BONNEVILLE POWER ADMINISTRATION

SUSTAINING SUCCESS

ANNUAL REPORT 2019

TABLE OF CONTENTS

The Bonneville Power Administration is a non-profit federal power marketing administration based in the Pacific Northwest. Although BPA is part of the U.S. Department of Energy, it is self-funding and covers its costs by selling its products and services.

BPA markets wholesale electrical power from 31 federal hydroelectric projects in the Northwest, one nonfederal nuclear plant and several small nonfederal power plants. The federal dams are operated by the U.S. Army Corps of Engineers and the Bureau of Reclamation. The nonfederal nuclear plant, Columbia Generating Station, is owned and operated by Energy Northwest, a joint operating agency of the state of Washington. BPA provides about 28% of the electric power generated in the Northwest, and its resources — primarily hydroelectric — make BPA power nearly carbon-free.

BPA also operates and maintains more than 15,000 circuit miles of high-voltage transmission lines. BPA's territory includes Idaho, Oregon, Washington, western Montana and small parts of eastern Montana, California, Nevada, Utah and Wyoming.

BPA promotes energy efficiency, renewable resources and new technologies that improve its ability to deliver on its mission. It also funds regional efforts to protect and rebuild fish and wildlife populations affected by hydropower development in the Columbia River Basin.

BPA is committed to public service and seeks to make its decisions in a manner that provides opportunities for input from all stakeholders. In its vision statement, BPA dedicates itself to providing high system reliability, low rates consistent with sound business principles, environmental stewardship and accountability.

Photo by Doug C.

FINANCIAL HIGHLIGHTS

Federal Columbia River Power System

FISCAL YEAR 2019 - MILLIONS OF DOLLARS

	GOAL	RESULT
Net revenues	≥ $ 274	$ 248
Days cash on hand	≥ 60	76
Debt-to-asset ratio	≤ 88%	82%
Available U.S. Treasury borrowing authority	≥ $ 1,500	$ 2,420
IPR operating expenses	≤ $ 1,891	$ 1,777

Credit Ratings

Fitch AA with a stable outlook

Moody's Aa1 with a negative outlook

Standard & Poor's AA- with a stable outlook

A GOOD BUSINESS STRATEGY ACHIEVES NOTHING WITHOUT THE PEOPLE AND CULTURE TO MAKE IT HAPPEN.

— ELLIOT MAINZER

Photo by Anthony R.

Quennet Creek Substation dedication, Roger Kline, general manager of Northern Wasco PUD and BPA Administrator Elliot Mainzer

This summer marked the Bonneville Power Administration's 82nd anniversary – that means 82 years of fulfilling our public responsibilities, driving the region's economic prosperity and environmental sustainability.

This summer also marked my sixth year as BPA administrator. The theme of BPA's competitiveness has dominated my time in office. By following through on the goals outlined in our 2018–2023 Strategic Plan, we have made significant progress toward maintaining BPA's competitiveness, while also becoming highly responsive to customer and regional needs, and modernizing our assets and operations so that we can leverage and enable industry change. In addition, our strategic goals are designed to help us navigate the periodic ups and downs of the wholesale power market, which became important this winter as market and weather conditions drove up our power costs and reduced our short-term transmission sales.

Through implementing the strategic plan, we have built a strong foundation and created a lasting cultural shift for BPA that will allow us to sustain our success and continue to provide safe, reliable, affordable and renewable power to the region.

Our financial successes

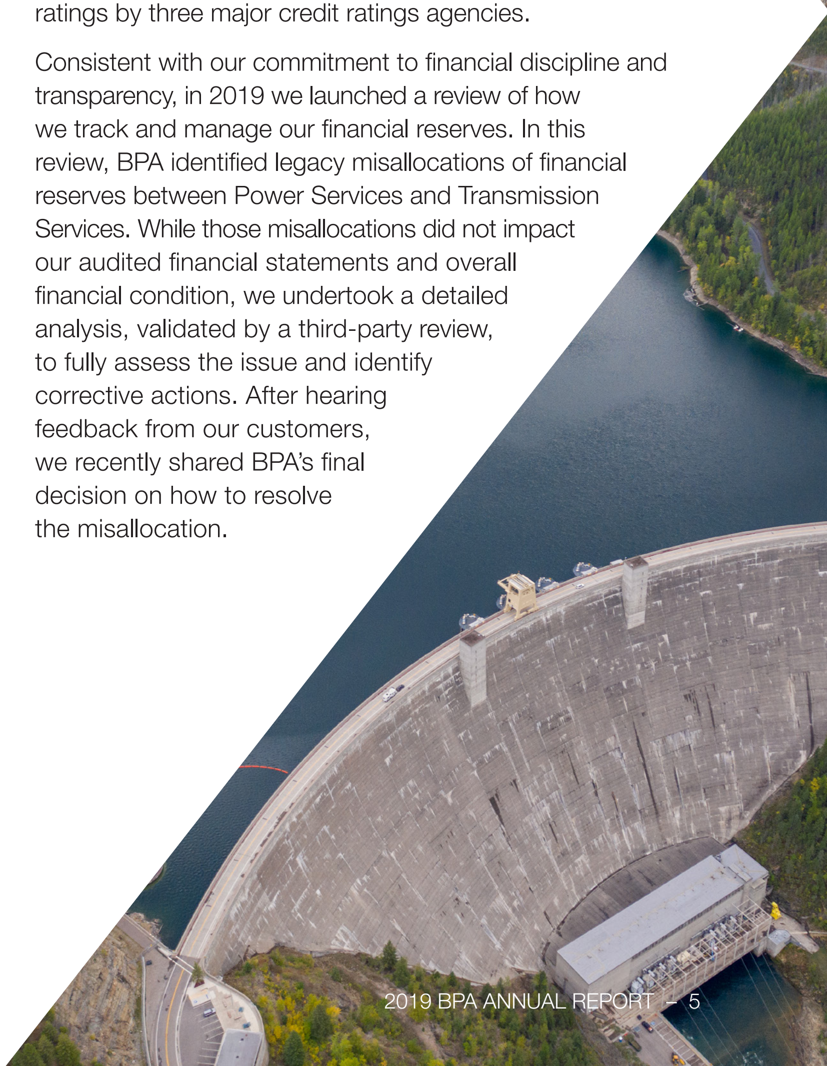
The outcome of the BP-20 Rate Case shows we are serious about achieving the foundational financial goal of our strategic plan: to sustain BPA's financial strength and provide competitive rates. The rates we established for fiscal years 2020 and 2021 place BPA on a much more sustainable rate trajectory.

This accomplishment required significant agency program cost reductions. With the support of our federal partners and Energy Northwest, we reduced program costs by $66 million per year of the next rate period compared to the FY 2018–2019 rate period. Thanks in part to these cost reductions, the average wholesale power rate will increase by just 1.5% after we apply a surcharge in FY 2020 to build Power Services' financial reserves. This surcharge is one of the tools BPA has adopted to ensure the agency has sufficient liquidity to meet its financial obligations.

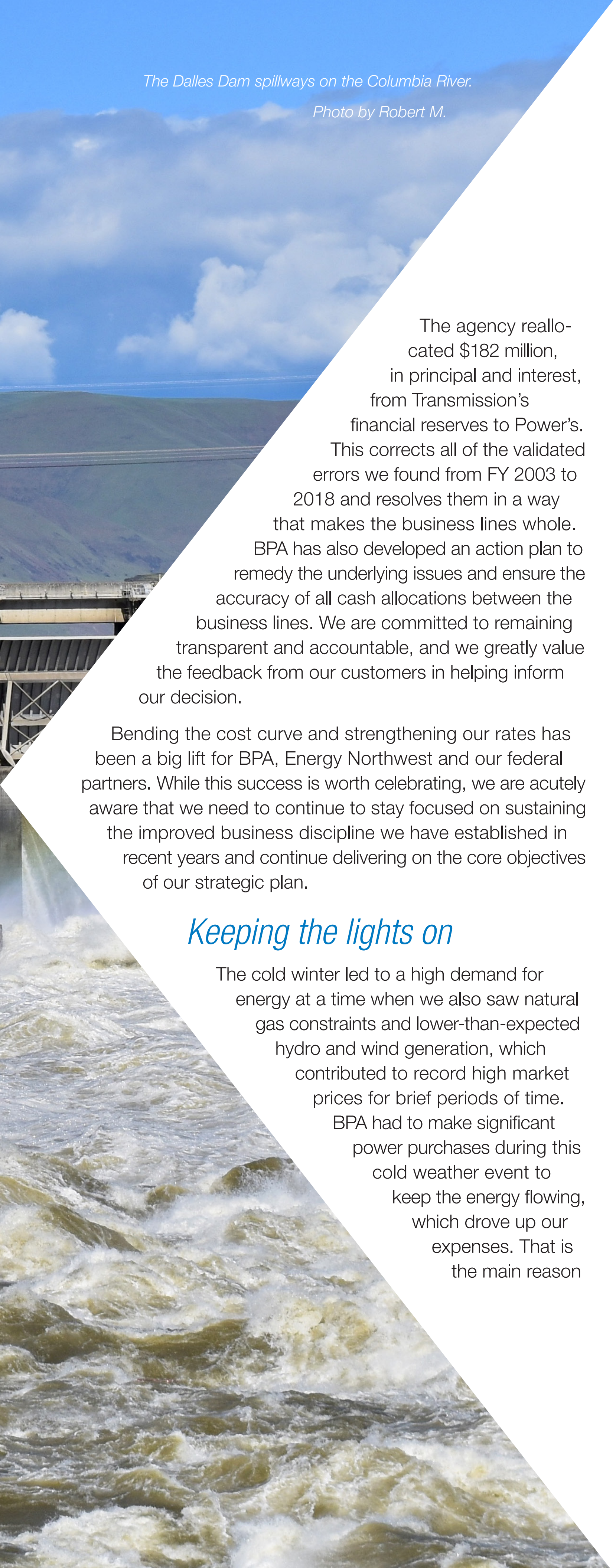
Average transmission rates will increase by just 3.6% over the two-year rate period, thanks to a settlement agreement that allowed BPA to adopt a new open access transmission tariff and resulted in a significantly lower rate than what we had otherwise expected. These power and transmission rates, which are increasing below the rate of inflation, are a major accomplishment for BPA and our customers.

Also this year, BPA made its 36th consecutive U.S. Treasury payment on time and in full. This year's $1.06 billion payment brings BPA's cumulative payments to the Treasury during those 36 years to over $30 billion. This is another indicator of BPA's financial strength, as supported by our continued strong investment-grade credit ratings by three major credit ratings agencies.

Consistent with our commitment to financial discipline and transparency, in 2019 we launched a review of how we track and manage our financial reserves. In this review, BPA identified legacy misallocations of financial reserves between Power Services and Transmission Services. While those misallocations did not impact our audited financial statements and overall financial condition, we undertook a detailed analysis, validated by a third-party review, to fully assess the issue and identify corrective actions. After hearing feedback from our customers, we recently shared BPA's final decision on how to resolve the misallocation.



Hungry Horse Dam



The Dalles Dam spillways on the Columbia River. Photo by Robert M.

The agency reallocated $182 million, in principal and interest, from Transmission's financial reserves to Power's. This corrects all of the validated errors we found from FY 2003 to 2018 and resolves them in a way that makes the business lines whole. BPA has also developed an action plan to remedy the underlying issues and ensure the accuracy of all cash allocations between the business lines. We are committed to remaining transparent and accountable, and we greatly value the feedback from our customers in helping inform our decision.

Bending the cost curve and strengthening our rates has been a big lift for BPA, Energy Northwest and our federal partners. While this success is worth celebrating, we are acutely aware that we need to continue to stay focused on sustaining the improved business discipline we have established in recent years and continue delivering on the core objectives of our strategic plan.

Keeping the lights on

The cold winter led to a high demand for energy at a time when we also saw natural gas constraints and lower-than-expected hydro and wind generation, which contributed to record high market prices for brief periods of time. BPA had to make significant power purchases during this cold weather event to keep the energy flowing, which drove up our expenses. That is the main reason Power Services ended the year with net revenues below rate case expectations. However, cost management, interest expense reductions, and additional revenues from secondary sales helped to offset some of those expenses.

The lower hydro conditions this year also resulted in fewer short-term transmission sales, which contributed to Transmission Services' lower-than-expected year-end net revenues. Fortunately, Transmission's lower net revenues were partially offset by additional sales of conditional firm service. These increased sales resulted from improvements we are making through an integrated transmission planning process that is enabling BPA to maximize the use of its existing system.

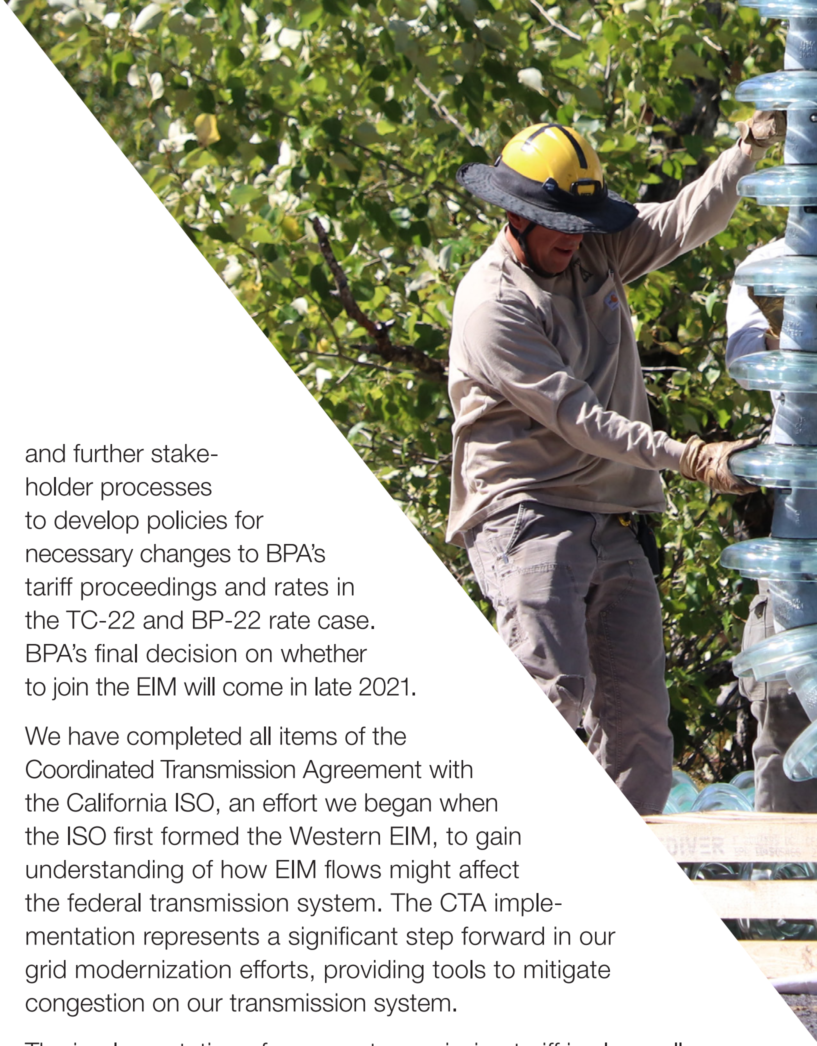
An elevated wildfire risk across our service territory during summer and fall presented another challenge. We reviewed our transmission assets, operations, vegetation management and training programs to minimize the risk that a fire might ignite from a piece of BPA equipment or as a result of an employee's action. Transmission prioritized the repair or replacement of any components they identified as high risk.

Despite challenges around weather, low streamflows and limited gas resources, BPA continued to provide reliable power and transmission services.

Collaborating with our partners

We came together with our federal, state and tribal partners to develop an innovative, collaborative agreement on a key component of operating federal dams in the Columbia River Basin. Parties to the agreement aligned on a flexible spring spill operation premised on achieving improved salmon survival while also managing costs of hydropower generation. The agreement fulfilled a key goal of not costing ratepayers on average more than the 2018 court-ordered spring spill operation. It also demonstrated the power of collaboration. Rather than focusing on our differences, we are working together on our shared objectives of improving salmon passage and providing affordable hydropower for the region. After completing one successful season of this flexible spill operation, we now have a better understanding of

Rather than focusing on our differences, we are working together on our shared objectives of improving salmon passage and providing affordable hydropower for the region.



A day in the life for our workforce.

the interplay between increased spill for salmon, market dynamics and physical operations. These insights will guide the flexible spill operation for the spring of 2020.

We also made significant progress on the draft Columbia River System Operations Environmental Impact Statement, which is scheduled to be published in February 2020, followed by the final EIS in June. Records of decision from the three co-lead agencies are scheduled to follow in late September 2020. This process will identify the key actions and investments related to the survival of salmon and other species in the basin as well as being a major determinant of the operational characteristics and financial competitiveness of the federal system.

Similarly, we continue to support the U.S. Department of State in negotiating post-2024 terms with Canada for the Columbia River Treaty. We are working closely with the negotiating team to ensure that we will continue to meet our commitments to the region of providing environmental stewardship and reliably delivering affordable power.

A strong foundation

We have a strong foundation to build future success upon. We have new business tools such as our program plans, which better connect us to our strategic goals and help us make more informed cost-management and investment decisions.

We have also launched improved operational controls and implemented better sharing of real-time data, which has helped prepare us to join the Western Energy Imbalance Market.

On Sept. 27, after an extensive stakeholder engagement process and a thorough cost-benefit analysis, BPA signed an implementation agreement with the California Independent System Operator to position the agency to join the Western EIM in 2022. Our analysis shows that BPA could earn additional power net revenues of about $34 million each year. Selling surplus energy in western markets is essential to keeping BPA's rates low, and participating in the EIM supports our strategic goals of sustaining financial strength and maintaining a competitive edge in the electric utility landscape. Next steps will include implementation activities and further stakeholder processes to develop policies for necessary changes to BPA's tariff proceedings and rates in the TC-22 and BP-22 rate case. BPA's final decision on whether to join the EIM will come in late 2021.

Participating in the EIM supports our strategic goals of sustaining financial strength and maintaining a competitive edge in the electric utility landscape.

We have completed all items of the Coordinated Transmission Agreement with the California ISO, an effort we began when the ISO first formed the Western EIM, to gain understanding of how EIM flows might affect the federal transmission system. The CTA implementation represents a significant step forward in our grid modernization efforts, providing tools to mitigate congestion on our transmission system.

The implementation of our new transmission tariff is also well underway, thanks to the successful completion of a settlement agreement with more than 150 of our transmission customers. The new tariff's terms and conditions will be foundational for the achievement of BPA's strategic objective to operate a modernized transmission grid and meet our customers' needs efficiently and responsively.

And perhaps most importantly, we have improved our work environment through an enduring commitment to safety, diversity and inclusion, and leadership that values people and delivers results. Our safety incident frequency rate is below the ceiling this year, and our Leadership Behaviors program continues to drive operational excellence and foster a culture that empowers employees to deliver on our strategic goals.

Photo by Robert M.

Photo by Jesse B.

Photo by Thorton S.

WE WILL CONTINUE TO BUILD PARTNERSHIPS TO SOLVE THE COMPLICATED ISSUES OF TODAY.

— ELLIOT MAINZER

Sustaining our success

As we anticipated in our strategic plan, we are now seeing an evolving set of issues and policy drivers begin to shape our operating environment. These include very ambitious clean energy legislation in Washington and other western states; an increasing pace of coal plant retirements and a growing demand for clean, flexible capacity; rapidly advancing technology; and growing concerns about regional resource adequacy. We also face ongoing challenges related to salmon protection and potential changes in our fuel supply driven by climate change.

The need for sufficient power to meet load, or resource adequacy, is the subject of important conversations in the region right now. As carbon-emitting resources are replaced with variable renewables like wind and solar, hydropower will play an important role in achieving the Northwest's clean energy goals while also maintaining a reliable power supply in the region. BPA can provide thousands of megawatts of clean hydropower and is in the middle of these conversations. We are also seeking opportunities to market our surplus clean hydropower at a price that fairly compensates us for its reliability, flexibility, and low-carbon attributes.

I strongly believe that the four major goals of our strategic plan continue to position BPA well for this next phase of industry change and policy evolution. But we must be wary of complacency as market fundamentals adjust. It is absolutely essential that we sustain our success on cost-management through effective fish and wildlife investments, strategic asset investment and our grid modernization efforts. At the same time, we need to continue our focus on offering competitive products and services, investing in energy efficiency, and providing highly responsive and efficient transmission services.

We can expect the energy landscape to continue to change. But through our strategic plan implementation — from sustaining our financial strength to modernizing our system assets and operations — we are positioning BPA to thrive in this ever-changing environment.

I look forward to updating our customers, partners and stakeholders in the coming months about how BPA is embracing the changing landscape and how we can leverage these significant changes to meet our customers' and the region's needs. Be assured that the BPA workforce and leadership feel a sense of engagement and connection to our very important mission as we step up to the next wave of challenges and opportunities facing BPA.

Elliot E. Mainzer
Administrator and CEO

PERFORMANCE TARGET RESULTS

BPA sets annual targets that the organization as a whole is responsible for achieving. BPA measures its success in executing on the strategic plan and meeting rate case commitments through this set of Key Performance Indicators and the grid modernization Key Strategic Initiative.

Strengthen financial health

Agency total revenues

Target not met. BPA's total revenues are $3.656 billion, which is 99.9% of the rate case expectation. This is below the target of at least 100% of rate case, or $3.658 billion. Lower loads were the primary cause of missing the total revenues target.

Agency total expenses

Target not met. BPA's total expenses are $3.41 billion, which is 96.3% of the rate case expectation. This is above the target of ≤ 96% of rate case, or $3.39 billion. Market volatility created significant cost pressure that could not be fully mitigated by cost management actions.

Agency net revenues

Target not met. BPA's net revenues are $248 million, which is $26 million below the minimum target of $274 million, or greater than or equal to the rate case expectation. Higher expenses resulted in missing the net revenues target.

Agency capital expenditures

Target met. BPA's capital expenditures are $663 million, or 77% of the rate case. This is below the target of $799 million, or ≤ 93% of the rate case.

Agency percent of capital work plan completed

Target not met. Power's capital spending is 73.6% of the rate case, or $226 million, with 23 units placed into service. This is below the target of $258 million, or ≤ 84% of the rate case, and 34 total units placed into service. Factors leading to the missed target include lack of available resources, refined project scopes, and reprioritization of projects. During 2019, BPA continued to develop the Asset Investment Excellence Initiative to work with agency partners to improve capital execution, including long-term planning, acquisition strategies, and making improvements in contracting and forecasting.

Transmission's capital spending is $249 million, or 81% of the rate case, with 465 units placed into service. This is below the target of $295 million, or ≤ 96% of the rate case, and above the target of at least 377 planned assets placed into service.

Agency debt-to-asset ratio

Target met. The agency debt-to-asset ratio is 82%, below the target of ≤ 88%.

Available U.S. Treasury borrowing authority

Target met. BPA's remaining borrowing authority with the U.S. Treasury is $2.4 billion against the target of $1.5 billion.

Modernize assets and system operations

Agency grid modernization — Key Strategic Initiative

Target not met. In 2019, 68% of grid mod projects on the start-of-year roadmap are in the deliver or complete phase, against a target of 90%. The target of 90% was an aggressive and ambitious target, intended to build as much momentum for projects as possible prior to the EIM decision. Grid mod projects will continue to be worked at a strong pace and most projects that started before or during 2019 are expected to be in the deliver phase by the end of Q2, FY 2020.

Provide competitive power products and services

Federal hydro forced outage factor

Target met. BPA's forced outage factor of hydro generation facilities, reflecting the percentage of hours within the period the asset was not available to run due to an unplanned event, was 4.1%, below the target of 4.4%.

Columbia Generating Station availability factor

Target met. The CGS availability factor, measured from July 1, 2018, to June 30, 2019, was 99.7%, above the target of 93% or higher.

Meet transmission customer needs efficiently and responsively

System Average Interruption Frequency Index - low voltage (<200kV)

Target met. BPA's frequency of annualized unplanned outages on low-voltage lines was 0.50, less than the target of 0.70 outages per line.

System Average Interruption Frequency Index - high voltage (≥200kV)

Target met. BPA's frequency of annualized unplanned outages on high-voltage lines was 0.35, less than the target of 0.66 outages per line.

System Average Interruption Duration Index - low voltage (<200kV)

Target met. BPA's duration of annualized unplanned outages on low-voltage lines was 292 minutes per line, less than the target of 427 minutes per line.

System Average Interruption Duration Index - high voltage (≥200kV)

Target met. BPA's duration of annualized unplanned outages on high-voltage lines was 193 minutes per line, less than the target of 233 minutes per line.

People and culture

Incident frequency rate

Target met. BPA recorded an incident frequency rate of 0.9 per 200,000 hours worked, which is below the ceiling of 1.1 or less.

FINANCIAL PLAN PROGRESS

In April 2018, BPA released the 2018 Financial Plan to outline the policies, practices and objectives that will help BPA continue to sustain it's financial strength. Within this plan, BPA outlined three key financial objectives: to improve cost management discipline, build financial resiliency and maintain high investment-grade credit ratings. The following section describes BPA's progress toward these objectives.

Objective 1: Improve cost management discipline

To help achieve the lowest possible rates consistent with sound business principles, BPA has set the goal of holding program costs at or below the rate of inflation through 2028. In FY 2019, program costs were $1.78 billion, $113.9 million below the rate case target of $1.89 billion. Program costs were below the rate case target due to enterprise-wide cost management actions throughout FY 2019. These actions directly improved BPA's FY 2019 net revenues.

Objective 2: Build financial resiliency

Three distinct areas of focus comprise BPA's objective of building financial resiliency: operational liquidity, leverage and debt capacity.

BPA's operational liquidity comes primarily from financial reserves and as a secondary measure a short-term line of credit from the U.S. Treasury. (For the definition of financial reserves, see the Liquidity and Capital Resources section in the Management's Discussion and Analysis.) To support BPA's financial reserves, BPA has set the goal of maintaining a minimum of 60 days cash on hand which is equivalent to approximately $382 million in financial reserves for the agency. BPA developed new rate mechanisms for Power and Transmission and applied them in the current BP-20 rate period to support this goal. This rate mechanism will trigger for Power Services, increasing power rates in the current period to build Power's days cash on hand and financial reserves. Overall, at the end of FY 2019, BPA's days cash on hand as an agency was 76 days, meeting the minimum threshold outlined in the 2018 Financial Plan.


Photo by Stephanie S.

Another goal set to measure BPA's progress toward building financial resiliency is to maintain a 97.5% annual Treasury payment probability. This goal ensures a very high likelihood of meeting all payment obligations, including the last payment of the fiscal year to the U.S. Treasury. This goal was met in FY 2019 by the $1.06 billion payment made on time and in full to the U.S. Treasury.

BPA uses the debt-to-asset ratio to evaluate financial leverage. In the 2018 Financial Plan, BPA set the goal of a debt-to-asset ratio of 75 to 85% within 10 years. At the end of FY 2019, BPA's debt-to-asset ratio was 82%, within the goal range identified in the 2018 Financial Plan. This ratio would have been 84% at year-end, but the final 82% was aided by the addition in FY 2019 of a $594.8 million nonfederal generation asset, without an equivalent debt increase. This addition resulted from a decommissioning study for the Columbia Generating Station. (See Other Operational Matters section in the Management's Discussion and Analysis for further information.)

To evaluate debt capacity BPA has set the goal of preserving $1.50 billion of available financing from the U.S. Treasury out of a total authorized amount of $7.70 billion. As of Sept. 30, 2019, BPA had $2.42 billion of available financing from the U.S Treasury, meeting the Financial Plan goal. The longer-term financial plan goal is to ensure adequate borrowing authority on a rolling 10-year basis. BPA continues to deploy an "all of the above" strategy to achieve this goal. (See the Liquidity and Capital Resources section in the Management's Discussion and Analysis for further details on BPA's financial activity.)

Objective 3: Independent financial health assessment

In the 2018 Financial Plan, BPA set the goal of maintaining a high investment-grade credit rating on nonfederal debt from all three ratings agencies. BPA met this goal in FY 2019, ending the year with the following ratings:

- Fitch at AA with a stable outlook (June 2019)
- Moody's at Aa1 with a negative outlook (June 2019)
- Standard & Poor's at AA- with a stable outlook (April 2019)

Full credit rating reports are available under Investor Relations at *www.bpa.gov.*

BPA IS COMMITTED TO COST-BASED RATES, AND PUBLIC AND REGIONAL PREFERENCE IN ITS MARKETING OF POWER.

FINANCIAL SECTION

Photo by Robert M.

MANAGEMENT'S DISCUSSION AND ANALYSIS

General

The Federal Columbia River Power System (FCRPS) financial statements combine the accounts of the Bonneville Power Administration (BPA) with the accounts of the Pacific Northwest generating facilities of the U.S. Army Corps of Engineers (USACE) and the Bureau of Reclamation (Reclamation). The FCRPS combined financial statements also include the operations and maintenance costs of the U.S. Fish and Wildlife Service for the Lower Snake River Compensation Plan facilities. Consolidated with BPA is a variable interest entity (VIE) of which BPA is the primary beneficiary, and from which BPA leases certain transmission facilities.

FCRPS revenues are derived principally from the sale of power and transmission products and services. In 1937, the Bonneville Project Act created BPA and directed it to market federally produced hydroelectric power to customers, giving preference and priority in power sales to public bodies and cooperatives. The Act authorized BPA to provide, construct, operate, maintain and improve transmission facilities to deliver federal power at cost. BPA is obligated to meet its statutory and contractual load obligations to preference customers so they can meet their total retail loads and load growth, minus their own nonfederal power supply. Preference customers are the largest customer group to which BPA sells power. BPA's current power sales agreements with preference customers are in effect through fiscal year 2028. As an open access transmission service provider, BPA provides ancillary and control area services to support basic transmission services, including providing balancing reserves for interconnected renewable generation. BPA remains committed to providing nondiscriminatory open access transmission after meeting statutory responsibilities to preference customers and others.

BPA's hydroelectric power supply depends on the amount and timing of precipitation in the Columbia River Basin and the shape, or timing, of the resulting runoff. For ratemaking purposes, BPA balances its firm load obligations with the runoff consistent with "critical water conditions." This assumption yields estimated power generation under historically low water conditions, which provides BPA with a reliable estimate of the firm power available to meet firm load obligations. Federal firm power is provided to meet regional preference customer loads first. BPA may also sell firm power to other entities, including regional investor-owned utilities and direct-service industrial customers. Power produced in excess of BPA's firm load obligations, if available, is considered by BPA to be surplus power and is sold in the Western Interconnection wholesale power markets. When generation is not sufficient to meet loads, BPA purchases power on the wholesale markets or acquires the output of resources.

Use of Estimates and Forward-Looking Information

The preparation of financial statements in accordance with accounting principles generally accepted in the United States of America (GAAP) requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual results may differ from those estimates.

This Management's Discussion and Analysis is unaudited and may contain statements which, to the extent they are not recitations of historical facts, constitute "forward-looking statements." In this respect, the words "planned," "predict," "could," "estimate," "expect" and similar expressions are intended to identify forward-looking statements. A number of important factors affecting FCRPS business and financial results could cause actual results to differ materially from those stated in forward-looking statements due to factors such as changes in economic, industry, political and business conditions; changes in laws, regulations and policies and the application of the laws; and changes in climate, weather, hydroelectric conditions and power services supply and demand. BPA does not plan to issue updates or revisions to the forward-looking statements.

Rates

Background

BPA is committed to cost-based rates, and public and regional preference in its marketing of power. BPA sets its rates as low as possible consistent with sound business principles and the full recovery of all of its costs, including timely repayment of the federal investment in the FCRPS.

Under BPA's U.S. Treasury payment probability standard, BPA establishes rates sufficient to maintain a level of financial reserves and achieve a 97.5 percent annual probability of making all of BPA's scheduled U.S. Treasury payments during the two-year rate period. (For the definition of financial reserves, see the Liquidity and Capital Resources section in this Management's Discussion and Analysis.)

Fiscal Years 2018–2019

To establish rates for fiscal years 2018 and 2019, BPA concluded the BP-18 rate proceeding in July 2017 by releasing the Administrator's Final Record of Decision and Final Proposal. Rates for the two-year period began on Oct. 1, 2017, and concluded on Sept. 30, 2019. The Federal Energy Regulatory Commission (FERC) granted final approval of the fiscal year 2018-2019 rates in March 2018. When compared to the prior rate period, the average power rate increase was 5.4 percent, and the average transmission rate decrease was 0.7 percent.

Power rates included a spill surcharge to address the financial effects arising from certain court-ordered changes to the operation of the federal hydroelectric system. The spill surcharge allowed BPA to increase Power rates each fiscal year (2018 and 2019) based on the estimated financial impact of the change in spill operations in the related fiscal year. In June 2018, BPA implemented a $10.2 million spill surcharge for fiscal year 2018 to recover estimated foregone revenue and costs to Power Services that resulted from increases in planned spill levels. The spill surcharge was not assessed in fiscal year 2019 since estimated foregone revenue and costs to Power Services that resulted from increases in planned spill levels were offset by internal cost savings. Power and transmission rates also included other rate adjustment mechanisms, such as a Cost Recovery Adjustment Clause (CRAC), that did not trigger in either fiscal year 2018 or 2019.

Fiscal Years 2020–2021

In July 2019, BPA concluded the BP-20 rate proceeding by issuing the Administrator's Final Record of Decision and Final Proposal. This decision established power and transmission rates for the fiscal years 2020-2021 rate period, which began on Oct. 1, 2019, and will conclude on Sept. 30, 2021. BPA received interim approval from the FERC in September 2019. FERC's practice is to grant approval of BPA's rates on an interim basis at the beginning of the rate period, pending final review. When compared to the prior rate period, the average transmission rate increase was 3.6 percent, while the base power rate increase was zero. The base power rate does not include the impact of the Financial Reserves Policy surcharge, which will trigger for Power Services in fiscal year 2020 resulting in a 1.5 percent increase to Power rates in fiscal year 2020. The surcharge is reassessed at the close of each fiscal year and may again trigger in fiscal year 2021 if Power's days cash are below 60 days. As with the 2018-2019 rate period, power and transmission rates also include other rate adjustment mechanisms, such as the CRAC, that BPA may employ if certain financial conditions occur.

Slice

BPA provides a power sales product called "Slice of the System," or "Slice." For this product, Slice customers pay for a fixed percentage of BPA's power costs in exchange for the right to an indeterminate and variable amount of power. The amount of power Slice customers receive is indexed to their respective Slice percentages and the decisions they make using a BPA-provided water routing simulator that reasonably represents the real-world constraints and capabilities of the FCRPS. BPA and its federal partners retain all operational control of resources that comprise the FCRPS at all times. The aggregate amount of Slice that BPA will sell has declined to 22.4 percent of the system in fiscal year 2020. In fiscal year 2019 the amount was 22.7 percent.

Results of Operations

Operating revenues

Fiscal year 2019 revenues compared to fiscal year 2018

A comparison of FCRPS operating revenues follows for the fiscal years ended Sept. 30, 2019, and 2018:

(Millions of dollars)	Fiscal Year 2019	Fiscal Year 2018	Revenue Increase (Decrease)	% Change
Sales				
Consolidated sales				
Power gross sales	$ 2,599.0	$ 2,659.5	$ (60.5)	(2) %
Transmission	893.3	921.4	(28.1)	(3)
Bookouts (Power)	(37.9)	(20.4)	(17.5)	86
Consolidated sales	3,454.4	3,560.5	(106.1)	(3)
Other revenues				
Power	50.4	33.3	17.1	51
Transmission	48.3	41.8	6.5	16
Other revenues	98.7	75.1	23.6	31
Sales	3,553.1	3,635.6	(82.5)	(2)
U.S. Treasury credits	102.8	74.7	28.1	38
Total operating revenues	$ 3,655.9	$ 3,710.3	$ (54.4)	(1)

Total operating revenues decreased $54.4 million when compared to fiscal year 2018. Sales of Power and Transmission Services, including other revenues and the effect of bookouts, decreased $82.5 million.

Power Services gross sales decreased $60.5 million.

- Firm power sales decreased $12.3 million, primarily due to lower loads in fiscal year 2019 compared to fiscal year 2018.
- Surplus power sales, including revenues from derivatives instruments, decreased $48.2 million. The decrease was mainly driven by comparatively dry weather, resulting in lower streamflows and water available to generate power for surplus sales. This was the case generally through the first half of fiscal year 2019, including the period of very cold weather in February and early March.
- January through July 2019 runoff volume at The Dalles Dam was 90 million acre-feet (maf), a decrease of 28 maf from the same period in 2018. This metric for measuring volume of runoff is one of several indicators of the amount of electricity the hydro system can produce. The full fiscal year 2019 volume finished at 116 maf, a decrease of 29 maf from fiscal year 2018, and below the historical average (1928-2008) of 132 maf.
- Gross power sales decreased to 74,549,756 megawatt-hours in fiscal year 2019 from 89,087,392 megawatt-hours in fiscal year 2018.

Bookouts are presented on a net basis in the Combined Statements of Revenues and Expenses. When sales and purchases are scheduled with the same counterparty on the same transmission path for the same hour, the power is typically booked out and not scheduled for physical delivery. The megawatt-hours that offset each other net to zero. The dollar values of these offsetting transactions reduce both sales and purchased power expense and are recorded as bookouts. Therefore, the accounting treatment for bookouts has no effect on net revenues, cash flows or margins.

Transmission Services sales decreased $28.1 million, primarily due to lower sales of network service in fiscal year 2019. In addition, lower market price spreads on Southern Intertie short-term point-to-point services led to decreased revenues. Furthermore, $4.9 million of oversupply revenues were earned in fiscal year 2018 while no such revenues were earned in fiscal year 2019. Oversupply revenues are offset by a corresponding expense.

Other power revenues increased $17.1 million, nearly all of which was due to gains realized on financial futures trades during the second quarter of fiscal year 2019. BPA uses financial futures contracts on energy as an operational hedge to mitigate for price volatility in the physical energy market.

U.S. Treasury credits increased $28.1 million year over year due to increased purchased power requirements resulting from reduced streamflows through the first half of fiscal year 2019. Power purchases were needed to replace lost hydroelectric generation due to fish mitigation measures. Under the Pacific Northwest Electric Power Planning and Conservation Act (Northwest Power Act), BPA reduces its payment to the U.S. Treasury for 22.3 percent of the nonpower expenditures made by BPA for fish and wildlife protection, mitigation and enhancement.

Fiscal year 2018 revenues compared to fiscal year 2017

A comparison of FCRPS operating revenues follows for the fiscal years ended Sept. 30, 2018, and 2017:

(Millions of dollars)	Fiscal Year 2018	Fiscal Year 2017	Revenue Increase (Decrease)	% Change
Sales				
Consolidated sales				
Power gross sales	$ 2,659.5	$ 2,539.8	$ 119.7	5 %
Transmission	921.4	922.1	(0.7)	(0)
Bookouts (Power)	(20.4)	(21.4)	1.0	(5)
Consolidated sales	3,560.5	3,440.5	120.0	3
Other revenues				
Power	33.3	29.5	3.8	13
Transmission	41.8	41.5	0.3	1
Other revenues	75.1	71.0	4.1	6
Sales	3,635.6	3,511.5	124.1	4
U.S. Treasury credits	74.7	58.3	16.4	28
Total operating revenues	$ 3,710.3	$ 3,569.8	$ 140.5	4

Total operating revenues increased $140.5 million when compared to fiscal year 2017. Sales of Power and Transmission Services, including other revenues and the effect of bookouts, increased $124.1 million.

Power Services gross sales increased $119.7 million.

- Firm power sales increased $31.4 million, primarily due to a 5.4 percent average power rate increase that went into effect on Oct. 1, 2017. Partially offsetting this increase were reduced firm power sales due to the comparatively mild winter experienced during fiscal year 2018.
- Surplus power sales increased $88.3 million. The increase was mainly due to higher hydroelectric generation in the second quarter of fiscal year 2018. Slightly higher electricity prices for surplus power sales in the summer also contributed to the increase.
- January through July 2018 runoff volume at The Dalles Dam was 119 million acre-feet (maf), a decrease of 18 maf from the same period in 2017. This metric for measuring volume of runoff is one of several indicators of the amount of electricity the hydro system can produce. The full fiscal year 2018 volume finished at 145 maf, a decrease of 25 maf from the 170 maf in fiscal year 2017, and above the historical average (1928-2008) of 132 maf.
- Gross power sales decreased to 89,087,392 megawatt-hours in fiscal year 2018 from 89,435,727 megawatt-hours in fiscal year 2017.

U.S. Treasury credits increased $16.4 million for fish and wildlife mitigation due to decreased streamflows in the first quarter of fiscal year 2018. This led to an increase in the amount of purchased power needed to replace lost hydroelectric generation due to fish mitigation measures. Under the Northwest Power Act, BPA reduces its payment to the U.S. Treasury for 22.3 percent of the nonpower expenditures made by BPA for fish and wildlife protection, mitigation and enhancement.

Operating expenses

Fiscal year 2019 operating expenses compared to fiscal year 2018

A comparison of FCRPS operating expenses follows for the fiscal years ended Sept. 30, 2019, and Sept. 30, 2018:

(Millions of dollars)	Fiscal Year 2019	Fiscal Year 2018	Expense Increase (Decrease)	% Change
Operations and maintenance	$ 2,137.9	$ 2,098.7	$ 39.2	2 %
Purchased power	298.3	159.5	138.8	87
Nonfederal projects	232.6	266.9	(34.3)	(13)
Depreciation and amortization	531.0	507.3	23.7	5
Total operating expenses	$ 3,199.8	$ 3,032.4	$ 167.4	6

Total operating expenses increased $167.4 million when compared to fiscal year 2018.

Operations and maintenance expense increased $39.2 million, primarily because of the following factors:

- Energy Northwest's Columbia Generating Station nuclear power plant costs increased $55.4 million because fiscal year 2019 was a refueling year. Refueling occurs biennially, and refueling and maintenance expenses are higher in refueling years.
- Corporate costs increased $12.7 million largely in support of the Grid Modernization project, which will advance the way BPA markets and operates the federal power and transmission systems and is critical to ensuring BPA's long-term commercial success and competitiveness. Additionally, information technology costs increased due to various asset upgrades.
- Bureau of Reclamation operations and maintenance costs increased $8.5 million largely due to an increase in non-routine work performed on Grand Coulee Dam's third power plant overhaul, the Inman turbine rehabilitation at the Minidoka Dam and the Columbia River System Operations Environmental Impact Statement (CRSO).

- Corps of Engineers operations and maintenance costs increased $7.9 million largely due to an increase in non-routine work performed on the Chief Joseph Dam spillway gate, The Dalles Dam powerhouse arc flash reduction and for efforts related to the CRSO.
- Transmission-related expenses increased $7.7 million due to increased grid modernization efforts, Puget Sound Area Northern Intertie work, increased non-electric facilities maintenance costs and reimbursable work performed for the Department of Energy. These were offset by a decrease in settlements costs, a reduction in non-wire projects and no oversupply displacement events taking place in fiscal year 2019.
- Generation Conservation costs decreased $22.4 million due to a planned reduction in the amount of energy efficiency projects completed by customers and which are reimbursed by BPA. Certain work was completed in fiscal year 2018 instead of fiscal year 2019.
- Fish and Wildlife costs decreased $19.4 million primarily due to Fish and Wildlife program reductions to avoid a spill surcharge cost for fiscal year 2019. The spill surcharge, a component of power rates, would have allowed BPA to recover from customers forgone revenue and costs that result from increases in planned spill levels. However, due to the aforementioned program reductions, no surcharge was charged to customers for fiscal year 2019. Additionally, costs decreased because of the federal furlough that occurred from the end of the first quarter into the beginning of the second quarter of fiscal year 2019. BPA provides funds for certain fish and wildlife work performed by other federal agencies that were impacted by the furlough and were unable to complete this work.
- Other expenses decreased approximately $11 million as a result of various small items.

Purchased power expense, including the effects of bookouts, increased $138.8 million primarily because of the following factors:

- Contracted power purchases increased $81.8 million, which includes the effects of bookouts. The increase was largely due to dry conditions that led to lower water available for power generation and resulted in increased power purchases. In addition, extremely cold weather in early 2019 led to a high demand for energy during times of high market prices and limited supply across the Northwest. BPA made significant power purchases during this time to meet our customers' energy demand.
- High power prices through the second quarter of 2019 resulted in BC Hydro, an electric utility owned by the Province of British Columbia, releasing water from Arrow Dam in Canada under certain water storage agreements. The expense recognized for amounts due to BC Hydro was $47.2 million higher in fiscal year 2019 compared to fiscal year 2018.
- Tier 2 power purchases increased $11.2 million. This was primarily due to power purchases made to satisfy BPA's contractual obligations to meet preference customers' load growth, which is considered a Tier 2 power obligation. BPA made no such purchases for fiscal year 2018 as federal system generation satisfied Tier 2 contractual requirements.

Nonfederal projects debt service decreased $34.3 million primarily due to the receipt of additional revenues by Energy Northwest in fiscal year 2019 for the sale of its nuclear fuel. This receipt is treated as an offset to debt service related to outstanding debt for Columbia Generating Station.

Depreciation and amortization increased $23.7 million, primarily because of revised depreciation rates that went into effect in March 2018. Those rates resulted from a depreciation study on BPA's transmission and general plant assets completed in February 2018. The impact to fiscal year 2019 depreciation expense was an increase of approximately $19 million when compared to fiscal year 2018.

Fiscal year 2018 operating expenses compared to fiscal year 2017

A comparison of FCRPS operating expenses follows for the fiscal years ended Sept. 30, 2018, and Sept. 30, 2017:

(Millions of dollars)	Fiscal Year 2018	Fiscal Year 2017	Expense Increase (Decrease)	% Change
Operations and maintenance	$ 2,098.7	$ 2,110.7	$ (12.0)	(1) %
Purchased power	159.5	147.4	12.1	8
Nonfederal projects	266.9	241.3	25.6	11
Depreciation and amortization	507.3	485.0	22.3	5
Total operating expenses	$ 3,032.4	$ 2,984.4	$ 48.0	2

Total operating expenses increased $48.0 million when compared to fiscal year 2017.

Operations and maintenance expense decreased $12.0 million.

- Energy Northwest's Columbia Generating Station nuclear power plant costs decreased $49.5 million. Refueling occurs biennially, most recently in fiscal year 2017, and refueling and maintenance expenses are typically higher in refueling years.
- Under the 2012 Residential Exchange Program (REP) Settlement Agreement, scheduled amounts increased $22.2 million.
- Contributions for post-retirement benefit programs and pension costs increased $12.9 million as a result of changes in the cost factors developed by the Office of Personnel Management. OPM sponsors these programs, and these cost factors are based on actuarial data and forecasts of future healthcare and pension costs.
- Other operations and maintenance expense saw a net increase of $2.4 million. Cost management actions taken during fiscal year 2018 helped to minimize this increase.

Purchased power expense, including the effects of bookouts, increased $12.1 million mainly due to high market prices experienced during the summer and greater compensation owed to BC Hydro for the market value of water released at Arrow Dam in British Columbia. Releasing water, which occurred primarily during the summer, enabled an increase of FCRPS hydroelectric generation.

Nonfederal projects debt service increased $25.6 million and reflects terms of the related outstanding debt for Columbia Generating Station and terminated nuclear Projects 1 and 3. Debt service also reflects past debt management decisions and actions under Regional Cooperation Debt efforts. (See Regional Cooperation Debt section in this Management's Discussion and Analysis.)

In February 2018, BPA completed a depreciation study on BPA's transmission and general plant assets. As a result, BPA implemented revised depreciation rates in March 2018 on applicable assets. Depreciation and amortization increased $22.3 million, largely due to the revised depreciation rates.

Other Operational Matters

U.S. Treasury liquidity facility

In December 2018, BPA issued $75.0 million of short-term debt on its liquidity facility with the U.S. Treasury to meet operating expenses and manage within-year working capital. BPA repaid this amount in February 2019.

Decommissioning study

In March 2019 as a result of a site-specific decommissioning study on CGS, BPA management increased its asset retirement obligation (ARO) liability for CGS by $594.8 million. This change in estimate was largely driven by the addition of a fuel storage estimate, the change in assumed decommissioning method, and increases in labor rates, which exceed the rate of inflation. The increased ARO liability did not affect power rates charged to customers or require any adjustments to trust fund contribution levels in fiscal year 2019. Management also expects no changes during the fiscal year 2020-2021 rate periods, but will continue to evaluate the trust fund balance and whether the current contribution levels will be sufficient to ensure adequate funding would be available when needed. A $594.8 million increase to the Nonfederal generation asset on the Combined Balance Sheets offset the increased ARO liability. There were no impacts to cash flows, revenues or expenses as a result of the aforementioned items. For fiscal year 2020, and as a result of the increased ARO liability, BPA management expects amortization expense related to the CGS nonfederal generation asset to increase approximately $58 million.

Re-Alignment of Business Line-Level Financial Reserves

As described below in the Liquidity and Capital Resources section, BPA's financial reserves are comprised of cash, cash equivalents, investments in U.S. Treasury market-based special securities and deferred borrowing. The cash portion of financial reserves is held in a single fund, the Bonneville Fund. For ratemaking and interest credit allocation purposes, BPA uses an internal model to allocate cash between its business lines. In fiscal year 2019, BPA identified errors in the internal cash allocation model that date back to 2003. These errors resulted in an understatement of Power's share of the cash in the Bonneville Fund and an overstatement of Transmission's share of the cash. The errors did not impact the FCRPS audited financial statements and overall financial condition. To correct these errors for the end-of-fiscal year 2019 cash balances, BPA reallocated $182 million from Transmission's cash balance to Power's cash balance. BPA's total financial reserves remain unchanged as a result of the reallocation.

Liquidity and Capital Resources

Cash and cash equivalents and financial reserves

To ensure BPA is able to meet its financial responsibilities to counterparties and to the U.S. Treasury, BPA relies on measures such as financial reserves, a line of credit with the U.S. Treasury and a CRAC (a rate mechanism that can adjust rates once each fiscal year if certain financial conditions exist). Financial reserves, a non-GAAP liquidity measure used by BPA management, consist of BPA cash and cash equivalents, investments in U.S. Treasury market-based special securities and deferred borrowing. The U.S. Treasury market-based special securities reflect the market value as if securities were liquidated as of the end of the period. Deferred borrowing represents amounts that BPA is authorized to borrow from the U.S. Treasury for capital expenditures on utility plant assets and for expenditures on certain regulatory assets, primarily related to fish and wildlife, that BPA has incurred but has not borrowed for as of the end of the period. To reduce interest expense, BPA delays borrowing from the U.S. Treasury when possible, which increases BPA's deferred borrowing balance. Over time, BPA intends to borrow these deferred amounts from the U.S. Treasury.

BPA's financial reserves decreased $66.5 million during fiscal year 2019:

(Millions of dollars)	As of Sept. 30, 2019	As of Sept. 30, 2018	Increase (Decrease)	% Change
Cash and cash equivalents	$ 523.5	$ 804.2	$ (280.7)	(35) %
Short-term investments in U.S. Treasury securities	-	40.2	(40.2)	(100)
	523.5	844.4	(320.9)	(38)
Less: Cash and cash equivalents held by USACE and Reclamation	334.7	343.2	(8.5)	(2)
Add: Deferred borrowing	584.3	338.4	245.9	73
BPA financial reserves balance	$ 773.1	$ 839.6	$ (66.5)	(8)

Three-year capital forecast

Planned capital expenditures for the FCRPS over the next three fiscal years for utility plant and for fish and wildlife assets, recorded as regulatory assets, are shown below. Where applicable, the amounts include estimates for capitalized indirect, overhead and interest costs. Actual capital expenditures may differ materially from these estimates based upon a number of factors, including environmental and cultural resource requirements, project lead times, resource availability, outages, dependencies associated with other projects and other factors. Amounts in the table below do not include investments projected by Energy Northwest for Columbia Generating Station.

(Millions of dollars)	Fiscal Year 2020	Fiscal Year 2021	Fiscal Year 2022
Transmission assets	$ 399	$ 532	$ 520
Federal system hydro generation assets	254	260	285
Fish and wildlife	47	47	43
IT and other assets	12	13	14
Total annual capital forecast	$ 712	$ 852	$ 862

Access to capital

BPA makes capital investments to support its multifaceted responsibilities to the region. Initially, BPA relied solely on its ability to borrow from the U.S. Treasury. However, BPA's U.S. Treasury borrowing authority is limited by law and, absent other actions, the limit could be reached within a few years. To assure continued funding necessary for critical infrastructure improvements, BPA has over several years expanded its options. These include nonfederal debt financing and refinancing, lease-purchases, the power prepay program, reserve and revenue financing and asset management strategies to more rigorously prioritize proposed capital investments.

BPA borrowing authority from the U.S. Treasury

BPA is authorized by Congress to issue and sell bonds to the U.S. Treasury, and have outstanding at any one time, up to $7.70 billion aggregate principal amount of bonds. The U.S. Treasury borrowing authority may be used to finance capital programs for the FCRPS. In addition, BPA and the U.S. Treasury have agreed to a liquidity facility for Northwest Power Act expenses in the amount of $750.0 million. Use of the facility is counted within the $7.70 billion overall limit. For capital programs, the related U.S. Treasury debt is term limited depending on the facilities financed: 50 years for USACE and Reclamation capital investments, 35 years for transmission facilities, 15 years for fish and wildlife projects and six years for corporate capital assets.

As of Sept. 30, 2019, BPA had $5.28 billion of bonds outstanding to the U.S. Treasury and $2.42 billion in remaining U.S. Treasury borrowing authority.

Regional Cooperation Debt

Starting in fiscal year 2014, BPA and Energy Northwest worked closely to establish a new phase of integrated debt management for their combined total debt portfolios, the debt service of which is borne by BPA ratepayers through BPA's rates. Energy Northwest-related debt refinanced under this effort is called Regional Cooperation Debt.

An important component of Regional Cooperation Debt is the issuance of new bonds by Energy Northwest to refund outstanding bonds shortly before their maturities when substantial principal repayments were and are due in fiscal year 2014 through 2020. Funds made available to BPA as a result of these refinancings have enabled BPA to prepay higher-interest-rate federal obligations. The net effect of refinancing this Regional Cooperation Debt is that both the weighted-average interest rate and the maturity of BPA's overall debt portfolio have been reduced over the life of the program. The refinancings have also preserved or restored U.S. Treasury borrowing authority, enabling BPA to finance much-needed investments in critical infrastructure.

During fiscal year 2018, the Energy Northwest Board of Directors passed a motion of support to extend the Regional Cooperation Debt program from fiscal year 2021 through 2030. Transactions under this extension, if implemented, would make funds available in the Bonneville Fund, within the U.S. Treasury, to continue prepaying a portion of BPA's comparatively higher-interest-rate federal obligations or for directly funding new capital projects.

BPA estimates that the aggregate potential principal amount of future Regional Cooperation Debt refunding bonds to be issued in fiscal years 2020 through 2030 could exceed $3.8 billion.

Expense borrowing arrangement by Energy Northwest

Through the continued use of line-of-credit borrowing arrangements between Energy Northwest and certain banking institutions, BPA continues a program that began in fiscal year 2016 to accelerate payments on comparatively higher-interest-rate federal obligations. If Energy Northwest did not borrow funds under these arrangements, BPA would have provided similar funding to Energy Northwest. In the FCRPS Combined Statements of Cash Flows, these amounts are reported as Deferred payments for Energy Northwest-related O&M and interest. This non-cash item is included among Net cash provided by operating activities as an adjustment in reconciling net revenues to cash flows from operating activities.

In January 2019, Energy Northwest obtained a $227.0 million bank line of credit (that could be increased to $457.4 million upon agreement with BPA, Energy Northwest, and the bank) to finance operations and maintenance expenses and interest payments for outstanding bonds related to Columbia Generating Station (CGS). Amounts borrowed are due to be repaid on or before June 30, 2020, unless extended for one year after notice from Energy Northwest and approval from the bank. Through June 30, 2019, Energy Northwest had borrowed the entire $227.0 million on this line of credit, thereby relieving BPA of providing an equivalent amount of funding to Energy Northwest for CGS. As with recent Energy Northwest line of credit arrangements, BPA will fund the repayment of the $227.0 million.

In June 2019, Energy Northwest drew an additional $230.4 million, thus increasing and fully utilizing the $457.4 million bank line of credit. In August 2019, Energy Northwest received payment from the Tennessee Valley Authority (TVA) in accordance with a previous agreement with TVA regarding the purchase of nuclear fuel. The payment was used to pay off the $230.4 million borrowed under the line of credit. There were no impacts to cash flows, revenues or expenses as a result of the aforementioned $230.4 million.

In December 2017, Energy Northwest obtained a $141.0 million line of credit to finance operations and maintenance expenses for CGS and interest payments related to certain outstanding bonds for CGS. Energy Northwest borrowed the entire $141.0 million on the line of credit during fiscal year 2018, and in June 2019 BPA funded Energy Northwest's repayment of the entire $141.0 million owed. This amount is recorded as a repayment of nonfederal debt in the FCRPS Combined Statement of Cash Flows.

Lease-Purchase Program

The Lease-Purchase Program enables BPA to provide for continued investment in infrastructure to support a safe and reliable system for the transmission of power without using limited U.S. Treasury borrowing authority. Under this program, BPA generally acts as the construction provider and has entered into lease-purchase arrangements with third parties that issue bonds and other debt instruments to fund construction of specific transmission assets. These third parties include the Port of Morrow, Oregon, the Idaho Energy Resources Authority (IERA), an independent public instrumentality of the state of Idaho, and the Northwest Infrastructure Financing Corporation (NIFC).

U.S. Treasury payment

BPA made its U.S. Treasury payment of $1.06 billion for fiscal year 2019, the 36th consecutive year in which BPA made its scheduled payment on time and in full.

(Millions of dollars)	Fiscal Year 2019	Fiscal Year 2018
Scheduled payment		
Principal	$ 506.4	$ 294.1
Interest	231.5	225.8
Irrigation assistance	56.0	27.2
Other FCRPS costs	42.7	40.3
Scheduled payment	836.6	587.4
Advanced payment		
Principal	227.1	275.0
Total Treasury payment	$ 1,063.7	$ 862.4

The scheduled principal payment included $75.0 million that BPA both borrowed and paid in fiscal year 2019. (See Other Matters section in this Management's Discussion and Analysis.)

The fiscal year 2019 payment also included an unscheduled advance payment of $227.1 million. This was made possible by additional cash in the Bonneville Fund becoming available primarily as a result of the Regional Cooperation Debt Program and the expense borrowing arrangement by Energy Northwest.

Contractual Obligations and Federal Payments

Amounts shown in the following table include interest expense or represent undiscounted cash flows and may exceed amounts for these line items reported on the Combined Balance Sheets or described in the related Notes to Financial Statements — Note 5, Asset Retirement Obligations; Note 7, Debt and Appropriations; and Note 9, Residential Exchange Program. Purchase power commitments are a period expense. Irrigation assistance and purchase power commitments are described in Note 13, Commitments and Contingencies.

Fiscal years: *(Millions of dollars)*	2020	2021	2022	2023	2024	2025+	Total
Nonfederal debt	$ 1,203	$ 1,245	$ 909	$ 703	$ 713	$ 5,256	$ 10,029
Borrowings from U.S. Treasury	611	608	458	414	367	5,295	7,753
Federal appropriations	44	44	44	44	44	2,805	3,025
IOU exchange benefits	245	245	259	259	274	1,132	2,414
Irrigation assistance	24	15	16	13	15	223	306
Asset retirement obligations	6	6	6	7	7	191	223
Purchase power commitments	44	34	-	-	-	-	78
Total	$ 2,177	$ 2,197	$ 1,692	$ 1,440	$ 1,420	$ 14,902	$ 23,828

Critical Accounting Policies

Regulatory accounting

BPA's rates are designed to recover its cost of service. In connection with the rate-setting process, certain current costs or credits may be included in rates for recovery or refund over future periods. Under those circumstances, regulatory assets or liabilities are recorded in accordance with authoritative guidance for regulated operations. Such costs or credits are amortized during the periods they are scheduled in rates.

In order to apply regulatory accounting, an entity must have the statutory authority to establish rates that recover all costs, and rates so established must be charged to and collected from customers. If BPA's rates should become market-based, BPA would review any deferred costs and revenues for possible recognition in the Combined Statement of Revenues and Expenses in that period. Since BPA's rates are not structured to provide a rate of return, regulatory assets are recovered at cost without an additional rate of return. Amortization of these assets and liabilities is reflected in the Combined Statements of Revenues and Expenses.

Revenues

Revenues from sales of power and transmission are recognized either when the product is delivered or the service is provided. Operating revenues include estimates for unbilled power and transmission services that were delivered but not billed by the end of the fiscal year. Accrued unbilled revenues are estimated from forecasts based on multiple factors including streamflows, seasonality, weather, changes in electricity prices, and customer load and usage patterns. Consequently, the amount of accrued unbilled revenues can vary significantly from period to period.

Off-balance-sheet arrangements

The FCRPS is not engaged in any off-balance-sheet arrangements through unconsolidated limited purpose entities.

Report of Independent Auditors

To the Administrator of the
Bonneville Power Administration,
United States Department of Energy

We have audited the accompanying combined financial statements of the Federal Columbia River Power System (FCRPS), which comprise the combined balances sheets as of September 30, 2019 and 2018 and the related combined statements of revenues and expenses and cash flows for each of the three years in the period ended September 30, 2019.

Management's Responsibility for the Combined Financial Statements

Management is responsible for the preparation and fair presentation of the combined financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of combined financial statements that are free from material misstatement, whether due to fraud or error.

Auditors' Responsibility

Our responsibility is to express an opinion on the combined financial statements based on our audits. We conducted our audits in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the combined financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the combined financial statements. The procedures selected depend on our judgment, including the assessment of the risks of material misstatement of the combined financial statements, whether due to fraud or error. In making those risk assessments, we consider internal control relevant to the Company's preparation and fair presentation of the combined financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the combined financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Opinion

In our opinion, the combined financial statements referred to above present fairly, in all material respects, the financial position of the Federal Columbia River Power System as of September 30, 2019 and 2018, and the results of its operations and its cash flows for the three years in the period ended September 30, 2019 in accordance with accounting principles generally accepted in the United States of America.

PricewaterhouseCoopers LLP, 805 SW Broadway, Suite 800, Portland, OR 97205
T: (971) 544 4000, F: (971) 544 4100, www.pwc.com/us

Emphasis of Matter

As discussed in Note 1 to the combined financial statements, the FCRPS changed the manner in which it accounts for revenue from contracts with customers in fiscal year 2019. Our opinion is not modified with respect to this matter.

PricewaterhouseCoopers LLP

Portland, Oregon
October 30, 2019

Federal Columbia River Power System
Combined Balance Sheets
As of September 30

(Millions of Dollars)

	2019	2018
Assets		
Utility plant		
Completed plant	**$ 19,894.9**	$ 19,307.4
Accumulated depreciation	**(7,179.5)**	(6,883.4)
Net completed plant	**12,715.4**	12,424.0
Construction work in progress	**1,248.2**	1,290.1
Net utility plant	**13,963.6**	13,714.1
Nonfederal generation	**3,774.3**	3,350.9
Current assets		
Cash and cash equivalents	**523.5**	804.2
Short-term investments in U.S. Treasury securities	**-**	40.2
Accounts receivable, net of allowance	**40.3**	75.2
Accrued unbilled revenues	**294.1**	292.4
Materials and supplies, at average cost	**106.5**	109.1
Prepaid expenses	**31.0**	48.2
Total current assets	**995.4**	1,369.3
Other assets		
Regulatory assets	**5,292.1**	5,587.7
Nonfederal nuclear decommissioning trusts	**391.6**	377.6
Deferred charges and other	**140.9**	176.8
Total other assets	**5,824.6**	6,142.1
Total assets	**$ 24,557.9**	$ 24,576.4

The accompanying notes are an integral part of these financial statements.

Federal Columbia River Power System
Combined Balance Sheets
As of September 30

(Millions of Dollars)

		2019		2018
Capitalization and Liabilities				
Capitalization and long-term liabilities				
Accumulated net revenues	**$**	**4,315.4**	$	4,123.8
Debt				
Federal appropriations		**1,595.2**		1,791.7
Borrowings from U.S. Treasury		**4,850.6**		4,955.7
Nonfederal debt		**6,701.7**		7,111.4
Total capitalization and long-term liabilities		**17,462.9**		17,982.6
Commitments and contingencies (Note 13)				
Current liabilities				
Debt				
Borrowings from U.S. Treasury		**429.0**		574.9
Nonfederal debt		**891.6**		598.3
Accounts payable and other		**551.6**		511.4
Total current liabilities		**1,872.2**		1,684.6
Other liabilities				
Regulatory liabilities		**1,804.5**		1,912.0
IOU exchange benefits		**2,092.8**		2,256.7
Asset retirement obligations		**821.2**		208.0
Deferred credits and other		**504.3**		532.5
Total other liabilities		**5,222.8**		4,909.2
Total capitalization and liabilities	**$**	**24,557.9**	$	24,576.4

The accompanying notes are an integral part of these financial statements.

Federal Columbia River Power System
Combined Statements of Revenues and Expenses

For the Years Ended September 30

(Millions of Dollars)

	2019	2018	2017
Operating revenues			
Sales	**$ 3,553.1**	$ 3,635.6	$ 3,511.5
U.S. Treasury credits	**102.8**	74.7	58.3
Total operating revenues	**3,655.9**	3,710.3	3,569.8
Operating expenses			
Operations and maintenance	**2,137.9**	2,098.7	2,110.7
Purchased power	**298.3**	159.5	147.4
Nonfederal projects	**232.6**	266.9	241.3
Depreciation and amortization	**531.0**	507.3	485.0
Total operating expenses	**3,199.8**	3,032.4	2,984.4
Net operating revenues	**456.1**	677.9	585.4
Interest expense and (income)			
Interest expense	**250.8**	245.1	285.9
Allowance for funds used during construction	**(32.5)**	(31.5)	(33.0)
Interest income	**(9.8)**	(6.3)	(6.1)
Net interest expense	**208.5**	207.3	246.8
Net revenues	**247.6**	470.6	338.6
Accumulated net revenues, beginning of year	**4,123.8**	3,680.4	3,392.6
Irrigation assistance	**(56.0)**	(27.2)	(50.8)
Accumulated net revenues, end of year	**$ 4,315.4**	$ 4,123.8	$ 3,680.4

The accompanying notes are an integral part of these financial statements.

Federal Columbia River Power System
Combined Statements of Cash Flows
For the Years Ended September 30
(Millions of Dollars)

	2019	2018	2017
Cash flows from operating activities			
Net revenues	$ 247.6	$ 470.6	$ 338.6
Adjustments to reconcile net revenues to cash provided by operations:			
Depreciation and amortization	531.0	507.3	485.0
Amortization of nonfederal projects	181.4	199.5	67.2
Deferred payments for Energy Northwest-related O&M and interest	227.0	141.0	458.3
Changes in:			
Receivables and unbilled revenues	33.2	(21.9)	(13.4)
Materials and supplies	2.6	2.9	(0.1)
Prepaid expenses	17.2	6.9	(33.2)
Accounts payable and other	32.6	7.2	71.3
Regulatory assets and liabilities	67.1	50.8	92.3
IOU exchange benefits	(163.9)	(159.0)	(136.2)
Other assets and liabilities	(38.2)	(3.5)	(50.9)
Net cash provided by operating activities	1,137.6	1,201.8	1,278.9
Cash flows from investing activities			
Investment in utility plant, including AFUDC	(634.8)	(704.3)	(692.5)
U.S. Treasury securities:			
Purchases	(110.0)	(332.1)	(1,109.0)
Maturities	150.0	322.0	1,352.3
Deposits to nonfederal nuclear decommissioning trusts	(3.9)	(3.8)	(3.6)
Lease-purchase trust funds:			
Deposits to	-	(9.6)	(103.8)
Receipts from	43.3	58.9	132.4
Net cash used for investing activities	(555.4)	(668.9)	(424.2)
Cash flows from financing activities			
Federal appropriations:			
Proceeds	31.0	44.2	71.2
Repayment	(227.5)	(281.9)	(908.7)
Borrowings from U.S. Treasury:			
Proceeds	255.0	809.0	250.0
Repayment	(506.0)	(287.1)	-
Nonfederal debt:			
Proceeds	4.0	30.6	104.1
Repayment	(379.5)	(677.5)	(293.1)
Customers:			
Net advances for construction	29.9	80.5	21.7
Repayment of funds used for construction	(14.6)	(17.8)	(31.3)
Irrigation assistance	(56.0)	(27.2)	(50.8)
Net cash used for financing activities	(863.7)	(327.2)	(836.9)
Net (decrease) increase in cash, cash equivalents and restricted cash	(281.5)	205.7	17.8
Cash, cash equivalents and restricted cash at beginning of year	816.4	610.7	592.9
Cash, cash equivalents and restricted cash at end of year	$ 534.9	$ 816.4	$ 610.7
Less: Restricted cash and cash equivalents at end of year	11.4	12.2	12.8
Cash and cash equivalents at end of year	$ 523.5	$ 804.2	$ 597.9
Supplemental disclosures:			
Cash paid for interest, net of amount capitalized	$ 284.3	$ 275.7	$ 316.1
Significant noncash investing and financing activities:			
Nonfederal debt increase for Energy Northwest	$ 727.3	$ 1,257.4	$ 1,046.2
Nonfederal debt decrease for Energy Northwest	$ (494.4)	$ (1,163.5)	$ (601.5)
Other nonfederal debt actions	$ 26.2	$ 0.4	$ (9.2)
Increase in Nonfederal generation asset	$ 594.8	$ -	$ -

The accompanying notes are an integral part of these financial statements.

Notes to Financial Statements

1. Summary of Significant Accounting Policies

ACCOUNTING PRINCIPLES

Combination and consolidation of entities

The Federal Columbia River Power System (FCRPS) financial statements combine the accounts of the Bonneville Power Administration (BPA) with the accounts of the Pacific Northwest generating facilities of the U.S. Army Corps of Engineers (USACE) and the Bureau of Reclamation (Reclamation). The FCRPS combined financial statements also include the operations and maintenance costs of the U.S. Fish and Wildlife Service for the Lower Snake River Compensation Plan facilities. Consolidated with BPA is a variable interest entity (VIE) of which BPA is the primary beneficiary, and from which BPA leases certain transmission facilities. (See Note 7, Debt and Appropriations, and Note 8, Variable Interest Entities.)

BPA is a separate and distinct entity within the U.S. Department of Energy; the USACE is part of the U.S. Department of Defense; and Reclamation and U.S. Fish and Wildlife Service are part of the U.S. Department of the Interior. Each of the combined entities is separately managed, but the facilities are operated as an integrated power system with the financial results combined as the FCRPS. BPA is a self-funding federal power marketing administration that purchases, transmits and markets power for the FCRPS. While the costs of USACE and Reclamation projects serve multiple purposes, only the power portion of total project costs are assigned to the FCRPS through cost allocation processes. All intracompany and intercompany accounts and transactions have been eliminated from the FCRPS financial statements.

FCRPS financial statements are prepared in accordance with generally accepted accounting principles (GAAP) of the United States of America. FCRPS financial statements also reflect the Uniform System of Accounts (USoA) applicable to federal entities as prescribed for electric public utilities by the Federal Energy Regulatory Commission (FERC). FCRPS accounting policies also reflect other specific legislation and directives issued by U.S. government agencies. All U.S. government properties and income are tax exempt.

Use of estimates

The preparation of FCRPS financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities, the disclosure of contingent assets and liabilities at the date of the FCRPS financial statements, and the reported amounts of revenues and expenses during the reporting period. Actual results could differ from those estimates.

Rates and regulatory authority

BPA establishes separate power and transmission rates in accordance with several statutory directives. Rates proposed by BPA are subject to an extensive formal hearing process, after which they are proposed by BPA and reviewed by FERC. FERC's review is based on BPA statutes that include a requirement that rates must be sufficient to ensure repayment of the federal investment in the FCRPS over a reasonable number of years after first meeting BPA's other costs. After the final FERC approval, BPA's rates may be reviewed by the United States Court of Appeals for the Ninth Circuit (Ninth Circuit Court) if challenged by parties involved in the rate proceedings. Petitions seeking such review must be filed within 90 days of the final FERC approval. The Ninth Circuit Court may either confirm or reject a rate proposed by BPA. BPA's rates are not structured to provide a rate of return on its assets.

In accordance with authoritative guidance for regulated operations, certain costs or credits may be included in rates for recovery or refund over a future period and are recorded as regulatory assets or liabilities. (See Note 4, Effects of Regulation.)

Utility plant

Utility plant is stated at original cost and includes federal system hydro generation assets (i.e., Pacific Northwest generating facilities of the USACE and Reclamation) as well as transmission and other assets. The costs of substantial additions, major replacements and substantial betterments are capitalized. Costs include direct labor and materials; payments to contractors; indirect charges for engineering, supervision and certain overhead items; and an allowance for funds used during construction (AFUDC). Maintenance, repairs and replacements of items determined to be less than major units of property are charged as incurred to Operations and maintenance in the Combined Statements of Revenues and Expenses. When utility plant is retired, the original cost and any net proceeds from the disposition are charged to accumulated depreciation. (See Note 3, Utility Plant.)

Depreciation and amortization

Depreciation of the original cost of generation plant is computed using straight-line methods based on estimated average service lives of the various classes of property. For transmission plant, depreciation of original cost and estimated net cost of removal is computed primarily on the straight-line group life method based on estimated average service lives of the various classes of property. Periodically BPA conducts a depreciation study on transmission and general plant assets. BPA updates depreciation rates based on updated asset lives and net salvage, which considers cost of removal and salvage proceeds. The estimated net cost of removal is included in depreciation expense. (See Note 3, Utility Plant.)

In the event removal costs associated with transmission plant are expected to exceed salvage proceeds, a reclassification of this negative salvage is made from accumulated depreciation to a regulatory liability. As actual removal costs are incurred, the associated regulatory liability is reduced. (See Note 4, Effects of Regulation.)

Amortization expense relates to certain regulatory assets. (See Note 4, Effects of Regulation.)

Allowance for funds used during construction

AFUDC represents the estimated cost of interest on financing the construction of new assets. AFUDC is calculated based on the construction work in progress balance and on Lease-Purchase Program trust fund balances held for construction purposes. (See Note 6, Deferred Charges and Other.) AFUDC is charged to the capitalized cost of the utility plant asset and is a reduction of interest expense.

AFUDC is capitalized at one rate for construction funded substantially by BPA and at another rate for USACE and Reclamation construction funded by congressional appropriations. (See Note 3, Utility Plant.) The BPA rate is determined based on the weighted-average cost of borrowing for certain types of debt and deferred credits that are related to BPA construction activity. The rate for appropriated funds is provided each year to BPA by the U.S. Treasury.

Nonfederal generation

BPA is party to long-term contracts for BPA to acquire all of the generating capability of Energy Northwest's Columbia Generating Station (CGS) nuclear power plant and, through June 2032, Lewis County PUD's Cowlitz Falls Hydroelectric Project. These contracts require BPA to meet all of the facilities' operating, maintenance and debt service costs. Operations and maintenance and debt service expenses for these projects are recognized based upon annual total project cash funding requirements, which vary from year to year. The Nonfederal generation assets on the Combined Balance Sheets are amortized over the term of the related outstanding nonfederal debt, with the amortization expense included in Nonfederal projects in the Combined Statements of Revenues and Expenses. (See Note 7, Debt and Appropriations.)

Cash and cash equivalents

Cash amounts for the FCRPS include cash and cash equivalents in the Bonneville Power Administration Fund (Bonneville Fund) within the U.S. Treasury and cash from certain unexpended appropriations of the USACE and Reclamation related to the FCRPS. The Bonneville Fund primarily holds cash equivalents, which consist of investments in non-marketable market-based special securities issued by the U.S. Treasury (market-based specials) with maturities of 90 days or less at the date of investment. The carrying value of cash and cash equivalents approximates fair value.

Investments in U.S. Treasury securities

BPA participates in the U.S. Treasury's Federal Investment Program, which provides investment services to federal government entities that have funds on deposit with the U.S. Treasury and statutory authority to invest those funds. Investments of the funds are generally restricted to U.S. Treasury market-based special securities and are informed by prevailing rates of interest for various short-term or longer-term investments.

Investments in U.S. Treasury securities are carried at amortized cost, which approximates fair value, and reflect the ability and intent to hold the securities to maturity. The fair value measurements of investments in U.S. Treasury securities are considered Level 2 in the fair value hierarchy as defined by the accounting guidance for fair value measurements and disclosures. (See Note 12, Fair Value Measurements.)

Concentrations of credit risks

General credit risk

Financial instruments that potentially subject the FCRPS to concentrations of credit risk consist primarily of BPA accounts receivable. Credit risk relates to the loss that might occur as a result of counterparty non-performance.

BPA's accounts receivable are spread across a diverse group of customers throughout the western United States and Canada, and include consumer-owned utilities (COUs), investor-owned utilities (IOUs), power marketers, wind generators and others. BPA's accounts receivable exposure is generally from large and stable counterparties and does not represent a significant concentration of credit risk. During fiscal years 2019, 2018 and 2017, BPA experienced no material losses as a result of any customer defaults or bankruptcy filings.

BPA mitigates credit risk by reviewing counterparties for creditworthiness, establishing credit limits and monitoring credit exposure. To further manage credit risk, BPA obtains credit support, such as letters of credit, parental guarantees, and cash in the form of prepayments, deposits or escrow funds, from some counterparties. BPA monitors counterparties for changes in financial condition and regularly updates credit reviews. (See Note 11, Risk Management and Derivative Instruments.)

Allowance for doubtful accounts

Management reviews accounts receivable to determine if any receivable will potentially be uncollectible. The allowance for doubtful accounts includes amounts estimated through an evaluation of specific customer accounts, based upon the best available facts and circumstances of customers that may be unable to meet their financial obligations, and a reserve for all other customers based on historical experience. The balance is not material to the financial statements.

Derivative instruments

Derivative instruments are measured at fair value and recognized on the Combined Balance Sheets as either Deferred charges and other or as Deferred credits and other except for certain contracts eligible for the normal purchases and normal sales exception under derivatives and hedging accounting guidance. Derivative instruments reported by the FCRPS consist primarily of forward electricity contracts, which are generally considered normal purchases and normal sales if they require physical delivery, are expected to be used or sold in the normal course of business and meet the derivative accounting definition of capacity. Recognition of these contracts in Sales or Purchased power in the Combined Statements of Revenues and Expenses occurs when the contracts settle. (See Note 11, Risk Management and Derivative Instruments.)

Changes in fair value are deferred as either Regulatory assets or Regulatory liabilities on the Combined Balance Sheets in accordance with regulated operations accounting guidance. The FCRPS does not apply hedge accounting.

Fair value

Carrying amounts of current assets and current liabilities approximate fair value based on the short-term nature of these instruments. Fair value measurements are applied to certain financial assets and liabilities and to determine fair value disclosures in accordance with GAAP. When developing fair value measurements, it is BPA's policy to use quoted market prices whenever available or to maximize the use of observable inputs and minimize the use of unobservable inputs when quoted market prices are not available. Fair values are primarily developed using industry standard models that consider various inputs including quoted forward prices for commodities, time value, volatility factors, current market and contractual prices for underlying instruments, market interest rates and yield curves, and credit spreads, as well as other relevant economic measures. (See Note 11, Risk Management and Derivative Instruments and Note 12, Fair Value Measurements.)

Operating revenues and net revenues

Operating revenues include estimated unbilled revenues. (See Note 2, Revenue Recognition.) Net revenues over time are committed to payment of operational obligations, including debt for both operating and non-operating nonfederal projects, debt service on bonds BPA issues to the U.S. Treasury, the repayment of federal appropriations for the FCRPS, and the payment of certain irrigation costs.

U.S. Treasury credits

U.S. Treasury credits represent nonpower-related costs that BPA recovers from the U.S. Treasury in accordance with certain laws. (See Note 2, Revenue Recognition.)

Purchased power

Purchased power expense represents wholesale power purchases that are meant to augment the FCRPS resource pool to meet loads and obligations. In addition, this expense includes the costs of certain water storage agreements between BPA and third parties. Purchased power excludes operations and maintenance expenses associated with CGS and the Cowlitz Falls Hydroelectric Project, and with certain contracts for renewable resources that BPA management considers part of the FCRPS resource pool.

Nonfederal projects

Nonfederal projects expense represents the amortization of nonfederal generation assets and regulatory assets for terminated nonfederal nuclear and hydro facilities, as well as the interest expense on the debt related to those assets. This expense varies from year to year and is recognized over the terms of the related outstanding debt, which reflect refinancing actions, if any, undertaken during the fiscal year.

Interest expense

Interest expense includes interest associated with the unpaid balance of federal appropriations scheduled for repayment, interest on bonds issued by BPA to the U.S. Treasury and interest on certain nonfederal debt and liabilities. Reductions to interest expense include the amortization of a capitalization adjustment regulatory liability. (See Note 4, Effects of Regulation.) Interest expense excludes interest on nonfederal debt related to operating or terminated generation assets that is instead reported as a component of nonfederal projects expense. (See Note 7, Debt and Appropriations.)

Interest income

Interest income includes interest earnings on market-based special securities in the Bonneville Fund and interest earnings from other sources. Interest earnings on U.S. Treasury market-based special investments are based on the stated rates of the individual securities.

Residential Exchange Program

In order to provide qualifying regional utilities, primarily IOUs, access to power benefits from the FCRPS, Congress established the Residential Exchange Program (REP) in Section 5(c) of The Pacific Northwest Electric Power Planning and Conservation Act (Northwest Power Act). Whenever a Pacific Northwest electric utility offers to sell power to BPA at the utility's average system cost of resources, BPA purchases such power and offers, in exchange, to sell an equivalent amount of power at BPA's priority firm exchange rate to the utility for resale to that utility's residential and small farm consumers. REP costs are forecast for each year of the rate period and included in the revenue requirement for establishing BPA's power rates. The cost of this program is collected through BPA's power rates. REP costs are recognized when incurred and are included in Operations and maintenance in the Combined Statements of Revenues and Expenses.

In fiscal year 2011, BPA signed the 2012 Residential Exchange Program Settlement Agreement (2012 REP Settlement Agreement), resolving disputes related to the REP. The 2012 REP Settlement Agreement provided for fixed "Scheduled Amounts" payable to the IOUs through fiscal year 2028, as well as fixed "Refund Amounts" payable to the COUs through fiscal year 2019. (See Note 9, Residential Exchange Program.)

Pension and other postretirement benefits

Federal employees associated with the operation of the FCRPS participate in either the Civil Service Retirement System or the Federal Employees Retirement System. Employees may also participate after retirement in the Federal Employees Health and Benefit Program and the Federal Employee Group Life Insurance Program. All such postretirement systems and programs are sponsored by the Office of Personnel Management; therefore, the FCRPS financial statements do not include accumulated plan assets or liabilities related to the administration of such programs. As part of BPA's scheduled payment each year to the U.S. Treasury for bonds and other purposes, BPA makes contributions to cover the estimated annual unfunded portion of FCRPS pension and postretirement benefits. These contribution amounts are paid to the U.S. Treasury and are recorded as Operations and maintenance in the Combined Statements of Revenues and Expenses during the year to which the payment relates.

RECENT ACCOUNTING PRONOUNCEMENTS

Financial instruments, recognition and measurement

In January 2016, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2016-01 to address certain aspects of recognition, measurement, presentation and disclosure of financial instruments. The ASU supersedes existing guidance to classify equity securities as trading or available-for-sale and requires all equity securities to be measured at fair value with changes in fair value recognized through net revenues. Management does not expect any material impact to the FCRPS financial statements or disclosures as a result of adopting this guidance, which became effective Oct. 1, 2019.

Leases

In February 2016, the FASB issued ASU 2016-02 which supersedes current lease accounting guidance found within Topic 840 "Leases." The primary change under the ASU is the recognition of lease assets and corresponding lease liabilities by lessees for those agreements currently classified as operating leases, which currently are not recognized on the balance sheet. In addition, the guidance requires both quantitative and qualitative disclosures regarding amounts recognized in the financial statements and significant judgments made by management in applying the lease standard. Accounting for lessors is substantially unchanged from current accounting guidance.

Management adopted Topic 842 effective Oct. 1, 2019. The standard, which includes amendments made subsequent to ASU 2016-02, was adopted by applying the optional prospective approach which allows for comparative periods prior to adoption to not be restated. These prior periods will not be adjusted to meet requirements of the new lease standard. Of the available expedients provided by the FASB, management elected to adopt (i) the hindsight practical expedient, which permits the use of hindsight to determine lease term, and (ii) the lease component expedient, which permits lease and non-lease components to be accounted for as a single lease component (by asset class). Management has elected to reassess all existing contracts for lease existence, classification, and initial indirect costs, thereby forgoing the package of three practical expedients, which would allow for the carryforward of historical lease classifications. In addition, management elected to evaluate expired or existing land easements for lease content and to apply the standard to short term leases, thus forgoing available transition expedients.

Management has determined there are no material impacts to FCRPS net financial position as a result of adopting this lease guidance in fiscal year 2020. In addition, management has identified the following effects of adopting this guidance: (i) reclassification of approximately $2.0 billion of capital lease obligations to debt; (ii) recognition on the Combined Balance Sheets of right-of-use assets and lease liabilities for operating leases of approximately $41 million each; (iii) recognition on the Combined Balance Sheets of right-of-use assets and lease liabilities for new financing leases of $3 million each; and (iv) derecognition of a $50 million build-to-suit, construction work in progress asset and $49 million of an other financial liability. Upon completion of construction and energization, this asset will be reinstated and reported among completed plant with the liability reported as a lease liability. The accounting for existing finance leases recorded as other capital leases will not materially change. Management does not expect the adoption of this guidance to have a material impact on the Combined Statements of Revenue and Expenses or the Combined Statements of Cash Flows. Management anticipates additional disclosures around the nature of leased assets and liabilities.

Fair Value

In August 2018, the FASB issued ASU 2018-13 which eliminated, modified and added new disclosure requirements to Topic 820 “Fair Value Measurement.” Management is evaluating the impact of adopting this guidance, which will be effective in fiscal year 2021.

Cloud Computing

In August 2018, the FASB issued ASU 2018-15 providing new guidance for capitalizing implementation costs incurred in a cloud computing arrangement that is a service contract. These costs will be considered in the same manner as accounting for implementation costs incurred to develop or obtain internal-use software. Management is evaluating the impact of adopting this guidance, which will be effective in fiscal year 2022.

RECENTLY ADOPTED ACCOUNTING PRONOUNCEMENTS

Revenue from contracts with customers

In May 2014, the FASB issued ASU 2014-09 on revenue from contracts with customers to create a new Topic 606 that supersedes the existing revenue recognition guidance, including most industry-specific guidance. The objective of the new accounting standard is to provide a single, comprehensive revenue recognition model for all contracts with customers to improve comparability within industries and across industries. The core principle of the guidance is that an entity should recognize revenue upon transfer of control of promised goods or services to customers in an amount that reflects the consideration to which an entity expects to be entitled in exchange for those goods or services. Additionally, the guidance requires additional disclosures, both qualitative and quantitative, regarding the nature, amount, timing and uncertainty of revenue and cash flows.

Management adopted Topic 606, Revenue from Contracts with Customers, effective Oct. 1, 2018. The standard was adopted by applying the modified retrospective method, which resulted in a change to Sales on the Combined Statements of Revenues and Expenses and in additional revenue-related disclosures in Note 2, Revenue Recognition. Upon adoption of Topic 606 management began reporting miscellaneous revenues within sales. Miscellaneous revenues are considered revenues within Topic 606 and have been presented as such within all comparative periods. (See Note 2, Revenue Recognition, Other revenue from contracts with customers and Other revenue not with customers, for additional information regarding revenues previously reported as miscellaneous revenues.)

Upon the adoption of this standard, management elected the following practical expedients:

- Apply the standard to a portfolio of contracts with similar characteristics when applicable, as the effects on the financial statements of applying this guidance to the portfolio would not differ materially from applying this guidance to the individual contracts.
- Recognize revenue in the amount we have the right to invoice a customer.
- Apply this standard only to contracts that are not completed as of the date of initial application.

Classification of certain cash receipts and cash payments in the statement of cash flows

In fiscal year 2019, management adopted ASU 2016-15, which addresses eight specific cash flow issues with the objective of reducing the existing diversity in practice. The impact of adopting this standard was immaterial to the FCRPS financial statements, and prior year financial statements were not retrospectively adjusted.

Restricted cash

In fiscal year 2019, management adopted ASU 2016-18, which addresses the classification and presentation of changes in restricted cash on the statement of cash flows with the objective of reducing existing diversity in practice. The standard was adopted by using a retrospective method on the fiscal year 2019 Combined Statements of Cash Flows to begin including restricted cash within beginning and end-of-year cash, cash equivalents and restricted cash. In addition, a reconciliation near the bottom of the Combined Statements of Cash Flows shows a separate row for restricted cash and cash equivalents. The reporting impact of adopting this standard was immaterial to the Combined Statements of Cash Flows and had no effect on the Combined Balance Sheets or the Combined Statements of Revenues and Expenses.

SUBSEQUENT EVENTS

Management has performed an evaluation of events and transactions for potential FCRPS recognition or disclosure through Oct. 30, 2019, which is the date the financial statements were issued.

2. Revenue Recognition

DISAGGREGATED REVENUE

Twelve months ended Sept. 30 - millions of dollars		2019
Sales		
Power		
Firm	$	2,189.7
Surplus		201.3
Transmission		893.3
Other		80.5
Revenue from contracts with customers	$	3,364.8
Derivatives		170.1
Other revenue not with customers		18.2
Sales	$	3,553.1
U.S. Treasury credits		102.8
Total operating revenues	$	3,655.9

REVENUE FROM CONTRACTS WITH CUSTOMERS

A substantial majority of FCRPS revenues is from rate-regulated sales of power and transmission products and services. BPA establishes rates for its power and transmission services in a formal rate proceeding. The power and transmission rate schedules and general rate schedule provisions establish the rates, billing determinants, and rate provisions applicable to all BPA power and transmission contracts. Charges for services specified in the rate schedules and their provisions represent the amount billed by BPA for the goods or services used and purchased by its customers.

BPA has elected to apply the right-to-invoice practical expedient to FCRPS rate-regulated revenues from power and transmission services. Amounts invoiced correspond directly with the value to the customers for energy or services provided by the FCRPS reporting entities. Therefore, revenue from power and transmission sales, which includes billed and estimated unbilled amounts, is recognized over time upon the delivery of energy or services to the customers. The customers receive and benefit from the value of power and transmission at the time of delivery. Payments for amounts billed by BPA are generally due from customers within 20 days of billing. There are no material significant financing components.

“Firm” power consists of energy, capacity, or both, that is guaranteed to be available to the customer at all times during the period covered by a contract, except by reason of certain uncontrollable forces or service interruption provisions. The Northwest Power Act obligates BPA to meet a utility customer’s firm consumer load net of the customer’s resources used to serve its load. In addition, BPA sells firm power to other federal agencies and to a limited number of direct service industries within the region for their direct consumption. The vast majority of firm power sold by BPA in fiscal year 2019 was to preference customers, which make long-term power purchases from BPA at cost-based rates to meet their retail loads in the region. Preference customers are qualifying public utility districts, municipalities, consumer-owned electric cooperatives, and tribal utilities within the region. BPA’s current power sales agreements with preference customers are in effect through fiscal year 2028.

“Surplus” power consists of energy that can be provided on an hourly or other short-term basis that is surplus to meeting certain firm loads as defined in the Northwest Power Act. BPA often describes the sale of surplus power as secondary sales. Most surplus power is sold to Pacific Northwest and California markets under short-term power sales that allow for flexible negotiated prices, or under longer-term contracts. The availability of surplus power depends primarily on precipitation and reservoir storage levels, performance of the Columbia Generating Station, BPA’s firm power load obligations and other factors. Secondary revenues from the sale of surplus power are highly variable and depend on market conditions and the resulting prices. Amounts disclosed are net of bookouts, which occur when sales and purchases are scheduled with the same counterparty on the same path for the same hour.

“Transmission” revenues consist primarily of revenue for the transmission of power on BPA’s network within and through the BPA service area. Point-to-point long-term contracts exceeding one year comprise the majority of network revenues and allow customers to move energy on a firm basis from a point of receipt to a point of delivery. In addition, Network Integration Transmission Service delivers power to load within BPA’s balancing authority area and is a significant component of transmission revenues. Revenue from ancillary services and the Southern Intertie also comprise a significant portion of transmission revenues. Ancillary services ensure transmission grid reliability and include items such as scheduling, dispatch, balancing reserves and other services. The Southern Intertie is a system of transmission lines used primarily to transmit power between the Pacific Northwest and California. Nearly all intertie revenue is from long-term contracts exceeding one year in duration. Transmission customers include entities that buy and sell non-federal power in the region, in-region purchasers of federal power, generators, power marketers and utilities that seek to transmit power into, out of, or through the region.

“Other” revenues source primarily from the sales of power and other services or items by Reclamation and USACE. In particular, Reclamation sells power to certain Pacific Northwest irrigation districts. Other revenues also include reimbursable revenues associated with work performed for BPA customers. Reimbursable revenues are generally offset by an equivalent amount of reimbursable expenses.

REVENUE NOT WITH CUSTOMERS

“Derivatives” revenues source primarily from certain secondary power contracts that involve derivative instruments. In accordance with accounting guidance, management discloses revenue from derivative instruments separately from revenue from contracts with customers. Amounts disclosed are net of bookouts, which occur when sales and purchases are scheduled with the same counterparty on the same path for the same hour. (For further information on derivatives, see Note 11, Risk Management and Derivative Instruments.)

"Other revenue not with customers" consists mainly of revenues from leasing fees that BPA receives as the lessor of certain fiber optic cables and other assets. Additionally, other revenue not with customers includes the recognized revenue from deferred project revenue funded in advance, which is recognized over the life of the corresponding transmission assets once placed in service. (See Note 10, Deferred Credits and Other.)

U.S. TREASURY CREDITS

U.S. Treasury credits represent nonpower-related costs that BPA recovers from the U.S. Treasury in accordance with certain laws. BPA applies the credits toward its annual payment to the U.S. Treasury, which is made to pay federal debt, interest and other federal obligations. The primary U.S. Treasury credit is the 4(h)(10)(C) credit provided for in the Pacific Northwest Electric Power Planning and Conservation Act (Northwest Power Act). This Act requires BPA to recover the nonpower portion of expenditures—set at 22.3 percent—that BPA makes for fish and wildlife protection, mitigation and enhancement. Through Section 4(h)(10)(C), the Northwest Power Act ensures that the costs of mitigating these impacts are allocated between the power-related and other purposes of the federal hydroelectric projects of the FCRPS. Power-related costs are recovered in BPA's rates. U.S. Treasury credits are reported as a component of Operating revenues in the Combined Statements of Revenues and Expenses.

As part of its annual payment to the U.S. Treasury, BPA applies the U.S. Treasury credits earned each fiscal year against various categories of payment obligations. For example, BPA may apply U.S. Treasury credits against interest expense or liabilities such as federal appropriations.

CONTRACT BALANCES

As of Sept. 30 — millions of dollars		2019
Receivable assets		
Accounts receivable, net of allowance	$	40.3
Accrued unbilled revenues		294.1
Contract liabilities		
Customer prepaid power purchases	$	228.2
Third AC Intertie capacity agreements		93.9
Unearned revenue from customer deposits		32.5
Revenue recognized during the fiscal year from amounts included in contract liabilities at the beginning of the year	$	102.9

Accounts receivable and accrued unbilled revenues source primarily from contracts with customers.

Contract liabilities represent an entity's unsatisfied performance obligation to transfer goods or services to a customer from which the entity has received consideration. The contract liability amounts in the table above show expected future revenues to be recorded as power is delivered (for customer prepaid power purchases), over the estimated life of transmission assets placed in service (for Third AC Intertie capacity agreements), or as expenditures are incurred (for unearned revenue from customer deposits). These contract liabilities have no variable consideration and require little or no significant judgment in revenue recognition. The average contract term varies by customer and type and may span several years. (See Note 7, Debt and Appropriations, for further information on customer prepaid power purchases, and Note 10, Deferred Credits and Other, for further information on Third AC Intertie capacity agreements and unearned revenue from customer deposits.)

3. Utility Plant

As of Sept. 30 — millions of dollars		2019		2018	2019 Estimated average service lives
Completed plant					
Federal system hydro generation assets	$	9,545.1	$	9,280.7	75 years
Transmission assets		10,207.0		9,869.3	51 years
Other assets		142.8		157.4	7 years
Completed plant	$	19,894.9	$	19,307.4	
Accumulated depreciation					
Federal system hydro generation assets	$	(3,609.9)	$	(3,485.1)	
Transmission assets		(3,493.9)		(3,319.6)	
Other assets		(75.7)		(78.7)	
Accumulated depreciation	$	(7,179.5)	$	(6,883.4)	
Construction work in progress					
Federal system hydro generation assets	$	619.2	$	668.7	
Transmission assets		613.9		602.1	
Other assets		15.1		19.3	
Construction work in progress	$	1,248.2	$	1,290.1	
Net Utility Plant	$	13,963.6	$	13,714.1	

Allowance for funds used during construction

Fiscal year	2019	2018	2017
BPA rate	3.2%	3.1%	3.1%
Appropriated rate	2.5%	1.3%	0.6%

Completed plant assets include transmission capital leased assets of $1.94 billion and $1.88 billion, with accumulated depreciation of $191.7 million and $141.0 million at Sept. 30, 2019, and 2018, respectively.

In fiscal year 2018, BPA completed a depreciation study on BPA’s transmission and general plant assets, which are reported in both transmission and other assets in the table above. As a result of the study, the average service lives for transmission assets have increased from 48 years to 51 years. Depreciation expense increased approximately $19 million in both fiscal years 2019 and 2018 when considering the results of the study and changes to net salvage estimates, including increases to cost of removal in excess of salvage proceeds.

4. Effects of Regulation

REGULATORY ASSETS

As of Sept. 30 — millions of dollars	2019	2018
IOU exchange benefits	$ 2,092.8	$ 2,256.7
Terminated nuclear facilities	1,706.4	1,709.0
Columbia River Fish Mitigation	768.8	755.0
Fish and wildlife measures	242.6	254.2
Conservation measures	207.5	249.6
Terminated I-5 Corridor Reinforcement Project	130.0	130.0
Spacer damper replacement program	43.6	44.9
Trojan decommissioning and site restoration	37.7	38.0
Legal claims and settlements	23.0	23.0
Federal Employees' Compensation Act	21.6	27.0
Terminated hydro facilities	8.7	10.2
Other	6.1	7.1
Derivative instruments	3.3	7.3
REP Refund Amounts	—	75.7
Total	$ 5,292.1	$ 5,587.7

Regulatory assets include the following items:

"**IOU exchange benefits**" reflect amounts to be recovered in rates through 2028 for the IOU exchange benefits liability incurred as part of the 2012 REP Settlement Agreement. These amounts are amortized to operations and maintenance expense. (See Note 9, Residential Exchange Program.)

"**Terminated nuclear facilities**" consist of amounts to be recovered in future rates to satisfy the nonfederal debt for Energy Northwest Projects 1 and 3. These assets are amortized to nonfederal projects expense over the term of the related outstanding debt. (See Note 7, Debt and Appropriations.)

"**Columbia River Fish Mitigation**" is the cost of research and development for fish bypass facilities funded through appropriations since 1989 in accordance with the Energy and Water Development Appropriations Act of 1989, Public Law 100-371. These costs are recovered in rates over 75 years and amortized to depreciation and amortization expense.

"**Fish and wildlife measures**" consist of deferred fish and wildlife project expenses to be recovered in future rates. These costs are amortized to depreciation and amortization expense over a period of 15 years.

"**Conservation measures**" consist of the costs of deferred energy conservation measures to be recovered in future rates. These costs are amortized to depreciation and amortization expense over periods of 12 or 20 years. BPA deferred certain costs of energy conservation measures through fiscal year 2015 and, beginning with fiscal year 2016 and the BP-16 rate period, began expensing such costs as incurred.

"Terminated I-5 Corridor Reinforcement Project" consists of the costs to be recovered in future rates for preliminary construction and related activities for the former I-5 Corridor Reinforcement Project. Beginning with fiscal year 2020, these costs will be amortized to depreciation and amortization expense over a period of five years.

"**Spacer damper replacement program**" consists of costs to replace deteriorated spacer dampers on certain transmission lines and are recovered in future rates under the Spacer Damper Replacement Program. These costs are amortized to depreciation and amortization expense over a period of 25 or 30 years.

"**Trojan decommissioning and site restoration**" reflects the amount to be recovered in future rates for funding the asset retirement obligation (ARO) liability related to the former Trojan nuclear facility. This amount equals the associated liability. (See Note 5, Asset Retirement Obligations.)

“**Legal claims and settlements**” reflect amounts to be recovered in future rates to satisfy accrued liabilities related to legal claims and settlements. These costs will be recovered and amortized to operations and maintenance expense over a period to be established during future rate cases.

“**Federal Employees’ Compensation Act**” reflects the actuarial estimated amount of future payments for current recipients of BPA’s worker compensation benefits. This amount equals the associated liability, and related expenses are recorded to operations and maintenance expense as payments are made. (See Note 6, Deferred Charges and Other.)

“**Terminated hydro facilities”** consist of the amounts to be recovered in future rates to satisfy nonfederal debt for the Northern Wasco Hydro Project, for which BPA ceased its participation as recipient of the project’s electric power. These assets are amortized to nonfederal projects expense over the term of the related outstanding debt. (See Note 7, Debt and Appropriations.)

“**Derivative instruments**” reflect the unrealized losses from BPA's derivative portfolio. These amounts are deferred over the corresponding underlying contract delivery months. (See Note 11, Risk Management and Derivative Instruments.)

“**REP Refund Amounts**” were amounts that were established in the 2012 REP Settlement Agreement. (See Note 9, Residential Exchange Program.) These amounts were recovered in rates through 2019 from IOUs as a reduction in their IOU Exchange benefits and were equal to the regulatory liability for REP Refund Amounts to COUs.

REGULATORY LIABILITIES

As of Sept. 30 — millions of dollars	2019	2018
Capitalization adjustment	$ 1,082.6	$ 1,147.5
Accumulated plant removal costs	491.0	455.5
Decommissioning and site restoration	205.6	210.2
Derivative instruments	25.3	16.6
REP Refund Amounts to COUs	—	75.7
Other	—	6.5
Total	$ 1,804.5	$ 1,912.0

Regulatory liabilities include the following items:

“**Capitalization adjustment**” is the difference between the outstanding balance of federal appropriations, plus $100 million, before and after refinancing under the BPA Refinancing Section of the Omnibus Consolidated Rescissions and Appropriations Act of 1996 (Refinancing Act), 16 U.S.C. 838(l). Consistent with treatment in BPA’s power and transmission rate cases, this adjustment is amortized over a 40-year period through fiscal year 2036. Amortization of the capitalization adjustment as a reduction to interest expense was $64.9 million each year for fiscal years 2019, 2018 and 2017.

“**Accumulated plant removal costs**” are the amounts previously collected through rates as part of depreciation expense. The liability will be reduced as actual removal costs are incurred. (See Note 1, Summary of Significant Accounting Policies.)

“**Decommissioning and site restoration**” represents contributions to the related nonfederal nuclear decommissioning trusts as well as trust fund earnings, offset by deferred expenses related to the AROs for (i) CGS decommissioning and site restoration, and (ii) Energy Northwest Projects 1 and 4 site restoration. (See Note 5, Asset Retirement Obligations.)

“**Derivative instruments**” reflect the unrealized gains from BPA’s derivative portfolio. These amounts are deferred over the corresponding underlying contract delivery months. (See Note 11, Risk Management and Derivative Instruments.)

“**REP Refund Amounts to COUs**” were the amounts previously collected through rates that were owed to qualifying COUs and were provided as future bill credits through fiscal year 2019 as established in the 2012 REP Settlement Agreement. These amounts were equal to regulatory assets for REP Refund Amounts. (See Note 9, Residential Exchange Program.)

5. Asset Retirement Obligations

As of Sept. 30 — millions of dollars	2019	2018
Beginning Balance	$ 208.0	$ 191.7
Activities:		
Accretion	22.3	9.9
Expenditures	(3.9)	(2.8)
Revisions	594.8	9.2
Ending Balance	$ 821.2	$ 208.0

AROs are recognized based on the estimated fair value of the dismantlement and restoration costs associated with the retirement of certain tangible long-lived assets, primarily the Columbia Generating Station (CGS), a nonfederal nuclear power plant owned and operated by Energy Northwest, a joint operating agency of the state of Washington. The liability is adjusted for any revisions, expenditures and the passage of time. As a result of a 2019 site-specific decommissioning study for CGS, BPA management revised the estimate for the ARO liability during fiscal year 2019 by $594.8 million. This change in estimate was largely driven by the addition of a fuel storage estimate, the change in assumed decommissioning method, and increases in labor rates, which exceed the rate of inflation. Actual decommissioning costs may vary from this estimate because of various factors including future decommissioning dates, requirements, costs and technology. A $594.8 million increase to the Nonfederal generation asset on the Combined Balance Sheets offset the increased ARO liability.

The FCRPS also has tangible long-lived assets such as federal hydro projects and transmission assets without an associated ARO because no legal obligation exists to remove these assets.

As of Sept. 30 — millions of dollars	2019	2018
CGS decommissioning and site restoration	$ 781.5	$ 165.9
Trojan decommissioning	37.7	38.0
Energy Northwest Projects 1 and 4 site restoration	2.0	4.1
Total	$ 821.2	$ 208.0

NONFEDERAL NUCLEAR DECOMMISSIONING TRUSTS

As of Sept. 30 — millions of dollars	2019		2018	
	Amortized cost	Fair value	Amortized cost	Fair value
Equity index funds	$ 228.8	$ 289.9	$ 215.7	$ 280.0
Bond index funds	53.3	54.4	52.6	50.7
Cash and cash equivalents	29.3	29.3	30.2	30.2
U.S. government obligation mutual funds	18.8	18.0	18.4	16.7
Total	$ 330.2	$ 391.6	$ 316.9	$ 377.6

These assets represent trust fund account balances for decommissioning and site restoration costs. External trust fund accounts for decommissioning and site restoration costs for CGS are funded monthly and are charged to operations and maintenance expense. The decommissioning trust fund account was established to provide for decommissioning at the end of the project's operations in accordance with Nuclear Regulatory Commission (NRC) requirements. The NRC requires that this period be no longer than 60 years from the time the plant ceases operations. Decommissioning funding requirements for CGS are based on the 2019 site-specific decommissioning study for CGS and the license termination date, which is in December 2043. The CGS trust fund accounts are funded and managed by BPA in accordance with NRC requirements and site certification agreements.

The investment securities in the decommissioning and site restoration trust fund accounts are classified as available-for-sale and recorded at fair value in accordance with accounting guidance for investments, debt and equity securities. Net unrealized and realized gains and losses on these investment securities are recognized as adjustments to the related regulatory liability. (See Note 4, Effects of Regulation.)

Contribution payments to the CGS trust fund accounts for fiscal years 2019, 2018 and 2017 were $3.9 million, $3.8 million and $3.6 million, respectively. BPA and Energy Northwest have no obligation to make further payments into the site restoration fund for Energy Northwest Projects 1 and 4.

Based on an agreement in place, BPA directly funds Eugene Water and Electric Board's 30 percent share of Trojan's decommissioning costs through current rates. Decommissioning costs are included in Operations and maintenance in the Combined Statements of Revenues and Expenses.

6. Deferred Charges and Other

As of Sept. 30 — millions of dollars	2019	2018
Lease-Purchase trust funds	$ 74.6	$ 116.2
Derivative instruments	25.3	16.6
Funding agreements	22.3	21.5
Spectrum Relocation Fund	11.4	12.2
Other	7.3	10.3
Total	$ 140.9	$ 176.8

Deferred Charges and Other include the following items:

"**Lease-Purchase trust funds**" are investments held in separate trust accounts outside the Bonneville Fund for the construction of leased transmission assets, the use of which BPA has acquired under lease-purchase agreements. The amounts held in trust are also used in part for debt service payments during the construction period and include an investment fund mainly for future principal and interest debt service payments. (See Note 7, Debt and Appropriations.) Interest income and realized and unrealized gains or losses on amounts held in trust for construction are recorded as AFUDC. Interest income and gains and losses on other trust balances are recorded as either income or expense in the period when earned.

Investments classified as trading were $53.9 million and $95.5 million, and those classified as held to maturity were $19.5 million and $19.6 million, at Sept. 30, 2019, and 2018, respectively. Trading investments are held for construction purposes and are stated at fair value based on quoted market prices. (See Note 12, Fair Value Measurements.) As of Sept. 30, 2019, and 2018, trust balances also included cash and cash equivalents of $1.2 million and $1.1 million, respectively.

"**Derivative instruments**" represent unrealized gains from BPA's derivative portfolio, which includes physical power purchase and sale transactions.

"**Funding agreements**" represent deferred costs associated with BPA's contractual obligations to determine the feasibility of certain joint transmission projects.

"**Spectrum Relocation Fund**" was created to reimburse certain federal agencies such as BPA for the costs of replacing radio communication equipment displaced as a result of radio band frequencies no longer available to the affected federal agencies. These amounts previously received from the U.S. Treasury are held as restricted cash in the Bonneville Fund for the sole purpose of constructing replacement assets. These amounts are the only restricted cash reported on the Combined Statements of Cash Flows.

7. Debt and Appropriations

As of Sept. 30 — millions of dollars		2019		2018	
	Terms	Carrying Value	Weighted-Average Interest Rate	Carrying Value	Weighted-Average Interest Rate
Nonfederal debt					
Nonfederal generation:					
Columbia Generating Station	1.9 – 6.8% through 2044	$ 3,365.0	4.4%	$ 3,468.5	4.3%
Cowlitz Falls Hydro Project	4.0 – 5.3% through 2032	68.5	5.1	72.1	5.1
Terminated nonfederal generation:					
Nuclear Project 1	1.9 – 5.0% through 2028	794.3	5.0	795.6	4.9
Nuclear Project 3	1.9 – 5.0% through 2028	912.7	5.0	914.1	5.0
Northern Wasco Hydro Project	2.6 – 5.0% through 2024	9.9	4.4	11.4	4.2
Lease-Purchase Program:					
Capital lease obligations	1.5 – 6.3% through 2042	2,009.9	2.7	2,022.4	2.7
NIFC debt	5.5% through 2034	118.9	5.5	118.8	5.5
Other capital lease obligations	3.2 – 6.9% through 2043	36.7	4.9	37.5	5.0
Other financial liability	5.6% (not yet scheduled)	49.2	5.6	21.2	5.6
Customer prepaid power purchases	4.3 – 4.6% through 2028	228.2	4.5	248.1	4.5
Total Nonfederal debt		$ 7,593.3	4.1%	$ 7,709.7	4.1%
Federal debt and appropriations					
Borrowings from U.S. Treasury	1.5 – 5.9% through 2048	$ 5,279.6	3.2%	$ 5,530.6	3.2%
Federal appropriations	2.4 – 4.5% through 2069	1,182.8	3.7	1,354.6	3.9
Federal appropriations (not scheduled for repayment)		412.4	n/a	437.1	n/a
Total Federal debt and appropriations		$ 6,874.8	3.3%	$ 7,322.3	3.4%
Total debt and appropriations		$ 14,468.1	3.7%	$ 15,032.0	3.7%

Nonfederal generation and Terminated nonfederal generation

BPA is party to long-term contracts for BPA to acquire all of the generating capability of Energy Northwest's Columbia Generating Station and, through June 2032, all of Lewis County PUD's Cowlitz Falls Hydroelectric Project. These contracts require that BPA meet all of the operating, maintenance and debt service costs for these projects. Under certain agreements, BPA also has financial responsibility for meeting all costs of Energy Northwest's Projects 1 and 3, including debt service costs of bonds and other financial instruments issued for the projects, even though these projects have been terminated. BPA is also required by a "Settlement and Termination Agreement" between BPA and Northern Wasco PUD to pay amounts equal to annual debt service on certain bonds of the Northern Wasco Hydro Project. Under the Settlement and Termination Agreement, BPA ceased its participation in this project.

BPA recognizes expenses for these nonfederal generation and terminated nonfederal generation projects based on annual total project cash funding requirements, which include debt service and operating and maintenance expense. BPA recognized operating and maintenance expense for these projects of $328.8 million, $272.5 million and $322.3 million in fiscal years 2019, 2018 and 2017, respectively, which is included in Operations and maintenance in the Combined Statements of Revenues and Expenses. Debt service expense for all projects of $232.6 million, $266.9 million and $241.3 million for fiscal years 2019, 2018 and 2017, respectively, is reported as

Nonfederal projects in the Combined Statements of Revenues and Expenses. On the Combined Balance Sheets, related assets for operating projects are included in Nonfederal generation. Related assets for terminated generation are included in Regulatory assets. (See Note 4, Effects of Regulation.)

As a result of debt management actions taken by BPA in coordination with Energy Northwest under the Regional Cooperation Debt program, amounts otherwise collected in BPA's power and transmission rates during fiscal years 2019 and 2018 were not used to pay off maturing Energy Northwest-related bonds as originally scheduled. Instead, the repayment of these principal amounts was extended to fiscal year 2038 at the latest. These debt management actions and the borrowings by Energy Northwest described below allowed BPA to prepay comparatively higher-interest-rate federal appropriations during fiscal years 2019 and 2018.

Energy Northwest debt of $2.44 billion is callable, in whole or in part, at Energy Northwest's option, on call dates between July 2020 and July 2029 at 100 percent of the principal amount.

Borrowings by Energy Northwest for expense-related purposes

As of Sept. 30 — millions of dollars	2019	2018
Amounts outstanding[1]	$ 227.0	$ 141.0
Approximate variable interest rate	2.3%	2.4%

[1] Amounts outstanding at September 30 of each fiscal year are included in the applicable nonfederal debt amounts shown in the table at the beginning of Note 7, Debt and Appropriations.

During fiscal years 2019 and 2018, Energy Northwest funded operations and maintenance for CGS and interest payments on CGS-related bonds with line-of-credit borrowing arrangements from banking institutions. These arrangements are or were due to be repaid on or before June 30, 2020, and June 30, 2019, respectively.

Energy Northwest-related expenses recorded in the FCRPS Combined Statements of Revenues and Expenses were not affected by the foregoing borrowing arrangements. Instead of providing funds to Energy Northwest for operations and maintenance and interest payment purposes, BPA either will or has funded the repayment of the borrowing arrangements.

Lease-Purchase Program and Other capital lease obligations

Under the Lease-Purchase Program, BPA has incurred capital lease obligations for lease-purchase transactions with certain third-party entities. These transactions are primarily with the Port of Morrow, a port district located in Morrow County, Oregon, and the Idaho Energy Resources Authority (IERA), an independent public instrumentality of the State of Idaho, for transmission facilities, including lines, substations and general plant assets. These capital lease obligations are paid from the rental payments made by BPA. The facilities are not security for the payment of these obligations. The lease-purchase agreements contain provisions that allow BPA to purchase the related assets at any time during each lease term for a bargain purchase price plus the value of the related outstanding debt instrument. (See Note 8, Variable Interest Entities.)

Under the Lease-Purchase Program, BPA consolidates one special purpose corporation (Northwest Infrastructure Financing Corporation or NIFC). As of Sept. 30, 2019, the NIFC had $119.6 million of bonds outstanding, including debt issuance costs. The lease rental payments from BPA are pledged to the payment of the debt, but the facilities do not secure the debt. The NIFC bonds are reported as NIFC debt and are subject to redemption by NIFC, in whole or in part, at any date, at the higher of the principal amount of the bonds or the present value of the bonds discounted using the U.S. Treasury rate plus a premium of 12.5 basis points.

On the Combined Balance Sheets, capital lease obligations and NIFC debt are included in Nonfederal debt. The related assets are included in Utility plant and in Deferred charges and other for unspent funds held in trust accounts outside the Bonneville Fund. The capital lease obligations expire on various dates through 2043.

Completed plant assets reported as transmission capital leased assets are described in Note 3, Utility Plant.

Other financial liability

In June 2018, BPA entered into agreements with a transmission customer for the construction, ownership, operation and maintenance of a transmission project in Idaho, for which the customer began construction in fiscal year 2018. BPA is the accounting owner of the assets during construction, which is expected to end in fiscal year 2020. Upon completion and energization, BPA is required to lease the entire capacity of the transmission facilities from the customer. Per terms of the agreements, BPA's total liability for these facilities will be limited to approximately $65 million. BPA's lease payments to the customer will begin upon energization of the transmission facilities and will continue for 40 years. (See Note 1, Leases section for description of planned fiscal year 2020 derecognition and reinstatement of this liability.)

Customer prepaid power purchases

During fiscal year 2013, BPA entered into agreements with four regional COUs for the advance payment of portions of their power purchases. Under this program, customers purchased prepaid power in blocks through fiscal year 2028. For each block purchased, BPA repays the prepayment, with interest, as monthly fixed credits on the customers' power bills.

In March 2013, BPA received $340.0 million representing $474.3 million in scheduled credits for blocks purchased by customers. BPA accounts for the prepayment proceeds as a financing transaction and reports the value of the obligations associated with the fixed credits as a prepayment liability. Interest expense is recognized using a weighted-average effective interest rate of 4.5 percent. The prepaid liability is reduced and the credits are applied as power is delivered through fiscal year 2028.

Borrowings from U.S. Treasury

BPA is authorized by Congress to issue and sell bonds to the U.S. Treasury, and have outstanding at any one time, up to $7.70 billion aggregate principal amount of bonds. Of the $7.70 billion in U.S. Treasury borrowing authority, $1.25 billion is available for electric power conservation and renewable resources, including capital investment at the FCRPS hydroelectric facilities owned by the USACE and Reclamation, and $6.45 billion is available for BPA's transmission capital program and to implement BPA's authorities under the Northwest Power Act. Of the $7.70 billion, $750.0 million can be issued to finance Northwest Power Act related expenses. The interest on BPA's outstanding bonds is set at rates comparable to rates on debt issued by other comparable federal government institutions at the time of issuance. Bonds can be issued with call options.

As of Sept. 30, 2019, and 2018, no bonds outstanding were related to Northwest Power Act expenses.

As of Sept. 30, 2019, $1.68 billion of variable-rate bonds are callable by BPA at par value on their interest repricing dates, which occurs every six months. The remaining $3.60 billion of bonds are callable by BPA at a premium or discount, which is calculated based on the current government agency rates for the remaining term to maturity at the time the bonds are called. As of Sept. 30, 2018, $1.46 billion of variable-rate bonds were outstanding.

In fiscal year 2019, BPA did not call or pay any U.S. Treasury bonds prior to maturity. However, during fiscal year 2018, BPA called and paid $98.0 million of U.S. Treasury bonds prior to maturity and recognized a noncash gain of $0.2 million. During fiscal years 2019 and 2018, BPA refinanced $307.9 million and $34.0 million, respectively, of U.S. Treasury bonds in noncash transactions with the U.S. Treasury, which resulted in no gain or loss for either year. BPA does not report these refinanced bonds as part of its annual payment to the U.S. Treasury.

Federal appropriations

Federal appropriations reflect the responsibility that BPA has to repay congressionally appropriated amounts in the FCRPS. Federal appropriations repayment obligations consist of the remaining unpaid power portion of USACE and Reclamation capital investments funded through congressional appropriations. These include appropriations for Columbia River Fish Mitigation as allocated to the power purpose of the USACE's FCRPS hydroelectric projects. BPA's repayment obligation begins when capital investments are completed and placed into service.

BPA is obligated to establish rates to repay to the U.S. Treasury appropriations for federal generation and transmission plant investments within a specified repayment period, which is the reasonably expected service life of the facilities, not to exceed 50 years. Federal appropriations may be paid early without penalty at their par value (i.e. carrying value for federal appropriations) as part of BPA's payment to the U.S. Treasury. BPA repaid appropriations earlier than their due dates in fiscal years 2019 and 2018. BPA establishes schedules for the repayment of federal appropriations when it establishes its power and transmission rates. These schedules can change depending on whether appropriations have been prepaid or deferred. Interest on appropriated amounts begins accruing when the related assets are placed into service.

As of Sept. 30 — millions of dollars	Maturing Nonfederal debt excluding capital leases	Future minimum lease payments under capital leases	Borrowings from U.S. Treasury	Federal appropriations	Total
2020	$ 612.3	$ 337.1	$ 429.0	$ -	$ 1,378.4
2021	382.4	626.4	430.0	-	1,438.8
2022	382.8	306.9	290.0	-	979.7
2023	398.3	102.5	256.0	-	756.8
2024	412.2	118.3	220.0	-	750.5
2025 and thereafter	3,359.4	958.3	3,654.6	1,595.2	9,567.5
Total	$ 5,547.4	$ 2,449.5	$ 5,279.6	$ 1,595.2	$ 14,871.7
Less: Executory costs	-	25.4	-	-	25.4
Less: Amount representing interest	-	377.5	-	-	377.5
Less: Unamortized debt issuance cost	0.7	-	-	-	0.7
Present value of debt	5,546.7	2,046.6	5,279.6	1,595.2	14,468.1
Less: Current portion	612.3	279.3	429.0	-	1,320.6
Long-term debt	$ 4,934.4	$ 1,767.3	$ 4,850.6	$ 1,595.2	$ 13,147.5

Fair value of debt and appropriations

See Note 12, Fair Value Measurements, for a comparison of carrying value to fair value for debt. Due to the current par value call provision on BPA's federal appropriations, the fair value of BPA's federal appropriations is equal to the carrying value. This call provision allows BPA to prepay appropriations repayment obligations without premiums or a mark-to-market adjustment.

8. Variable Interest Entities

A VIE is an entity that does not have sufficient equity at risk to finance its activities without additional financial support or whose equity investors lack characteristics of a controlling financial interest. An enterprise that has a controlling interest is known as the VIE's primary beneficiary and is required to consolidate the VIE.

Management reviews executed lease-purchase agreements with nonfederal entities for VIE accounting impacts. BPA has determined that NIFC is a VIE and that BPA is the primary beneficiary of NIFC. As such, this entity is consolidated. The key factors in this determination are BPA's ability to take contractual actions that significantly impact the economic, commercial and operating activities of NIFC and BPA's obligation to absorb losses that could be significant to NIFC. Additionally, BPA's lease-purchase agreement with NIFC obligate BPA to absorb the operational and commercial risks, and thus potentially significant benefits or losses associated with the underlying transmission facilities. BPA also has exclusive use and control of the facilities during the lease period and has indemnified NIFC for all construction and operating risks associated with its transmission facilities.

Amounts related to NIFC include Lease-Purchase trust funds and other assets of $20.5 million and $20.4 million and Nonfederal debt of $118.9 million and $118.8 million as of Sept. 30, 2019 and 2018, respectively. BPA has also entered into lease-purchase agreements with Port of Morrow and IERA, which are nonfederal entities. These entities are governmental and, in accordance with VIE accounting guidance, are therefore not consolidated into the FCRPS financial statements. (See Note 7, Debt and Appropriations.)

BPA has entered into power purchase agreements with wind farm-related VIEs, which, because of their pricing arrangements, provide that BPA absorb commodity price risk from the perspective of the counterparty entities. However, BPA management has concluded that in no instance does BPA have the power to control the most significant operating and maintenance activities of these entities. Therefore, BPA is not the primary beneficiary and does not consolidate these entities. Additionally BPA does not provide, and does not plan to provide, any additional financial support to these entities beyond what BPA is contractually obligated to pay. Thus, BPA has no exposure to loss on contracts with these VIEs. Expenses related to VIEs for which BPA is not the primary beneficiary were $18.7 million, $21.8 million and $19.8 million in fiscal years 2019, 2018 and 2017, respectively. These expenses were recorded to operations and maintenance as BPA management considers the related purchases to be part of the FCRPS resource pool.

9. Residential Exchange Program

REP SCHEDULED AMOUNTS

As of Sept. 30 — millions of dollars		
2020	$	245.2
2021		245.2
2022		259.0
2023		259.0
2024		273.6
2025 through 2028		1,131.9
Subtotal of annual payments		2,413.9
Less: Discount for present value		321.1
IOU exchange benefits	$	2,092.8

BACKGROUND

In 1981 and as provided in the Northwest Power Act, BPA began to implement the Residential Exchange Program (REP) through various contracts with eligible regional utility customers. BPA's implementation of the REP has been the subject of various litigations and settlement agreements.

2012 RESIDENTIAL EXCHANGE PROGRAM SETTLEMENT AGREEMENT

Beginning in April 2010, over 50 litigants and other regional parties entered into mediation to resolve numerous disputes over the REP. In fiscal year 2011 the parties reached a final settlement agreement – the 2012 Residential Exchange Program Settlement Agreement (2012 REP Settlement Agreement). As a result of the settlement, BPA recorded an associated long-term IOU exchange benefits liability and corresponding regulatory asset of $3.07 billion. Under the 2012 REP Settlement Agreement, the IOUs' REP benefits were determined for fiscal years 2012 - 2028 (also referred to herein as Scheduled Amounts). The Scheduled Amounts started at $182.1 million for fiscal year 2012 and increase over time to $286.1 million for fiscal year 2028. As provided in the 2012 REP Settlement Agreement, the Scheduled Amounts are established for each IOU based on the IOU's average system cost, its residential exchange load and BPA's applicable Priority Firm Exchange rate. The Scheduled Amounts total $4.07 billion over the 17-year period through fiscal year 2028, with remaining Scheduled Amounts as of Sept. 30, 2019, totaling $2.41 billion. Amounts recorded of $2.09 billion at Sept. 30, 2019, represent the present value of future cash outflows for these IOUs exchange benefits.

REP SETTLEMENT AGREEMENT REFUND AMOUNTS

In addition to Scheduled Amounts, the 2012 REP Settlement Agreement called for Refund Amounts of $612.3 million to be paid to COUs in the amount of $76.5 million each year from fiscal year 2012 through fiscal year 2019. The Refund Amounts were established as a regulatory asset and regulatory liability for the refunds that were provided to COU customers as bill credits. As of Sept. 30, 2019, there were no remaining regulatory assets or liabilities associated with the Refund Amounts.

10. Deferred Credits and Other

As of Sept. 30 — millions of dollars	2019	2018
Interconnection agreements	$ 177.7	$ 182.6
Deferred project revenue funded in advance	135.9	122.8
Third AC Intertie capacity agreements	93.9	95.4
Unearned revenue from customer deposits	32.5	55.4
Service deposits	22.4	21.6
Federal Employees' Compensation Act	21.6	27.0
Other	8.6	7.1
Fiber optic leasing fees	8.4	13.3
Derivative instruments	3.3	7.3
Total	$ 504.3	$ 532.5

Deferred Credits and Other include the following items:

"**Interconnection agreements**" are advances for requested new network upgrades and interconnections. These advances accrue interest and will be returned as cash or credits against future transmission service on the new or upgraded lines.

"Deferred project revenue funded in advance" consists of third-party advances received where BPA will own the resulting transmission assets. The balance is amortized as other revenue not with customers over the life of the assets so that the balance prevents any stranded costs in case of impairment as prescribed by the transmission rate process.

"**Third AC Intertie capacity agreements**" reflect unearned revenue from customers related to the Third AC Intertie transmission line capacity project. Revenue is recognized over an estimated 51-year life of the related assets, which are generally added and retired each year. (See Note 2, Revenue Recognition.)

"**Unearned revenue from customer deposits**" consists of advances received from customers for projects or studies undertaken at their request. Revenue is recognized as expenditures are incurred. (See Note 2, Revenue Recognition.)

"**Service deposits**" reflect required deposits for BPA products or services. The majority of these amounts are expected to be returned to the customer after a period of service. In certain cases, the deposits are considered prepayments, in which case they are recognized as revenue as per terms of the contract.

"**Federal Employees' Compensation Act**" reflects the actuarial estimated amount of future payments for current recipients of BPA's worker compensation benefits.

"**Fiber optic leasing fees**" reflect unearned revenue related to the leasing of fiber optic cables. BPA recognizes revenue over the lease terms, which extend through 2024. (See Note 2, Revenue Recognition.)

"**Derivative instruments**" reflect the unrealized loss of the derivative portfolio, which primarily includes physical power purchase and sale transactions.

11. Risk Management and Derivative Instruments

BPA is exposed to various forms of market risks related to commodity prices and volumes, counterparty credit, and interest rates. Non-performance risk, which includes credit risk, is described in Note 12, Fair Value Measurements. BPA has formalized risk management processes in place to manage agency risks, including the use of derivative instruments. The following sections describe BPA's exposure to and management of certain risks.

RISK MANAGEMENT

Due to the operational risk posed by fluctuations in river flows and electricity market prices, net revenues that result from underlying surplus or deficit energy positions are inherently uncertain. BPA's Risk Oversight Committee has responsibility for the oversight of market risk and determines the transactional risk policy and control environment at BPA. Through simulation and analysis of the hydro supply system, experienced business and risk managers install market price risk measures to capture additional market-related risks, including credit and event risk.

COMMODITY PRICE RISK AND VOLUMETRIC RISK

BPA has exposure to commodity price risk through fluctuations in electricity market prices that affect the value of energy bought and sold. Volumetric risk is the uncertainty of energy production from the hydro system. The combination of the two results in net revenue uncertainty. BPA routinely models commodity price risk and volumetric risk through parametric calculations, Monte Carlo simulations and general market observations to derive net revenues at risk, mark-to-market valuations, value at risk and other metrics as appropriate. These metrics capture the uncertainty around single point forecasts in order to monitor changes in the revenue risk profile from changes in market price, market price volatility and forecasted hydro generation. BPA measures and monitors the output of these methods on a regular basis. In order to mitigate revenue uncertainty that is beyond BPA's risk tolerance, BPA enters into short-term and long-term purchase and sale contracts by using instruments such as forwards, futures, swaps, and options.

CREDIT RISK

Credit risk relates to the loss that might occur as a result of counterparty non-performance. BPA mitigates credit risk by reviewing counterparties for creditworthiness, establishing credit limits and monitoring credit exposure. To further manage credit risk, BPA obtains credit support, such as letters of credit, parental guarantees, and cash in the form of prepayments, deposits or escrow funds, from some counterparties. BPA monitors counterparties for changes in financial condition and regularly updates credit reviews. BPA uses scoring models, publicly available financial information and external ratings from major credit rating agencies to determine appropriate levels of credit for its counterparties.

During fiscal year 2019, BPA experienced no material losses as a result of any customer defaults or bankruptcy filings. As of Sept. 30, 2019, BPA had $46.0 million in credit exposure related to purchase and sale contracts after taking into account netting rights. Of this credit exposure, $4.1 million was related to sub-investment grade counterparties who provided letters of credit that exceed BPA's exposure to these counterparties. The letters of credit serve as a guarantee arrangement and mitigate BPA's credit risk exposure to these counterparties.

INTEREST RATE RISK

BPA has the ability to issue variable rate bonds to the U.S. Treasury. BPA may manage the interest rate risk presented by variable rate U.S. Treasury debt by holding U.S. Treasury security investments with a similar maturity profile. Such investments may earn interest that is correlated, but typically lower than, the interest rate paid on U.S. Treasury variable rate debt. Energy Northwest may also issue variable rate debt for which BPA is expected to fund the repayment. No variable rate debt has been issued in connection with Energy Northwest or the Lease-Purchase Program.

DERIVATIVE INSTRUMENTS

Commodity Contracts

BPA's forward electricity contracts are eligible for the normal purchases and normal sales exception if they require physical delivery, are expected to be used or sold by BPA in the normal course of business and meet the derivative accounting definition of capacity described in the derivatives and hedging accounting guidance. Transactions for which BPA has elected the normal purchases and normal sales exception are not recorded at fair value in the financial statements. Recognition of these contracts in Sales or Purchased power in the Combined Statements of Revenues and Expenses occurs when the contracts are delivered and settled.

For derivative instruments recorded at fair value, BPA records unrealized gains and losses in Regulatory assets and Regulatory liabilities on the Combined Balance Sheets. Realized gains and losses are included in Sales and Purchased power in the Combined Statements of Revenues and Expenses as the contracts are delivered and settled.

When available, quoted market prices or prices obtained through external sources are used to measure a contract's fair value. For contracts without available quoted market prices, fair value is determined based on internally developed modeled prices. (See Note 12, Fair Value Measurements.)

As of Sept. 30, 2019, the derivative commodity contracts recorded at fair value totaled 6.1 million megawatt hours (MWh), gross basis, with delivery months extending to December 2021.

On the Combined Balance Sheets, BPA reports gross fair value amounts of derivative instruments subject to a master netting arrangement, excluding contracts designated as normal purchases or normal sales. (See Note 6, Deferred Charges and Other and Note 10, Deferred Credits and Other.) In the event of default or termination, contracts with the same counterparty are offset and net settle through a single payment. BPA does not offset cash collateral against recognized derivative instruments with the same counterparty under the master netting arrangements.

If netted by counterparty, BPA's derivative position would have resulted in assets of $23.6 million and $16.5 million, and liabilities of $1.6 million and $7.1 million as of Sept. 30, 2019, and 2018, respectively. (See Note 4, Effects of Regulation.)

12. Fair Value Measurements

BPA applies fair value measurements and disclosures accounting guidance to certain assets and liabilities including assets held in trust funds, commodity derivative instruments, debt and other items. BPA maximizes the use of observable inputs and minimizes the use of unobservable inputs when measuring fair value. Fair value is based on actively quoted market prices, if available. In the absence of actively quoted market prices, BPA seeks price information from external sources, including broker quotes and industry publications. If pricing information from external sources is not available, BPA uses forward price curves derived from internal models based on perceived pricing relationships to major trading hubs.

BPA also utilizes the following fair value hierarchy, which prioritizes the inputs to valuation techniques used to measure fair value, into three broad levels:

Level 1 – Quoted prices (unadjusted) in active markets for identical assets and liabilities that BPA has the ability to access at the measurement date. Instruments categorized in Level 1 primarily consist of financial instruments such as exchange-traded financial futures, fixed income investments, equity mutual funds and money market funds.

Level 2 – Inputs other than quoted prices included within Level 1 that are either directly or indirectly observable for the asset or liability, including quoted prices for similar assets or liabilities in active markets, quoted prices for identical or similar assets or liabilities in inactive markets, inputs other than quoted prices that are observable for the asset or liability, and inputs that are derived from observable market data by correlation or other means. Instruments categorized in Level 2 include certain non-exchange traded commodity derivatives and certain agency, corporate and municipal securities as part of the Lease-Purchase trust funds investments. Fair value for certain non-exchange traded derivatives is based on forward exchange market prices and broker quotes adjusted and discounted. Lease-Purchase trust funds investments are based on a market input evaluation pricing methodology using a combination of observable market data such as current market trade data, reported bid/ask spreads, and institutional bid information.

Level 3 – Unobservable inputs for the asset or liability, including situations where there is little, if any, market activity for the asset or liability. Instruments categorized in Level 3 include long-dated and modeled commodity contracts where inputs into the valuation are adjusted market prices plus an adder.

The fair value hierarchy gives the highest priority to quoted prices in active markets (Level 1) and the lowest priority to unobservable data (Level 3). In some cases, the inputs used to measure fair value might fall in different levels of the fair value hierarchy. The lowest level input that is significant to a fair value measurement in its entirety determines the applicable level in the fair value hierarchy. Assessing the significance of a particular input to the fair value measurement in its entirety requires judgment, considering factors specific to the asset or liability.

BPA includes non-performance risk when calculating fair value measurements. This includes a credit risk adjustment based on the credit spreads of BPA's counterparties when in an unrealized gain position. BPA's assessment of non-performance risk is generally derived from the credit default swap market and from bond market credit spreads. The impact of the credit risk adjustments for all outstanding derivatives was immaterial to the fair value calculation at Sept. 30, 2019, and 2018. There were no transfers between Level 1, Level 2 or Level 3 during fiscal years 2019 and 2018.

ASSETS AND LIABILITIES MEASURED AT FAIR VALUE ON A RECURRING BASIS

As of Sept. 30, 2019 — millions of dollars

	Level 1	Level 2	Level 3	Total
Assets				
Nonfederal nuclear decommissioning trusts				
Equity index funds	$ 289.9	$ —	$ —	$ 289.9
Bond index funds	54.4	—	—	54.4
Cash and cash equivalents	29.3	—	—	29.3
U.S. government obligation mutual funds	18.0	—	—	18.0
Lease-Purchase trust funds				
U.S. government obligations	—	53.9	—	53.9
Derivative instruments [1]				
Commodity contracts	0.7	3.6	21.1	25.4
Total	$ 392.3	$ 57.5	$ 21.1	$ 470.9
Liabilities				
Derivative instruments [1]				
Commodity contracts	$ (0.6)	$ (2.6)	$ (0.2)	$ (3.4)
Total	$ (0.6)	$ (2.6)	$ (0.2)	$ (3.4)

As of Sept. 30, 2018 — millions of dollars

	Level 1	Level 2	Level 3	Total
Assets				
Nonfederal nuclear decommissioning trusts				
Equity index funds	$ 280.0	$ —	$ —	$ 280.0
Bond index funds	50.7	—	—	50.7
Cash and cash equivalents	30.2	—	—	30.2
U.S. government obligation mutual funds	16.7	—	—	16.7
Lease-Purchase trust funds				
U.S. government obligations	—	88.0	—	88.0
Corporate obligations	—	7.5	—	7.5
Derivative instruments [1]				
Commodity contracts	0.1	12.6	3.9	16.6
Total	$ 377.7	$ 108.1	$ 3.9	$ 489.7
Liabilities				
Derivative instruments [1]				
Commodity contracts	$ —	$ (7.2)	$ (0.1)	$ (7.3)
Total	$ —	$ (7.2)	$ (0.1)	$ (7.3)

[1] Derivative instruments assets and liabilities are included in Deferred charges and other and Deferred credits and other, respectively, on the Combined Balance Sheets. See Note 11, Risk Management and Derivative Instruments for more information related to BPA's risk management strategy and use of derivative instruments.

Level 3 derivative commodity contracts are power contracts measured at fair value on a recurring basis using the California-Oregon Border (COB) forward price curves. They include power contracts delivering to illiquid trading points or contracts without available market transactions for the entire delivery period; therefore, they are considered unobservable. Forward prices are considered a key component to contract valuations. All valuation pricing data is generated internally by BPA's risk management organization.

The risk management organization constructs the forward price curve through the use of available market prices, broker quotes and bid/offer spreads. In periods where market prices or broker quotes are not available, the risk management organization derives monthly prices by applying seasonal shaping based on historical broker quotes and spreads. Long-term prices are derived from internally developed or commercial models with both internal and external data inputs. BPA management believes this approach maximizes the use of pricing information from external sources and is currently the best option for valuation. Significant increases or decreases in the inputs would result in significantly higher or lower fair value measurements.

Forward power prices are influenced by, among other factors, the price of natural gas, seasonality, hydro forecasts, expectations of demand growth, and planned changes in the regional generating plants.

COMMODITY CONTRACTS

The following table presents the changes in the assets and liabilities measured at fair value on a recurring basis and included in the Level 3 fair value category.

As of Sept. 30 — millions of dollars	2019	2018
Beginning Balance	$ 3.8	$ 1.6
Changes in unrealized gains (losses)[1]	17.1	2.2
Ending Balance	$ 20.9	$ 3.8

[1] Unrealized gains and losses are included in Regulatory assets and Regulatory liabilities on the Combined Balance Sheets. Realized gains and losses are included in Sales and Purchased power, respectively, in the Combined Statements of Revenues and Expenses.

DEBT

As of Sept. 30 — millions of dollars	2019		2018	
	Carrying Value	Fair Value	Carrying Value	Fair Value
Nonfederal Debt				
Nonfederal generation:				
Columbia Generating Station	$ 3,365.0	$ 3,557.8	$ 3,468.5	$ 3,579.8
Cowlitz Falls Project	68.5	77.3	72.1	79.9
Terminated nonfederal generation:				
Nuclear Project 1	794.3	923.3	795.6	897.2
Nuclear Project 3	912.7	1,112.4	914.1	1,060.4
Northern Wasco Hydro Project	9.9	10.8	11.4	12.2
Lease-Purchase Program:				
NIFC debt	118.9	155.8	118.8	134.6
Other financial liability	49.2	49.2	21.2	21.2
Customer prepaid power purchases	228.2	228.2	248.1	248.1
Federal debt				
Borrowings from U.S. Treasury	$ 5,279.6	$ 5,858.3	$ 5,530.6	$ 5,720.9

The fair value measurements described above are considered Level 2 in the fair value hierarchy.

The fair value of Nonfederal debt, excluding the Customer prepaid power purchases, is based on a market input evaluation pricing methodology using a combination of market observable data such as current market trade data, reported bid/ask spreads and institutional bid information.

The fair value of Other financial liability is based upon terms of a transmission construction agreement that BPA signed with a customer in fiscal year 2018 and is equal to the carrying value.

The opportunity to participate in the Customer prepaid power purchase program was made to a subset of BPA's power customers with repayment terms through billing credits extending to fiscal year 2028. Management believes that the customer prepaid power purchases are specific to BPA's operating environment and are nontransferable. As a result, the carrying value of customer prepaid power purchases is equal to its fair value.

The fair value of Borrowings from U.S. Treasury is based on discounted future cash flows using interest rates for similar debt that could have been issued at Sept. 30, 2019, and 2018.

13. Commitments and Contingencies

INTEGRATED FISH AND WILDLIFE PROGRAM

The Northwest Power Act directs BPA to protect, mitigate and enhance fish and wildlife and their habitats to the extent they are affected by the federal hydroelectric projects on the Columbia River and its tributaries from which BPA markets power. BPA makes expenditures and incurs other costs for fish and wildlife protection and mitigation that are consistent with the purposes of the Northwest Power Act and the Pacific Northwest Power and Conservation Council's Columbia River Basin Fish and Wildlife Program. In addition, certain fish and wildlife species that inhabit the Columbia River Basin are listed under the Endangered Species Act (ESA) as threatened or endangered. BPA makes expenditures and incurs other costs related to power purposes to comply with the ESA and implement certain biological opinions (BiOp) prepared by the National Oceanic and Atmospheric Administration Fisheries Service and the U.S. Fish and Wildlife Service in furtherance of the ESA. BPA's total commitment including timing of payments under the Northwest Power Act, ESA and BiOp fluctuates because it is in part dependent on river flows and water conditions.

In October 2018, BPA and its federal partners USACE and Reclamation signed extension agreements with current Accords partners, namely certain states and tribes, to extend the Columbia Basin Fish Accords. The existing agreements expired Sept. 30, 2018, and were extended from October 2018 until Sept. 30, 2022, at the latest. The extension agreements, in addition to a similar new agreement signed later in fiscal year 2019, commit $502.1 million for fish and wildlife protection and mitigation, which is likely to result in future expenses or regulatory assets.

As of Sept. 30, 2019, BPA has long-term fish and wildlife agreements with estimated contractual commitments of $672.1 million, which are likely to result in future expenses or regulatory assets. These agreements will expire at various dates through fiscal year 2027 and include the Columbia Basin Fish Accords extension agreements, which are described above.

IRRIGATION ASSISTANCE

Scheduled distributions

As of Sept. 30 — millions of dollars		
2020	$	24.1
2021		14.7
2022		16.1
2023		12.7
2024		15.0
2025 through 2045		223.3
Total	$	305.9

As directed by law, BPA is required to establish rates sufficient to make distributions to the U.S. Treasury for original construction costs of certain Pacific Northwest irrigation projects for which the costs have been determined to be beyond the irrigators' ability to pay. These irrigation distributions do not specifically relate to power generation. In establishing power rates, particular statutory provisions guide the assumptions that BPA makes as to the amount and timing of such distributions. Accordingly, these distributions are not considered to be regular operating costs of the power program and are treated as distributions from accumulated net revenues when paid. Future irrigation assistance payments are scheduled to total $305.9 million over a maximum of 66 years since the time the irrigation facilities were completed and placed in service. BPA is required by the Grand Coulee Dam - Third Powerplant Act to demonstrate that reimbursable costs of the FCRPS will be returned to the U.S. Treasury from BPA within the period prescribed by law. BPA is required to make a similar demonstration for the costs of irrigation projects to the extent the costs have been determined to be beyond the irrigators' ability to repay. These requirements are met by conducting power repayment studies including schedules of distributions at the proposed rates to demonstrate repayment of principal within the allowable repayment period. Irrigation assistance excludes $40.3 million for Teton Dam, which failed prior to completion and for which BPA has no obligation to repay.

FIRM PURCHASE POWER COMMITMENTS

As of Sept. 30 — millions of dollars		
2020	$	44.0
2021		33.6
Total	$	77.6

BPA periodically enters into long-term commitments to purchase power for future delivery. When BPA forecasts a resource shortage, based on its planned contractual obligations for a period and the historical water record for the Columbia River basin, BPA takes a variety of operational and business steps to cover a potential shortage including entering into power purchase commitments. Additionally, under BPA's current Tiered Rates Methodology and its current Regional Dialogue power sales contracts, BPA's customers may request that BPA meet their power requirements in excess of the Rate Period High Water Mark load under their contract. For these Above High Water Mark load requests, BPA may meet such requests by entering into power purchase commitments.

The preceding table includes firm purchase power agreements of known costs that are currently in place to assist in meeting expected future obligations under BPA's current long-term power sales contracts. Included are two purchases to meet load obligations in Idaho. The expenses associated with the Idaho purchases were $43.0 million, $44.2 million and $45.3 million for fiscal years 2019, 2018 and 2017, respectively. In prior fiscal years, BPA had firm purchase power agreements made specifically to meet commitments to sell power at Tier 2 rates. The expenses associated with these Tier 2 purchases to meet prior commitments were $41.1 million, $29.9 million and $26.6 million for fiscal years 2019, 2018 and 2017, respectively. BPA has several other purchase agreements with wind-powered and other generating facilities that are not included in the preceding table as payments are based on the variable amount of future energy generated and as there are no minimum payments required.

ENERGY EFFICIENCY PROGRAM

BPA is required by the Northwest Power Act to meet the net firm power load requirements of its customers in the Pacific Northwest. BPA is authorized to help meet its net firm power load through the acquisition of electric conservation. BPA makes available a portfolio of initiatives and infrastructure support activities to its customers to ensure the conservation targets established in the Northwest Power and Conservation Council's then-current Power Plan are achieved. The Council released the Seventh Power Plan in fiscal year 2016. These initiatives and activities are often executed via conservation commitments made by BPA to its customers through agreements with utility customers and contractors that provide support in the way of energy efficiency program research, development and implementation. The timing of the payments under these commitments is not fixed or determinable, and these agreements will expire at various dates through fiscal year 2024. Conservation-related expenses are recorded to operations and maintenance expense as incurred.

1989 ENERGY NORTHWEST LETTER AGREEMENT

In 1989, BPA agreed with Energy Northwest that, in the event any participant shall be unable for any reason, or shall fail or refuse, to pay to Energy Northwest any amount due from such participant under its net billing agreement for which a net billing credit or cash payment to such participant has been provided by BPA, BPA will be obligated to pay the unpaid amount in cash directly to Energy Northwest.

NUCLEAR INSURANCE

BPA is a member of the Nuclear Electric Insurance Limited (NEIL), a mutual insurance company established to provide insurance coverage for nuclear power plants. The insurance policies purchased from NEIL by BPA include: 1) Primary Property and Decontamination Liability Insurance; 2) Decontamination Liability, Decommissioning Liability and Excess Property Insurance; and 3) NEIL I Accidental Outage Insurance.

Under each insurance policy, BPA could be subject to a retrospective premium assessment in the event that a member-insured loss exceeds reinsurance and reserves held by NEIL. The maximum assessment for the Primary Property and Decontamination Liability Insurance policy is $20.6 million. For the Decontamination Liability, Decommissioning Liability and Excess Property Insurance policy, the maximum assessment is $7.3 million. For the NEIL I Accidental Outage Insurance policy, the maximum assessment is $5.4 million.

As a separate requirement, BPA is liable under the Nuclear Regulatory Commission's indemnity for public liability coverage under the Price-Anderson Act. In the event of a nuclear accident resulting in public liability losses exceeding $450.0 million, BPA could be subject to a retrospective assessment of up to $131.1 million limited to $20.5 million per incident within one calendar year. Assessments would be included in BPA's costs and recovered through rates. As of Sept. 30, 2019, there have been no assessments to BPA under any of these events.

ENVIRONMENTAL MATTERS

From time to time there are sites for which BPA, the USACE or Reclamation may be identified as potential responsible parties. Costs associated with cleanup of sites are not expected to be material to the FCRPS financial statements. As such, no material liability has been recorded.

INDEMNIFICATION AGREEMENTS

BPA, USACE and Reclamation have provided indemnifications of varying scope and terms in contracts with customers, vendors, lessors, trustees, and other parties with respect to certain matters, including, but not limited to, losses arising out of particular actions taken on behalf of the FCRPS, certain circumstances related to Energy Northwest Projects, and in connection with lease-purchases. Because of the absence of a maximum obligation in the provisions, management is not able to reasonably estimate the overall maximum potential future payments. Based on historical experience and current evaluation of circumstances, management believes that, as of Sept. 30, 2019, the likelihood is remote that the FCRPS would incur any significant costs with respect to such indemnities. No liability has been recorded in the financial statements with respect to these indemnification provisions.

LITIGATION

Rates

BPA's rates are frequently the subject of litigation. Most of the litigation involves claims that BPA's rates are inconsistent with statutory directives, are not supported by substantial evidence in the record, or are arbitrary and capricious. It is the opinion of BPA's general counsel that if any rate were to be rejected, the remedy accorded would be a remand to BPA to establish a new rate. BPA's flexibility in establishing rates could be restricted by the rejection of a BPA rate, depending on the grounds for the rejection. BPA is unable to predict, however, what new rate it would establish if a rate were rejected. If BPA were to establish a rate that was lower than the rejected rate, a petitioner may be entitled to a refund in the amount overpaid; however, BPA is required by law to set rates to meet all of its costs. Thus, it is the opinion of BPA's general counsel that BPA may be required to increase its rates to seek to recover the amount of any such refunds, if needed.

OTHER

The FCRPS may be affected by various other legal claims, actions and complaints, including litigation under the Endangered Species Act, which may include BPA as a named party. Certain of these cases may involve material amounts. Management is unable to predict whether the FCRPS will avoid adverse outcomes in these legal matters.

Judgments and settlements are included in FCRPS costs and recovered through rates. As of Sept. 30, 2019, no material liability has been recorded for the above legal matters.

Photo by Meg A.

FEDERAL REPAYMENT

Revenue requirement study

The submission of BPA's annual report fulfills the reporting requirements of the Grand Coulee Dam – Third Powerplant Act, Public Law 89-448. The revenue requirement study demonstrates repayment of federal investment. It reflects revenues and costs consistent with BPA's 2018 Final Wholesale Power and Transmission Rate Proposals of July 26, 2017, for fiscal years 2018 and 2019. (See BP-18-E-BPA-02 for Power and BP-18-E-BPA-09 /BP-18-E-BPA-09-E01 for Transmission.) The final proposals filed with FERC contain the official amortization schedule for the rate periods. FERC granted final approval to the Power Rates Schedules and the Transmission, Ancillary and Control Area Service Rate Schedules on March 19, 2018.

Repayment demonstration

BPA is required by Public Law 89-448 to demonstrate that reimbursable costs of the FCRPS will be returned to the U.S. Treasury from BPA net revenues within the period prescribed by law. BPA is required to make a similar demonstration for the costs of irrigation projects that are beyond the ability of irrigation water users to repay. These requirements are met by conducting power repayment studies including schedules of payments at the proposed rates to demonstrate repayment of principal within the allowable repayment period.

Since 1985, BPA has prepared separate repayment demonstrations for generation and transmission in accordance with an order issued by FERC on Jan. 27, 1984 (26 FERC 61,096).

Repayment policy

BPA's repayment policy is reflected in its generation and transmission revenue requirements and respective rate levels. This policy requires that FCRPS revenues be sufficient to:

1. Pay the cost of operating and maintaining the power system.
2. Pay the cost of obtaining power through purchase and exchange agreements (nonfederal projects) and transmission services that BPA is obtaining under capitalized lease-purchase agreements.
3. Pay interest on and repay outstanding U.S. Treasury borrowings to finance transmission system construction, conservation, environmental, direct-funded Corps and Reclamation improvements, and fish and wildlife projects.
4. Pay interest on the unrepaid investment in facilities financed with appropriated funds. (Federal hydroelectric projects all were financed with appropriated funds, as were BPA transmission facilities constructed before 1978.)
5. Pay, with interest, any outstanding deferral of interest expense.
6. Repay the power investment in each federal hydroelectric project with interest within 50 years after the project is placed in service (except for the Chandler project, which has a legislated repayment period of 66 years).

7. Repay each increment of the investment in the BPA transmission system financed with appropriated funds with interest within the average service life of the associated transmission plant (51 years).
8. Repay the appropriated investment in each replacement at a federal hydroelectric project within its service life.
9. Repay irrigation investment at federal reclamation projects assigned for payment from FCRPS revenues, after all other elements in the priority of payments are paid and within the same period established for irrigation water users to repay their share of construction costs. These periods range from 40 to 66 years, with 50 years being applicable to most of the irrigation payment assistance.

Investments bearing the highest interest rate will be repaid first, to the extent possible, while still completing repayment of each increment of investment within its prescribed repayment period.

Repayment obligation

BPA's rates must be designed to collect sufficient revenues to return separately the power and transmission costs of each FCRPS investment and each irrigation assistance obligation within the time prescribed by law.

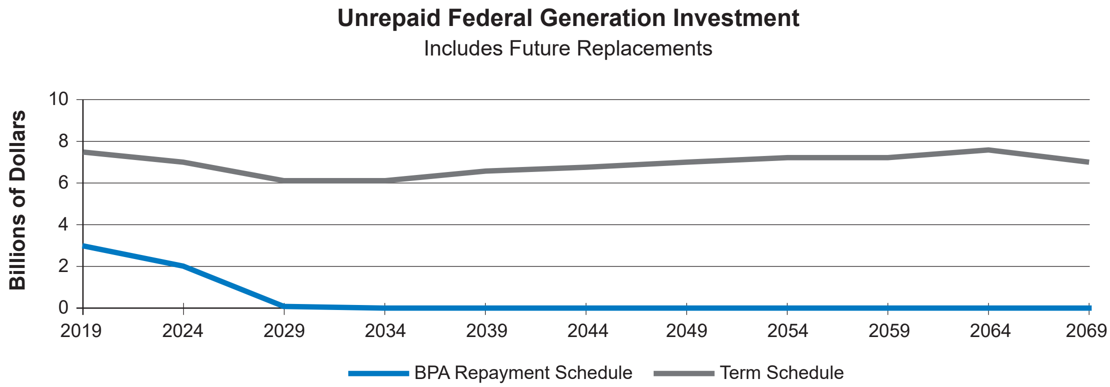
If existing rates are not likely to meet this requirement BPA must reduce costs, adjust its rates, or both. Comparing BPA's repayment schedule for the unrepaid capital appropriations and bonds with a "term schedule" demonstrates that the federal investment will be repaid within the time allowed. A term schedule represents a repayment schedule whereby each capitalized appropriation or bond would be repaid in the year it is due.

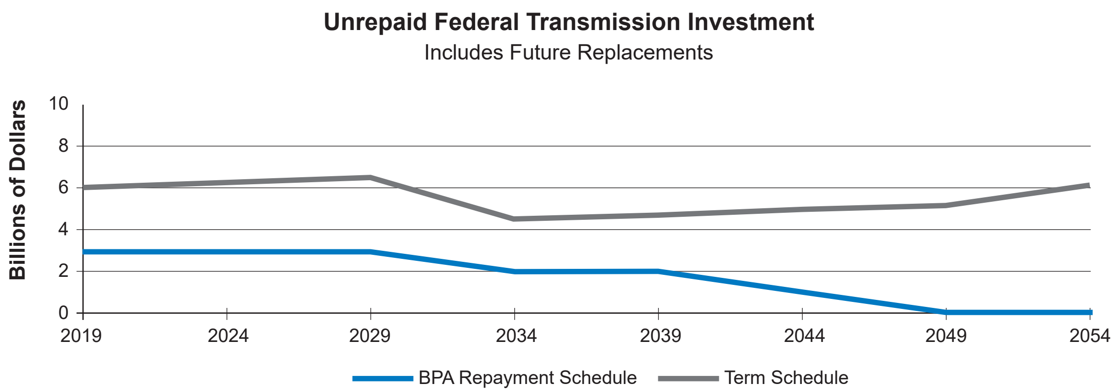
Reporting requirements of Public Law 89-448 are met so long as the unrepaid FCRPS investment and irrigation assistance resulting from BPA's repayment schedule are less than or equal to the allowable unrepaid investment in each year. While the comparison is illustrated by the following graphs representing total FCRPS generation and total FCRPS transmission investment, the actual comparison is performed on an investment-by-investment basis.

Repayment of FCRPS investment

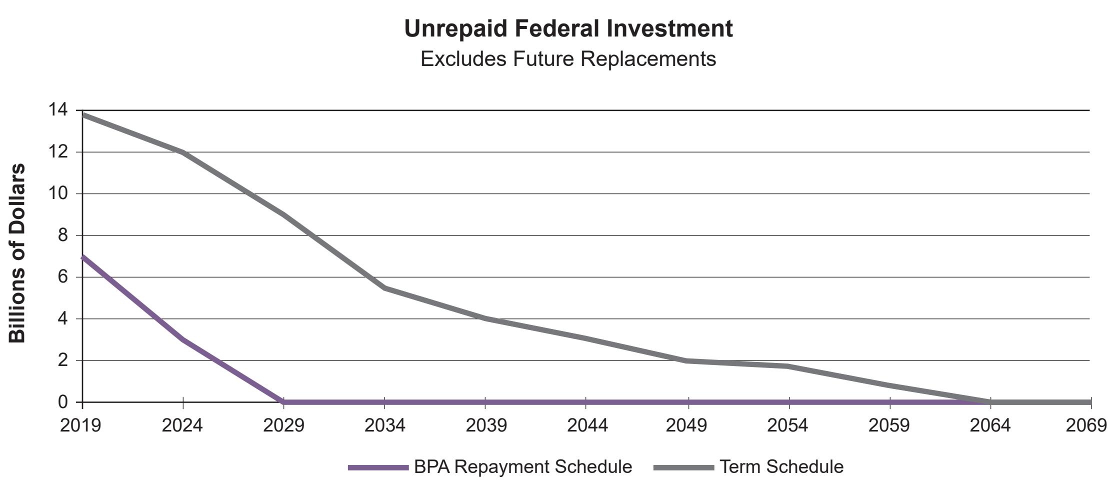
The graphs for Unrepaid Federal Generation and Transmission Investment illustrate that unrepaid investment resulting from BPA's generation and transmission repayment schedules is less than the allowable unrepaid investment. This demonstrates that BPA's rates are sufficient to recover all FCRPS investment costs on or before their due dates.

The term schedule lines in the graphs show how much of the obligation can remain unpaid in accordance with the repayment periods for the generation and transmission components of the FCRPS. The BPA repayment schedule lines show how much of the obligation remains to be repaid according to BPA's repayment schedules. In each year, BPA's repayment schedule is ahead of the term schedule. This occurs because BPA plans repayment both to comply with obligation due dates and to minimize costs over the entire repayment study horizon (35 years for transmission, 50 years for generation). Repaying highest interest-bearing investments first, to the extent possible, minimizes costs. Consequently, some investments are repaid before their due dates while assuring that all other obligations are repaid by their due dates. These graphs include forecasts of system replacements during the repayment study horizon that are necessary to maintain the existing FCRPS generation and transmission facilities.





The Unrepaid Federal Investment graph displays the total planned unrepaid FCRPS obligations compared to allowable total unrepaid FCRPS investment, omitting future system replacements. This demonstrates that each FCRPS investment through 2019 is scheduled to be returned to the U.S. Treasury within its repayment period and ahead of due dates.



If, in any given year, revenues are not sufficient to cover all cash needs including interest, any deficiency becomes an unpaid annual expense. Interest is accrued on the unpaid annual expense until paid. This must be paid from subsequent years' revenues before any repayment of federal appropriations can be made.

LEADERSHIP

ENTERPRISE BOARD MEMBERS AS OF SEPT. 30, 2019


Daniel James, John Hairston, Janet Herrin and Elliot Mainzer

Elliot E. Mainzer
Administrator and Chief Executive Officer

Daniel M. James
Deputy Administrator

Janet C. Herrin
Chief Operating Officer

John L. Hairston
Chief Administrative Officer

Joel D. Cook
Senior Vice President for Power Services

Richard L. Shaheen
Senior Vice President for Transmission Services, P.E.

Benjamin Berry
Executive Vice President of Information Technology and Chief Information Officer

Michelle Manary
Executive Vice President and Chief Financial Officer

Mary K. Jensen
Executive Vice President and General Counsel

Thomas A. McDonald
Executive Vice President of Compliance, Audit and Risk Management

Scott G. Armentrout
Vice President of Environment, Fish and Wildlife

Nita Zimmerman
Deputy Executive Vice President Business Transformation

Peter T. Cogswell
Director of Intergovernmental Affairs

Brian Carter
Director of Human Resources

Mike S. Hansen
Director of Communications (acting)

Karen A. Conforti
Executive Office Enterprise Program Manager

www.bpa.gov/HydroFlowsHere

HYDRO POWER FLOWS HERE

OFFICES

BPA Headquarters
905 NE 11th Ave.
P.O. Box 3621
Portland, OR 97208
503-230-3000

BPA Visitor Center
905 NE 11th Ave.
P.O. Box 3621
Portland, OR 97208
503-230-INFO (4636) | 800-622-4250

POWER SERVICES CUSTOMER SERVICE CENTERS

Boise
950 W. Bannock St.
Suite 805
Boise, Idaho 83702
208-670-7406

Eastern Area
P.O. Box 789
Mead, WA 99021
509-822-4591

Montana
P.O. Box 640
Ronan, MT 59864
406-676-2669

Seattle
909 First Ave., Suite 380
Seattle, WA 98104
206-220-6770

Western Area
905 NE 11th Ave.
P.O. Box 3621
Portland, OR 97208
503-230-5856

TRANSMISSION SERVICES

Transmission Services Headquarters
P.O. Box 491
Vancouver, WA 98666
503-230-3000

EAST REGION

Idaho Falls District
1350 Lindsay Blvd.
Idaho Falls, ID 83402
208-612-3100

Kalispell District
2520 U.S. Highway 2 E.
Kalispell, MT 59901
406-751-7802

Spokane District
2410 E. Hawthorne Road
Mead, WA 99021
509-468-3002

Tri-Cities District
2211 N. Commercial Ave.
Pasco, WA 99301
509-544-4702

SOUTH REGION

Eugene District
86000 Highway 99 S.
Eugene, OR 97405
541-988-7401

Longview District
3750 Memorial Park Drive
Longview, WA 98632
360-414-5600

Redmond District
3655 SW Highland Ave.
Redmond, OR 97756
541-516-3200

Salem District
2715 Tepper Lane NE
Keizer, OR 97303
503-304-5996

The Dalles District
3920 Columbia View Drive E.
The Dalles, OR 97058
541-296-4694

NORTH REGION

Covington District
28401 Covington Way SE
Kent, WA 98042
253-638-3700

Olympia Regional Office
5240 Trosper Road SW
Olympia, WA 98512
360-570-4305

Snohomish District
914 Avenue D
Snohomish, WA 98290
360-563-3600

Wenatchee District
13294 Lincoln Park Road
East Wenatchee, WA 98802
509-886-6000

Many of the photos
throughout this annual report
were sourced from BPA's employee
photo contest.

Cover photo: Darin B.

Back cover photos left to right, top to bottom:
Aaron S., Tony N., Robert M., Greg G., Melissa P.

The Your Lens/Our World photo contest aims to engage all members of the workforce and help them connect their work on an individual level to BPA's mission. At the same time, it promotes the important work being accomplished throughout BPA's geographical footprint.

www.bpa.gov

BONNEVILLE POWER ADMINISTRATION
P.O. Box 3621 Portland, Oregon 97208-3621

DOE/BP-4949 • November 2019