reserves to BPA during the IPR and they will look for savings internally before asking BPA in the case such funds are needed in the future. Going forward, Energy Northwest will continue to seek efficiencies as they do "less with less" while continuing to maintain safe and reliable operations at Columbia.

3. COMMERCIAL OPERATIONS KSI

OVERVIEW

BPA reduced the Commercial Operations Key Strategic Initiative proposed expenses by $10 million in FY 2018 and $5 million in FY 2019, which accounts for how work will be phased over the rate period.

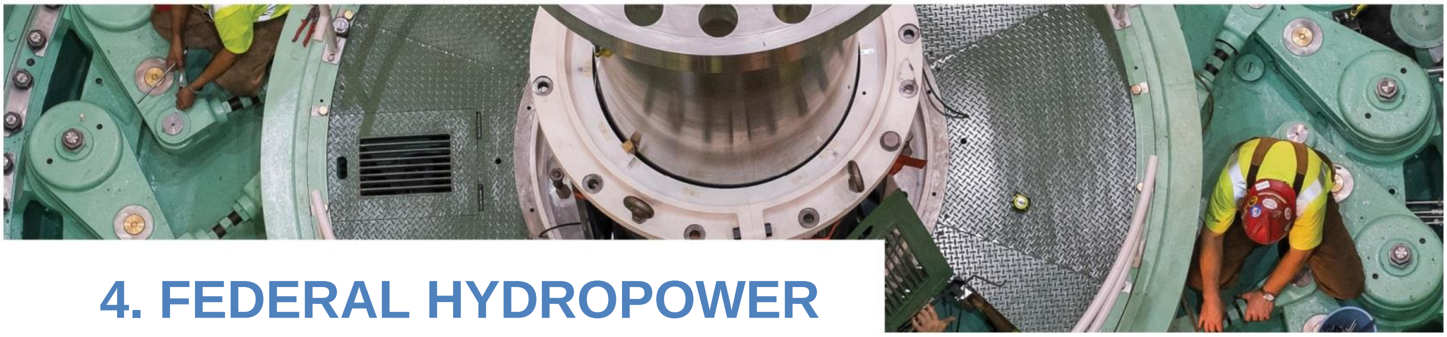
The objective of the Commercial Operations Key Strategic Initiative is to ensure BPA moves toward a modern and agile commercial operations business model, in line with the direction of evolving regional grid and market dynamics. This initiative will improve reliable load service while also maintaining and enhancing the value of federal generation and transmission assets for BPA's customers. The work on this KSI is expected to continue over the next two to three rate periods.

Compared to the IPR close-out, the two spending alternatives proposed in IPR 2 reflect a more realistic view of BPA's capacity to successfully deliver on a key set of foundational and modernization projects, examples of which were outlined in the February workshop. It also reaffirms our commitment to balance commercial operations agility against the agency's cost and workforce management goals. BPA's approach will include reprioritizing work of existing resources and relying on external consultants and service providers to assist with the completion of this significant business transformation.

BPA has decided to go with scenario B for the IPR 2 close-out, which includes the foundational and modernizing work of scenario A but also provides additional spending for energy imbalance market optionality. The additional spending will be used to conduct benefit analysis studies, maintain engagement in stakeholder processes that determine market rules and develop capabilities that support increased interaction with the EIM. BPA believes this scenario is the most prudent, as it provides modest funding necessary to keep future EIM participation a possibility if it were to become viable for BPA in the future. BPA believes it may achieve similar benefits to those reported in recent analyses of EIM participation conducted by other Northwest hydro utilities. When those benefits are considered with the qualitative benefits to system operations (e.g., better situational awareness of the grid and of hydrosystem obligations, improved congestion management, etc.), maintaining EIM as an option for providing value to our customers makes sense. That said, governance of the market remains an ongoing concern for important BPA constituencies. We will closely evaluate the performance and decision-making quality of the EIM governing body as the market footprint expands to include other public power entities in the West.

As discussed in the workshop, a long-term roadmap for this multi-year effort is the cornerstone to evaluating BPA's current business state, gap analysis and development of best practices. The interim results will be available for customer review later this year before BPA adopts a final roadmap that identifies and sequences the implementation of best practices.

BPA also heard the request for further customer engagement as we develop the Commercial Operations KSI program. BPA will provide engagements with customers and stakeholders in a forum outside of the Quarterly Business Review for the time being with the goal to roll this engagement into an existing process in the future.



4. FEDERAL HYDROPOWER

OVERVIEW

The Bureau of Reclamation reduced proposed expenses by $2.5 million per year and the U.S. Army Corps of Engineers by $2 million per year. However, new costs associated with the CRSO EIS increased expenses by $5.1 million per year between the two agencies. As a result, the overall program expense increased by $0.6 million per year.

Capital

Power Services will continue with the $300 million per year federal hydropower capital investment program as outlined in the IPR close-out. BPA does not anticipate any incremental rate impact from the larger investment due to the increased generation available in this scenario. The problem with lost generation was highlighted this January when one-fifth of the Federal Columbia River Power System was out of commission during the peak of winter storms. This new capital program looks to reduce that lost-generation risk moving forward.

BPA is committed to continued evaluation of the capital program to make sure the right investments are being made at the right projects at the right time. During the biannual Capital Investment Review, customers and stakeholders will have a chance to review proposed capital spending levels that will be informed by the latest Hydro Asset Strategy and System Asset Plan, a tool developed under the Asset Investment Excellence Initiative.

Expense

The Bureau of Reclamation and U.S. Army Corps of Engineers found operations and maintenance expense reductions of $4.5 million per year that they can achieve while continuing to deliver on their missions. These reductions are near-term, and long-term expense savings still need to be evaluated. The three agencies will continue to work through BPA's Asset Investment Excellence Initiative to find sustainable reductions. While some tribes expressed concerns that this effort to find further reductions could impact funding for cultural resource mitigation, BPA remains committed to funding this important work, which includes mitigation work on Transmission projects.

These expense reductions are offset by those agencies' new costs associated with the Columbia River System Operations Environmental Impact Statement. The CRSO EIS projected costs result in an additional $5.1 million per year in FY 2018 and 2019. The projected work, in conjunction with federal partners, includes completing the alternative impact assessment and publishing the draft EIS which is due in March 2020. While there are many components to the five-year EIS, the alternative impact assessment is the largest expense item. A larger portion of the increased expense will go to the Corps for its 12 hydro projects that will be evaluated under the assessment, while Reclamation will receive a smaller share for its two projects included in the evaluation.

5. WORKFORCE

OVERVIEW

Workforce proposed expenses were reduced by $15.3 million per year, some of which will be a capital reduction.

The workforce expense reductions in IPR 2 are the result of reviewing two aspects of workforce costs: a more accurate estimate of BPA staffing levels and a refined estimate of the agency's unfunded post-retirement benefits obligations.

Staffing Levels

The staff level reductions reflect a review of the workforce based on a more refined forecast of our ability to bring on new hires net of attrition. Managers reviewed and adjusted their projected full-time equivalent staff levels while keeping an eye on how these reductions may impact BPA's ability to deliver on its mission critical work. This includes ensuring that reductions were not made to areas where BPA had already committed to lower workforce spending through earlier undistributed reductions and ensuring the ability to accomplish functional and programmatic requirements with less FTE than anticipated.

As a result of these reductions, IPR 2 provides a better projection of the total FTE that the agency can actually bring on board. These are expense reductions in federal employee staffing and will not be a shift of expense to hiring more contractors. Compared to Power, Transmission reductions are lower because Transmission Services had already assumed lower staffing levels as part of its undistributed reduction in the IPR close-out.

Post-Retirement Benefits

BPA agreed to fund its portion of the post-retirement benefits unfunded liability a number of years ago by paying the U.S. Treasury a calculated amount for the benefits every year. Over the past year, BPA worked extensively with the Corps and Reclamation to refine the methodology used to calculate BPA's unfunded post-retirement benefit contributions. The new methodology combines forecasts with a year-end true-up based upon actual data, in this case FY 2016 actuals.

The changes to the methodology, improved information from the Corps and Reclamation and a large reduction in the required contribution for federal employee health benefits have led to a reduction in expected spending for FY 2018-2019. Most of the reduction for this time period is due to the lower contribution rate for the federal employee health benefits. However, $1 million is due to the refined methodology and will be carried forward into the future.

BPA will continue evaluating its workforce size and allocation through the Workforce KSI. This includes the workforce study initiative and the workforce modernization effort to ensure BPA has the right size and composition of federal employees and supplemental labor contractors to prudently meet current and future needs. Through BPA's workforce modernization initiative, sensible targets are being set to downsize our workforce through ongoing attrition so that BPA can be as efficient as possible, creating meaningful cost reductions for customers. The target is to reduce FTE by 10 percent by 2025, compared to the current FTE cap of 3,147. There is also a target for a 25 percent reduction in supplemental labor spending. The anticipated cost reduction is over $50 million through FY 2025.

6. SUMMARY TABLES

Power

($Thousands)	2018 IPR Closeout	2018 IPR 2 Closeout	2018 Delta	2019 IPR Closeout	2019 IPR 2 Closeout	2019 Delta
Costs Described in IPR						
Columbia Generating Station	270,169	270,146	(23)	339,947	327,354	(12,593)
Bureau of Reclamation	165,679	164,609	(1,070)	163,603	162,623	(980)
Corps of Engineers	254,457	256,057	1,600	254,457	256,057	1,600
Renewables	38,332	38,332	0	39,060	39,060	0
Energy Efficiency	117,677	117,677	0	117,597	117,597	0
Non-Generation Operations*	95,007	90,411	(4,596)	96,459	94,319	(2,140)
Fish & Wildlife, Lower Snake River Comp Plan	310,483	310,197	(287)	310,483	310,187	(296)
NW Planning & Conservation Council	11,624	11,624	0	11,914	11,914	0
Power Internal Support	86,352	79,353	(6,999)	89,291	81,417	(7,875)
Undistributed Reduction	(10,000)	(10,000)	0	(10,000)	(10,000)	0
Costs Described in IPR Total	**1,339,780**	**1,328,406**	**(11,374)**	**1,412,812**	**1,390,528**	**(22,284)**
Other Costs						
Reimbursable Energy Efficiency Development	8,000	8,000	0	8,000	8,000	0
Legacy	590	590	0	590	590	0
Long-Term Contract Generating Projects	12,595	12,595	0	13,687	13,687	0
Non-Operating Generation	1,500	1,500	0	1,534	1,534	0
Operating Generation Settlement	22,612	22,612	0	22,997	22,997	0
Power Services Transmission Acquisition	213,469	213,469	0	213,684	213,684	0
Residential Exchange & IOU Settlements	315,984	315,984	0	318,350	318,350	0
Other Costs Total	**574,751**	**574,751**	**0**	**578,842**	**578,842**	**0**
Grand Total	**1,914,531**	**1,903,157**	**(11,374)**	**1,991,654**	**1,969,369**	**(22,284)**

Transmission

The changes in the transmission expense table below reflect the reduction to Transmission Service's share of the proposed spending levels for the Commercial Operations KSI and workforce expenses, some of which will be capital reductions. Transmission identified an average of $3.8 million per year of proposed reductions during the workforce IPR 2 effort that will be applied to the existing undistributed reduction. Of this $3.8 million, $1.7 million per year will be allocated to capital which is not shown in the table below.

($Thousands)	2018 IPR Closeout	2018 IPR 2 Closeout	2018 Delta	2019 IPR Closeout	2019 IPR 2 Closeout	2019 Delta
Costs Described in IPR						
Operations*	173,609	165,299	(8,310)	170,891	166,298	(4,593)
Maintenance	176,893	176,580	(313)	178,365	178,125	(240)
Engineering	58,682	56,351	(2,331)	59,506	57,718	(1,788)
Non-Between Business Line Acquisitions and Ancillary Services	29,799	29,799	0	29,232	29,232	0
Transmission Internal Support	98,474	93,940	(4,534)	100,596	95,607	(4,988)
Undistributed Reduction/Other Income (Loss)	(11,831)	(7,548)	4,284	(11,825)	(8,539)	3,286
Costs Described in IPR Total	**525,625**	**514,421**	**(11,204)**	**526,763**	**518,440**	**(8,323)**
Other Costs						
Between Business Line Acquisitions and Ancillary Services	113,559	113,559	0	113,774	113,774	0
Reimbursables	9,929	9,929	0	9,936	9,936	0
Other Costs Total	**123,488**	**123,488**	**0**	**123,710**	**123,710**	**0**
Grand Total	**649,114**	**637,909**	**(11,204)**	**650,474**	**642,151**	**(8,323)**

*The proposed spending level for Commercial Operations is distributed 33 percent to Power Services and 67 percent to Transmission Services. This is consistent with how Commercial Operations was distributed in the Initial IPR closeout but is a slight change from how these costs were erroneously displayed in the initial IPR 2 tables.

7. CONCLUSION

These updated spending levels will be included in the BP-18 Rate Case. While the IPR 2 results will lower the overall planned expenses, there remain several significant moving parts that will affect final rates (see rates graphic) and these IPR 2 reductions by themselves may not lead to rate reductions.

BPA values participants' time and we are committed to making the most efficient use of everyone's resources. The improvements being made internally will enhance future IPR preparations and support our goal of setting proposed spending levels in a single round of discussions, reserving IPR 2 as a tool only for addressing new information and events that arise after IPR concludes.

8. DISCLOSURES

FY 2017–19 Final IPR spending levels were made publicly available by BPA on Oct. 12, 2016, and reflect information not reported in the BPA financial statements.

FY 2017–19 Initial IPR 2 spending levels were made publicly available by BPA on Feb. 10, 2017, and reflect information not reported in the BPA financial statements.

FY 2017–19 Final IPR 2 spending levels were made publicly available by BPA on April 28, 2017, and reflect information not reported in the BPA financial statements.

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