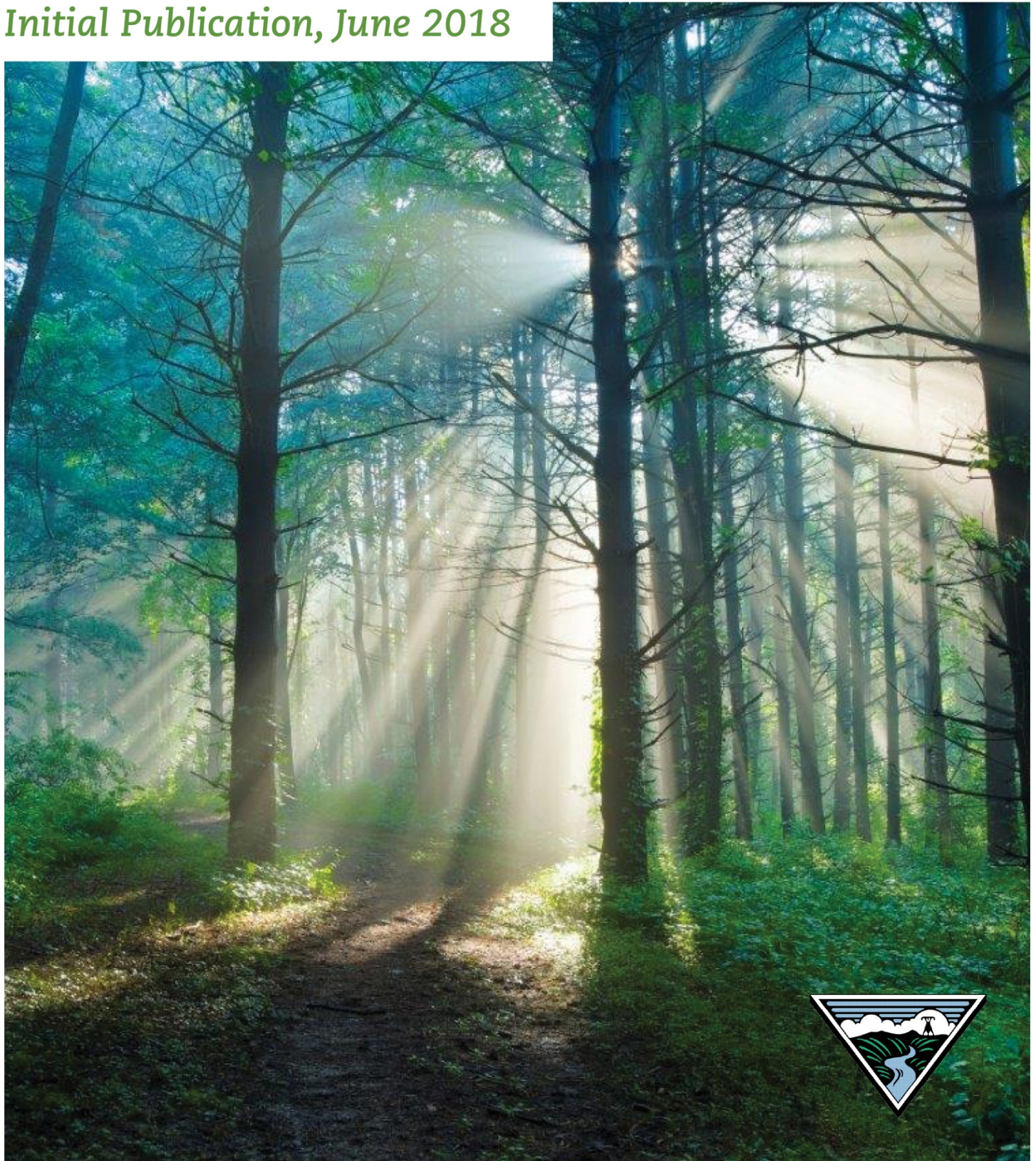
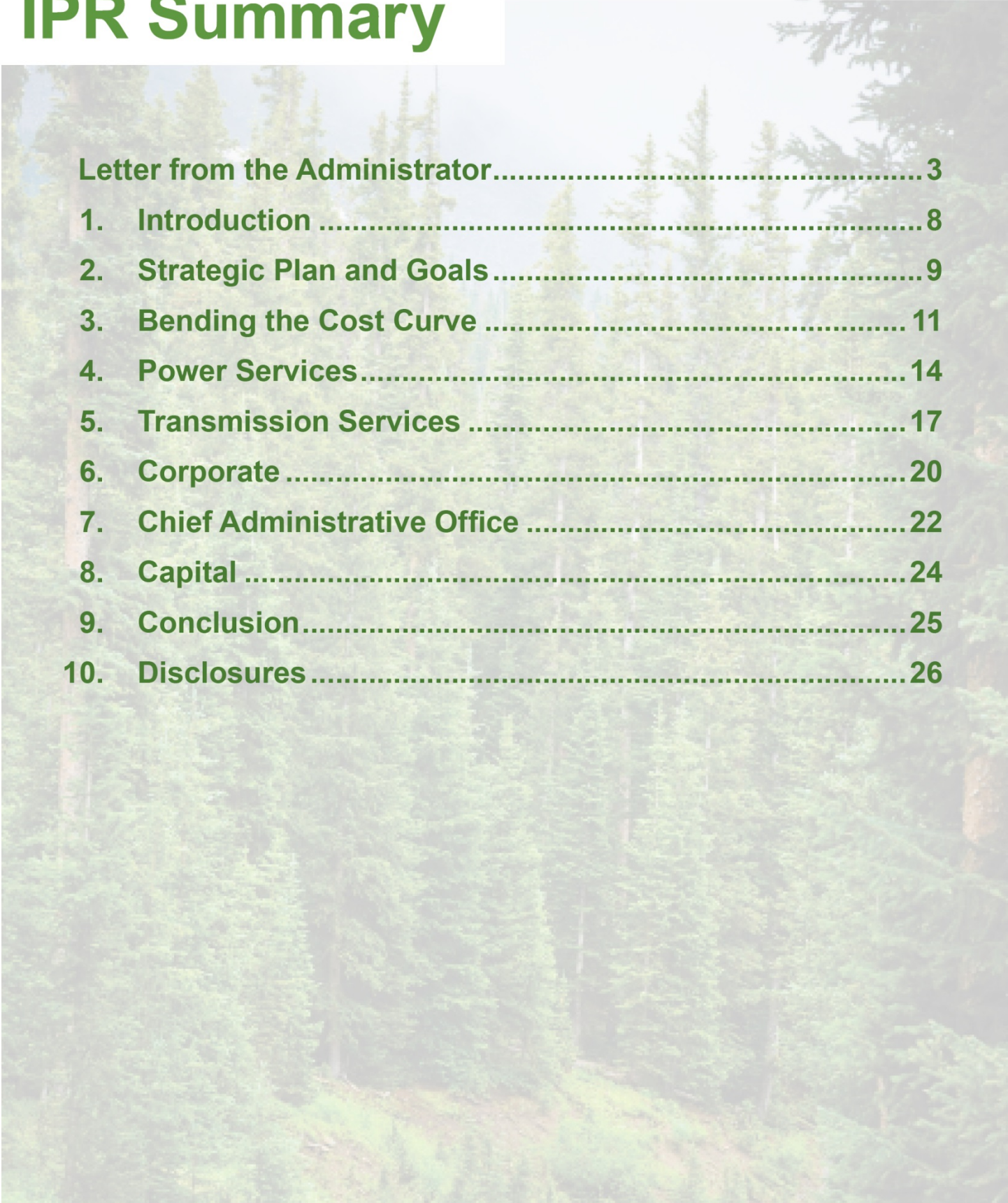


Integrated Program Review

Initial Publication, June 2018



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Letter from the administrator

The Bonneville Power Administration invites you to participate in the 2018 Integrated Program Review. Your input will inform our capital and expense spending levels for the next rate period covering fiscal years 2020 and 2021.

These are challenging times for all of us involved with the electricity industry. Amidst the many changes at play, my fundamental goal as BPA administrator is to sustain Bonneville's role as an engine of the region's economic prosperity and environmental sustainability. Everything we do, from delivering reliable and carbon-free electricity throughout the Northwest to investing in energy efficiency and fish and wildlife protection, is contingent on our ability to recover our costs from our customers in a very dynamic and increasingly competitive market environment. At the end of the day, we must deliver on our vast public responsibilities by operating a commercially successful business. This is the essential thesis of BPA's 2018-2023 Strategic Plan, which we released earlier this year. The strategic plan has become the central organizing principle for everything we will be doing at BPA over the next five years, including the 2018 Integrated Program Review.

The theme of BPA's long-term competitiveness has dominated my time as BPA administrator, and rightfully so. Over the past decade, the costs underlying BPA's rates have consistently increased, while our firm loads and secondary revenues have generally decreased in the face of low natural gas prices, rapid increases in wind and solar generation and other macro and microeconomic forces. Since the early days of my administration, customers have expressed their concern that BPA is on an unsustainable rate trajectory, and absent concerted action, they will be forced to seek other power suppliers when long-term contracts expire in 2028. This is a message that I and the other members of my leadership team have taken to heart. The people of BPA and our partners at the U.S. Army Corps of Engineers, Bureau of Reclamation and Energy Northwest have been working very hard over the past few years to bring our costs under control and to seek new sources of revenue for our tremendously valuable, carbon-free hydroelectric system. As you will see in this IPR, we have made significant progress toward bending the cost curve. But we have more work to do in the months and years ahead.

Let me offer a bit of additional background and context for this IPR. In FY 2015, BPA initiated a long-term key strategic initiative focused on sustainable finances and rates, with a particular focus on strengthening BPA's balance sheet and addressing the many inflationary pressures in BPA's cost structure. Also in 2015, BPA commenced the Focus 2028 process where we engaged with customers, tribes, states and other regional stakeholders to review the forces shaping the electricity industry and the key drivers of BPA's costs and revenues. Building on this work, in 2016 we undertook a comprehensive analysis of BPA's long-term competitiveness. We evaluated future power and gas prices, reviewed utility integrated resource plans and new resource costs from the Northwest Power and Conservation Council, and examined other factors influencing the long-term price of wholesale electricity. We also took a close look at the elasticity of demand in our customer base and evaluated the underlying attributes and value of our power and transmission products.

Through this comprehensive analysis, we developed a sense of what will constitute a competitive rate level in the coming decade. We also recognized that wholesale power prices are an important

benchmark against which we must compare our rates, but they do not necessarily reflect a direct comparison to the extremely reliable, flexible and carbon-free hydroelectric energy and capacity services that we market to our preference customers. This competitiveness analysis was a critical input to our 2018 Financial Plan, which itself was a fundamental underpinning of our BPA 2018-2023 Strategic Plan. While this competitiveness analysis pointed to the tremendous value and unique attributes of our products and services, especially in an increasingly carbon-constrained West Coast electricity market, it also reinforced the point that absent concerted action on both the cost and revenue side of the ledger, BPA could lose its position as the provider of choice for our public power customers.

While we have elected not to share this proprietary competitiveness analysis with the broader region, one of its central conclusions was that BPA maintains a competitive position in the market, but we must sustain and escalate our efforts to bend the cost curve by holding the sum of program costs, by business line, *at or below* the rate of inflation through 2028. In fact, our objective for the FY 2020-2021 rate period is to keep total IPR costs flat in nominal terms relative to FY 2018-2019 spending. While I acknowledge that keeping costs flat may ultimately not go far enough and does not represent real cost reductions, it has been a very challenging task to take the inflation out of BPA's program costs over the past few years. Doing so represents a significant step forward in cost management for BPA and our many partners that we can build on in the years ahead as we further align around our strategic objectives and strengthen our financial planning and analysis capabilities. To understand our progress, it is helpful to see these efforts to de-escalate our programmatic costs in the context of the past decade.

Bending the cost curve

Average annual program costs in billions of dollars and percentage of cost change by rate period



As displayed in the figure above, the rate of escalation in BPA’s IPR costs has significantly decreased over the past few rate periods. Getting there has required changes in BPA processes and culture and a willingness to re-examine our work in the context of our strategic plan and the goal of maintaining our long-term competitiveness.

This year, in response to customer input and through the dedicated work of executives, managers and staff across our agency, we changed the way we approached the IPR. Historically, we have used a “bottom-up” approach to budgeting. In the traditional approach, our individual operating groups and business units started with their previous rate period costs and applied escalation factors or adjustments based on anticipated spending increases or decreases. These estimates were then rolled up by business unit and spending pool to a total BPA program spending level. We then made additional adjustments and periodic undistributed reductions in areas where we had evidence of persistent underspending to offset total cost projections.

This approach is no longer viable. This fiscal year, working from our strategic and financial plans, the BPA front office established spending caps for each of the cost pools early in the budgeting process. Senior executives worked with their management teams to develop budgets within, or in some cases below, those caps, using the goals of the strategic plan and other mission critical work as the basis for establishing spending priorities. This guidance and approach has been applied across the entire BPA enterprise with no exceptions.

Our new approach has been challenging but effective. For starters, in order to keep program costs flat in nominal terms for BP-20, we are planning to absorb approximately \$80 million per year in inflation. In addition, the cost pools have each searched for additional spending reductions by evaluating all program spending against our strategic objectives and mission critical work requirements and have come up with additional savings below our spending caps. Our current proposed changes in IPR spending between BP-18 and the next rate period are summarized in the table below and further discussed in the attached IPR documents. Note that the current numbers do not include impacts from the rebalancing of the Fish and Wildlife portfolio, since these discussions are still actively underway with our partners. This will be discussed in a July workshop and included in the final IPR report.

We will continue to seek additional savings throughout BPA during the course of the summer, and the results of these efforts will be reflected in the final IPR numbers. These ongoing cost-management efforts are critical because we still face upward rate pressure during BP-20 on the load, revenue and financing side within our Power business. We also want to create additional headroom in Transmission so that we can begin to manage our debt ratio on that side of the business through additional revenue financing.

Change in IPR spending levels

	Average BP-18 spending levels (\$ millions)	Average 2018 IPR (\$ millions)	Change (\$ millions)	Change (Percent)
Power	1,359	1,354	(6)	(0.4)
Transmission	499	502	3	0.5

I would like to highlight a few of the areas that we have targeted for cost savings. Given our focus on grid modernization over the next few years, and our intention to sustain \$25 million per rate period in that important strategic area, we are narrowing the focus of BPA's Technology Innovation program, concentrating on projects that will help us achieve our grid modernization objectives. We have reduced the TI program by \$14.4 million for the rate period, or an average of \$7.2 million per year. We have also made adjustments to our Power and Transmission capital programs to absorb additional capital costs associated with our grid modernization efforts. More broadly, the attached documents also provide significant detail about the content and value of our proposed capital spending. This includes our intention to scale up our capital investment in the hydro system to \$300 million per year, a strategy with a net present value of \$500 million relative to a \$200 million a year program.

Our concerted efforts to reduce our federal workforce through attrition and reduce total spending on supplemental labor have also played an important role in bending our cost curve. A rigorous workforce study is already in motion to carefully analyze staffing requirements for each of our business units and better align personnel needs with the goals of our strategic plan.

In the process of evaluating spending through the lens of our strategic plan, we have identified additional cost-saving actions both large and small, from consolidating field offices to reducing

expenditures on travel, subscriptions and sponsorships. We have decided to downscale the services of the BPA Library and Visitor Center based at our headquarters in Portland and will be selling one of our fixed-wing aircraft as we tighten requirements and approval processes for air travel within the region. We cannot ask others to make budget reductions or raise rates in their service territories without making some hard choices ourselves, and we have done so.

In the coming weeks, we will continue to engage with our many partners throughout the region on the difficult but critical task of rebalancing our Fish and Wildlife portfolio to reflect new obligations from recent court decisions and to keep that vitally important program on a spending trajectory that is consistent with BPA's overall commercial viability. We will be managing our environmental costs by focusing on the most important actions benefiting fish and finding program efficiencies, not by eliminating important "on the ground" compliance activities.

Even as we work diligently to manage our costs, I want to reiterate my absolute commitment to improving the safety of our workforce and fostering a positive and inclusive work environment where our people are highly engaged and enabled to deliver on our mission.

I hope you will join us for the June 18 kickoff meeting in BPA's Rates Hearing Room at 1 p.m. This meeting will initiate an eight-week public comment period on our proposed spending levels. More information, including meeting details and presentation materials, will be posted on BPA's website.

Thank you for your engagement and support as we work together to sustain BPA's role as an engine of the region's economic prosperity and environmental sustainability.

Sincerely,

A handwritten signature in black ink, reading "Elliot Mainzer". The signature is written in a cursive, flowing style.

Elliot E. Mainzer
Administrator and CEO

1. INTRODUCTION

The Integrated Program Review occurs every two years and allows interested parties to review and comment on BPA's proposed spending levels. The final spending levels will serve as a foundation for developing power and transmission rates for the next rate period, fiscal years 2020 and 2021.

IPR commitments:

- Align spending with strategic goals outlined in the BPA 2018-2023 Strategic Plan.
- Keep program costs flat relative to BP-18.
- Provide greater consistency by standardizing cross-agency decision-making and trade-off analysis.

The 2018 IPR integrates both long-term capital forecasts and near-term program spending levels for the next rate period into one forum. The process will run from June 18 through Aug. 2, and workshop topics will include transmission, federal hydropower, the Columbia Generating Station, energy efficiency, grid modernization, information technology, and fish and wildlife.

The first priority of this IPR is to deliver on the goal of the BPA 2018-2023 Strategic Plan and its companion piece, the 2018 Financial Plan, to

strengthen financial health. BPA is committed to vigilant cost-management and prudently investing every ratepayer dollar in the Northwest. Decisions on how and when to invest are reflected in the IPR spending levels outlined in this document.

We also further integrated capital and expense funding proposals by eliminating the Capital Investment Review. And in an effort to focus and reduce work, this IPR will cover only fiscal years 2020 and 2021. We will not revisit FY 2019.

BPA took significant cost-management steps to find savings and bring proposed spending levels at or below BP-18 levels. These actions were taken after rigorous analysis and required trade-offs, as they dealt with eliminating or significantly reducing services or existing work. BPA will continue to evaluate cost-management actions. Any additional savings found between now and final decisions later this summer will be included in the IPR closeout report.

Changes in the 2018 IPR:

- Begin with firm cost constraints set by senior executives in alignment with BPA 2018-2023 Strategic Plan.
- Integrate capital and expense decisions into one process.
- Focus only on the next two-year rate period, eliminating the review of the upcoming fiscal year.

2. STRATEGIC PLAN AND GOALS

The BPA 2018-2023 Strategic Plan describes the actions BPA will take over the next several years to become more competitive and responsive to customer needs, to leverage and enable industry change through modernized assets and system operations, and to deliver on our public responsibilities through a commercially successful business.

Our four strategic goals are the central reference point for everything we will be doing at BPA over the next five years.

The strategic plan acknowledges that achieving the full scope of BPA’s multifaceted mission requires a careful balance between sometimes competing objectives. This careful balance is perhaps most visible during the IPR as we set spending levels that will allow us to achieve these goals while also controlling costs so that we can provide competitive rates.

Since we adopted the strategic plan, we have taken a close look at the work underway across the agency to determine how that work does or does not align with our strategic goals. This included

an evaluation of our existing seven key strategic initiatives. Through these multi-year KSIs, BPA has made tremendous progress in critical areas, such as the development of a robust safety program that is now embedded in our day-to-day business practices.

Given the progress we have made toward these KSIs, coupled with our updated agency strategy, we will have just one KSI in fiscal years 2020 and 2021: grid modernization, previously known as commercial operations. All other KSIs are being completed and integrated into our business in FY 2018, and any ongoing work will be managed within the business units rather than under the KSI framework.

BPA's 2018–2023

STRATEGIC GOALS

DELIVERING ON OUR PUBLIC RESPONSIBILITIES THROUGH A COMMERCIALY SUCCESSFUL BUSINESS

- #1 STRENGTHEN FINANCIAL HEALTH**
Improve cost-management discipline, build financial resiliency and maintain strong credit ratings.
- #2 MODERNIZE ASSETS & SYSTEM OPERATIONS**
Administer an industry-leading asset management program; modernize federal power and transmission system operations to leverage market and technology developments.
- #3 PROVIDE COMPETITIVE POWER PRODUCTS & SERVICES**
Increase revenues; align the region around a durable and financially sustainable fish and wildlife plan; align energy efficiency investments with long-term needs; achieve a modernized Columbia River Treaty.
- #4 MEET TRANSMISSION CUSTOMER NEEDS EFFICIENTLY & RESPONSIVELY**
Make more flexible, scalable, economical and operationally efficient transmission investments; support efficient regional resource development; streamline processes; standardize products and services.

Grid modernization: BPA's sole key strategic initiative in BP-20

Grid modernization is central to our strategic goal to modernize assets and operations. It is also connected to our goals to provide competitive power products and services, and to meet our

Proposed spending levels for the grid modernization program hold expense flat compared to BP-18. BPA proposes spending \$25 million for the rate period, or an average of \$12.5 million per year for FY 2020 and FY 2021. Capital investments will be absorbed within existing capital budgets.

transmission customer needs efficiently and responsively. This is a large undertaking that will require tremendous cross-agency support and coordination.

Bonneville has developed a grid modernization road map for the federal power and transmission system to enhance system operations in three major ways: automation, real-time data analysis, and operational visibility.

This effort will support a more reliable, flexible and efficient system. It will also help to reduce future costs and create new market opportunities for Bonneville and other regional resource owners. The progress driven by this program will better position BPA to capitalize on the rapidly changing and evolving wholesale electricity markets, leverage opportunities to monetize the region's valuable clean hydropower capacity, and better utilize the flexibility of the federal transmission system.

BPA has sequenced the grid modernization project portfolio to satisfy multiple objectives while holding expense levels flat: (1) to modernize our commercial and operational systems, (2) to support the option to choose the reliability coordinator that provides the best value to BPA and the region, (3) to leverage day-ahead market enhancements expected to be implemented by the California Independent System Operator in October 2019, and (4) to position Bonneville with the option to join the energy imbalance market operated by CAISO.

See the IPR detailed document for more information.

The development of operating and program plans

The strategic plan represents transformational change on many fronts for BPA. One change that will enable us to achieve the four strategic goals is the development of operating plans.

The Power and Transmission Operating Plans (and embedded program plans) will provide an integrated view of the business, workforce and financial performance of each major cross-agency function: commercial activities, operations, asset management and maintenance. The development of operating plans by function, rather than by department, will provide visibility into the allocation of costs across Power and Transmission products and services, as well as alignment and prioritization to and across the strategic goals.

The plans are being developed for an FY 2019 launch and encompass all agency departments in partnership to achieve the strategic goals.

3. BENDING THE COST CURVE

BPA is holding proposed total spending levels for fiscal years 2020 and 2021 flat, compared to BP-18, in line with the cost-management objective of keeping program costs at or below the rate of inflation. A new approach to setting expense levels, cost-management actions and improved asset planning helped BPA bend the cost curve.

Like most utilities, BPA faces annual upward cost pressure, primarily due to inflation, which is compounded by the size and complexity of the agency. Between 2008 and 2012, BPA's program costs increased by double-digit percentages from rate period to rate period. To transform its cost-management approach and budget development process, BPA launched a cross-agency initiative in 2014. In the 2014 and 2016 IPRs, BPA began with a baseline budget, determined by the spending levels set in the previous rate period, and requests above the baseline were subject to rigorous scrutiny.

This bottom-up approach helped to slow the rate of escalation, but two major efforts helped BPA further bend the cost trajectory in this IPR. The first effort was the publication of the BPA 2018-2023 Strategic Plan, which narrowed the agency's focus on four strategic goals and helped it prioritize spending. The second was an internal process where BPA evaluated its long-term competitive market position by analyzing market comparisons, new resource comparisons, natural gas price scenarios, and evaluations of BPA's existing customers. From this, BPA was able to determine a cost trajectory – that is, a sustainable level of spending – so that it can maintain a strong competitive market position.

Expense

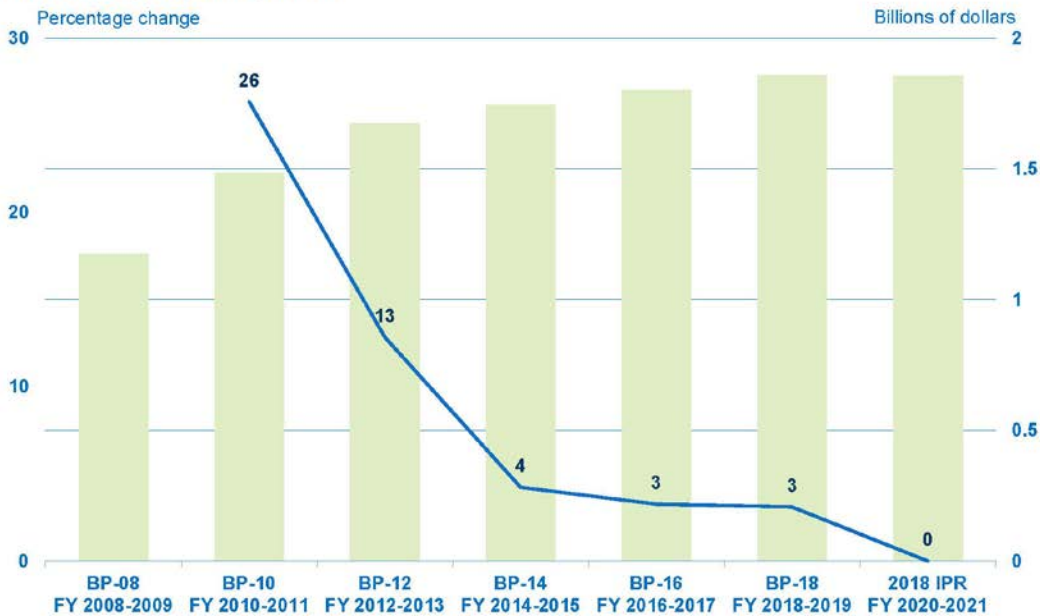
Total annual agency program spending is declining by \$3 million from BP-18 due to the absorption of \$80 million in annual inflation costs.

BPA began the budgeting process for this IPR with firm cost constraints informed by the strategic plan and spending caps set by senior executives for each organizational cost pool – Power, Transmission, Corporate and Chief Administrative Office – early in the process. Each pool was given guidance to not exceed the spending caps and, where possible, make further reductions.

Pool managers worked with their teams to identify the work critical to delivering on the strategic plan goals. Each group's spending was reviewed to determine if the work could be performed more efficiently, if it is at the right scale and if it still provides a necessary service to the agency. Program areas that did not meet the criteria were scaled back to achieve lower program costs and to offset critical work that was needed elsewhere.

Bending the cost curve

Average annual program costs in billions of dollars and percentage of cost change by rate period



The strategic plan represents a transformational change that will require a cultural shift to drive cost management. At an all-employee meeting in April, BPA announced the first of many actions that reflect this shift and will change business as usual. These changes include limiting corporate memberships, subscriptions, publications and sponsorships; reducing positions that qualify for relocation expense; and clarifying travel policies.

These changes may seem small, but they represent BPA's renewed focus on delivering on its mission and strategic goals and are indicative of the cost-management culture the agency is building. BPA will continue to evaluate additional cost-management actions and include any further reductions in final spending level decisions.

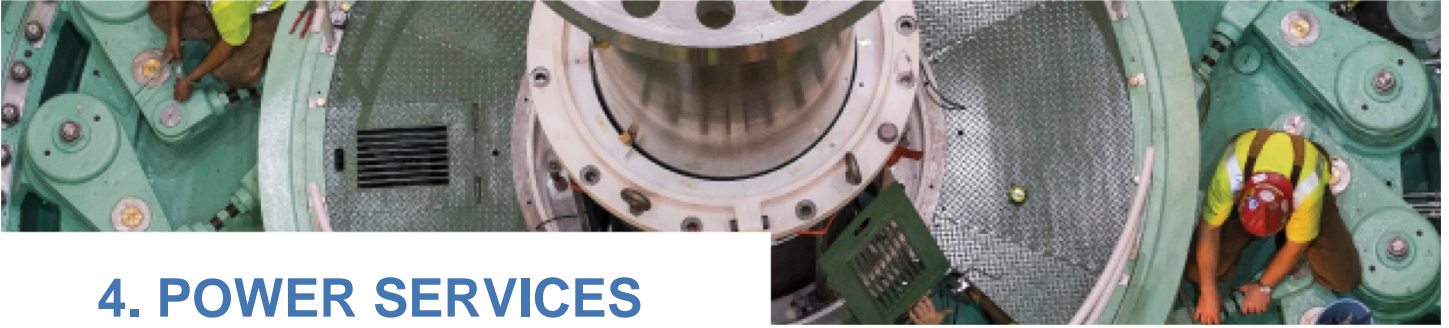
Capital

Over the past few years, BPA has adopted industry-leading asset management planning standards under its Asset Management KSI. These standards have been applied to make better investment decisions across all of the agency's asset categories: power, transmission, facilities, information technology, and fish and wildlife. It is BPA's responsibility to plan for and fund the operations and maintenance of federal power and transmission assets while also preserving and enhancing

physical and cyber security. This new approach recognizes that our assets do not all deliver the same value. It also seeks to produce the highest economic benefit and derive the maximum value from the system, while meeting nonpower purposes and environmental requirements.

One change from the 2016 Capital Investment Review (now being covered in this IPR process) is BPA's approach to how it plans for asset investments. In 2016, each asset category created its own asset strategy. BPA has since implemented a standardized approach and applied it across all asset categories. The first step in the process is the development of strategic asset management plans that provide a medium to long-term approach to asset planning. These plans inform capital investment level requirements by considering asset criticality, health and risks, as well as by establishing risk-based asset performance objectives that reflect reliability, compliance and other factors. Plan development involves the use of leading analytical methods to prioritize capital investments to minimize lost generation risk for Power and minimize total economic cost for Transmission within resource limitations. The outcome is a plan that balances risks and constraints to achieve the highest return on investment.

The second step is to translate these longer-term strategies into more detailed, near-term asset plans. These detail the actual expected work over the next several years based on the timing determined in the longer-term approach. These asset plans are incorporated in the capital spending levels for FY 2020 and 2021, and the capital work outlined in the IPR reflects those plans.



4. POWER SERVICES

OVERVIEW

Power Services proposes an expense reduction of \$6 million a year compared to BP-18 spending levels.

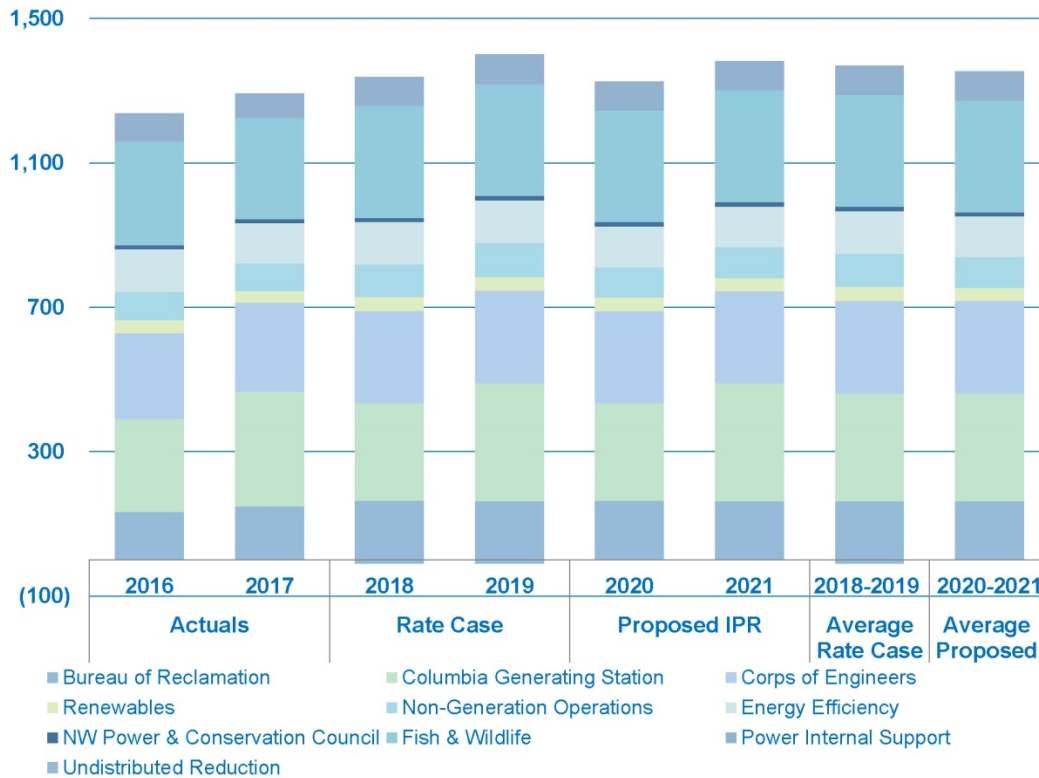
- BPA's partners are proposing to absorb the rate of inflation for operations and maintenance programs to keep spending levels flat.
- Internal operations continues to lower costs through savings on labor and service contracts.

Power proposes to maintain its ramp to a \$300 million annual capital program to increase power production and reliability.

Power Services markets the power from 31 federally owned dams that are operated by the U.S. Army Corps of Engineers and Bureau of Reclamation, as well as the output of the Columbia Generating Station, a 1,174 megawatt nuclear plant, which is owned and operated by Energy Northwest. BPA remains committed to being a cost-effective power supplier, but it faces cost pressures from maintaining aging generation infrastructure, increasing costs to meet fish and wildlife obligations, the cost of the Residential Exchange Program settlement, and declining market prices for surplus power sales. For Power Services, this IPR will focus on investing in the systems that will deliver value and reducing the costs of programs that can be scaled back or eliminated to hedge against these rising cost pressures.

Power's largest expense, at approximately \$419 million per year, is maintaining and modernizing the Federal Columbia River Power System through its federal hydropower program. BPA has partnered with Reclamation and the Corps to stem the momentum of continued increases by implementing disciplined cost management while continuing to provide safe, reliable operations. Combined, these agencies were able to keep their programs flat compared to the BP-18 Rate Case, which requires absorbing roughly \$25 million in annual inflation. Much of the savings are from reprioritizing projects to ensure the most critical projects are completed, and deferring other maintenance projects until future rate periods. The Corps and Reclamation will achieve additional savings by delaying hiring actions, consolidating functions and reducing travel and training.

Power Services program costs in millions of dollars¹



As with the 2016 IPR, Power Services continues to implement a ramp in capital spending for the FCRPS, from \$200 million a year up to \$300 million a year. Rather than immediately implementing a \$300 million a year program, BPA decided in the 2016 IPR to gradually increase capital spending to align with the Corps’ and Reclamation’s ability to execute the work. BPA proposes to follow the same capital spending levels as outlined in the 2016 IPR – \$238 million in FY 2020 and \$256 million in FY 2021 – with a goal to reach \$300 million a year in FY 2023. Investments in the proposed plan are expected to improve unit efficiency while reducing lost generation, direct-cost risks, and safety and environmental risks. The proposed plan has a net-present-value benefit of \$500 million relative to a plan that would continue to invest \$200 million per year.

In 2016, Energy Northwest implemented a series of cost-optimization efforts that have helped to reduce the cost escalation of both the expense and capital investments for the Columbia Generating

¹ Power Services discontinued the use of an undistributed reduction in this 2018 IPR. The proposed 2018 IPR levels are decreasing compared to the BP-18 Rate Case levels even with the removal of the undistributed reduction.

Station. This IPR, Energy Northwest is proposing to keep O&M costs flat and capital costs under the investment levels set for FY 2018 and 2019. The investment levels are based on Energy Northwest's long-range plan for Columbia, which it established after a rigorous review process that looks at the challenges and constraints that need to be managed in order to support continued, safe operations.

BPA will increase its focus on energy efficiency investments and demand response initiatives that deliver cost-effective solutions in support of BPA's evolving system needs, capabilities and constraints, and grid modernization efforts. Regardless of scale, scope and composition, changing customer and market needs continuously drive BPA to develop new programs as well as evaluate and update the size and scale of existing programs.

BPA is holding conservation infrastructure costs and major program spending flat relative to BP-18 Rate Case levels. Conservation acquisition funding is sized to reflect both accelerated achievements in FY 2016 and 2017 relative to the 2016 Energy Efficiency Action Plan, as well as the mix and scale of energy efficiency acquisitions identified in the resource program. BPA estimates it will acquire between 74 and 101 average megawatts of energy efficiency by 2021. BPA will further describe proposed program changes in its 2020-2021 energy efficiency goal proposal document.

In the spirit of bending the cost curve, the Northwest Power and Conservation Council partnered with BPA to keep costs below the rate of inflation compared to BP-18 levels. These savings are due to efficiencies gained in areas that can be reduced without impacting the effectiveness of programs.

BPA's 2018-2023 Strategic Plan highlights how BPA has a unique role and responsibility to balance the economic and environmental benefits of the federal hydropower system. Fish and Wildlife's \$310 million direct-expense program funds BPA's and its partners' efforts to address multiple legal mandates by protecting, mitigating and enhancing the region's natural resources impacted by the development of the federal hydropower system. These initial IPR numbers do not reflect work that is currently underway with Northwest tribes, states and other partners to reduce costs by rebalancing the Fish and Wildlife portfolio. BPA will need the active support of its many partners and other stakeholders throughout the region to help sustain the Fish and Wildlife program at a level that is consistent with BPA's overall commercial viability. BPA anticipates that the actions taken in the short term will create sustainable savings that will roll into FY 2020 and 2021.

In addition to meeting these important regional obligations, two major processes will be underway. The first is the creation of a new comprehensive Columbia River System Operations Environmental Impact Statement in collaboration with the Corps and Reclamation, with a record of decision in September 2021. The second process will be to develop a new Columbia River System Biological Opinion(s) based on the information gathered and evaluated under the CRSO EIS.

Power Services has been implementing reductions to non-generation operations spending since the 2014 IPR. In this IPR, BPA is proposing to reduce the spending levels by limiting the spending associated with federal staff, service contracts and supplemental labor. This will be accomplished by reprioritizing work, which will reduce or eliminate tasks that are not in line with the strategic plan. Priorities for Power staff and work will include efforts that support BPA's grid modernization efforts.



5. TRANSMISSION SERVICES

OVERVIEW

Transmission Services proposes to increase costs by \$3 million a year compared to BP-18 spending levels. While this is significantly below the rate of inflation, Transmission is looking for additional reductions to get to BP-18 levels by the end of this IPR.

- Expenses are prioritized to support safety, compliance and market transformation activities, as well as to modernize assets.
- Transmission took significant steps to offset increasing costs, such as inflation, critical positions and licensing costs.
- Capital spending is set to achieve safety and high reliability, availability and adequacy standards, and to maximize economic value to the region.

Transmission Services is responsible for planning, designing, marketing, operating and maintaining three-fourths of the region's high-voltage transmission assets and providing safe, reliable and cost-effective service to customers. The transmission system connects more than 15,000 circuit miles of transmission lines, 260 substations and an extensive network of related transmission facilities, telecommunications and IT infrastructure across eight states.

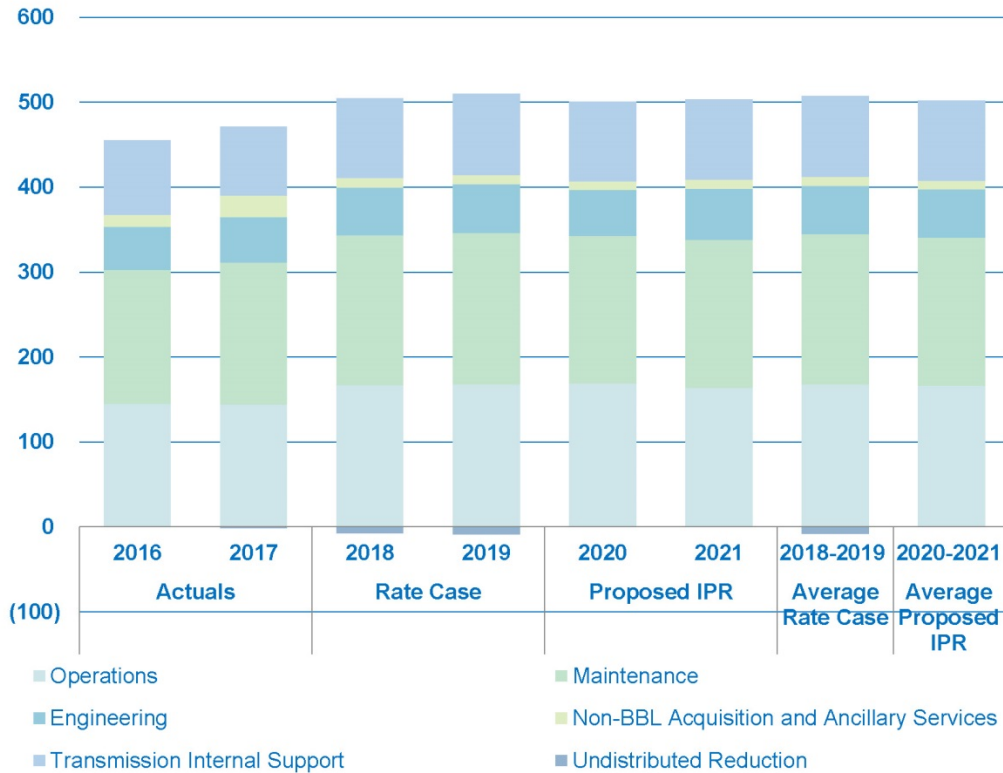
The proposed Transmission Services spending prioritizes three goals of the agency strategy: strengthen financial health; modernize assets and system operations; and meet transmission customer needs efficiently and responsively.

BPA is adopting a more flexible, scalable, economical and operationally efficient approach to managing its aging transmission system and to remain a competitive transmission provider. This work will ensure we maintain financial strength while continuing to meet our multiple statutory responsibilities and delivering the public benefits that are so valuable to the region.

Expense

Careful stewardship of Transmission's spending levels resulted in keeping costs close to BP-18 levels. Throughout the IPR process, Transmission will work to eliminate the \$3 million increase over BP-18 levels in order to support the strategic and financial plans. The proposed

Transmission Services program costs in millions of dollars²



spending levels support safety, compliance, reliability and market transformation activities. They also support Transmission’s role in enabling economic growth and providing grid access by providing flexible products and services to meet evolving demand forecasts, impacts to energy markets, generation choices and policies.

Upward pressures on costs include price and wage inflation and additional workload related to adding responsiveness capability and modernizing systems. Mitigating actions have included carefully evaluating and prioritizing hires, projects, work and initiatives, and consolidating workloads.

Maintenance will accomplish its compliance-driven and contractually-obligated responsibilities efficiently and cost-effectively, ensuring the reliability of the grid. Another focus will be on

² Transmission Services discontinued the use of an undistributed reduction in this 2018 IPR. The proposed 2018 IPR levels are increasing compared to the BP-18 Rate Case levels with the removal of the undistributed reduction.

optimizing maintenance intervals as well as our inventory of spare equipment with the use of a decision-making tool that allows us to perform a probabilistic risk assessment.

BPA will also sell one airplane. This will leave Bonneville with one plane that will be used more strategically under a new policy that requires executive level authorization for use.

The primary focus of Transmission's spending will be on modernizing the grid and updating supporting technology. Grid modernization and preparing for evolving markets will require significant efforts impacting all of System Operations. Transmission Marketing will develop strategy, policies and implementation plans to enable customer participation in the Western energy imbalance market, which involves the use of BPA's transmission system. Mature market analysis capabilities will help develop clear business practices and streamlined processes that meet the current and future needs of network integration transmission service and point-to-point transmission service customers.

Capital

Transmission has developed a robust asset management strategy to serve the majority of the Northwest's high-voltage needs. Transmission capital levels were held flat to BP-18 capital spending, with an expected execution of approximately \$300 million in direct spending per year. Spending levels were held flat by delaying and deferring replacement of assets; deferring alternative service delivery arrangements; and adopting a risk assessment and evaluation method that prioritizes available dollars to mitigate the highest system risks.

Transmission has improved its capital program to deliver a more timely and cost-effective process. Since the last IPR, Transmission has implemented a formal project scoping and stage-gate capital approval process, which improves investment decision-making and makes the best use of capital dollars. Future efficiencies will be made through the Capital Investment Approval process, focusing on improving certainty and speed of project delivery. In addition, Transmission is optimizing the life-cycle cost of acquiring, operating, maintaining and disposing of assets in order to preserve and maximize their reliability and value.

The capital funding proposal also reflects the transition from a period of large system expansion to one dominated by smaller sustain projects. Additionally, the volume of developer and utility customer-driven projects funded in advance has ramped up significantly over the last two years.



6. CORPORATE

OVERVIEW

Corporate proposes to reduce costs by \$5 million a year compared to BP-18 spending levels.

- Reprioritization led to cutbacks or elimination of some work.
- Organizations across Corporate will be supporting important processes and initiatives, including the Columbia River System Operations Environmental Impact Statement and Columbia River Treaty modernization.

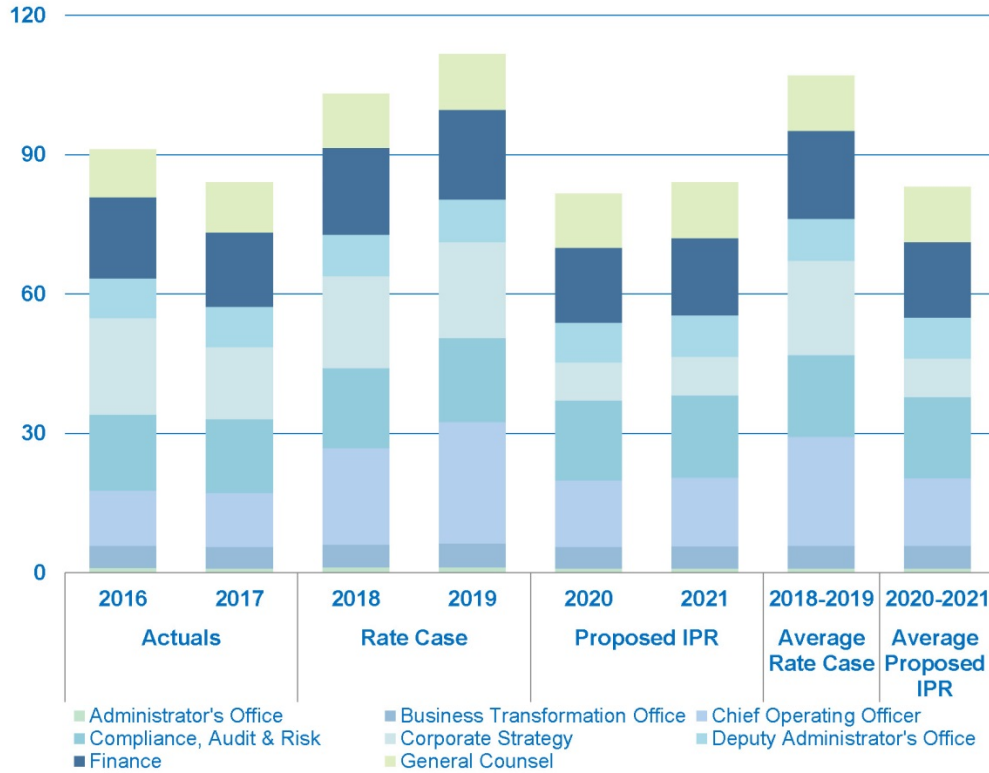
Corporate is made up of nine organizations that report to the administrator, deputy administrator or chief operating officer. They provide support services and benefits to all of BPA, and their costs are ultimately covered by power and transmission rates. These organizations are made up largely of labor costs, which will decrease over time through attrition based on targets outlined in the workforce modernization initiative that was discussed in the 2016 IPR 2.

The Finance organization has reprioritized work around BPA's strategic and financial plans to align with the goal to strengthen financial health. Finance is actively analyzing how to further reduce or eliminate work resulting in either dollar or labor savings.

Communications and Intergovernmental Affairs will be engaged in regional communication and outreach on important fish and wildlife processes, including the CRSO EIS, in addition to other high-profile processes, such as the Columbia River Treaty. General Counsel will provide advice related to, and defend actions associated with, the widely varying issues that these processes and others across the agency may bring up. Each of these organizations have held flat or decreased their spending from BP-18 levels. This means they may need to reprioritize existing work or provide less support to other projects if emerging issues require more resources than planned.

Part of the reduction to Communications is due to reducing the scale of the BPA Library and Visitor Center while still providing important archiving services and managing subscriptions and publications for the agency. Finance and Communications also teamed up to eliminate the "year in review" section of the annual report, which will deliver savings due to contract termination and significant labor savings across the agency.

Corporate program costs in millions of dollars



Compliance, Audit and Risk Management organizations will absorb inflation as they continue integrate governance, risk and compliance frameworks throughout BPA and help find efficiencies and improved agency oversight of mission-critical objectives and regulatory obligations.

The Business Transformation Office, the newest Corporate organization, leads and facilitates the implementation of cross-agency initiatives, such as grid modernization. This organization is responsible for providing structure and standardization in program and project management.

BPA is making major changes in the Corporate Strategy organization. The Strategic Planning group is being eliminated in lieu of a more distributed model of strategic planning that involves the Business Transformation Office, business lines and senior executives. In addition, BPA narrowed the focus of the Technology Innovation program, which led to significant program reductions. TI will concentrate on projects that support our grid modernization objectives and will work with the business lines to identify the types of projects needed to modernize assets and system operations.



7. CHIEF ADMINISTRATIVE OFFICE

OVERVIEW

The CAO proposes to reduce costs by \$17 million a year compared to BP-18 spending levels.

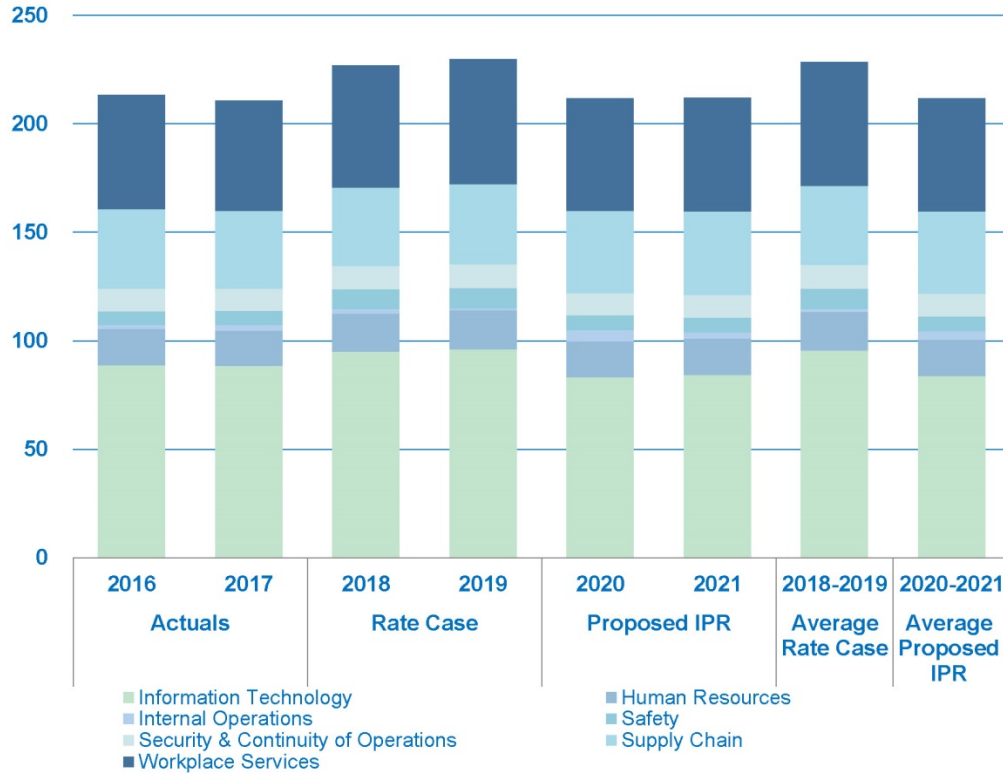
- The CAO will meet its reductions through eliminating program expansions, reducing supplemental labor and reducing federal employees through attrition.
- A new IT strategy will bring long-term savings while improving service delivery.
- Capital investments are proposed to be flat or decline as the CAO absorbs or reprioritizes existing work to meet emerging needs.

The Chief Administrative Office provides policy and strategic guidance concerning key internal operations. The CAO provides executive-level leadership for strategic direction and policy for Human Resources, Information Technology, Safety, Security and Continuity of Operations, Supply Chain, and Workplace Services. The CAO has committed to coming in well under BP-18 spending levels by eliminating planned spending increases, program expansions, reduced supplemental labor costs and reducing its federal workforce through attrition.

IT conducted an enterprise technology assessment, which identified 10 breakthrough report strategies that align with BPA's goals of strengthening financial health and modernizing assets. When fully implemented by the end of 2023, IT will achieve a \$42.5 million cost reduction, create a new service model to improve service delivery and enable IT to be a more effective strategic business partner. Another change to the IT program will be a shift from capital investments to expense as the adoption of cloud-based services increases.

Capital investments for the CAO will include a number of facility investments at the Ross Complex, Covington Regional Maintenance Headquarters and ongoing seismic improvements throughout the system. Another cost-saving measure by Facilities was the consolidation of field offices in Bend, Oregon, and Walla Walla and Usk, Washington, to provide annual lease savings.

CAO program costs in millions of dollars



The implementation of the workforce modernization initiative, introduced in the 2016 IPR 2, will continue to reduce the size of the federal workforce and supplemental labor. The strategy is to reduce the federal workforce by 10 percent by 2025 compared to the FTE cap of 3,147, as well as reduce supplemental labor spending by 25 percent in that same time horizon. This will provide cost savings across the agency.

8. CAPITAL

Below is a summary of the proposed capital spending levels based on the programs and direction that are explained in the previous sections and in the IPR detailed document.

Capital investment levels by asset category in millions of dollars

	Actuals		Rate Case		Proposed IPR	
	2016	2017	2018	2019	2020	2021
Asset Category Direct Spending						
Transmission Direct	378.8	270.7	317.0	310.5	310.2	317.7
Federal Hydro	178.5	196.4	236.0	258.0	238.0	256.0
Columbia Generating Station	127.0	138.4	111.3	99.4	75.7	93.2
Facilities	10.1	18.0	17.9	35.0	29.6	23.3
Security	10.9	6.6	6.0	8.0	7.0	7.0
Fleet	6.0	5.5	6.7	7.2	6.7	7.2
IT	22.2	10.7	25.0	25.0	20.9	20.9
Fish & Wildlife	16.0	5.4	50.5	44.0	47.3	47.3
Environment	7.0	6.3	5.5	5.6	5.6	5.6
Direct Total	756.6	657.9	776.0	792.8	741.0	778.0
PFIA	2.4	5.2	16.0	15.5	65.5	50.1
Transmission Indirects	54.1	50.5	56.2	57.1	54.7	55.6
Corporate Indirects	52.2	54.0	57.3	59.0	47.4	47.6
AFUDC	38.5	32.9	33.1	33.1	31.6	30.2
Grand Total	903.8	800.5	938.7	957.5	940.2	961.5

	Outyears							
	2022	2023	2024	2025	2026	2027	2028	2029
Asset Category Direct Spending								
Transmission Direct	314.4	321.3	328.3	335.4	342.5	349.8	357.0	364.4
Federal Hydro	281.0	300.0	306.0	313.0	319.0	326.0	333.0	340.0
Columbia Generating Station	76.3	80.7	94.0	108.1	96.3	98.1	114.2	143.7
Facilities	17.2	41.7	51.7	4.3	27.4	27.9	28.5	29.0
Security	7.0	7.0	5.4	5.5	5.6	5.7	5.8	5.9
Fleet	8.2	8.2	8.5	9.0	9.2	9.8	9.8	10.0
IT	19.9	19.9	18.9	17.9	16.9	15.9	14.9	14.9
Fish & Wildlife	43.0	43.0	40.0	40.0	40.0	40.0	39.9	15.0
Environment	5.6	5.6	5.6	5.6	5.6	5.6	5.6	5.7
Direct Total	772.6	827.4	858.3	838.8	862.5	878.9	908.8	928.5
PFIA	45.1	29.9	30.0	30.0	30.0	30.0	30.0	30.0
Transmission Indirects	56.4	57.2	58.1	59.0	59.9	60.8	61.7	62.6
Corporate Indirects	48.4	49.2	50.0	50.9	51.7	52.6	53.4	54.2
AFUDC	30.9	31.6	32.3	33.0	33.7	34.4	35.1	35.8
Grand Total	953.4	995.3	1,028.8	1,011.7	1,037.8	1,056.6	1,089.0	1,111.2

9. CONCLUSION

BPA will host workshops the week of June 18 to cover some of the largest IPR spending level areas. If you wish to suggest an additional topic for workshops, email BPAFinance@bpa.gov by June 15. If you need additional information, clarification on IPR materials or have questions, you can also submit them to BPAFinance@bpa.gov, or contact your power, transmission, tribal or constituent account executive.

Participants have an opportunity to submit public comments on BPA’s proposed IPR spending levels during an eight-week public comment period beginning June 18 and concluding Aug. 2. Comments can be submitted online at www.bpa.gov/comments. A closeout report is expected in late September outlining final spending details, including any additional cost-management actions that BPA identifies between June and August.

	MONDAY JUNE 18	TUESDAY JUNE 19	WEDNESDAY JUNE 20	THURSDAY JUNE 21	TUESDAY JULY 17	THURSDAY AUGUST 2	FALL 2018
MORNING		9 a.m. Federal Hydropower	9 a.m. Grid Modernization	9 a.m. Energy Efficiency	9 a.m. Environment, Fish and Wildlife	Close of public comment period	Release of IPR close-out report
AFTERNOON	1 p.m. Kickoff	1 p.m. Columbia Generating Station 2:45 p.m. Information Technology	1 p.m. Transmission Services	11:30 a.m. Capital- related costs			

10. DISCLOSURES

10.1 Future Adjustments

BPA conducts the IPR process to solicit and consider regional input on BPA's financial priorities for the upcoming rate period. Through this collaborative process, BPA and regional parties can have a meaningful dialogue regarding BPA's initial program spending levels. At the conclusion of the IPR process, BPA issues a close-out letter and report in which BPA describes how its program funding and spending projections were informed by the parties' comments. The projected program levels described in the close-out letter and report reflect the administrator's best estimate regarding the appropriate spending levels to assume in establishing revenue requirements.

The close-out of the IPR process does not mark the consummation of BPA's decision-making process on spending levels because further adjustments to BPA's spending projections may occur after the conclusion of the IPR. While the IPR close-out letter and report reflect the administrator's best estimate regarding the appropriate spending levels to assume in setting revenue requirements, these levels may be further modified by subsequent future events that lead to changing priorities or by subsequent judicial, executive or congressional action. Thus, while the IPR serves the important role of receiving regional input on the priorities for BPA spending, the resulting final program levels are only recommendations that may be subsequently modified.

BPA will share adjustments to spending projections at Quarterly Business Reviews.

10.2 Financial Disclosure

FY 2017 actuals have been made publicly available by BPA and contain BPA-approved financial information.

FY 2018–2019 forecasts for rate case and start-of-year has been made publicly available by BPA and contain BPA-approved financial information.

FY 2020–2021 proposed IPR levels have been made publicly available by BPA on June 6, 2018, and reflect information not reported in BPA financial statements.

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