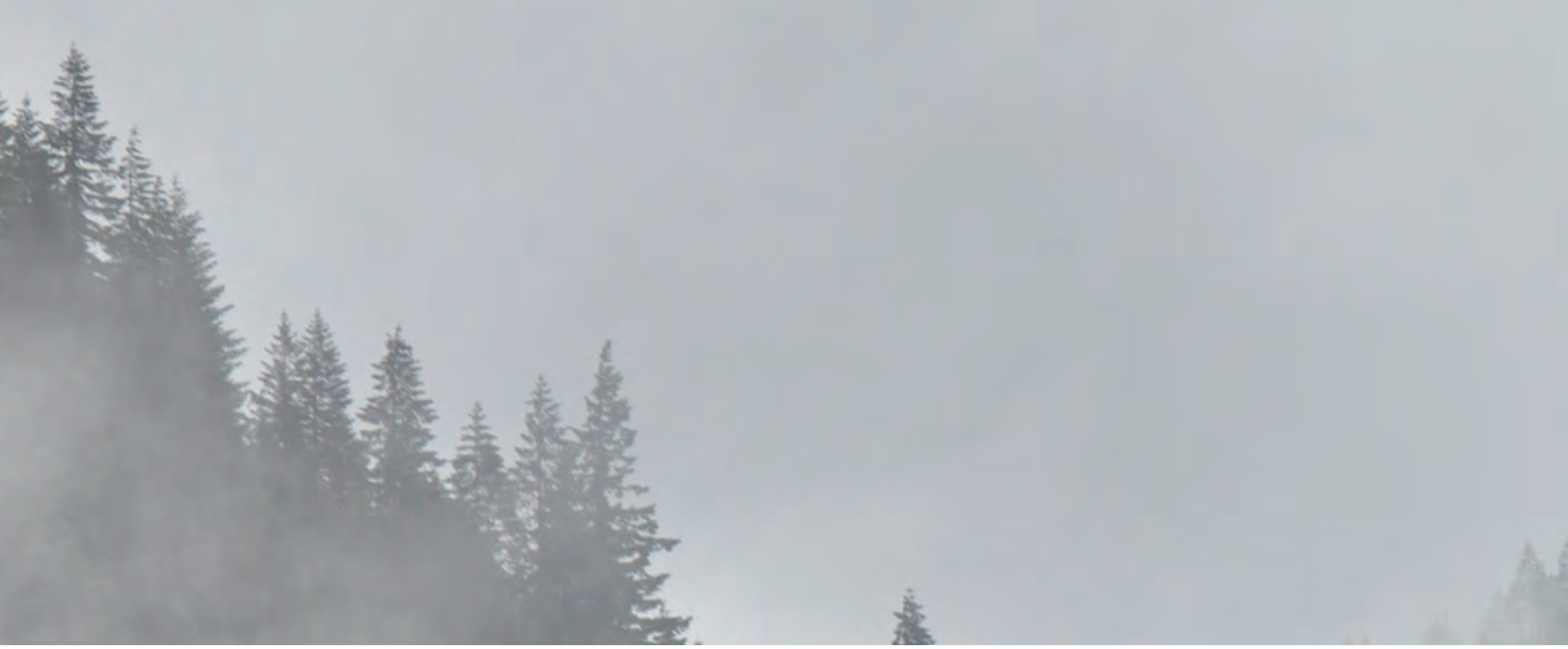
BONNEVILLE POWER ADMINISTRATION

RESILIENCE, RESPONSIVENESS AND RESULTS

ANNUAL REPORT 2020



About BPA

The Bonneville Power Administration is a nonprofit 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 dams in the Northwest, one nonfederal nuclear plant and several small nonfederal power plants. The 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 in its service territory. 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. To mitigate the impacts of the federal dams, BPA implements a fish and wildlife program that includes working with its partners to make the federal dams safer for fish passage.

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.

Cover photo by Jun D.

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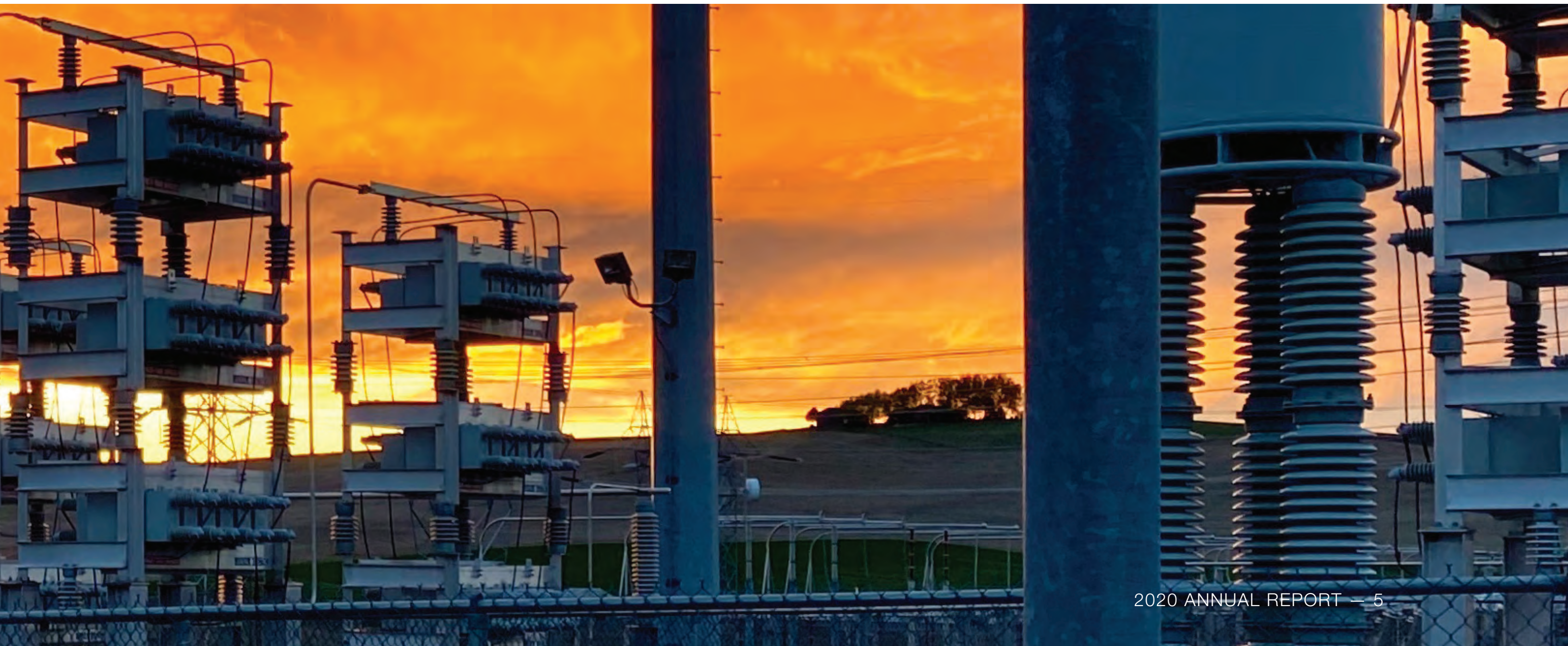
FINANCIAL HIGHLIGHTS

Federal Columbia River Power System

FISCAL YEAR 2020, MILLIONS OF DOLLARS

		GOAL	RESULT
Net revenues	≥	$12.2	$246
IPR cost expenditure	≤	$1,760	$1,700
Days cash on hand	≥	60	113
Capital expenditures	≤	$847	$609
Debt-to-asset ratio	≤	82%	82%
Available U.S. Treasury borrowing authority	≥	$1,500	$2,051



LETTER FROM THE ACTING ADMINISTRATOR

Nothing about fiscal year 2020 was routine. The global pandemic and its economic fallout tested the resilience of the Bonneville Power Administration, our customers and the region. Late summer wildfires, the likes of which we had never seen, tore through the communities we live in and serve.

But through it all, we rose to the challenge for the people of the Northwest. The Bonneville workforce quickly adapted in service to our customers, even as we experienced a change in agency leadership. We delivered on our commitments while focusing on safety and reliability, and we are stronger today because of what we have learned and achieved together over the last year.

Bonneville is accustomed to some uncertainty, having managed the highly variable Columbia River Basin runoff for more than eight decades. In a typical year, the timing and volume of the runoff — the fuel for the Northwest's federal hydropower system — plays the leading role in Bonneville's annual performance. It sets the stage for the agency's operational and financial outcomes. This year, streamflow volume was average, but the timing of the runoff was favorable as it coincided with higher than expected power demand due to Western heatwaves. Bonneville was able to respond and supply power to help meet that demand. Coupled with careful system planning, these conditions contributed to positive agency net revenues of $246 million, exceeding expectations.

But COVID-19 presented an uncertainty of another kind, the severity of which took precedence over all else. We quickly changed workforce operations for the safety of our people and implemented protocols for continuing protection. The coronavirus did not, however, prevent us from meeting our public service responsibilities. And while we were physically separated, we found ways to come together and strengthen our sense of community.

Investing in workplace culture

When Bonneville released its 2018–2023 Strategic Plan, we adopted four goals for delivering on our public responsibilities through a commercially successful business. We recognized early in our strategy execution that workplace culture is critical to our success, and in 2020 we formally adopted a fifth strategic goal, "Value people and deliver results." It commits us to cultivating a safe, positive and inclusive culture where everyone can thrive, and building a workforce with the capabilities to deliver on our mission and strategy. It captures our commitments to both the people of Bonneville and those we serve.

At the heart of valuing people is safety. Concern for the health and well-being of our workforce, without whom the grid cannot operate, drove Bonneville to initiate a proactive pandemic response plan in early March. Most of our workforce began teleworking even before states adopted stay-at-home orders. Only mission-essential workers continued to report to BPA facilities, and transmission field work was limited to projects deemed critical for system safety and reliability. Our decisions throughout the pandemic have been based on preserving the health and safety of our employees and our ability to continue delivering power to the region.

Value people and deliver results … cultivating a safe, positive and inclusive culture where everyone can thrive ….

Responding to customers in crisis while sustaining Bonneville's financial strength

The pandemic created tremendous economic hardships for Northwest residents. With many electric utility customers unable to pay their bills, some BPA customers also felt severe economic strain. BPA responded by providing rate relief for our customers. In addition to offering payment flexibilities, we suspended an element of our current rates that is designed to build cash reserves, called the Financial Reserves Policy surcharge. The surcharge triggered automatically at the beginning of FY 2020, to build BPA's financial reserves up to a pre-determined threshold. But after hearing our customers' concerns, BPA launched an expedited rate process to suspend the surcharge for the remainder of the rate period, saving power customers $9 million in FY 2020 and avoiding any possibility of a surcharge triggering for FY 2021.

BPA did not take the decision to suspend the surcharge lightly, as we have worked extremely hard in recent years to build financial liquidity, and we remain committed to that goal for the long term. However, our analysis at the time showed that even with the surcharge suspension, we would have sufficient liquidity to weather the near-term volatility of COVID-19.

BPA launched an expedited rate process to **suspend the surcharge** for the remainder of the rate period, saving power customers $9 million in FY 2020 and avoiding any possibility of a surcharge triggering for FY 2021.

In fact, agency financial reserves exceeded our third quarter projections, ending the year with 113 days cash on hand. As was the case with our higher than expected net revenues, this boost in cash reserves can be largely attributed to high power demand and market prices due to heat-waves throughout the West. In addition, adding to the positive cash reserves were under-runs in several programs impacted by COVID-19 restrictions. We expect to draw on these reserves as needed in FY 2021 to complete work and make up for project slowdowns, particularly in the areas of federal hydropower and energy efficiency.

While managing the financial impacts of the pandemic and over-coming logistical barriers caused by social distancing, BPA carried out its planned finance initiatives. We held our first virtual Integrated Program Review to safely engage with stakeholders in setting capital and expense spending levels for the next rate period. Consistent with our strategic plan objective, we once again achieved our goal of holding program costs at or below the rate of inflation. The final program spending levels we adopted with our customers' input, through which we will absorb $63 million in inflation each year of the next rate period, will set the foundation for FY 2022 and 2023 power and transmission rates.

Bonneville's financial strength also enabled our annual payment to the U.S. Treasury of $736 million, the 37th consecutive year BPA has made this payment on time and in full. As our final payment of the year, the Treasury payment is an indicator of our liquidity and ability to meet all of our financial commitments.

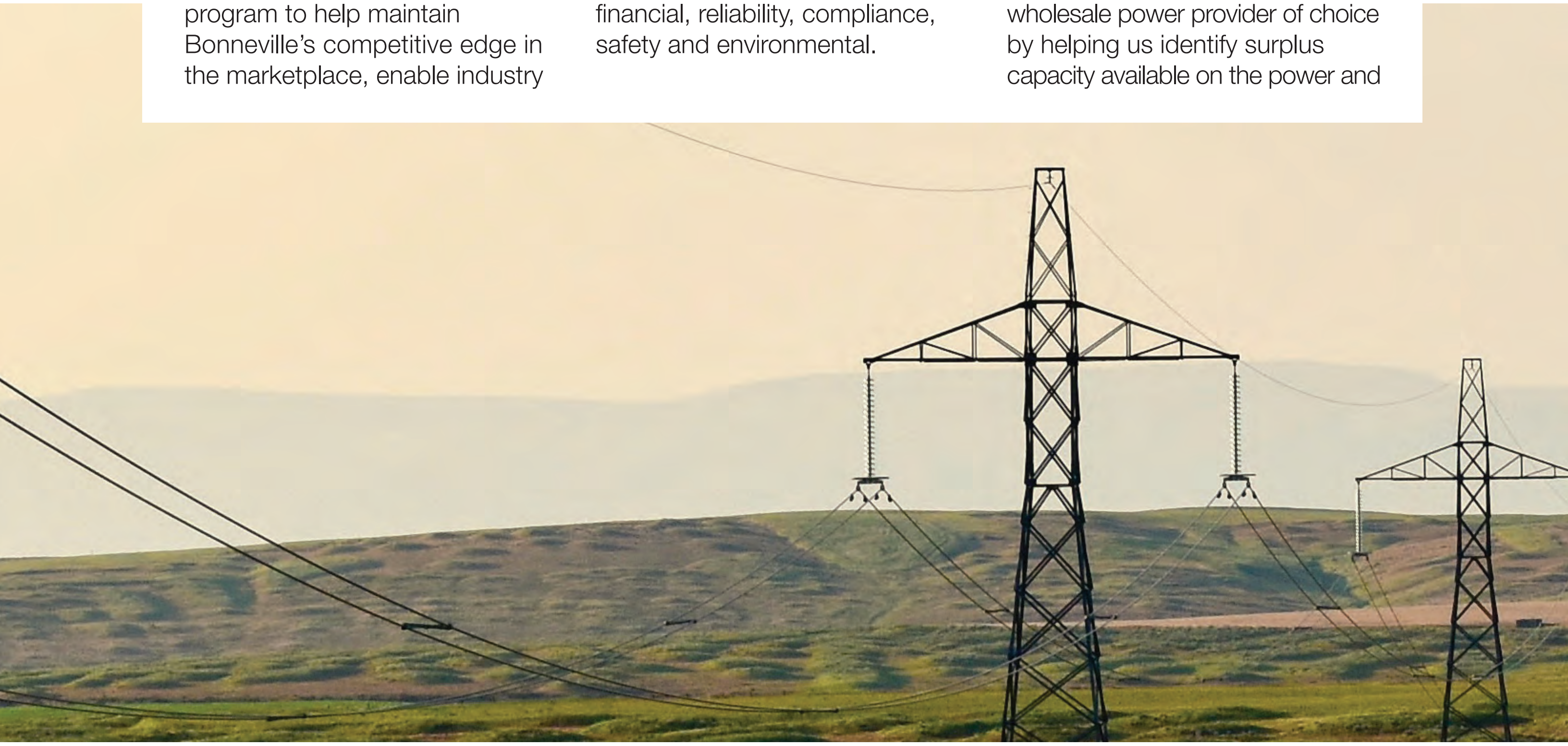
This year's Treasury payment included $20 million of obligations that BPA was able to pay off early as a result of the Regional Cooperation Debt program. This is a multiyear collaboration with Energy Northwest to extend maturing low-cost debt associated with the region's three nuclear projects. Through the extension of this low-cost debt, revenues that would have been used to pay off nonfederal bonds were instead used to pay off higher interest rate U.S. Treasury debt. The first phase of the RCD program began in 2014 and concluded with this year's Treasury payment, providing the region over $2.79 billion in gross debt-service savings.

Finally, all three major ratings agencies (Moody's, Fitch and S&P) continue to rate BPA-backed bonds as high investment-grade.

Building resilience through sound asset management and grid modernization

Technology and energy markets are changing rapidly, impacting how we operate the transmission grid and hydropower plants we and our federal partners are entrusted with managing. Our asset management program maximizes the value we derive from these and other assets, including facilities and IT equipment. We are continually growing and updating our program to help maintain Bonneville's competitive edge in the marketplace, enable industry change, deliver on our public responsibilities, and strengthen financial health by effectively managing asset lifecycle costs. This year we strengthened the tie between our strategic asset management plans and our financial planning process, and we began implementing a common risk methodology to base all asset decisions on five dimensions of risk: financial, reliability, compliance, safety and environmental.

We are also making significant headway in our effort to modernize BPA's systems and operations in response to new and changing markets. Out of a portfolio of 35 grid modernization projects, six were completed this year, three were completed in FY 2019, and all but one of the others are in flight. This work is essential for the agency to remain the region's wholesale power provider of choice by helping us identify surplus capacity available on the power and



transmission systems for additional sales, manage grid congestion more efficiently and reliably, and provide valuable insights into how best to invest in the system. Projects are already delivering significant value to BPA and our customers, such as through a new program called One BPA Outage. This cross-agency program has resulted in more efficient processes that are reducing the number of outages BPA must take to maintain its transmission assets, optimizing the timing of hydropower outages and saving ratepayers millions of dollars.

Five of the grid modernization projects underway will support BPA's potential participation in the Western Energy Imbalance Market, operated by the California Independent System Operator. BPA expects that the benefits of the EIM will quickly pay for both the startup and ongoing costs of participation, with mature participation resulting in considerable annual net power benefits, coupled with more efficient transmission congestion management and transmission planning options. Selling surplus energy in Western markets helps keep 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. BPA expects to make its final decision whether to join the EIM by October 2021.

Since the signing of an EIM implementation agreement with the California ISO in 2019, BPA has been engaging with the region to develop policy and discuss rates and tariff modifications. We are also participating in the devel-

BPA is participating in an effort … to develop a **resource adequacy** program that will define how much capacity the region needs and make it clear who is accountable for assuring resources are adequate to supply that capacity.

Photo by Rob M.

opment of the ISO's extended day ahead market and its day ahead market enhancements initiative, which may provide additional compensation for the flexible capacity provided by our carbon-free federal hydropower system.

Resource adequacy has emerged as another critical issue for the region that may impact BPA's supply of power, resource needs and transmission service. With coal plants retiring more quickly than previously anticipated, the Northwest faces a potential shortfall of several gigawatts of capacity to meet power demands. While utilities and independent power producers are building new renewable, carbon-free generating resources, which produce significant amounts of energy in the right conditions, they do not have the ability to produce the same energy capacity benefits as the resources they are replacing and can't ensure sufficient power is available at all hours, under all conditions.

BPA is participating in an effort coordinated through the Northwest Power Pool to develop a resource adequacy program that will define how much capacity the region needs and make it clear who is accountable for assuring resources are adequate to supply that capacity. Such a program may offer BPA an opportunity to not only sell surplus capacity and the transmission required to deliver that capacity, but also serve as a resource in the event BPA determines it has a need for additional power.

Leveraging power markets and controlling costs to boost net revenues

One of the key drivers behind BPA's strategic plan is to position BPA as the provider of choice for our preference customers beyond 2028, following the expiration of our current contracts. In FY 2020, we engaged with customers to learn about their needs and interests regarding future service, and we continued our focus on delivering competitively priced power from the federal hydropower system.

Over the last decade, declining natural gas prices and other factors have driven low wholesale market prices. This has decreased our revenues from surplus sales, which have historically offset our costs and helped keep power rates low for our core customers. But 2020 did not follow recent trends. Higher than expected power prices contributed to power net revenues that exceeded our rate case forecast by about $208 million, for a total of $255 million.

We know this does not represent the norm, however, which is why our long-term strategy calls for a continued focus on cost-manage-

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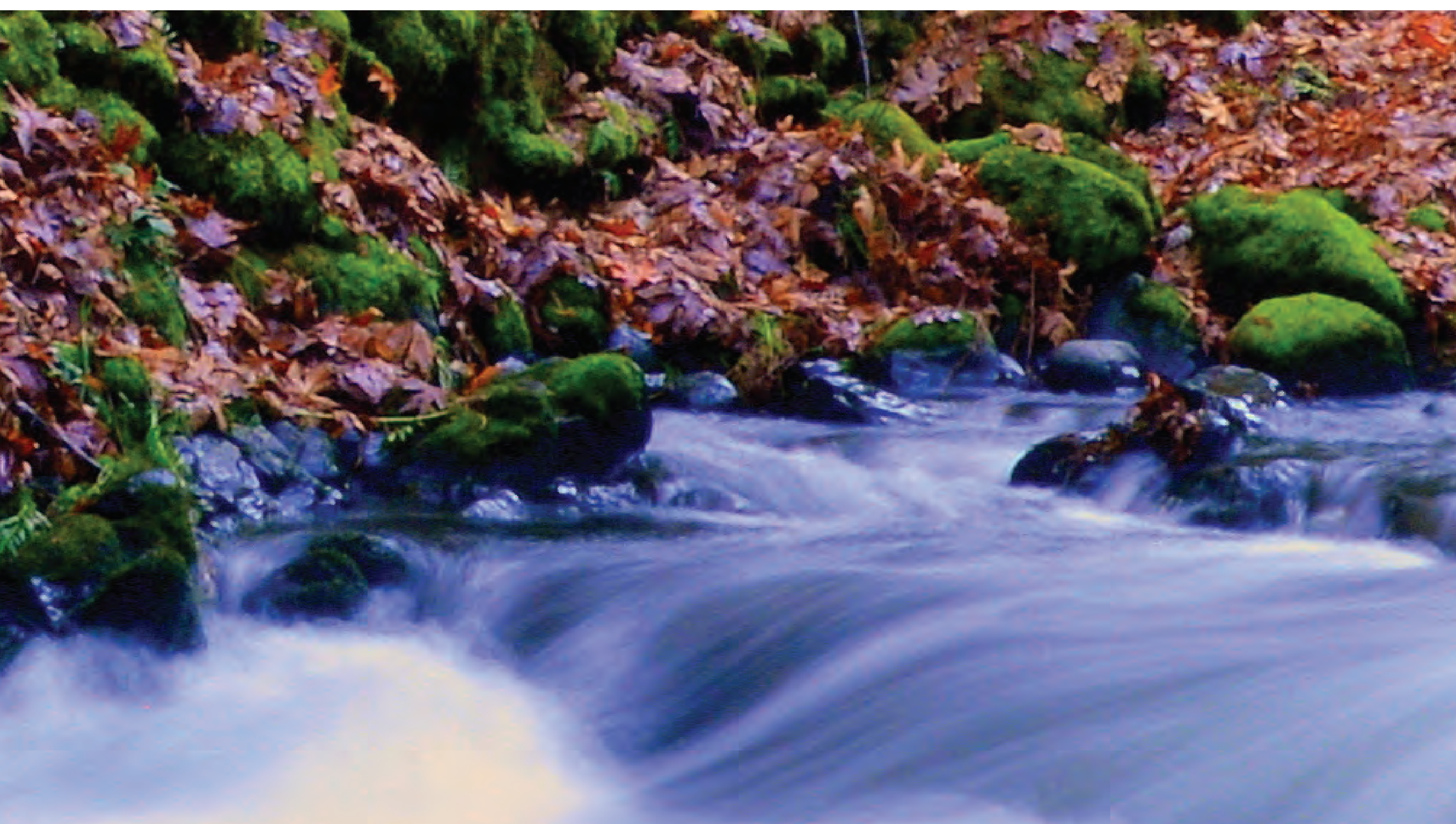

ment in all parts of our agency. Our Fish and Wildlife Program is one area we are managing costs at or below the rate of inflation. This is inclusive of any new obligations related to our responsibility to protect, mitigate and enhance fish and wildlife affected by the development and operation of the Federal Columbia River Power System.

This year we concluded the Columbia River System Operations environmental analysis. This multi-year, multi-agency analysis was informed through a robust public process that we adapted to enable safe, meaningful participation during the pandemic. The plan outlines how the federal government will operate the 14 federal dam and reservoir projects that make up the Columbia River System. The final environmental impact statement and joint record of decision, signed by BPA, the U.S. Army Corps of Engineers and Bureau of Reclamation, adopted a preferred alternative that we expect will provide improvements to Snake River salmon and steelhead and other species while still achieving all authorized purposes of the system. It builds on recent progress in testing an innovative, collaborative approach to system operations — a flexible spill design — to simultaneously provide clean, reliable, affordable electricity and benefits for salmon and steelhead.

The completion of the CRSO environmental analysis has not ended the regional discussion on the future of the four lower Snake River dams, a central concern to many who participated in the process. On the contrary, the review provides information and analysis to inform future dialogue. Bonneville is participating in broader regional discussions about actions to benefit salmon and other species, the economic vitality of the Columbia Basin tribes and others who depend on the river system for their livelihoods, and the region's reliable and affordable clean electricity future.


Photo by Anthony W.

Delivering results for transmission customers

Between COVID-19 and a historic wildfire season, the reliability of our transmission system was put to the test. Through the resilience of our people and the grid, we remained focused on meeting the power needs of people in the Pacific Northwest.

When we initiated our pandemic response in March, work on all but the most critical capital transmission projects was put on hold for the safety of our crews. This work restarted in phases in June, but was restricted again in August as COVID-19 cases spiked. We were preparing to ramp up once more in September, just as dozens of destructive wildfires in the West started to burn.

The dry August weather, followed by an early September wind storm, created extreme fire activity that displaced thousands and destroyed entire communities. It was devastating to witness the hardships so many in our region were forced to endure. Bonneville quickly established an incident management team to coordinate the agency's response. Our field crews and transmission operations staff performed incredibly well under the extreme pressure.

Ahead of summer, BPA invested heavily in wildfire prevention and preparation. Notably, in May we released a comprehensive Wildfire Management Plan in recognition of the growing fire risk to transmission and public safety. The proactive measures outlined in the plan included aggressive vegetation management to reduce fuel that can catch fire, as well as inspecting and repairing or replacing equipment that could fail and ignite a fire. Our Wildfire Management Plan was timely and guided our response during the wildfire season.

While the fires and pandemic delayed certain planned maintenance, other transmission initiatives moved ahead at a remarkable pace. In support of our strategic plan, we have prioritized efforts to connect our customers to the grid more quickly and cost-effectively. By optimizing the use of our existing transmission assets and finding more flexible, scalable solutions, BPA met over 1,500 megawatts of new firm transmission service requests in the 2020 Transmission Study and Expansion Process. We also identified an additional 3,000 megawatts of conditional firm service, a flexible form of service to let customers use the existing transmission system without waiting on new infrastructure for service to begin.

At the start of the fiscal year, Transmission Services successfully transitioned to a new reliability coordinator, RC West, following over a year of preparation that included changes to a multitude of data connections, processes and procedures. The reliability coordinator plays a crucial role in protecting the reliability of the Western Interconnection, and the North American Electric Reliability Corporation referred to this transition as the single largest risk to reliability. But Bonneville, along with other utilities in the West, completed this transition seamlessly.

Also in FY 2020, Bonneville held public discussions about future transmission tariff modifications to meet business needs and enable participation in evolving markets.

We also played a key role in the creation of NorthernGrid, the new consolidated regional transmission planning organization. NorthernGrid facilitates regional resource development and grid optimization over a large footprint, eliminating duplicative efforts and supporting our efforts to meet transmission customer needs efficiently and responsibly.

Looking ahead

With FY 2020 behind us, the Bonneville workforce is focused on the future and eager to move forward with the region. We will continue to work to ensure future policies and contracts meet our customers' evolving needs and remain the region's power provider of choice. **We are committed to our strategic goals and to being a responsive partner to the customers and communities we serve.** By delivering clean, competitively priced power products and reliable transmission services, we are confident we will continue to realize BPA's vision as a driver of economic prosperity and environmental sustainability.

John Hairston, Acting Administrator and CEO

PERFORMANCE TARGET RESULTS

BPA sets annual performance targets that the organization as a whole is responsible for achieving in the specified year. Together, these targets serve as indicators of BPA's annual performance. Where applicable, financial results are for the FCRPS reporting entity.

STRENGTHEN FINANCIAL HEALTH

Agency capital expenditures **Target met.** BPA's capital expenditures for the year are $609 million, which meets the end-of-year target to not exceed the rate case expectation of $847 million.

Agency days cash on hand **Target met.** The agency days cash on hand is 113 days, above the target of 60 or more.

Agency debt-to-asset ratio **Target met.** The agency debt-to-asset ratio is 82% against a target of 82%.

Agency Integrated Program Review cost expenditures **Target met.** BPA's IPR cost expenditures for the year are $1.7 billion, which is 97% of the rate case expectation, meeting the target to not exceed the rate case expectation.

Agency net revenues **Target met.** BPA generated net revenues of $246 million, which is $234 million above the rate case expectation of $12.2 million.

Available U.S. Treasury borrowing authority **Target met.** BPA's remaining borrowing authority with the U.S. Treasury is $2.1 billion against the target of at least $1.5 billion.

MODERNIZE ASSETS AND SYSTEM OPERATIONS

Grid modernization finance **Target met.** Grid Modernization projects in the deliver phase or completed in FY 20 have spent 90% of their grid modernization IPR expense funding, against a target of 100% or less.

Grid modernization milestones **Target met.** 98% of milestones for grid modernization projects in the deliver phase or completed in FY 20 were met against a target of 90 to 100%.

PROVIDE COMPETITIVE POWER PRODUCTS AND SERVICES

Federal hydro forced outage factor **Target not met.** BPA's forced outage factor of hydropower generation facilities, reflecting the percentage of hours within the period the asset was not available to run due to an unplanned event, was 6.76%, above the target of 4.5%.

Columbia Generating Station availability factor **Target met.** Columbia's availability factor, measured from July 1, 2019, to June 30, 2020, 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 line outages on low-voltage lines was 0.39, below the target of 0.70 outages per line or less.

System average interruption frequency index – high voltage (≥200kV) **Target met.** BPA's frequency of annualized unplanned line outages on high-voltage lines was 0.44, below the target of 0.65 outages per line or less.

System average interruption duration index – low voltage (<200kV) **Target met.** BPA's duration of annualized unplanned line outages on low-voltage lines was 207 minutes per line, below the target of 442.57 minutes or less.

System average interruption duration index – high voltage (≥200kV) **Target not met.** BPA's duration of annualized unplanned line outages on high-voltage lines was 310 minutes per line, above the target of 253.72 or less minutes. This was largely due to September fire and May weather outages.

VALUE PEOPLE AND DELIVER RESULTS

Incident frequency rate **Target met.** BPA recorded an incident frequency rate of 0.7 per 200,000 hours worked, which is below the ceiling of 0.9 or less.

Photo by Beverly B.

FINANCIAL PLAN PROGRESS UPDATE

In 2018 BPA released the Financial Plan, a companion to its 2018–2023 Strategic Plan, which outlines the policies, practices and objectives that will help BPA sustain its financial strength. The Financial Plan outlines three key financial objectives: to improve cost management discipline, build financial resiliency and maintain high investment-grade credit ratings. The following sections describe BPA's progress toward these objectives.

Objective 1: Improve cost-management discipline

To help achieve the lowest possible power and transmission rates consistent with sound business principles, BPA set the goal of holding program costs at or below the rate of inflation through 2028. BPA has continued its efforts to seek cost savings and manage costs consistent with this goal. In FY 2020, program costs were $1.7 billion, $59.6 million below the rate case target of $1.76 billion. While cost-management efforts were a key driver for this outcome, COVID-19 related work deferrals also contributed to keeping FY 2020 costs low. While this deferred work will increase cost pressure in FY 2021, BPA will use flexible tools, including budget carryover within the rate period and trade-off discussions, to continue to manage costs within our cost-management target for the BP-20 rate period.

Objective 2: Build financial resiliency

Three distinct areas of focus comprise BPA's objective of building financial resiliency: operational liquidity, as measured by days cash on hand; leverage, as measured by debt-to-asset ratio; and debt capacity, as measured by available borrowing authority. BPA started implementation of these goals through the BP-20 Rate Case, with the inclusion of the Financial Reserve Policy (FRP) and the Leverage Policy.

BPA's operational liquidity comes primarily from financial reserves

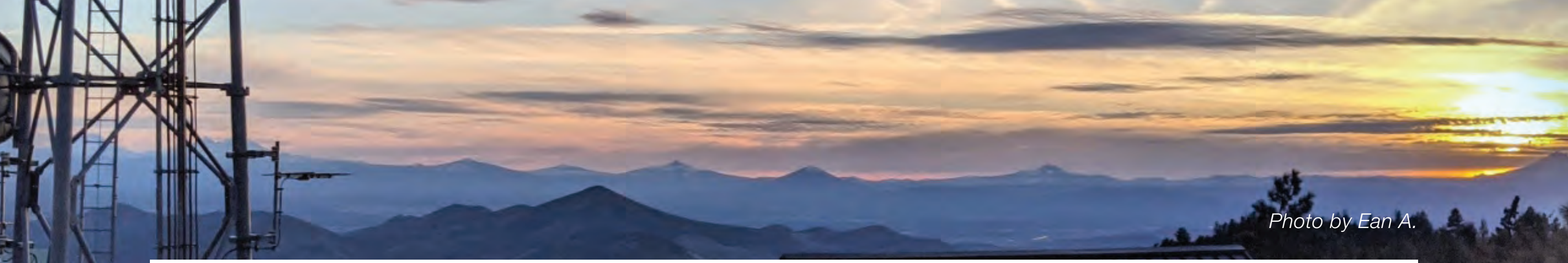

Photo by Ean A.

and, as a secondary measure, a short-term line of credit from the U.S. Treasury. To support BPA's financial reserves, BPA has set the goal of maintaining a minimum of 60 days cash on hand for each business unit. The FRP lays out the mechanism to help achieve this target, and contains both lower and upper thresholds for days cash on hand. The upper threshold includes a two-tiered test, which if passed triggers the "reserves distribution clause," also known as the RDC.

At the end of FY 2019, Transmission was well above the target of 60 days cash on hand, with 170 days. Power's days cash on hand had increased to 43 days at the end of FY 2019, but was below the 60 days threshold. Accordingly, no FRP mechanism was triggered for Transmission, and the FRP surcharge triggered for Power Services and was applied to FY 2020 rates, as called for in the policy. The surcharge was scheduled to raise an additional $30 million in revenues in FY 2020. However, BPA suspended the surcharge, effective July 1, 2020, for the remainder of the rate period due to the regional economic impacts of COVID-19. This resulted in BPA suspending collection of the remaining $9 million of the $30 million expected to be collected in FY 2020.

Despite the challenges of FY 2020, liquidity has improved for the agency. At the end of FY 2020, days cash on hand was 113 days, with both Power and Transmission well above the 60 days threshold. Because both the agency and Transmission upper thresholds were exceeded, the Transmission Reserves Distribution Clause has triggered for FY 2021.

The RDC allows the administrator to repurpose financial reserves (that are above the level necessary for the Treasury Payment Probability and the FRP) as debt reduction, incremental capital investment, rate reduction through a dividend distribution, distribution to customers, or any other business line-specific purpose.

Another goal to measure liquidity is maintaining 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 2020 with the $736 million payment being 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 debt-to-asset ratio goal of 75 to 85% within 10 years and 60 to 70% in the long term. At the end of FY 2020, BPA's debt-to-asset ratio was 82%, within the goal range identified in the 2018 Financial Plan. Achieving the near-term goal outlined within the Financial Plan is noteworthy, but there is more work to do. BPA will engage with stakeholders to explore options to achieve the longer-term goal of a 60 to 70% debt-to-asset ratio.

To evaluate debt capacity, BPA has set the goal of preserving $1.5 billion out of $7.70 billion of available financing from the U.S. Treasury. As of Sept. 30, 2020, BPA met this Financial Plan goal with $2.1 billion of available financing from the U.S. Treasury. The overall objective is to ensure a minimum of $1.5 billion of available borrowing authority on a rolling 10-year basis. BPA's latest forecasts show it will fall short of this objective. BPA continues to deploy an "all of the above" strategy to achieve this goal, including starting a regional conversation about additional revenue financing. (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 high investment-grade credit ratings on nonfederal bonds from all three ratings agencies.

All three major ratings agencies (Moody's, Fitch and S&P) continue to rate BPA-backed bonds as high investment-grade.

Fitch Ratings changed BPA's outlook from stable to negative, citing declining reserves combined with the suspension of the FRP surcharge, which is seen as an indicator of intense rate pressure and the magnitude of the COVID-19 impact on the economy in the region. Moody's downgraded BPA's rating from Aa1 with a negative outlook to Aa2 with a stable outlook, citing the agency's decreasing cash on hand and declining availability of U.S. Treasury borrowing authority.

BPA's most recent ratings are:

- Moody's: Aa2 (stable)
- S&P Global: AA- (stable)
- Fitch: AA (negative)

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

FINANCIAL SECTION

Photo by James G.

Photo by Rob 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. The FCRPS fiscal year is from October 1 to September 30.

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 (MD&A) 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.

See Other Operational Matters, COVID-19 Pandemic and Effects on the Bonneville Power Administration, in this MD&A for a short discussion of how BPA is responding to the evolving risks and uncertainties resulting from the COVID-19 pandemic.

Rates and the Effect of Regulations

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% 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 MD&A.)

Rates for Fiscal Years 2020–2021

Rates for the two year BP-20 rate period began on Oct. 1, 2019, and will conclude on Sept. 30, 2021. When compared to the prior rate period, the average transmission rate increase was 3.6%, while the base power rate increase was zero. The base power rate does not include the impact of the Financial Reserves Policy surcharge, which triggered in October 2019 for application to fiscal year 2020 power rates. The surcharge resulted in an average increase of 1.5% to fiscal year 2020 power rates, with a range of 1% to 2% depending on product type. BPA implemented a $30 million power rate surcharge, the maximum allowed under BPA's Financial Reserves Policy, for collection in fiscal year 2020. As described below, BPA in fiscal year 2020 recorded $21 million of revenue from power customers for the fiscal year 2020 Financial Reserves Policy surcharge. As with the 2018-2019 rate period, power and transmission rates also include other rate adjustment mechanisms, such as a Cost Recovery Adjustment Clause (CRAC), that BPA may employ if certain financial conditions occur.

Due to financial hardship experienced by certain customers in the region because of the COVID-19 pandemic, BPA in June 2020 initiated the BP-20E Expedited Rate Proceeding to suspend the Financial Reserves Policy surcharge for the remainder of the BP-20 rate period. On June 29, 2020, BPA issued a final Record of Decision to suspend the Financial Reserves Policy surcharge for the final three months of fiscal year 2020 and all of fiscal year 2021. On July 23, 2020, the Federal Energy Regulatory Commission (FERC) gave interim approval for BPA to suspend the surcharge. BPA ceased collecting the additional $9 million ($3 million per month) for the remainder of fiscal year 2020 and will not collect the $30 million that was expected to be applied to fiscal year 2021 rates based on the forecast fiscal year 2020 year-end power reserve level. Final approval of the surcharge suspension was granted by the FERC on Oct. 8, 2020.

As a result of the BP-20 rate case, management made several accounting and financial statement changes that impacted fiscal year 2020 reporting. For example, the caption Nonfederal projects expense on the Combined Statements of Revenues and Expenses is no longer used. Interest and amortization expense related to nonfederal projects are now reported within Interest expense and Depreciation, amortization and accretion. BPA management prospectively applied the changes made in the BP-20 rate case on Oct. 1, 2019, in accordance with ASC 980, Regulated Operations.

The financial statement impacts of the changes prescribed in the BP-20 rate case are described in the following sections of the Notes to Financial Statements, Note 1, Summary of Significant Accounting Policies: Depreciation, amortization and accretion; Nonfederal generation; Nonfederal projects; Interest expense; Interest income; Other income, net.

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 has sold in fiscal year 2020 declined slightly to 22.4% of the system. In fiscal year 2019, the amount was 22.7%. The Slice percentage for fiscal year 2021 will remain at 22.4%.

Results of Operations

Operating revenues

Fiscal year 2020 revenues compared to fiscal year 2019

A comparison of FCRPS operating revenues follows for the fiscal years ended Sept. 30, 2020, and 2019:

(Millions of dollars)	Fiscal Year 2020	Fiscal Year 2019	Revenue Increase (Decrease)	% Change
Sales				
Consolidated sales				
Power gross sales	$ 2,604.7	$ 2,599.0	$ 5.7	0 %
Transmission	938.3	893.3	45.0	5
Bookouts (Power)	(45.3)	(37.9)	(7.4)	20
Consolidated sales	3,497.7	3,454.4	43.3	1
Other revenues				
Power	39.3	50.4	(11.1)	(22)
Transmission	46.6	48.3	(1.7)	(4)
Other revenues	85.9	98.7	(12.8)	(13)
Sales	3,583.6	3,553.1	30.5	1
U.S. Treasury credits	100.1	102.8	(2.7)	(3)
Total operating revenues	$ 3,683.7	$ 3,655.9	$ 27.8	1

Total operating revenues increased $27.8 million when compared to fiscal year 2019. Sales of Power and Transmission Services, including other revenues and the effect of bookouts, increased $30.5 million.

Power Services gross sales increased $5.7 million.

- Firm power sales decreased $76.0 million. Lower loads for the composite product, which comprises a majority of BPA's firm revenues, led to a $97.0 million decrease. This effect was partially offset by the $21.0 million recorded under the Financial Reserves Policy surcharge that was implemented for fiscal year 2020 rates, but was not available in prior rate periods.

- Surplus power sales, including revenues from derivative instruments settled with physical deliveries, increased $81.7 million. The increase was mainly driven by significantly higher volumes of sales, enabled by favorable water conditions in fiscal year 2020 when compared to fiscal year 2019, particularly in July and August, which allowed BPA to generate and sell surplus power during times of high prices.
- January through July 2020 runoff volume at The Dalles Dam was 102 million acre-feet (maf), an increase of 12 maf from the same period in 2019. 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 2020 volume finished at 126 maf, an increase of 10 maf from fiscal year 2019, and below the historical average (1928-2018) of 134 maf.
- Gross power sales increased to 82,019,081 megawatt-hours in fiscal year 2020 from 74,549,756 megawatt-hours in fiscal year 2019.

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 increased $45.0 million, largely due to the 3.6% average transmission rate increase for fiscal year 2020. In addition, higher 2020 hydro run-off during May through August resulted in increased short-term point-to-point service revenues of $5.3 million.

Other power revenues decreased $11.1 million, of which $7.5 million reflects a decrease in realized gains associated with financial futures trades. BPA uses financial futures contracts on energy as an operational hedge to mitigate for price volatility in the physical energy market. Financial futures contracts are settled financially and not through the delivery of power.

U.S. Treasury credits decreased $2.7 million for fish and wildlife mitigation. Through the fiscal year, BPA records anticipated U.S. Treasury credits earned through the reporting period. At fiscal year-end, BPA calculates and records the annual amount of U.S. Treasury credits earned. For additional information regarding U.S. Treasury credits, see Note 2, Revenue Recognition, in the fiscal year 2020 Notes to Financial Statements.

Operating expenses

Fiscal year 2020 operating expenses compared to fiscal year 2019

A comparison of FCRPS operating expenses follows for the fiscal years ended Sept. 30, 2020, and Sept. 30, 2019:

(Millions of dollars)	Fiscal Year 2020	Fiscal Year 2019	Expense Increase (Decrease)	% Change
Operations and maintenance	$ 2,065.6	$ 2,137.9	$ (72.3)	(3) %
Purchased power	123.7	298.3	(174.6)	(59)
Nonfederal projects	-	232.6	(232.6)	(100)
Depreciation, amortization and accretion	818.8	531.0	287.8	54
Total operating expenses	$ 3,008.1	$ 3,199.8	$ (191.7)	(6)

Total operating expenses decreased $191.7 million when compared to fiscal year 2019.

Operations and maintenance expense decreased $72.3 million, primarily because of the following factors:

- Energy Northwest's Columbia Generating Station nuclear power plant costs decreased $62.6 million because fiscal year 2019 was a refueling year. Refueling occurs biennially, most recently in fiscal year 2019 and refueling and maintenance expenses are higher in refueling years.
- U.S. Army Corps of Engineers operations and maintenance costs decreased $12.7 million largely due to execution delays in non-routine work caused by the COVID-19 pandemic.
- Bureau of Reclamation operations and maintenance costs decreased $8.5 million largely due to a reduction in work performed in fiscal year 2020, primarily as a result of planned reductions to Reclamation's expense budget.
- Contributions for the unfunded post-retirement benefits decreased $11.8 million, primarily as a result of reductions in the cost factors for the Federal Employees' Retirement System, known as FERS. The Office of Personnel Management sponsors these post-retirement benefits and provides annual cost factors that are based on actuarial data and forecasts of future pension costs.
- Residential Exchange Program (REP) payments to investor-owned utilities (IOUs) and consumer-owned utilities (COUs) increased relative to last year by $8.7 million. Aggregate payments to IOUs increased pursuant to the 2012 Residential Exchange Program (REP) Settlement Agreement. Payments to the COUs vary depending on their loads and average system cost filings.
- Various other Power, Transmission and Enterprise Services program costs saw a net increase of approximately $8 million when compared to the same period in the last fiscal year.
- Conservation purchases increased $6.0 million. As part of the Energy Efficiency program, BPA provides its utility customers with funding for approved energy efficiency programs and measures. Energy efficiency program costs can fluctuate within a two-year rate period mainly due to program effectiveness and adoption.

Purchased power expense, including the effects of bookouts, decreased $174.6 million primarily because of the following factors:

- Expenses related to BC Hydro water storage agreements decreased $99.7 million when compared to fiscal year 2019. In the second quarter of fiscal year 2019, high power prices 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. Per terms of the agreements between BPA and BC Hydro, BPA recorded an expense and accrued a liability to BC Hydro for the value of the water released at the prevailing price at time of release. Such conditions did not repeat in fiscal year 2020, leading to much lower purchased power expense.
- Contracted power purchases decreased $35.5 million, which includes the effects of bookouts. BPA's need for purchased power declined in fiscal year 2020, especially during times of high market prices, compared to the same period of fiscal year 2019. In early 2019 during times of high market prices and extremely cold weather, BPA experienced a period of dry weather and low water available for power generation, which led to an increased amount of power purchases.
- BPA made no purchases in fiscal year 2020 to meet preference customers' load growth, which is considered a Tier 2 power obligation. Prior to the BP-20 rate case, BPA was obligated to make power purchases to meet preference customers' long-term load growth due to power purchase contracts that were signed with customers in fiscal years 2012 and 2013. These contracts expired in fiscal year 2019 and are no longer an obligation or necessity, as BPA can meet load growth with power that it would have otherwise sold as surplus power. In fiscal year 2019, BPA had made $41.1 million of such Tier 2 power purchases.

Nonfederal projects expense is zero as a result of changes set forth in the BP-20 rate case and implemented at the start of fiscal year 2020. For further information, see Rates and the Effect of Regulations section in this MD&A.

Depreciation, amortization and accretion increased $287.8 million, primarily because of the following factors:

- Amortization expense related to Columbia Generating Station (CGS) and to regulatory assets for terminated nuclear facilities was $216.1 million, while accretion expense related to CGS was $33.1 million. These expenses resulted from changes set forth in the BP-20 rate case and were implemented at the start of fiscal year 2020. Fiscal year 2020 was the first year that BPA recorded these expenses. For further information on these fiscal year 2020 changes, see Rates and the Effect of Regulations section.
- Amortization expense related to the Terminated I-5 Corridor Reinforcement Project regulatory asset was $26.0 million. Fiscal year 2020 is the first of five years over which this regulatory asset will be amortized.
- Depreciation expense increased $8.8 million, mainly due to an increase in utility plant assets in service.

Interest expense and other income, net

Fiscal year 2020 interest expense and other income, net compared to fiscal year 2019

A comparison of FCRPS interest expense and other income, net follows for the fiscal years ended Sept. 30, 2020, and Sept. 30, 2019:

(Millions of dollars)	Fiscal Year 2020	Fiscal Year 2019	Expense Increase (Decrease)	% Change
Interest expense	$ 467.9	$ 250.8	$ 217.1	87 %
Allowance for funds used during construction	(27.7)	(32.5)	4.8	(15)
Interest income	(3.3)	(9.8)	6.5	(66)
Other income, net	(7.0)	-	(7.0)	(100)
Total interest expense and other income, net	$ 429.9	$ 208.5	$ 221.4	106

Total interest expense and other income, net increased $221.4 million when compared to the same period of fiscal year 2019.

Interest expense increased $217.1 million, primary due to an increase in nonfederal-related interest resulting from changes set forth in the BP-20 rate case and implemented at the start of fiscal year 2020. For further information, see Rates and the Effect of Regulations section.

Other income, net, relates primarily to dividends and net realized gains on investments held in the nonfederal nuclear decommissioning trusts. Income of $12.1 million was partially offset by a $5.1 million loss incurred in June 2020 when certain Port of Morrow lease-purchase liabilities were extinguished via a debt refinancing.

Other Operational Matters

U.S. Treasury liquidity facility

In October 2019, BPA issued $100.0 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 December 2019.

COVID-19 Pandemic and Effects on the Bonneville Power Administration

The COVID-19 pandemic did not materially affect FCRPS net revenues in fiscal year 2020. However, expenses in certain areas such as fish and wildlife, energy efficiency and federal hydro system maintenance were lower than expected due to COVID-19 related delays. Management is planning to increase spending in certain of these areas in fiscal year 2021 to make up for the delays, while keeping total program expense levels by business line at or below what was included in rates for the two-year BP-20 rate period.

Currently there are no significant operational impacts to mission essential functions because of the COVID-19 pandemic. However, at the request of certain customers that were experiencing financial hardship due to the COVID-19 pandemic, BPA suspended the Financial Reserves Policy surcharge for the final three months of fiscal year 2020 and all of fiscal year 2021. (See previous discussion in Rates for Fiscal Years 2020–2021.) In addition, BPA suspended work on non-essential construction projects in fiscal year 2020, primarily in the third quarter, focusing instead on projects that ensure the continued reliability of the transmission grid. Since then, BPA has lessened some of its pandemic-related restrictions, allowing for transmission construction and maintenance work to proceed once more, with the requirement for enhanced COVID-19 safety protocols.

On March 13, 2020, BPA implemented maximum telework operations for non-essential employees and contract personnel and closed its Portland, Vancouver and Spokane facilities to non-essential staff until further notice. BPA continues to fulfill its mission to deliver reliable power and transmission service throughout the region, and management continues to actively monitor and take actions in response to this evolving public health threat under its continuity of operations plans. As of fiscal year end, some operational restrictions have eased to allow access to a facility or worksite for those workers whose jobs cannot be performed remotely. However, the majority of the BPA workforce will remain in a telework status through at least the remainder of the calendar year.

BPA cannot predict the potential impacts of COVID-19, if any, on BPA's future operations or financial results. If the COVID-19 pandemic continues and efforts to contain it are unsuccessful or disrupt BPA's ability to operate, FCRPS financial results could be adversely impacted.

September 2020 Wildfires

The wildfires experienced by certain areas within BPA's service territory did not materially affect FCRPS net revenues in fiscal year 2020.

Deadly wildfires hit parts of the Northwest region in early September. The fires resulted in localized destruction, evacuations and a region wide hazardous blanket of smoke that persisted for nearly two weeks. However, BPA shifted resources and managed priorities to maximize safety and system reliability and help customer utilities who felt the brunt of the wildfires' destruction. Repair or replacement work, largely on certain transmission lines, equipment and to hydropower structures at certain USACE dams, will continue to be recorded to expense or to construction work in progress. Fiscal year 2020 impacts of such work were immaterial, and management expects future amounts to also be immaterial.

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 other items such as the previously described Financial Reserves Policy surcharge 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. BPA will borrow for these deferred amounts as needed for liquidity management.

BPA's financial reserves increased $116.4 million during fiscal year 2020:

(Millions of dollars)	As of Sept. 30, 2020	As of Sept. 30, 2019	Increase (Decrease)	% Change
Cash and cash equivalents	$ 846.5	$ 523.5	$ 323.0	62 %
Less: Cash and cash equivalents held by USACE and Reclamation	330.6	334.7	(4.1)	(1)
Add: Deferred borrowing	373.6	584.3	(210.7)	(36)
BPA financial reserves balance	$ 889.5	$ 773.1	$ 116.4	15

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 2021	Fiscal Year 2022	Fiscal Year 2023
Transmission assets	$ 424	$ 576	$ 612
Federal system hydro generation assets	270	289	306
Fish and wildlife	47	43	43
IT and other assets	20	8	13
Total annual capital forecast	$ 761	$ 916	$ 974

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. In attempts 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, 2020, BPA had $5.65 billion of bonds outstanding to the U.S. Treasury and $2.05 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 phase one, which extended from fiscal year 2014 through September 2020, has been the issuance of new bonds by Energy Northwest to refund outstanding bonds shortly before their maturities when substantial principal repayments were due. Freed-up amounts in the BPA Fund 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 phase one resulted in multiple benefits. Over the life of the program, the weighted-average interest rate and the maturity of BPA's overall debt portfolio have been reduced, resulting in debt service savings of $2.79 billion from 2014 through 2058.

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. The second phase of the Regional Cooperation Debt program is focused on increasing access to available capital. Similar to phase one, the Regional Cooperation Debt program phase two will utilize the issuance of new bonds by Energy Northwest to refund outstanding bonds shortly before their maturities when substantial principal repayments are due. Freed-up amounts in the BPA Fund will be used to either pay off certain bonds issued by BPA to the U.S. Treasury or to directly fund capital expenditures. Bonds issued under phase two will also fund a portion of interest payments related to outstanding Energy Northwest bonds. Freed-up amounts in the BPA Fund as a result of the refinancings will enable BPA to preserve and restore U.S. Treasury borrowing authority, enabling BPA to finance much-needed investments in critical infrastructure.

BPA estimates that Energy Northwest may potentially issue up to $3.5 billion in aggregate future Regional Cooperation Debt phase two bonds in fiscal years 2021 through 2030.

Expense borrowing arrangements by Energy Northwest

Through the continued use of line of credit borrowing arrangements between Energy Northwest and certain banking institutions, BPA has accelerated certain payments on comparatively higher-interest-rate federal obligations. The original program began in fiscal year 2016 and ended in September 2020. During that time, lines of credit were repaid with the funds collected through BPA's rates. Going forward, BPA management intends that lines of credit will be used to fund a portion of Energy Northwest's semi-annual bond coupon payments. Bond proceeds obtained from the Regional Cooperation Debt phase two program will fund the repayment of these lines of credit.

If Energy Northwest did not borrow funds under these line of credit arrangements, BPA would have provided similar funding to Energy Northwest. Under the original program, these amounts are reported as Deferred payments for Energy Northwest-related O&M and interest in the FCRPS Combined Statements of Cash Flows. 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 million line of credit to finance operations and maintenance expenses and interest payments for outstanding bonds related to CGS. In May 2020, BPA funded Energy Northwest's repayment of the entire $227 million owed. This amount is recorded as a repayment of nonfederal debt in the FCRPS Combined Statement of Cash Flows.

In May 2020, Energy Northwest obtained two separate $150 million lines of credit from two banks. These amounts were intended to facilitate the refinancing of maturing bonds and fund interest payments and capital expenditures in case the COVID-19 pandemic prevented Energy Northwest from issuing bonds in spring of

2020 for such purposes. Through Sept. 30, 2020, Energy Northwest had drawn $10 million of the $300 million available.

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 currently include the Port of Morrow, Oregon and the Idaho Energy Resources Authority (IERA), an independent public instrumentality of the state of Idaho. For additional information regarding the Lease-Purchase Program, see Note 8, Debt and Appropriations, in the fiscal year 2020 Notes to Financial Statements.

U.S. Treasury payment

BPA made its U.S. Treasury payment of $735.7 million for fiscal year 2020, the 37th consecutive year in which BPA made its scheduled payment on time and in full. The scheduled principal payment amount below excludes certain U.S. Treasury bond refinancing transactions that occurred during fiscal year 2020, in which BPA extinguished variable-rate-debt and reissued fixed-rate debt to secure low interest rates.

(Millions of dollars)	Fiscal Year 2020	Fiscal Year 2019
Scheduled payment		
Principal	$ 451.0	$ 506.4
Interest	207.6	231.5
Irrigation assistance	24.1	56.0
Other FCRPS costs	32.7	42.7
Scheduled payment	715.4	836.6
Advanced payment		
Principal	20.3	227.1
Total Treasury payment	$ 735.7	$ 1,063.7

The scheduled principal payment included $100.0 million that BPA both borrowed and paid in fiscal year 2020. (See Other Matters section in this Management's Discussion and Analysis.)

The fiscal year 2020 payment also included an unscheduled advance payment of $20.3 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 payments 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 6, Asset Retirement Obligations; Note 8, Debt and Appropriations; and Note 10, Residential Exchange Program. Irrigation assistance is described in Note 14, Commitments and Contingencies.

Fiscal years: *(Millions of dollars)*	2021	2022	2023	2024	2025	2026+	Total
Nonfederal debt	$ 1,289	$ 757	$ 751	$ 761	$ 833	$ 5,407	$ 9,798
Borrowings from U.S. Treasury	812	429	395	342	298	5,292	7,568
Federal appropriations	43	43	43	43	43	2,788	3,003
IOU exchange benefits	245	259	259	274	274	858	2,169
Asset retirement obligations	6	6	7	7	7	272	305
Irrigation assistance	22	16	13	8	13	209	281
Total	$ 2,417	$ 1,510	$ 1,468	$ 1,435	$ 1,468	$ 14,826	$ 23,124

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

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. 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 balance sheets as of September 30, 2020 and 2019, and the related combined statements of revenues and expenses and of cash flows for each of the three years in the period ended September 30, 2020.

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, 2020 and 2019, and the results of its operations and its cash flows for the three years in the period ended September 30, 2020 in accordance with accounting principles generally accepted in the United States of America.

Emphasis of Matter

As discussed in Note 1 to the combined financial statements, the FCRPS changed the manner in which it accounts for leases in fiscal year 2020 and 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

PricewaterhouseCoopers LLP
October 30, 2020

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

(Millions of Dollars)

	2020	2019
Assets		
Utility plant and nonfederal generation		
Completed plant	**$ 20,499.4**	$ 19,894.9
Accumulated depreciation	**(7,507.9)**	(7,179.5)
Net completed plant	**12,991.5**	12,715.4
Construction work in progress	**1,151.0**	1,248.2
Net utility plant	**14,142.5**	13,963.6
Nonfederal generation	**3,543.3**	3,774.3
Net utility plant and nonfederal generation	**17,685.8**	17,737.9
Current assets		
Cash and cash equivalents	**846.5**	523.5
Accounts receivable, net of allowance	**50.5**	40.3
Accrued unbilled revenues	**299.1**	294.1
Materials and supplies, at average cost	**107.1**	106.5
Prepaid expenses	**36.4**	31.0
Total current assets	**1,339.6**	995.4
Other assets		
Regulatory assets	**5,018.9**	5,292.1
Nonfederal nuclear decommissioning trusts	**405.4**	391.6
Deferred charges and other	**209.2**	140.9
Total other assets	**5,633.5**	5,824.6
Total assets	**$ 24,658.9**	$ 24,557.9

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)

		2020		2019
Capitalization and Liabilities				
Capitalization and long-term liabilities				
Accumulated net revenues	**$**	**4,537.0**	$	4,315.4
Debt				
Federal appropriations		**1,544.0**		1,595.2
Borrowings from U.S. Treasury		**4,982.6**		4,850.6
Nonfederal debt		**6,348.9**		6,701.7
Total capitalization and long-term liabilities		**17,412.5**		17,462.9
Commitments and contingencies (Note 14)				
Current liabilities				
Debt				
Borrowings from U.S. Treasury		**666.0**		429.0
Nonfederal debt		**971.4**		891.6
Accounts payable and other		**559.3**		551.6
Total current liabilities		**2,196.7**		1,872.2
Other liabilities				
Regulatory liabilities		**1,649.7**		1,804.5
IOU exchange benefits		**1,910.4**		2,092.8
Asset retirement obligations		**890.7**		821.2
Deferred credits and other		**598.9**		504.3
Total other liabilities		**5,049.7**		5,222.8
Total capitalization and liabilities	**$**	**24,658.9**	$	24,557.9

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)

	2020	2019	2018
Operating revenues			
Sales	**$ 3,583.6**	$ 3,553.1	$ 3,635.6
U.S. Treasury credits	**100.1**	102.8	74.7
Total operating revenues	**3,683.7**	3,655.9	3,710.3
Operating expenses			
Operations and maintenance	**2,065.6**	2,137.9	2,098.7
Purchased power	**123.7**	298.3	159.5
Nonfederal projects	**-**	232.6	266.9
Depreciation, amortization and accretion	**818.8**	531.0	507.3
Total operating expenses	**3,008.1**	3,199.8	3,032.4
Net operating revenues	**675.6**	456.1	677.9
Interest expense and other income, net			
Interest expense	**467.9**	250.8	245.1
Allowance for funds used during construction	**(27.7)**	(32.5)	(31.5)
Interest income	**(3.3)**	(9.8)	(6.3)
Other income, net	**(7.0)**	-	-
Total interest expense and other income, net	**429.9**	208.5	207.3
Net revenues	**245.7**	247.6	470.6
Accumulated net revenues, beginning of year	**4,315.4**	4,123.8	3,680.4
Irrigation assistance	**(24.1)**	(56.0)	(27.2)
Accumulated net revenues, end of year	**$ 4,537.0**	$ 4,315.4	$ 4,123.8

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)

	2020	2019	2018
Cash flows from operating activities			
Net revenues	$ **245.7**	$ 247.6	$ 470.6
Adjustments to reconcile net revenues to cash provided by operations:			
Depreciation, amortization and accretion	**818.8**	531.0	507.3
Amortization of nonfederal projects	**-**	181.4	199.5
Deferred payments for Energy Northwest-related O&M and interest	**10.0**	227.0	141.0
Other	**6.8**	-	-
Changes in:			
Receivables and unbilled revenues	**(15.2)**	33.2	(21.9)
Materials and supplies	**(0.6)**	2.6	2.9
Prepaid expenses	**(5.4)**	17.2	6.9
Accounts payable and other	**115.0**	32.6	7.2
Regulatory assets and liabilities	**(25.9)**	67.1	50.8
IOU exchange benefits	**(182.4)**	(163.9)	(159.0)
Other assets and liabilities	**5.5**	(38.2)	(3.5)
Net cash provided by operating activities	**972.3**	1,137.6	1,201.8
Cash flows from investing activities			
Investment in utility plant, including AFUDC	**(587.6)**	(634.8)	(704.3)
Proceeds from sale of utility plant	**8.6**	-	-
U.S. Treasury securities:			
Purchases	**-**	(110.0)	(332.1)
Maturities	**-**	150.0	322.0
Deposits to nonfederal nuclear decommissioning trusts	**(4.1)**	(3.9)	(3.8)
Lease-purchase trust funds:			
Deposits to	**(71.0)**	-	(9.6)
Receipts from	**110.2**	43.3	58.9
Net cash used for investing activities	**(543.9)**	(555.4)	(668.9)
Cash flows from financing activities			
Federal appropriations:			
Proceeds	**24.1**	31.0	44.2
Repayment	**(75.3)**	(227.5)	(281.9)
Borrowings from U.S. Treasury:			
Proceeds	**1,757.0**	255.0	809.0
Repayment	**(1,388.0)**	(506.0)	(287.1)
Nonfederal debt:			
Proceeds	**71.2**	4.0	30.6
Repayment	**(470.0)**	(379.5)	(677.5)
Debt extinguishment costs	**(5.1)**	-	-
Customers:			
Net advances for construction	**20.2**	29.9	80.5
Repayment of funds used for construction	**(15.8)**	(14.6)	(17.8)
Irrigation assistance	**(24.1)**	(56.0)	(27.2)
Net cash used for financing activities	**(105.8)**	(863.7)	(327.2)
Net increase (decrease) in cash, cash equivalents and restricted cash	**322.6**	(281.5)	205.7
Cash, cash equivalents and restricted cash at beginning of year	**534.9**	816.4	610.7
Cash, cash equivalents and restricted cash at end of year	$ **857.5**	$ 534.9	$ 816.4
Less: Restricted cash and cash equivalents at end of year	**11.0**	11.4	12.2
Cash and cash equivalents at end of year	$ **846.5**	$ 523.5	$ 804.2
Supplemental disclosures:			
Cash paid for interest, net of amount capitalized	$ **440.2**	$ 284.3	$ 275.7
Significant noncash investing and financing activities:			
Nonfederal debt increase	$ **916.2**	$ 753.5	$ 1,257.8
Nonfederal debt decrease	$ **(785.8)**	$ (494.4)	$ (1,163.5)
Nonfederal debt cost of issuance	$ **(4.6)**	$ -	$ -
Increase in Nonfederal generation asset	$ **-**	$ 594.8	$ -

Captions from the prior period have been combined for comparability with the current period.

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 8, Debt and Appropriations, and Note 9, 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 5, Effects of Regulation.)

Rates for fiscal years 2020-2021

Rates for the two year BP-20 rate period began on Oct. 1, 2019, and will conclude on Sept. 30, 2021. On Oct. 1, 2021, new rates for fiscal years 2022-2023 will go into effect. During the BP-20 rate case, the actions to recover and the treatment of ongoing deferrals of certain regulatory assets and liabilities were changed. As a result of the BP-20 rate case, the manner in which certain current costs or credits were included in rates for recovery or refund over future periods, and the method of recovery or refund of certain amounts that were previously deferred were changed. These changes were made to align rate treatment across all FCRPS generating assets and related debt. Additionally, during the BP-20 rate case it was decided to no longer defer the expenses and realized income related to the Columbia Generating Station (CGS) asset retirement obligation (ARO) and decommissioning trust fund as regulatory assets and liabilities. In the BP-20 rate case, realized gains and losses on the CGS decommissioning trust fund assets were included as a component of the revenue requirement, and thus are no longer deferred. In accordance with Accounting Standards Codification (ASC) 980, Regulated Operations, BPA applies regulatory accounting to account for actions of the regulator.

The financial statement impacts of the changes prescribed in the BP-20 rate case are described in the following sections of this Note 1: Depreciation, amortization and accretion; Nonfederal generation; Nonfederal projects; Interest expense; Interest income; Other income, net. BPA management prospectively applied the changes made in the BP-20 rate case on Oct. 1, 2019, in accordance with ASC 980, Regulated Operations.

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, amortization and accretion

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 5, Effects of Regulation.)

Amortization expense relates to nonfederal generation assets, certain regulatory assets and finance lease right-of-use assets. (See Note 3, Utility Plant, Note 5, Effects of Regulation and Note 4, Leases.)

Accretion expense is recorded in connection with a periodic increase to the CGS ARO liability to reflect the passage of time. Fiscal year 2020 is the first year that accretion expense has been recorded in the Combined Statements of Revenues and Expenses. Prior to fiscal year 2020, accretion expense was deferred as a reduction to a regulatory liability. For further discussion of these fiscal year 2020 changes, see Rates for fiscal years 2020-2021 in this Note 1.

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 7, 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 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 expense for these projects are recognized based upon annual total project cash funding requirements, which vary from year to year.

Beginning in fiscal year 2020 as a result of actions within the BP-20 rate case, the Nonfederal generation assets on the Combined Balance Sheets are amortized on a straight-line basis through their respective license termination dates, with the amortization expense included in Depreciation, amortization and accretion in the Combined Statements of Revenues and Expenses. Prior to fiscal year 2020, the Nonfederal generation assets were amortized over the terms of the related outstanding nonfederal debt, with the amortization expense included in Nonfederal projects in the Combined Statements of Revenues and Expenses. (See Note 8, 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 original maturities of 90 days or less at the date of investment. The carrying value of cash and cash equivalents approximates fair value.

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 2020, 2019 and 2018, 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 12, 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. For the allowance as of Sept. 30, 2020, management considered the effects of the COVID-19 pandemic. 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 12, 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 12, Risk Management and Derivative Instruments and Note 13, Fair Value Measurements.)

Operating revenues and net revenues

Sales 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

Beginning in fiscal year 2020 the Nonfederal projects caption in the Combined Statements of Revenues and Expenses is no longer used. Prior to fiscal year 2020, nonfederal projects expense included the amortization of nonfederal generation assets and regulatory assets for terminated nonfederal generation assets, including nuclear and hydro facilities. This expense also included the interest expense on the debt related to those assets. The nonfederal projects expense varied from year to year and was recognized over the terms of the related outstanding debt, which reflected refinancing actions, if any, undertaken during the fiscal year. For further discussion of these fiscal year 2020 changes, see Rates for fiscal years 2020-2021 in this Note 1.

Interest expense

Interest expense includes interest associated with nonfederal debt related to operating or terminated nonfederal generation assets, bonds issued by BPA to the U.S. Treasury, the unpaid balance of federal appropriations scheduled for repayment, and other nonfederal debt and certain liabilities. In addition, interest expense includes the amortization of bond premiums, discounts and costs of issuance. Reductions to interest expense include the amortization of a capitalization adjustment regulatory liability. (See Note 5, Effects of Regulation.) Prior to fiscal year 2020, interest expense on nonfederal debt related to operating or terminated nonfederal generation assets was reported as a component of nonfederal projects expense. (See Note 8, Debt and Appropriations.) For further discussion of these fiscal year 2020 changes, see Rates for fiscal years 2020-2021 in this Note 1.

Interest income

Interest income includes interest earnings on market-based special securities in the Bonneville Fund and interest earnings from other sources.

Other income, net

Beginning with fiscal year 2020, Other income, net primarily includes dividend income and realized gains and losses associated with the nonfederal nuclear decommissioning trusts for CGS. For further discussion of these fiscal year 2020 changes, see Rates for fiscal years 2020-2021 in this Note 1. In addition, losses incurred because of early debt extinguishment are recorded to this caption.

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 10, 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 Employees 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

Fair Value

In August 2018, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (ASU) 2018-13, “Changes to the Disclosure Requirements for Fair Value Measurement”, which eliminated, modified and added new disclosure requirements to Topic 820 “Fair Value Measurement.” Management has determined there are no material impacts to the FCRPS financial statements or disclosures as a result of adopting this guidance, which became effective Oct. 1, 2020.

Cloud Computing

In August 2018, the FASB issued ASU 2018-15, “Customer’s Accounting for Implementation Costs Incurred in a Cloud Computing Arrangement That Is a Service Contract”, providing new guidance for capitalizing implementation costs incurred in a cloud computing arrangement that is a service contract. These costs are considered in the same manner as accounting for implementation costs incurred to develop or obtain internal-use software. Management has determined there are no material impacts to the FCRPS financial statements or disclosures as a result of adopting this guidance, which became effective Oct. 1, 2020.

RECENTLY ADOPTED ACCOUNTING PRONOUNCEMENTS

Leases

In February 2016, the FASB issued ASU 2016-02, “Leases (Topic 842)”, which supersedes existing 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 had previously not been recognized on the balance sheet until this guidance and later amendments became effective. 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 “Leases” effective Oct. 1, 2019. Management elected the modified retrospective approach allowing 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 practical 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 billion of capital lease obligations to debt as these arrangements no longer meet the definition of a lease under ASC 842. As both items are reported as Nonfederal debt on the Combined Balance Sheets, this reclassification affects disclosure only, as shown in Note 8, Debt and Appropriations. Other effects of adopting this guidance are (ii) recognition on the Combined Balance Sheets of right-of-use assets and lease liabilities for operating leases of approximately $42 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 $49 million build-to-suit, construction work in progress asset, now recorded in completed plant, and $49 million of an associated other financial liability, which is now recorded among nonfederal debt.

The impact of adopting this guidance was immaterial to the Combined Statements of Revenue and Expenses and the Combined Statements of Cash Flows. Additional disclosures around the nature of leased assets and liabilities can be found in Note 4, Leases.

Revenue from contracts with customers

In May 2014, the FASB issued ASU 2014-09, "Revenue from Contracts with Customers (Topic 606)", which supersedes existing revenue recognition guidance, including most industry-specific guidance. Management adopted Topic 606 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.

SUBSEQUENT EVENTS

Management has performed an evaluation of events and transactions for potential FCRPS recognition or disclosure through Oct. 30, 2020, which is the date the financial statements were issued.

2. Revenue Recognition

DISAGGREGATED REVENUE

Twelve months ended Sept. 30 - millions of dollars	2020	2019
Sales		
Power		
Firm	$ 2,113.7	$ 2,189.7
Surplus[1]	445.7	371.4
Transmission	938.3	893.3
Other[2]	85.9	98.7
Sales	$ 3,583.6	$ 3,553.1
U.S. Treasury credits[3]	100.1	102.8
Total operating revenues[4]	$ 3,683.7	$ 3,655.9

[1] Surplus revenue includes $198.5 million and $170.1 million of derivative commodity contracts and related operational hedging activity for fiscal years 2020 and 2019, respectively, which are not considered revenue from contracts with customers under ASC 606. For further information, see additional disclosure below.
[2] Other revenue includes $24.1 million and $18.2 million for fiscal years 2020 and 2019, respectively, that are not classified as revenue from contracts with customers under ASC 606. For further information, see additional disclosure below.
[3] U.S. Treasury credits are not classified as revenue from contracts with customers under ASC 606. For further information, see additional disclosure below.
[4] Revenue from contracts with customers was $3,361.0 million and $3,364.8 million for fiscal years 2020 and 2019, respectively.

SALES

A substantial majority of FCRPS revenues is from rate-regulated sales of power and transmission products and services. All revenues are from contracts with customers except for U.S. Treasury credits, derivatives and certain other revenues as shown in the table above. 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 years 2020 and 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 and capacity 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.

Also included within Surplus sales are revenues from derivative commodity contracts in scope of ASC 815, Derivatives and Hedging, which are not considered revenue from contracts with customers under ASC 606. Derivative revenues are reported net of bookouts and primarily source from certain secondary power contracts that involve derivative instruments. (For further information on derivatives, see Note 1, Summary of Significant Accounting Policies, and Note 12, Risk Management and Derivative Instruments.)

“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.

Also included within other revenues are the following types of revenue not with customers: leasing fees that BPA receives as the lessor of certain fiber optic cables and other assets, revenue from deferred project revenue funded in advance, which is recognized over the life of the corresponding transmission assets once placed in service; and realized gains on financial futures contracts. (See Note 11, Deferred Credits and Other for further information on deferred project revenue funded in advance.)

U.S. TREASURY CREDITS

U.S. Treasury credits represent BPA's recovery of certain nonpower-related costs 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 Northwest Power Act. This Act requires BPA to recover the nonpower portion of expenditures—set at 22.3%—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		2020		2019
Receivable assets				
Accounts receivable, net of allowance	$	50.5	$	40.3
Accrued unbilled revenues		299.1		294.1
Contract liabilities				
Customer prepaid power purchases	$	207.5	$	228.2
Third AC Intertie capacity agreements		91.8		93.9
Unearned revenue from customer deposits		26.4		32.5
Revenue recognized during the fiscal year from amounts included in contract liabilities at the beginning of the year	$	87.0	$	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 8, Debt and Appropriations, for further information on customer prepaid power purchases, and Note 11, Deferred Credits and Other, for further information on Third AC Intertie capacity agreements and unearned revenue from customer deposits.)

3. Utility Plant and Nonfederal Generation

As of Sept. 30 — millions of dollars	2020	2019	2020 Estimated average service lives
Completed plant			
Federal system hydro generation assets	$ 9,837.1	$ 9,545.1	75 years
Transmission assets	10,529.6	10,207.0	51 years
Other assets	132.7	142.8	7 years
Completed plant	$ 20,499.4	$ 19,894.9	
Accumulated depreciation			
Federal system hydro generation assets	$ (3,739.0)	$ (3,609.9)	
Transmission assets	(3,684.9)	(3,493.9)	
Other assets	(84.0)	(75.7)	
Accumulated depreciation	$ (7,507.9)	$ (7,179.5)	
Construction work in progress			
Federal system hydro generation assets	$ 512.7	$ 619.2	
Transmission assets	608.3	613.9	
Other assets	30.0	15.1	
Construction work in progress	$ 1,151.0	$ 1,248.2	
Nonfederal generation	$ 3,543.3	$ 3,774.3	
Net utility plant and nonfederal generation	$ 17,685.8	$ 17,737.9	

Allowance for funds used during construction

Fiscal year	2020	2019	2018
BPA rate	3.0%	3.2%	3.1%
Appropriated rate	1.8%	2.5%	1.3%

Upon adoption of ASC 842 in fiscal year 2020, management records finance lease right-of-use assets within completed plant assets. At Sept. 30, 2019, completed plant assets included transmission capital lease assets of $1.94 billion, with accumulated depreciation of $191.7 million.

4. Leases

An arrangement contains a lease if a lessee has the right to control an identified asset for a period of time in exchange for consideration. At contract inception, management determines whether an arrangement contains a lease and lease classification, if applicable. At the lease commencement date, lease right-of-use (ROU) assets and lease liabilities are recorded based upon the present value of lease payments over the lease term, including initial direct costs, if any. If a contract provides an implicit rate it is used to determine the present value of future lease payments. If a contract does not provide an implicit rate, management uses the incremental borrowing rate available at lease commencement. Operating lease ROU assets include any lease payments made at or before the commencement date and exclude lease incentives.

Certain lease arrangements contain renewal or early termination options. If management is reasonably certain to exercise these options they are included in the calculation of the ROU asset and lease liability by incorporating the option into the lease term. Certain renewal options include an adjustment to future lease cost based upon various factors, such as pre-determined percentage increases, the Consumer Price Index, or other methods. Management has also elected to account for arrangements with lease and non-lease components as a single lease component.

Operating leases are primarily for office spaces and leased vehicles. Operating lease terms range from 1 to 39 years. Finance leases are primarily for transmission lines and equipment. Finance lease terms range from 5 to 67.5 years. There were no material lessor arrangements as of Sept. 30, 2020.

The following table provides supplemental balance sheet information related to leases:

As of Sept. 30 — millions of dollars	Financial Statement Line Item		2020
Operating leases			
ROU assets	Deferred charges and other	$	115.2
Short-term lease liability	Accounts payable and other		18.0
Long-term lease liability	Deferred credits and other		97.2
Finance leases			
ROU assets	Completed plant		85.1
Short-term lease liability	Nonfederal debt		1.5
Long-term lease liability	Nonfederal debt		87.4

The following table provides supplemental expense information related to total lease costs:

As of Sept. 30 — millions of dollars	Financial Statement Line Item		2020
Operating lease cost[1]	Operations and maintenance	$	15.9
Finance lease cost:			
Amortization of ROU assets	Depreciation, amortization and accretion		2.3
Interest on lease liabilities	Interest expense		4.1
Total lease costs		$	22.3

[1]Includes variable lease costs, which were immaterial for the fiscal year ended Sept. 30, 2020.

	Weighted-average remaining lease term	Weighted-average discount rate
Operating leases	8.7 years	3.0%
Finance leases	56.6 years	5.6%

The following provides supplemental cash flow information related to leases:

Twelve months ended Sept. 30 - millions of dollars		2020
Cash paid for amounts included in the measurement of lease liabilities		
Operating cash outflows:		
Operating lease payments	$	15.9
Interest on finance leases		4.1
Financing cash outflows:		
Principal payments on finance lease		1.7
Right-of-use assets obtained in exchange for new lease obligations		
Operating leases		115.2
Finance leases		74.1

The following tables provide maturities of operating lease liabilities:

As of Sept. 30 - millions of dollars		2020
2021	$	18.9
2022		18.3
2023		16.7
2024		13.0
2025		10.4
2026 and thereafter		53.5
Total undiscounted lease liabilities		130.8
Less: Amounts representing interest		15.6
Total lease liabilities	$	115.2

As of Sept. 30 - millions of dollars		2019
2020	$	15.9
2021		8.9
2022		8.3
2023		6.6
2024		3.0
2025 and thereafter		3.8
Total undiscounted lease liabilities		46.5
Less: Amounts representing interest		4.3
Total lease liabilities	$	42.2

See Note 8, Debt and Appropriations, for finance lease maturity analysis.

5. Effects of Regulation

REGULATORY ASSETS

As of Sept. 30 — millions of dollars	2020	2019
IOU exchange benefits	$ 1,910.4	$ 2,092.8
Terminated nuclear facilities	1,636.6	1,706.4
Columbia River Fish Mitigation	772.0	768.8
Fish and wildlife measures	247.6	242.6
Conservation measures	165.4	207.5
Terminated I-5 Corridor Reinforcement Project	104.0	130.0
Trojan decommissioning and site restoration	76.1	37.7
Spacer damper replacement program	43.0	43.6
Legal claims and settlements	23.0	23.0
Federal Employees' Compensation Act	22.3	21.6
Terminated hydro facilities	8.0	8.7
Derivative instruments	5.4	3.3
Other	5.1	6.1
Total	$ 5,018.9	$ 5,292.1

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 10, 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. Beginning in fiscal year 2020, these assets are amortized to depreciation, amortization and accretion through 2043, as established in the rate case. Prior to fiscal year 2020, these assets were amortized to nonfederal projects expense over the term of the related outstanding debt. (See Note 8, 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, amortization and accretion 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, amortization and accretion 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, amortization and accretion 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 are amortized to depreciation, amortization and accretion expense over a period of five 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 6, Asset Retirement Obligations.)

"**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, amortization and accretion expense over a period of 25 or 30 years.

"**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 7, 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. Beginning in fiscal year 2020, these assets are amortized to depreciation, amortization and accretion through 2025, as established in the rate case. Prior to fiscal year 2020, these assets were amortized to nonfederal projects expense over the term of the related outstanding debt. (See Note 8, 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 12, Risk Management and Derivative Instruments.)

REGULATORY LIABILITIES

As of Sept. 30 — millions of dollars	2020	2019
Capitalization adjustment	$ 1,017.7	$ 1,082.6
Accumulated plant removal costs	533.8	491.0
Decommissioning and site restoration	90.0	205.6
Derivative instruments	8.2	25.3
Total	$ 1,649.7	$ 1,804.5

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, 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 2020, 2019 and 2018.

"**Accumulated plant removal costs**" represent a liability for amounts previously collected through rates as part of depreciation expense. The liability increases as depreciation expense is incurred and is reduced as actual costs of removal, net of proceeds, are incurred. (See Note 1, Summary of Significant Accounting Policies.)

"**Decommissioning and site restoration**" represents unrealized gains in the nonfederal nuclear decommissioning trust assets as well as realized earnings and interest income offset by accretion expense related to the ARO for Energy Northwest Projects 1 and 4. Prior to fiscal year 2020, this liability represented contributions made in excess of the ARO liability for the related nonfederal nuclear decommissioning trusts as well as realized and unrealized 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 6, 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 12, Risk Management and Derivative Instruments.)

6. Asset Retirement Obligations

As of Sept. 30 — millions of dollars	2020	2019
Beginning Balance	$ 821.2	$ 208.0
Activities:		
Accretion	34.9	22.3
Expenditures	(3.0)	(3.9)
Revisions	37.6	594.8
Ending Balance	$ 890.7	$ 821.2

AROs represent the legal obligations associated with the future retirement of certain tangible, long-lived assets. FCRPS AROs are recognized based on the estimated fair value of the dismantlement and restoration costs associated with the retirement of the Columbia Generating Station, and 30% share of the former Trojan nuclear power plant decommissioning activities.

The Columbia Generating Station (CGS) is a nonfederal nuclear power plant owned and operated by Energy Northwest, a joint operating agency of the state of Washington. ARO liabilities are 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 in fiscal year 2019.

Based on agreements in place, BPA directly funds Eugene Water and Electric Board's 30% share of the former Trojan nuclear power plant decommissioning activities that consist of long-term operation and decommissioning of the Independent Spent Fuel Installation (ISFSI). BPA funds these costs through current rates, with the expenses included in Operations and maintenance in the Combined Statements of Revenues and Expenses. Trojan decommissioning primarily relates to the storage of spent nuclear fuel through 2059 at the former nuclear plant site. Decommissioning of the ISFSI and final site restoration activities is not expected to occur before 2059, which is the year the Nuclear Regulatory Commission extended the fuel storage license through. This liability increased because the Nuclear Regulatory Commission (NRC) extended the license to store nuclear fuel at the site until 2059. As a result of this extension, BPA management revised the liability by approximately $38 million in fiscal year 2020.

Based on a prior settlement agreement with the DOE, BPA receives an annual reimbursement for certain costs related to monitoring the spent nuclear fuel. BPA reduces operations and maintenance expense when it receives the reimbursement, which was $1.3 million in fiscal year 2020, and $1.2 million in fiscal years 2019 and 2018.

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	2020	2019
CGS decommissioning and site restoration	$ 813.7	$ 781.5
Trojan decommissioning	76.1	37.7
Energy Northwest Projects 1 and 4 site restoration	0.9	2.0
Total	$ 890.7	$ 821.2

NONFEDERAL NUCLEAR DECOMMISSIONING TRUSTS

As of Sept. 30 — millions of dollars	2020		2019	
	Amortized cost	Fair value	Amortized cost	Fair value
Equity index funds	$ 248.4	$ 306.8	$ 228.8	$ 289.9
Bond index funds	51.0	54.0	53.3	54.4
U.S. government obligation mutual funds	26.2	26.2	18.8	18.0
Cash and cash equivalents	17.7	18.4	29.3	29.3
Total	$ 343.3	$ 405.4	$ 330.2	$ 391.6

These assets represent trust fund account balances for decommissioning and site restoration costs, primarily for CGS but also for Energy Northwest Projects 1 and 4. External trust fund accounts for decommissioning and site restoration costs for CGS are funded monthly, with these contributions recorded as an increase to the trust fund asset. Prior to fiscal year 2020, these amounts were charged to operations and maintenance expense. The CGS 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. Beginning in fiscal year 2020, unrealized gains and losses are recorded to a regulatory liability or regulatory asset, respectively. Realized gains and losses for CGS are recorded to Other income, net in the Combined Statements of Revenues and Expenses, and were factored into the determination of fiscal year 2020 rates. Realized gains and losses for Energy Northwest Projects 1 and 4 are recorded to a regulatory liability. Prior to fiscal year 2020, net unrealized and realized gains and losses on these investment securities were recognized as adjustments to the related regulatory liability. (See Note 5, Effects of Regulation.)

Contribution payments to the CGS trust fund accounts for fiscal years 2020, 2019 and 2018 were $4.1 million, $3.9 million and $3.8 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.

7. Deferred Charges and Other

As of Sept. 30 — millions of dollars	2020	2019
Operating leases	$ 115.2	$ —
Lease-Purchase trust funds	43.9	74.6
Funding agreements	23.3	22.3
Spectrum Relocation Fund	11.0	11.4
Derivative instruments	8.2	25.3
Other	7.6	7.3
Total	$ 209.2	$ 140.9

Deferred Charges and Other include the following items:

"**Operating leases**" represent right-of-use assets that are amortized to operations and maintenance expense over the term of the related leases. (See Note 4, Leases.)

"**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 8, 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. At the time of debt extinguishment, unspent trust funds under a particular line of credit are used to repay the related lease-purchase debt and associated debt extinguishment costs for that line of credit.

Investments classified as trading were $16.4 million and $53.9 million, and those classified as held to maturity were $19.4 million and $19.5 million, at Sept. 30, 2020, and 2019, respectively. Trading investments are held for construction purposes and are stated at fair value based on quoted market prices. (See Note 13, Fair Value Measurements.) As of Sept. 30, 2020, and 2019, trust balances also included cash and cash equivalents of $8.1 million and $1.2 million, respectively.

"**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 source of restricted cash reported on the Combined Statements of Cash Flows.

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

8. Debt and Appropriations

As of Sept. 30 — millions of dollars		2020		2019	
	Terms	Carrying Value	Weighted-Average Interest Rate	Carrying Value	Weighted-Average Interest Rate
Nonfederal debt					
Nonfederal generation:					
Columbia Generating Station	1.2 – 6.8% through 2044	$ 3,129.9	4.6%	$ 3,365.0	4.4%
Cowlitz Falls Hydro Project	4.0 – 5.3% through 2032	64.6	5.4	68.5	5.1
Terminated nonfederal generation:					
Nuclear Project 1	1.2 – 5.0% through 2028	792.1	4.9	794.3	5.0
Nuclear Project 3	2.9. – 5.0% through 2028	912.0	5.0	912.7	5.0
Northern Wasco Hydro Project	3.0 – 5.0% through 2024	8.4	4.8	9.9	4.4
Lease-Purchase Program:					
Capital lease obligations[1]		—	—	2,009.9	2.7
Lease-purchase liability	1.8 – 3.7% through 2042	1,979.1	2.7	—	—
NIFC debt	5.5% through 2034	118.9	5.5	118.9	5.5
Other capital lease obligations[2]		—	—	36.7	4.9
Finance lease liability	3.2 – 6.9% through 2087	88.9	5.6	—	—
Other financial liability[3]	3.4 – 4.6% through 2043	18.9	3.5	49.2	5.6
Customer prepaid power purchases	4.3 – 4.6% through 2028	207.5	4.5	228.2	4.5
Total Nonfederal debt		$ 7,320.3	4.2%	$ 7,593.3	4.1%
Federal debt and appropriations					
Borrowings from U.S. Treasury	0.1 – 5.9% through 2050	$ 5,648.6	2.6%	$ 5,279.6	3.2%
Federal appropriations	2.1 – 4.5% through 2070	1,213.5	3.5	1,182.8	3.7
Federal appropriations (not scheduled for repayment)		330.5	n/a	412.4	n/a
Total Federal debt and appropriations		$ 7,192.6	2.8%	$ 6,874.8	3.3%
Total debt and appropriations		$ 14,512.9	3.5%	$ 14,468.1	3.7%

BPA management elected to adopt fiscal year 2020 lease accounting guidance under the modified retrospective method. As such, management did not restate the fiscal year 2019 presentation of lease-related obligations and debt. The following footnotes clarify the presentation transition from fiscal year 2019 to 2020 for the following fiscal year 2019 liabilities in this table.

[1] 2019 Capital lease obligations are presented as Lease-purchase liability ($2,009.9 million) in fiscal year 2020. These contracts fail to meet the definition of a lease under ASC 842 lease guidance, because management has determined that BPA controls the related assets during construction, and the existence of a purchase option within the contracts prevents the transaction from qualifying for sale treatment under the sale and leaseback accounting model.

[2] 2019 Other capital lease obligations are presented as Other financial liability ($20.2 million) and Finance lease liability ($16.5 million) in fiscal year 2020. ASC 842 removed the capital lease classification, and amounts previously classified as Other capital lease obligations were reclassified as Other financial liability or Finance lease liability based upon if they meet the definition of a finance lease under ASC 842.

[3] Other financial liability for fiscal year 2019 ($49.2 million) is presented as Finance lease liability in fiscal year 2020. Construction per terms of these agreements ended in fiscal year 2020, at which time BPA derecognized the existing other financial liability. At the commencement date BPA recorded a finance lease liability for these agreements.

NONFEDERAL DEBT

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 certain expenses for these nonfederal generation and terminated nonfederal generation projects based on annual total project cash funding requirements, which include interest expense and operating and maintenance expense. BPA recognized operating and maintenance expense for these projects of $267.6 million, $328.8 million and $272.5 million in fiscal years 2020, 2019 and 2018, respectively, which is included in Operations and maintenance in the Combined Statements of Revenues and Expenses. (See Note 1, Summary of Significant Accounting Policies, Interest expense section, for further discussion of interest expense and the nonfederal projects expense, which is no longer reported beginning with fiscal year 2020.) On the Combined Balance Sheets, related assets for CGS and the Cowlitz Falls Hydroelectric Project are included in Nonfederal generation. Related assets for terminated nonfederal generation are included in Regulatory assets. (See Note 5, 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 2020 and 2019 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 2020 and 2019.

Energy Northwest debt of $2.60 billion is callable, in whole or in part, at Energy Northwest's option, on call dates between July 2021 and July 2030 at 100% of the principal amount.

Borrowings by Energy Northwest for expense-related purposes

As of Sept. 30 — millions of dollars	2020	2019
Amounts outstanding[1]	$ 10.0	$ 227.0
Approximate variable interest rate	2.3%	2.3%

[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 8, Debt and Appropriations.

In fiscal year 2020, Energy Northwest obtained two line-of-credit borrowing arrangements from banking institutions in an aggregate amount of $300 million. Amounts made available under the lines of credit do not become an FCRPS liability until drawn by Energy Northwest. At fiscal year end, Energy Northwest had drawn $10 million of the available $300 million. Repayment of amounts drawn are due on or before April 30, 2021 or on or before April 29, 2022, depending on the individual line of credit. Also during fiscal year 2020, BPA funded the $227 million repayment of the amount outstanding as of Sept. 30, 2019.

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

Prior year balances as of Sept. 30, 2019, accounted for under ASC 840 are presented as separate lines on the preceding debt and appropriations table for the fiscal year ended Sept. 30, 2020. Footnotes in the preceding table describe presentation changes from fiscal year 2019 to 2020.

Under the Lease-Purchase Program, BPA has incurred financial liabilities 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 financial liabilities 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 9, Variable Interest Entities.) During fiscal year 2020, BPA recorded a $5.1 million loss when certain Port of Morrow lease-purchase liabilities were extinguished via a debt extinguishment.

Under the Lease-Purchase Program, BPA consolidates one special purpose corporation (Northwest Infrastructure Financing Corporation or NIFC). As of Sept. 30, 2020, the NIFC had $119.6 million of bonds outstanding, including debt issuance costs. The 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, the Lease-Purchase liability 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.

Completed plant assets reported at Sept. 30, 2019, as transmission capital leased assets are described in Note 3, Utility Plant.

Finance lease liability

Included among this liability are finance lease agreements for transmission lines and equipment. The related assets are recorded as completed plant. (See Note 1, Leases section for description of fiscal year 2020 derecognition and reinstatement of this liability.) For additional information regarding finance leases, see Note 4, Leases.

Other financial liability

Liabilities for agreements which failed to meet the lease criteria under ASC 842 are reported as Other financial liability during fiscal year 2020. During fiscal year 2019, management reported these liabilities among Other capital lease obligations. These agreements are with transmission customers, and BPA is deemed the accounting owner of the assets, which are included in Utility plant on the Combined Balance Sheets. The agreements contain provisions that allow BPA to purchase the related assets at any time during each contract term, with ownership transferring to BPA at the end of each term.

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%. The prepaid liability is reduced and the credits are applied as power is delivered through fiscal year 2028.

FEDERAL DEBT AND APPROPRIATIONS

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, 2020, and 2019, no bonds outstanding were related to Northwest Power Act expenses.

As of Sept. 30, 2020, $1.01 billion of variable-rate bonds are callable by BPA at par value on their interest repricing dates, which occurs every three or six months. The remaining $4.64 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, 2019, $1.68 billion of variable-rate bonds were outstanding.

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 2020 and 2019. 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 finance leases	Future minimum lease payments under finance leases	Borrowings from U.S. Treasury	Federal appropriations	Total
2021	$ 1,027.8	$ 6.5	$ 666.0	$ -	$ 1,700.3
2022	503.0	6.2	290.0	-	799.2
2023	514.1	6.2	264.0	-	784.3
2024	543.9	6.1	220.0	-	770.0
2025	636.2	6.0	178.0	-	820.2
2026 and thereafter	4,489.4	176.2	4030.6	1,544.0	10,240.2
Total	7,714.4	207.2	5648.6	1,544.0	15,114.2
Less: Executory costs	2.9	-	-	-	2.9
Less: Amount representing interest	570.5	118.3	-	-	688.8
Less: Unamortized debt issuance cost	5.2	-	-	-	5.2
Plus: Unamortized premiums	95.6	-	-	-	95.6
Present value of debt	7,231.4	88.9	5,648.6	1,544.0	14,512.9
Less: Current portion	969.9	1.5	666.0	-	1,637.4
Long-term debt	$ 6,261.5	$ 87.4	$ 4,982.6	$ 1,544.0	$ 12,875.5

FAIR VALUE OF DEBT AND APPROPRIATIONS

See Note 13, 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.

9. 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 Nonfederal debt of $118.9 million as of both Sept. 30, 2020, and 2019. 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 8, 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 $23.2 million, $18.7 million and $21.8 million in fiscal years 2020, 2019 and 2018, respectively. These expenses were recorded to operations and maintenance as BPA management considers the related purchases to be part of the FCRPS resource pool.

10. Residential Exchange Program

REP SCHEDULED AMOUNTS

As of Sept. 30 — millions of dollars		
2021	$	245.2
2022		259.0
2023		259.0
2024		273.6
2025		273.6
2026 through 2028		858.3
Subtotal of annual payments		2,168.7
Less: Discount for present value		258.3
IOU exchange benefits	$	1,910.4

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, 2020, totaling $2.17 billion. Amounts recorded of $1.91 billion at Sept. 30, 2020, represent the present value of future cash outflows for these IOUs exchange benefits.

11. Deferred Credits and Other

As of Sept. 30 — millions of dollars	2020	2019
Interconnection agreements	$ 168.9	$ 177.7
Deferred project revenue funded in advance	141.4	135.9
Operating leases	97.2	—
Third AC Intertie capacity agreements	91.8	93.9
Service deposits	31.9	22.4
Unearned revenue from customer deposits	26.4	32.5
Federal Employees' Compensation Act	22.3	21.6
Other	7.5	8.6
Fiber optic leasing fees	6.1	8.4
Derivative instruments	5.4	3.3
Total	$ 598.9	$ 504.3

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.

"**Operating leases**" consists of long-term lease liabilities. (See Note 4, Leases.)

"**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.)

"**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.

"**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.)

"**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.

12. 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 13, 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 2020, BPA experienced no material losses as a result of any customer defaults or bankruptcy filings. As of Sept. 30, 2020, BPA had $71.1 million in credit exposure related to purchase and sale contracts after taking into account netting rights. Of this credit exposure, $71.0 million was related to investment grade counterparties ($62.1 million) or sub-investment grade counterparties who provided letters of credit that exceed BPA's exposure to these counterparties ($8.9 million). 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.

In fiscal year 2020, management refinanced a large portion of its variable rate U.S Treasury bonds to fixed rate bonds. This was done to lock in low interest rates and to mitigate future interest rate risk on variable rate bond liabilities. (See Note 8, Debt, Borrowings from U.S. Treasury section, for further discussion.)

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 13, Fair Value Measurements.)

As of Sept. 30, 2020, the derivative commodity contracts recorded at fair value totaled 4.6 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 7, Deferred Charges and Other and Note 11, 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 $6.4 million and $23.6 million, and liabilities of $3.5 million and $1.6 million as of Sept. 30, 2020, and 2019, respectively. (See Note 5, Effects of Regulation.)

13. 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, 2020, and 2019. There were no transfers between Level 1, Level 2 or Level 3 during fiscal years 2020 and 2019.

ASSETS AND LIABILITIES MEASURED AT FAIR VALUE ON A RECURRING BASIS

As of Sept. 30, 2020 — millions of dollars

		Level 1		Level 2		Level 3		Total
Assets								
Nonfederal nuclear decommissioning trusts								
Equity index funds	$	306.8	$	—	$	—	$	306.8
Bond index funds		54.0		—		—		54.0
Cash and cash equivalents		26.2		—		—		26.2
U.S. government obligation mutual funds		18.4		—		—		18.4
Lease-Purchase trust funds								
U.S. government obligations		—		16.4		—		16.4
Derivative instruments [1]								
Commodity contracts		0.2		0.6		7.4		8.2
Total	$	405.6	$	17.0	$	7.4	$	430.0
Liabilities								
Derivative instruments [1]								
Commodity contracts	$	(0.3)	$	(3.2)	$	(1.9)	$	(5.4)
Total	$	(0.3)	$	(3.2)	$	(1.9)	$	(5.4)

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)

[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 12, 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	2020	2019
Beginning Balance	$ 20.9	$ 3.8
Changes in unrealized gains (losses)[1]	(15.4)	17.1
Ending Balance	$ 5.5	$ 20.9

[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	2020		2019	
	Carrying Value	Fair Value	Carrying Value	Fair Value
Nonfederal debt				
Nonfederal generation:				
Columbia Generating Station	$ 3,129.9	$ 3,560.9	$ 3,365.0	$ 3,557.8
Cowlitz Falls Project	64.6	72.8	68.5	77.3
Terminated nonfederal generation:				
Nuclear Project 1	792.1	926.1	794.3	923.3
Nuclear Project 3	912.0	1,129.2	912.7	1,112.4
Northern Wasco Hydro Project	8.4	9.3	9.9	10.8
Lease-Purchase Program:				
Lease-purchase liability	1,979.1	2,079.8	—	—
NIFC debt	118.9	158.4	118.9	155.8
Other financial liability	18.9	17.4	49.2	49.2
Customer prepaid power purchases	207.5	207.5	228.2	228.2
Federal debt				
Borrowings from U.S. Treasury	$ 5,648.6	$ 6,468.9	$ 5,279.6	$ 5,858.3

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

The fair value of Nonfederal debt, excluding Other financial liability and Customer prepaid power purchases, is primarily 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.

In fiscal year 2020, the fair value of Other financial liability is based upon discounted future cash flows using estimated interest rates for similar debt that could have been issued at Sept. 30, 2020. In fiscal year 2019, the fair value of Other financial liability was based upon terms of a transmission construction agreement that BPA signed with a customer in fiscal year 2018 and was 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, 2020, and 2019.

The table above does not include Finance lease liabilities, a component of BPA's nonfederal debt. See Note 8, Debt and Appropriations, for the full carrying value of BPA's debt portfolio.

14. 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 (including results from the Columbia River System Operations (CRSO) Environmental Impact Statement). BPA's total commitment including timing of payments under the Northwest Power Act, ESA and BiOp, including CRSO Environmental Impact Statement impacts, is not fixed or determinable.

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, 2020, BPA has long-term fish and wildlife agreements with estimated contractual commitments of $628.7 million, which includes the $502.1 million referenced above. These long-term fish and wildlife agreements are likely to result in future expenses or regulatory assets, 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		
2021	$	22.1
2022		16.1
2023		12.8
2024		7.7
2025		13.4
2026 through 2045		208.9
Total	$	281.0

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 $281.0 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		
2021	$	33.6
2022		10.4
2023		9.6
2024		9.1
2025		8.8
2026		9.3
Total	$	80.8

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 and estimated costs that are currently in place to assist in meeting expected future obligations under BPA's current long-term power sales contracts.

Included are four purchases to meet load obligations in Idaho. Power purchase agreements to satisfy load obligations in Idaho may utilize either fixed or variable pricing. Variable pricing arrangements are based on the current market price of energy on the date of delivery. The expenses associated with the Idaho purchases were $43.8 million, $43.0 million and $44.2 million for fiscal years 2020, 2019 and 2018, respectively. In prior fiscal years, BPA had firm purchase power agreements made specifically to meet commitments to sell power at Tier 2 rates. BPA had no expenses associated with these Tier 2 purchases to meet prior commitments in fiscal year 2020. During fiscal years 2019 and 2018 BPA had such expenses of $41.1 million and $29.9 million, 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 2025. 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 for CGS include: 1) Primary Property and Decontamination Liability Insurance; 2) Excess Property, Decontamination Liability and Decommissioning Liability 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 $20.9 million. For the Excess Property, Decontamination Liability and Decommissioning Liability Insurance policy, the maximum assessment is $7.1 million. For the NEIL I Accidental Outage Insurance policy, the maximum assessment is $5.2 million.

Additionally, in the event of a nuclear accident resulting in public liability losses exceeding $450.0 million under the Nuclear Regulatory Commission's indemnity for public liability coverage under the Price-Anderson Act, 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, 2020, there have been no assessments payable by 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, 2020, 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

The FCRPS may be affected by various legal claims, actions and complaints, including claims regarding BPA's rates and litigation under the Endangered Species Act, which may include BPA as a named party. Most of the rates litigation typically 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. Certain of the non-rate related 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, 2020, no material liability has been recorded for the above legal matters.

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 2020 Final Wholesale Power and Transmission Rate Proposals of July 2019, for fiscal years 2020 and 2021. (See BP-20-FS-BPA-02 for Power and BP-20-FS-BPA-09 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 April 17, 2020.

Repayment demonstration

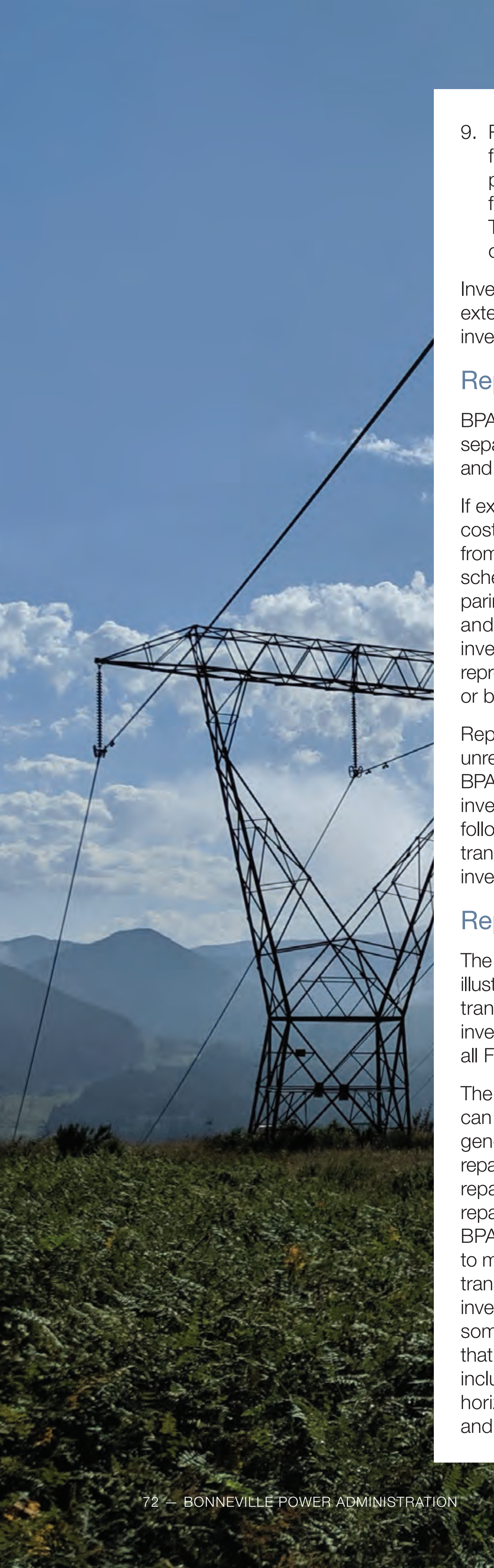
BPA is required by Public Law 89-448 to demonstrate that reimbursable costs of the FCRPS will be returned to the U.S. Treasury from BPA net revenues within the period prescribed by law. BPA is required to make a similar demonstration for the costs of irrigation projects that are beyond the ability of 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.

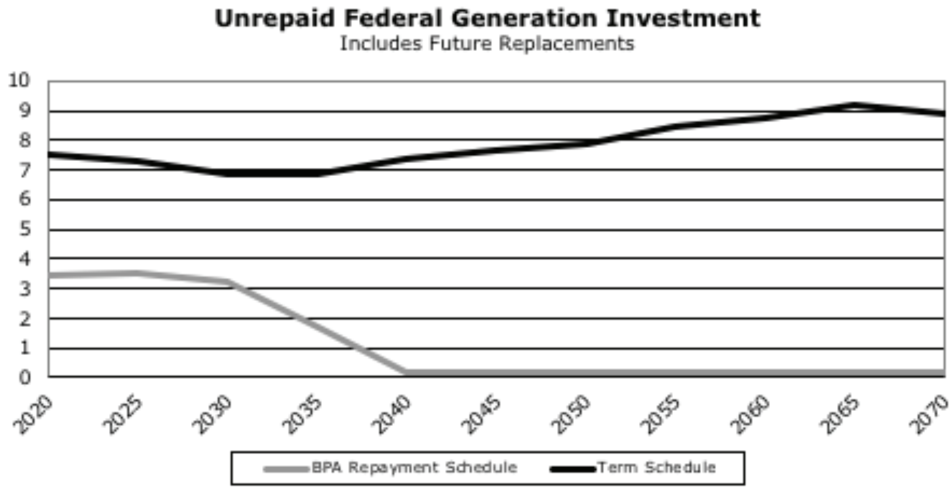
If existing rates are not likely to meet this requirement BPA must reduce costs, adjust its rates, or both. However, irrigation assistance payments from projects authorized subsequent to Public Law 89-448 are to be scheduled to not require an increase in the BPA power rate level. Comparing BPA's repayment 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.

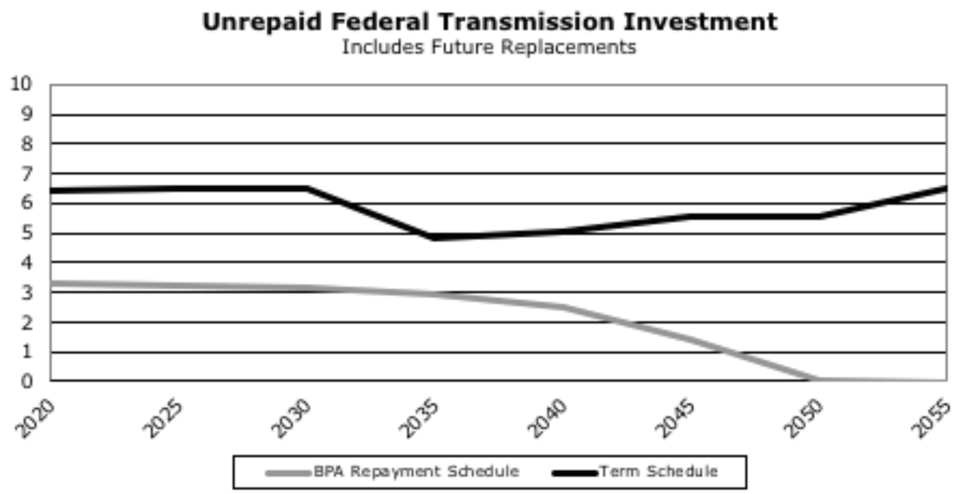
Reporting requirements of Public Law 89-448 are met so long as the unrepaid FCRPS investment and irrigation assistance resulting from BPA's repayment schedule are less than or equal to the allowable unrepaid investment in each year. While the comparison is illustrated by the following graphs representing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

Repayment of FCRPS investment

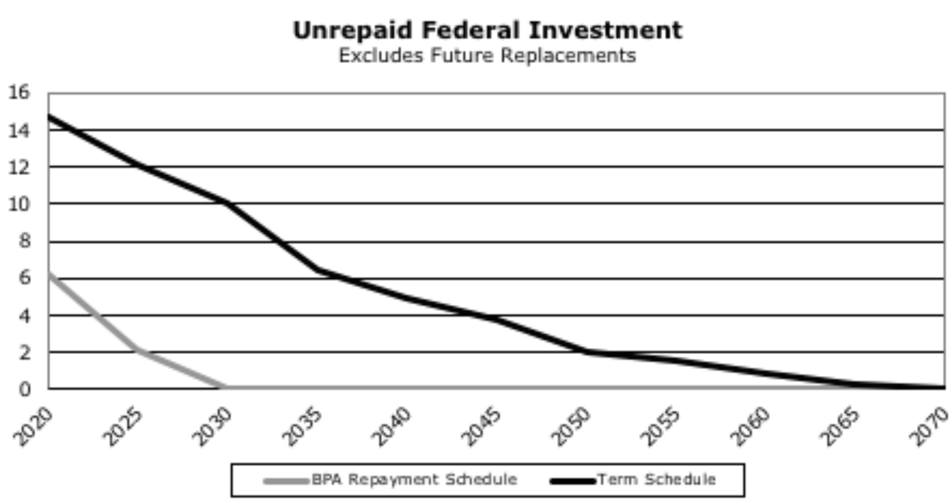
The graphs for Unrepaid Federal Generation and Transmission Investment illustrate that unrepaid investment resulting from BPA's generation and transmission repayment schedules is less than the allowable unrepaid investment. This demonstrates that BPA's rates are sufficient to recover all FCRPS investment 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 2020 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, 2020

John L. Hairston, Acting Administrator and Chief Executive Officer

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Daniel M. James, Deputy Administrator

Tom McDonald, Acting Chief Operating Officer

Robin R. Furrer , 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

Christopher M. Frost, Executive Vice President of Compliance, Audit, Risk Management and EEO

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

Nita Zimmerman, Chief Business Transformation Officer

Peter T. Cogswell, Director of Intergovernmental Affairs

Brian Carter, Director of Human Resources

Joel Scruggs, Director of Communications

Karen A. Conforti, Executive Office Enterprise Program Manager

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Spokane District
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Mead, WA 99021
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Tri-Cities District
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Pasco, WA 99301
509-544-4702

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