

STATEMENT OF
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U.S. DEPARTMENT OF ENERGY
BEFORE THE
SUBCOMMITTEE ON WATER, POWER AND OCEANS
COMMITTEE ON NATURAL RESOURCES
U.S. HOUSE OF REPRESENTATIVES
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EXAMINING THE MISSIONS AND IMPACTS OF THE PRESIDENT'S PROPOSED
FISCAL YEAR 2017 BUDGETS OF THE U.S. FISH AND WILDLIFE SERVICE, THE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, THE BUREAU
OF RECLAMATION AND THE POWER MARKETING ADMINISTRATIONS

Mr. Chairman, Mr. Ranking Member, and Members of the Subcommittee, I appreciate the opportunity to testify today. My name is Claudia Andrews. I am the Chief Operating Officer of the Bonneville Power Administration (Bonneville). I am testifying on behalf of Bonneville's Administrator, Elliot Mainzer, who wishes for me to express his regrets at not being able to attend this hearing. I am excited to work with our employees, customers and constituents, states, local and tribal governments, and Congress to position Bonneville to continue to deliver value to the Pacific Northwest well into the future.

In my testimony today, I will share with the Subcommittee Bonneville's significant successes over the past year, how we are addressing key challenges and opportunities, and an overview of the FY 2017 budget.

BONNEVILLE'S RECENT SUCCESSES AND KEY CHALLENGES

Since its creation, Bonneville has been a major force in the Pacific Northwest, providing renewable hydropower that is the cornerstone of the region's economy, helping to preserve and restore the environment and raising the standard of living for both urban and rural citizens. Bonneville's foundational commitment as a steward of the region's valuable resources has guided us through many challenges, from difficult economic times to the recent low water year. Even as the Pacific Northwest faced these uncertainties, Bonneville worked with its Federal and Canadian partners to coordinate operations and ensure the region could continue to count on its supply of clean, low-cost power from the Federal Columbia River Power System (FCRPS). At the same time, Bonneville continued to make important progress in areas that advance both regional and national energy goals.

Debt Repayment

Bonneville ratepayers repay, with interest, the Federal investment in the FCRPS. In FY 2015, Bonneville made payments of \$891 million to the U.S. Treasury. That sum included its full scheduled payments of \$662 million and \$229 million in early retirement of higher interest rate U.S. Treasury debt. This payment marked the 32nd consecutive year that Bonneville has made its scheduled payments to the U.S. Treasury on time and in full. We expect to make this year the 33rd consecutive year of on time and in full U.S. Treasury payments. Bonneville funds its approximately \$4.1 billion annual cost of operations and investments primarily through power and transmission revenues and borrowing from the U.S. Treasury.

Rates – Managing for Short and Long-Term

One of Bonneville's most important priorities is to keep rates as low as possible, consistent with sound business principles, while addressing the demands on the power and transmission system and achieving key public purpose objectives.

To that end, last fall Bonneville kicked off Focus 2028, a forum for regional leaders to establish a common understanding of industry changes and the strategic choices Bonneville may face to maintain its long-term financial strength. With our public power utility customers' long-term wholesale power contracts expiring in 2028, our objective is to ensure we maintain cost competitiveness while continuing to meet our multiple statutory responsibilities and delivering the public benefits that are so valuable to our region. The outcome of this forum, which concludes by June 2016, will likely play a vital role in the upcoming rate-setting process for FY 2018-2019.

Bonneville's rate-setting begins with an invitation for customers and the public to participate in a review of our programs and costs. This process, the Integrated Program Review, is underway for proposed spending levels for FYs 2017-2019. The results from this process will establish cost levels for the rate-setting process that begins in the fall of 2016 and culminates with a final proposal in the summer of 2017 for FY 2018-2019 rates. Bonneville's Integrated Program Review includes a Capital Investment Review, which will focus on near and long-term capital investment plans.

First Quarter Financial Forecast

Our current forecast for end-of-year adjusted agency net revenues is lower than expected. Agency adjusted net revenue was \$38 million at the end of the first quarter. The First Quarter Review End-of-Year (EOY) Adjusted Net Revenue forecast is negative \$73 million, a \$211 million decrease from the Start of Year (SOY) budget and a \$225 million decrease from the rate case. While the BPA EOY forecast of adjusted agency net revenues has declined, BPA started the rate period with a substantial amount of financial reserves which has provided a good cushion in the event the actual end of year results are lower than planned. Additionally, BPA sets rates based on a Treasury Payment Probability of 95% over the two-year rate period and as of the end of the first quarter, BPA projected a 100% likelihood of making the FY 2016 year end Treasury payment on time and in full.

For Power Services, the first quarter forecast for modified net revenues is negative \$175 million, a \$213 million decrease from the start-of-year budget. This negative forecast is largely due to low natural gas prices, which are driving down Bonneville's secondary power revenues, and a slightly below average water year. At the same time, we are getting less water from Canadian and U.S. reservoirs, primarily because we are restoring the reservoir levels after receiving additional water last summer to offset dry-year conditions in 2015. The Transmission Services net revenue forecast is virtually on target at \$102 million, a \$2 million increase from the start-of-year budget.

While it is still early in the year to draw strong conclusions about our current forecast, as conditions change, we are keeping a close eye on costs and looking for ways to perform our work as efficiently as possible. It is also important to remember that Bonneville has built expectations of volatility into its rate design and plans its long-term finances to cover hydrology and market risks, among other things.

Capital Strategy

Bonneville's most important strategic priority is to maintain and enhance the value of the FCRPS. The FCRPS power and transmission assets are aging and require significant capital investment to allow them to continue to provide reliable and low-cost service well into the future. Optimally maintaining and enhancing this extremely critical power and transmission system in the capital intensive electric utility industry is a primary responsibility of Bonneville and its Federal partners.

As this critical infrastructure ages, replacements and upgrades will increase operational efficiency and provide needed capacity and capabilities, ensuring that the region has adequate, reliable and low-cost power and transmission systems for many years to come. Bonneville also invests to fulfill regional commitments for fish and wildlife restoration.

We are committed to working closely with our customers and other stakeholders to optimize the use of capital across the authorized asset classes while minimizing power and transmission rate effects.

Supplemental Capital Financing Tools

Bonneville's success in meeting its growing capital demands and delivering public benefits to its customers relies greatly on sufficient access to low-cost sources of capital. To supplement the traditional use of borrowing authority from the U.S. Treasury to finance investments, Bonneville is utilizing other financing sources to meet future needs of the power and transmission systems.

For example, the Lease-Purchase Program enables Bonneville to continue to invest in infrastructure to support safe and reliable transmission. Over \$1.5 billion in essential FCRPS transmission infrastructure investments have been made under this program. Bonneville has also continued its work to restructure certain of the Bonneville-supported non-Federal debt obligations to continue to preserve or restore Bonneville's limited ability to borrow from the U.S. Treasury.

Workforce Challenges

We are facing unprecedented changes on the regulatory, technology and market design fronts at a time when our physical assets and systems are aging and requiring significant capital investment and renewal. Not unlike electric utilities nationwide, many of our employees are eligible to retire now and in the near future. It is important that Bonneville continue to attract and retain a skilled workforce to meet the growing demands of a competitive and rapidly changing industry. Bonneville is exploring improvements in this area to help us maintain our competitiveness in our industry.

Transmission Infrastructure

Bonneville builds, operates, and maintains more than 15,000 circuit miles of transmission lines throughout the Northwest. To support the marketing needs of our transmission customers, we are collaborating with stakeholders to revise and enhance policies and procedures with the objectives of: promoting more efficient and effective regional transmission planning processes and timelines; clarifying rights and responsibilities for Bonneville and its customers; ensuring equitable cost allocation; reducing financial risks to Bonneville and its ratepayers, and mitigating stranded investment exposure.

Bonneville continued its legacy as the leader in high-voltage transmission in the Northwest in 2015. The new Central Ferry-Lower Monumental line, which was energized in November 2015, exemplifies Bonneville's expansion of electric transmission capacity in the Pacific Northwest. The 38-mile, 500-kilovolt line delivers primarily renewable energy from the region's east side to urban centers in the west and continues to reliably serve existing needs in the lower Snake River area.

Bonneville's core values of collaboration and environmental stewardship took center stage as the \$200 million Big Eddy-Knight Transmission Project in the Columbia River Gorge was also energized in November 2015. The 28-mile, 500-kilovolt line to connect substations in Wasco County, Oregon, and Klickitat County, Washington, adds another link in Bonneville's regional high-voltage transmission system to support new transmission requests, including from renewable energy generators. Following extensive consultation with tribes and landowners, Bonneville demonstrated its commitment to its partners by taking exceptional steps to protect culturally sensitive sites. These efforts included innovative construction methods, such as using coring in lieu of controlled blasting to secure tower footings in basalt.

In January 2016, Bonneville energized the \$370 million modernization of a one-of-a-kind piece of energy infrastructure, the Celilo Converter Station, in The Dalles, Oregon. This project is a great example of Bonneville's strategic focus to ensure the long-term health and operational efficiency of our physical assets. The converter station is the northern end of the 845-mile Pacific Direct Current Intertie (PDCI), the longest commercial direct current transmission line of its kind in the nation. The PDCI connects the Northwest with the Los Angeles Department of Water and Power at Sylmar, California, providing affordable transmission of energy, reliability and cost benefits to customers at either end. Bonneville is also upgrading the 265-mile portion of intertie that it owns from the

Columbia River to the Nevada-Oregon border. The transmission line upgrades will be completed this fall and will raise the capacity of the intertie from 3,100 to 3,220 megawatts.

Bonneville is continuing its review of the proposed I-5 Corridor Reinforcement project. The 80-mile transmission line and associated substations in southwest Washington and northwest Oregon are proposed to maintain transmission system reliability and relieve congestion in the area. After more than six years of analysis and robust public involvement, we released the final Environmental Impact Statement in February 2016. We currently expect to make a decision about this project later this year. Before making a decision, we will continue to evaluate the circumstances around the project to ensure we are making the right investments at the right time. This includes continuing to actively explore possible “non-wires” technologies – measures that do not involve building a new transmission line – that may address the system reliability and congestion issues. While previous studies have not identified any combination of feasible and cost-effective long-term non-wires measures, these technologies are constantly evolving. We recognize the uncertainty that our ongoing consideration of this proposed line creates for the potentially affected communities in the I-5 corridor. However, we want to be sure every potentially feasible option has been thoroughly explored before we make a decision of this size and scope.

Stewardship of existing assets, the backbone of the Northwest electricity system, is Bonneville’s essential responsibility. A better understanding of the economic value delivered by our assets, coupled with improved asset management techniques, have increased the focus on this vital work. In FY 2015, we replaced more than 680 wood poles, 17 miles of insulators and 13 miles of ground wire, as well as completing several line-rebuild projects. In our substations, we replaced more than 75 high-voltage bushings on transformers and reactors, work that continues to accelerate in 2016. Each project preserves the safety and reliability of valuable equipment that serves millions of residents of the region.

Grand Coulee Dam Third Power Plant Overhaul

In rural northern Washington at the Grand Coulee Dam, the first mechanical overhaul of one of the largest hydroelectric turbines in the world is nearing the end of its final commissioning phase. This is the first step in the Grand Coulee Third Power Plant overhaul. Bonneville through direct funding of its Federal partner, the Bureau of Reclamation, is committed to successfully completing the entire \$700 to \$800 million project over the next decade. During that time, each of the six massive turbines in the dam’s Third Power Plant will be overhauled in sequence to provide approximately 40 more years of service to the region.

Chief Joseph Dam Turbine Runners

The Pacific Northwest is getting a boost to its supply of clean electricity thanks to a major upgrade at the second-largest hydropower dam in the country. Chief Joseph Dam in central Washington provides 2,458 megawatts of renewable energy, enough to single-handedly power the entire Seattle metro area. Bonneville ratepayers are funding \$173

million of work to replace 16 massive hydroelectric turbine runners in the 60-year-old plant, operated by the Corps of Engineers. The runner is the part of the turbine that turns under the force of the water to transform the mechanical energy of the river into electricity. The fleet of new stainless steel turbines will increase Chief Joseph's production efficiency by 6.5 percent.

The upgrades, expected to be completed in 2017, will increase the reliability of the electric power from the dam and help the agencies that operate the hydropower system to produce more clean energy while protecting natural resources such as salmon and steelhead.

Cyber and Physical Security

Bonneville takes the cyber security threat to grid reliability very seriously. Over the past year, Bonneville has significantly increased its staff in the cyber security area on the heels of establishing a 24/7 Cyber Security Operations and Analysis Center in the prior year. We continue to add more systems to the cyber security monitoring process and become increasingly proficient at monitoring, preventing and detecting cyber vulnerabilities and threats. We are currently working towards applying the Federal Information Security Management Act of 2002 (44 U.S.C. 3541 et seq.), with the recently passed updates, including the Federal Information Security Modernization Act of 2014. Bonneville is committed to complying with Critical Infrastructure Protection (CIP) standards established by the North American Electric Reliability Corporation (NERC). We are working to comply with NERC CIP version 5 requirements by the deadline.

Bonneville also is committed to the physical protection of critical infrastructure that is under Bonneville's control, such as control centers and substations supporting high-voltage transmission. Bonneville has implemented a long-term Security Asset Management Strategy and a Critical Asset Security Plan to ensure installation of enhanced security infrastructure at our most critical substations. The strategy follows the DOE Graded Security Protection guidelines and is a risk-based approach to protecting critical assets. This strategy meets or exceeds NERC CIP requirements.

Northwest Power Pool Members' Market Assessment Initiative Ends

In January 2016, Bonneville and our Northwest partners formally ended the multi-year Northwest Power Pool (NWPP) Market Assessment and Coordination Initiative (MC). The decision to dissolve the MC was the natural progression after a number of members left to pursue joining the California ISO (CAISO) Energy Imbalance Market (EIM). While the NWPP market initiative has concluded, the MC members, both past and present, remain committed to working together. Bonneville will continue collaborating with its partners on shared interests such as reliability, transmission planning and emerging market issues. Primary among our collective goals is to preserve and enhance the value of northwest power and transmission assets, especially our low-cost, carbon-free and flexible hydroelectric resources.

The conclusion of the MC process provides two key opportunities for Bonneville. We are focusing internally on our commercial operations strategy to ensure we have the foundational tools and systems in place to operate reliably, efficiently and flexibly in the evolving industry environment. We also believe it is in the best interest of Bonneville's customers and stakeholders to constructively engage with the CAISO EIM participants to further optimize our commercial operations in this evolving environment. Although we are not looking at formally joining the CAISO EIM, we are identifying the emerging market's impacts on our system and customers, attempting to minimize seams between markets, and engaging together on opportunities to more efficiently and effectively utilize our power and transmission assets.

Columbia River Treaty

Another important and pressing strategic initiative concerns the future of the Columbia River Treaty. The U.S. Government is developing a high level position for negotiation of the future of the Columbia River Treaty (CRT), based on a regional recommendation sent to Department of State in December 2013. In August 2015, the Department of State selected a lead negotiator. Bonneville has been working diligently with Department of State's lead negotiator to help State conclude the approval process necessary to begin formal negotiations too as soon as possible. Bonneville understands that State's goal is to begin formal negotiations by mid-year.

Recently, in a meeting with Senator Maria Cantwell and Secretary of State John Kerry, Prime Minister Justin Trudeau confirmed the need for US-Canadian talks and committed to focusing on appointing a negotiating team. Foreign Minister Stephane Dion also committed to moving talks forward.

The Department of State's lead negotiator also has had regular engagement with Northwest Congressional Delegation members and regional parties. The lead negotiator is committed to the Administration's ongoing engagement with regional stakeholders, including ongoing engagement with regional tribal governments. The lead negotiator plans to have a regular schedule of engagements with stakeholders and tribes through the preliminary and formal negotiation period.

Fish and Wildlife

Bonneville's strategy for protecting and enhancing fish and wildlife impacted by the FCRPS builds on the strong foundation we have established and takes us several years into the future. This effort is guided by sound science and Federal laws and agreements including but not limited to the Pacific Northwest Electric Power Planning and Conservation Act (16 U.S.C. 839 et seq.), the Northwest Power and Conservation Council's Fish and Wildlife Program, the Endangered Species Act of 1973 (16 U.S.C. 1531 et seq.), biological opinions covering the Federal hydro system and the transmission system, as well as the historic Columbia Basin Fish Accords. It also embraces state-of-the-art hydro system management and habitat and hatchery actions, most of which are implemented through our valued partnerships with tribes, Federal and state agencies and conservation groups.

Salmon passage at Columbia River dams is among the best in the nation, with juvenile fish dam passage survival performance standards of 93 to 96 percent. 2015 demonstrated the potential of what today's Columbia River system can support with favorable ocean conditions. For the third consecutive year, more than one million chinook returned to Bonneville Dam, and it was among the top five years on record for combined returns of chinook, coho, sockeye and steelhead since counts began in the Columbia River in 1938. While warm weather and water temperatures impacted Snake River sockeye salmon in both dammed and undammed rivers in 2015, BPA-funded hatcheries help to conserve these stocks and bring fish back to the rivers when conditions are unfavorable.

We are awaiting a court decision on the National Oceanic and Atmospheric Administration (NOAA) Fisheries Biological Opinion for operation of the FCRPS to protect salmon and steelhead under the Endangered Species Act. Although we cannot predict the outcome of this litigation, we are cautiously optimistic that our all-H strategy – hydro improvements, tributary and estuary habitat restoration, predator management, and hatchery operations with best management practices – will be recognized as comprehensive and beneficial for salmon and steelhead across all their life stages, with results in recent years that show this strategy's success.

We continue working with our Federal partners to develop our approach for a new biological opinion that builds on the success of the ongoing all-H strategy.

Energy Efficiency

In concert with our public power utility customers, we are funding energy efficiency infrastructure to meet the ambitious regional goals of the Northwest Power and Conservation Council (Council), and are using energy efficiency as our priority resource to augment power supplied to our customers. Since Congress passed the Pacific Northwest Electric Power Planning and Conservation Act in 1980, more than half of the region's new demand for electricity has been met through energy efficiency actions.

Over the past 35 years, Bonneville and its public utility customers have helped homeowners, farmers, business and industries save about 1,500 average megawatts of electricity. This makes energy efficiency the second largest power resource in the Northwest, second only to hydropower. Bonneville and its public power customers continue to exceed their share of energy efficiency acquisition goals and lead the nation in the use of efficiency as a power resource. This success is a result of strong regional collaboration and support for technological innovation.

In February, the Council approved its Seventh Northwest Power Plan, an updated assessment of the region's long-term electricity needs and how the region will meet them. The plan formalizes energy conservation targets and helps guide Bonneville's resource decisions. Bonneville worked with customers and regional stakeholders to support the Council with data and analysis to ensure the new plan builds on the region's strong track record of ensuring clean, reliable and cost-effective energy. Now we are working on integrating the Council's findings, including an updated six-year energy efficiency goal, into our own planning efforts.

FY 2017 BUDGET OVERVIEW

Bonneville is in sound financial condition and is well positioned for the future. Our FY 2017 budget proposes estimated accrued (self-financed) expenditures of \$3,049 million for operating expenses, \$30 million for projects funded in advance (funded by customers), and \$989 million for capital investments. While BPA end of year forecast of adjusted agency net revenues has declined, BPA started the rate period with a substantial amount of financial reserves which has provided a good cushion in the event the actual end of year results are lower than planned. Additionally, BPA sets rates based on a Treasury Payment Probability of 95% over the two-year rate period and as of the end of the first quarter, BPA projected a 100% likelihood of making the FY 2016 year end Treasury payment on time and in full.

Bonneville's commitment to fish and wildlife mitigation and enhancement is exemplified in its substantial direct program budget of \$320 million, capital and expense.

Bonneville's FY 2017 budget is a business-based budget that aligns well with Department of Energy priorities and goals.

Table BP-5 in Bonneville's FY 2017 Congressional Budget submission provides increased transparency regarding potential Bonneville third-party financing through our Lease-Purchase Program and projects funded in advance, which is estimated at about \$1,562 million during the FY 2016 through the FY 2021 period.

Please see Attachment A for budget data based on current services for fiscal years 2015 through 2017.

CONCLUSION

Mr. Chairman, this concludes my prepared remarks. I am excited by the role Bonneville is playing and will continue to play to achieve regional goals for clean, low-cost, and reliable electricity supplies while operating in a fiscally prudent manner. I would be happy to respond to any questions from the Committee.

Attachment A

Bonneville Power Administration

Funding Profile by Subprogram ^{1/}

(Accrued Expenditures in Thousands of Dollars)

	Fiscal Year			
	2015 Actuals	2016 Original ^{2/}	2016 Revised ^{2/}	2017 Proposed
Capital Investment Obligations				
Associated Project Costs ^{3/}	43,201	N/A	240,790	269,908
Fish & Wildlife	21,373	N/A	40,000	45,602
Conservation & Energy Efficiency ^{3/}	87,225	N/A	0	0
Subtotal, Power Services	151,799	N/A	280,790	315,510
Transmission Services	461,279		700,040	644,478
Capital Equipment & Bond Premium	34,344	N/A	37,356	28,794
Total, Capital Obligations ^{3/}	647,423	1,051,569	1,018,186	988,782
Expensed and Other Obligations				
Expensed	2,747,786	3,040,716	3,016,942	3,049,010
Projects Funded in Advance	389,677	30,000	30,000	30,000
Total, Obligations	3,784,886	4,122,285	4,065,128	4,067,792
Capital Transfers (cash)	448,761	206,900	189,107	205,868
BPA Total	4,233,647	4,329,185	4,254,235	4,273,660
Bonneville Net Outlays	(383,275)		(635)	(45,734)
Full-time Equivalents (FTEs)	2,836	3,100	3,100	3,100

Public Law Authorizations include:

Bonneville Project Act of 1937, Public Law No. 75-329

Federal Columbia River Transmission System Act of 1974, Public Law No. 93-454

Regional Preference Act of 1964, Public Law No. 88-552

Flood Control Act of 1944, Public Law No. 78-543

Pacific Northwest Electric Power Planning and Conservation Act of 1980 (Northwest Power Act), Public Law No. 96-501

These notes are an integral part of this table.

- ^{1/} This budget has been prepared in accordance with PAYGO. Under PAYGO all Bonneville budget estimates are treated as mandatory and are not subject to the discretionary caps included in the Budget Control Act of 2011. These estimates support activities which are legally separate from discretionary activities and accounts. Thus, any changes to Bonneville estimates cannot be used to affect any other budget categories which have their own legal dollar caps. Because Bonneville operates within existing legislative authority, Bonneville is not subject to a "pay-as-you-go" test regarding its revision of current-law funding estimates.
- ^{2/} Original estimates reflect Bonneville's FY 2016 Congressional Budget Submission. Revised estimates, consistent with Bonneville's annual near-term funding review process, provide notification to the Administration and Congress of updated capital and expense funding levels for FY 2016.
- ^{3/} Includes infrastructure investments designed to address the long-term electric power related needs of the Northwest and to reflect significant changes affecting Bonneville's power and transmission markets.