BONNEVILLE POWER ADMINISTRATION

ANNUAL REPORT 2021

SHAPING THE FUTURE OF CLEAN ENERGY

ABOUT

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.

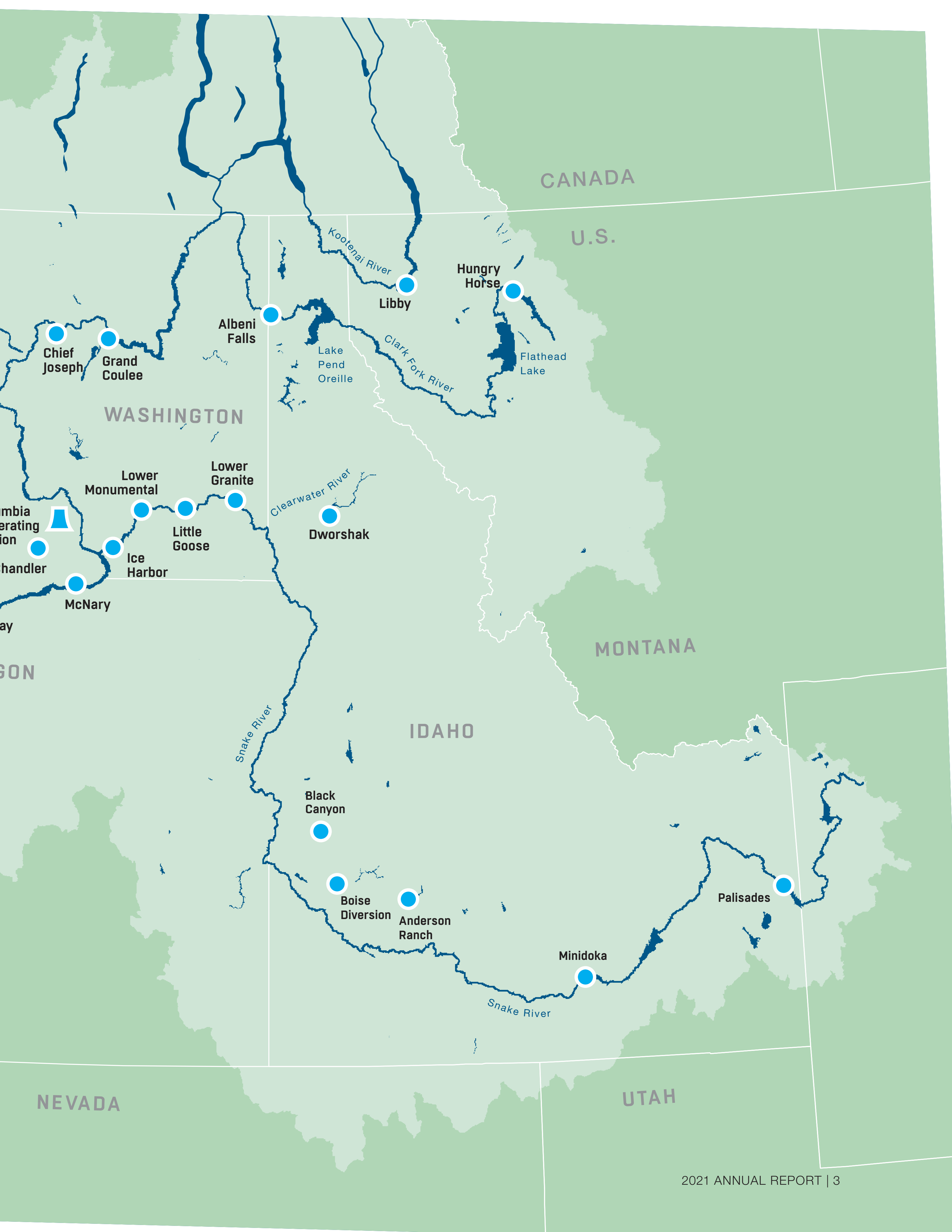
BPA also operates and maintains more than 15,000 circuit miles of high-voltage transmission in its service territory. BPA's territory includes Idaho, Oregon, Washington, western Montana and small parts of eastern Montana, California, Nevada, Utah and Wyoming.

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.

HYDROELECTRIC DAM

NUCLEAR POWER


CANADA
U.S.
Kootenai River
Libby
Hungry Horse
Albeni Falls
Lake Pend Oreille
Clark Fork River
Flathead Lake
Chief Joseph
Grand Coulee
WASHINGTON
Lower Monumental
Lower Granite
Clearwater River
Dworshak
Little Goose
Ice Harbor
McNary
MONTANA
IDAHO
Snake River
Black Canyon
Boise Diversion
Anderson Ranch
Palisades
Minidoka
Snake River
NEVADA
UTAH

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Cover photo by Amy H.

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Moody's: Aa2 (stable)

Fitch: AA (stable)

S&P Global: AA- (stable)

FINANCIAL HIGHLIGHTS

FEDERAL COLUMBIA RIVER POWER SYSTEM

FISCAL YEAR 2021, MILLIONS OF DOLLARS

		GOAL	RESULT
Net revenues	≥	$38	$398
IPR cost expenditure (two-year rate period target)	≤	$3.58B	$3.48B
Days cash on hand	≥	60	130
Capital expenditures	≤	$853	$680
Debt-to-asset ratio	≤	85%	83%
Available U.S. Treasury borrowing authority	≥	$1.5B	$2.1B

LETTER FROM THE ADMINISTRATOR

The Bonneville Power Administration reached historic milestones in fiscal year 2021, building on its commercial success to maximize the benefits of the federal hydropower and transmission grid for our customers. With the impacts of climate change upon us, we worked with our partners to drive the Northwest closer to its clean energy future.

I proudly took the oath of office as BPA's 16th administrator in January. With an eye toward the challenges ahead and the strength of the Bonneville workforce behind me, I promised to carry on the agency's legacy as a driver of our region's economy and way of life.

True to form, the BPA workforce pressed forward on our public-service mission against the ongoing tumult of COVID-19. I witnessed unparalleled teamwork as we delivered reliable power in the face of historic, potentially disastrous weather events. And I was reminded how rewarding it is to work with our many regional partners to find common ground for the benefit of those we serve.

Putting people first

For the third year in a row, BPA placed in the top quartile of the Best Places to Work in the Federal Government, a testament to the satisfaction and commitment of our staff. My goal is to continue this trend and enhance our mission and strategy execution through continued investments in our people and culture.

To that end, BPA established a new Workforce and Strategy Office this year, bringing all of our people and strategy functions together under one organization to improve their collective effectiveness. I see the creation of this new organization as a progression of our 2018–2023 Strategic Plan and Culture Strategy to help us lead the region through the next chapter of BPA's history.

Photo by Rob M.

We continued the hard, sometimes painful work to advance our goals for a diverse and inclusive work-force, where people feel free and safe to speak up without the fear of reprisal.

Our most fundamental objective is safety. We made headway toward our goal of becoming the safest utility in North America after achieving one of the lowest incident frequency rates on record and exceeding our goal for completing corrective actions on time. This metric tracks how responsive we are in correcting identified hazards, reflecting the proactive safety program and culture we are building.

In addition to physical safety, our efforts in FY 2021 expanded our focus on psychological safety. We continued the hard, sometimes painful work to advance our goals for a diverse and inclusive workforce, where people feel free and safe to speak up without the fear of reprisal.

As the country experienced a rise in hate crimes and violence against people of color and marginalized groups, BPA came together as a community. I shared my commitment to providing a workplace where everyone feels welcome and is treated with respect and dignity. We took important steps through our Diversity and Inclusion Program, first-ever cultural assessment, and other efforts like the development of an inclusion lens to address systemic barriers and inequities. I believe we are making progress and taking the right steps to achieve our aspirational culture.

Financial health remains strong

Photo by Ruth C.

This year the Northwest experienced climate change in the form of extreme cold, historic heat waves and severe wildfires. And at 81% of average, 2021 marked the 16th lowest water year on record in the Columbia River Basin.

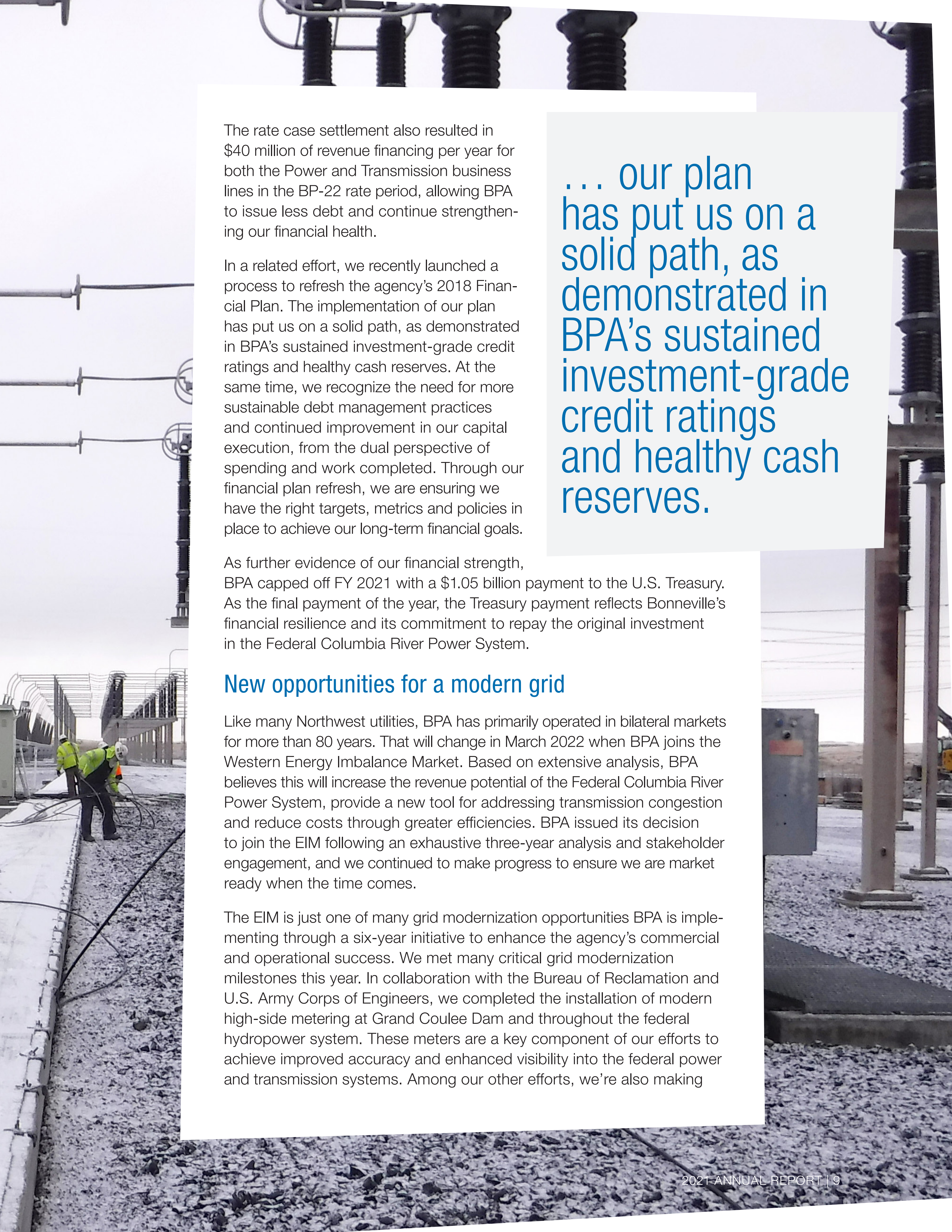
Even under those unfavorable climate conditions, BPA's operational and financial position remained strong.

Agency net revenues were higher than expected, totaling $398 million. Power net revenues benefited from sales of surplus power during times of high market prices, coupled with lower-than-expected expenses. Power net revenues also reflect realized gains from a new investment strategy in decommissioning and site restoration trust funds for the Columbia Generating Station nuclear plant. Transmission net revenues were higher than expected as well, mostly due to underruns in interest expense.

Several other factors contributed to our positive net revenues. Our continued cost discipline efforts have enabled us to hold agency program costs flat, including absorbing inflation, four years in a row. This achievement has improved the competitiveness of both our power and transmission products, as reflected in BPA's newly established BP-22 wholesale rates.

The rate case set power and transmission rates for fiscal years 2022 and 2023. Maintaining BPA's competitive edge in the evolving marketplace was a key factor in my decision to adopt a rates settlement agreement, a direct outcome of the collaboration and creative proposals of rate case parties and BPA staff. The settlement resulted in BPA reducing the average power rate by 2.5% compared to current levels. Notably, this means our 10-year historical rate trajectory is less than 2%, which is in line with inflation rates and demonstrates the effectiveness of our consistent efforts to bend the cost curve.

For transmission rates, the weighted average increase for the next rate period is 6.1% relative to current rates. At roughly half the weighted average increase cited in the BP-22 Initial Proposal, this increase will allow us to make key investments in grid reliability and modernization.



The rate case settlement also resulted in $40 million of revenue financing per year for both the Power and Transmission business lines in the BP-22 rate period, allowing BPA to issue less debt and continue strengthening our financial health.

In a related effort, we recently launched a process to refresh the agency's 2018 Financial Plan. The implementation of our plan has put us on a solid path, as demonstrated in BPA's sustained investment-grade credit ratings and healthy cash reserves. At the same time, we recognize the need for more sustainable debt management practices and continued improvement in our capital execution, from the dual perspective of spending and work completed. Through our financial plan refresh, we are ensuring we have the right targets, metrics and policies in place to achieve our long-term financial goals.

… our plan has put us on a solid path, as demonstrated in BPA's sustained investment-grade credit ratings and healthy cash reserves.

As further evidence of our financial strength, BPA capped off FY 2021 with a $1.05 billion payment to the U.S. Treasury. As the final payment of the year, the Treasury payment reflects Bonneville's financial resilience and its commitment to repay the original investment in the Federal Columbia River Power System.

New opportunities for a modern grid

Like many Northwest utilities, BPA has primarily operated in bilateral markets for more than 80 years. That will change in March 2022 when BPA joins the Western Energy Imbalance Market. Based on extensive analysis, BPA believes this will increase the revenue potential of the Federal Columbia River Power System, provide a new tool for addressing transmission congestion and reduce costs through greater efficiencies. BPA issued its decision to join the EIM following an exhaustive three-year analysis and stakeholder engagement, and we continued to make progress to ensure we are market ready when the time comes.

The EIM is just one of many grid modernization opportunities BPA is implementing through a six-year initiative to enhance the agency's commercial and operational success. We met many critical grid modernization milestones this year. In collaboration with the Bureau of Reclamation and U.S. Army Corps of Engineers, we completed the installation of modern high-side metering at Grand Coulee Dam and throughout the federal hydropower system. These meters are a key component of our efforts to achieve improved accuracy and enhanced visibility into the federal power and transmission systems. Among our other efforts, we're also making

It would also improve efficiency … ensuring reliability across a wide geographic footprint.

progress to improve our customer experience as they do business with us digitally, and enhancing grid reliability, safety and efficiency through outage management efforts.

BPA continued participating in the development of the Western Resource Adequacy Program, which is being designed to address the growing concern that the Northwest's power grid may be unable to meet demand under certain conditions. Extreme weather events have the potential to stretch the grid to its limits. Unfortunately, all signs point to more of these extreme events in our future. The region will also have less baseload generation to rely on due to planned coal plant retirements.

A resource adequacy program would establish clear, uniform standards for how much capacity each participant is responsible for providing. It would also improve efficiency by sharing available capacity among the participants, ensuring reliability across a wide geographic footprint. BPA has committed to participating in the next development and test phase of the program, and I'm hopeful the participants will be able to come together on a final program design that will achieve our shared reliability goals.

Maximizing the value of federal hydropower

Photo by Tony N.

Central to our agency strategy is the reality that current long-term wholesale power contracts with our regional customers will expire in 2028. BPA's goal is to remain their power provider of choice and continue to fully market the Federal Columbia River Power System's firm power through new long-term contracts. We've deployed our Provider of Choice initiative to lay the foundation for the development of policies and contracts BPA will offer into the future.

Through this effort, BPA believes it is well-positioned to help our customers achieve their own goals and requirements for clean energy. At the heart of our region's clean energy future is the vast federal hydropower system.

We have worked for decades to stretch the value of the system through energy efficiency investments, and this year we continued that legacy by achieving 44.1 average megawatts of energy savings with our regional partners.

We were reminded of hydropower's critical role in the Northwest's safety and economic health when the region faced record power demands from extreme weather conditions in FY 2021. During the winter freeze, we saw how the geographic diversity of the Northwest's federal hydropower system — with major generation on the upper Columbia, lower Columbia and lower Snake rivers — gives operators options to solve the unique challenges each weather event can bring. Faced with technical issues at Chief Joseph Dam, operators were able to lean on the lower Snake River dams for generation and capacity, keeping power flowing during the severe cold.

The unprecedented summer heatwave presented an entirely different scenario. With soaring temperatures, Northwest load areas set their all-time summer peak records. Even in a below average water year, the federal hydropower system had surplus power to offer, demonstrating that the system is not only important to BPA's core customers, but the entire region.

Collaborating for fish and wildlife

Representatives from BPA, the Confederated Tribes of the Umatilla Indian Reservation and the state fish and wildlife departments of Washington and Oregon, celebrate the ground-breaking of a new salmon hatchery on the banks of Oregon's South Fork Walla Walla River.

BPA continues to balance its efforts to market and widely spread hydropower's benefits with efforts to mitigate the impacts of the system on fish and wildlife. I'm proud of the work we have done with tribes and other partners to achieve BPA's mitigation goals.

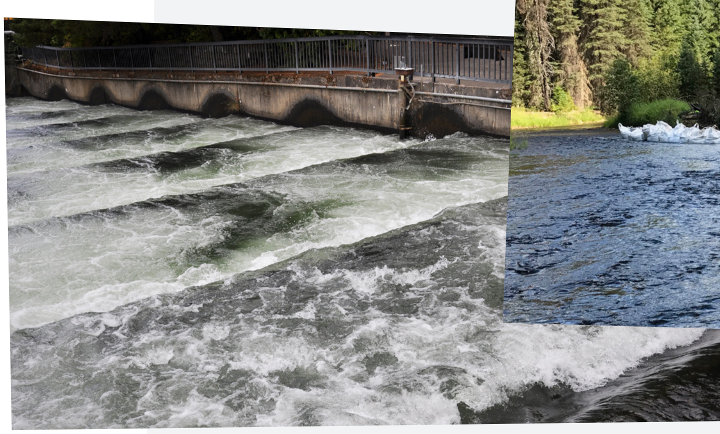
Notably, the Confederated Tribes of the Umatilla Indian Reservation began operating an enhanced, state-of-the-art hatchery in FY 2021. The new facility is expected to double the number of spring chinook salmon released annually into the Walla Walla River Basin, where they had previously disappeared. It will play an important role in producing fish for tribal ceremonies, subsistence and fisheries. This project — one of hundreds BPA funds through its Fish and Wildlife Program each year — is a tremendous success story about our partnerships and investments, and demonstrates the progress we can make for fish when we work together.

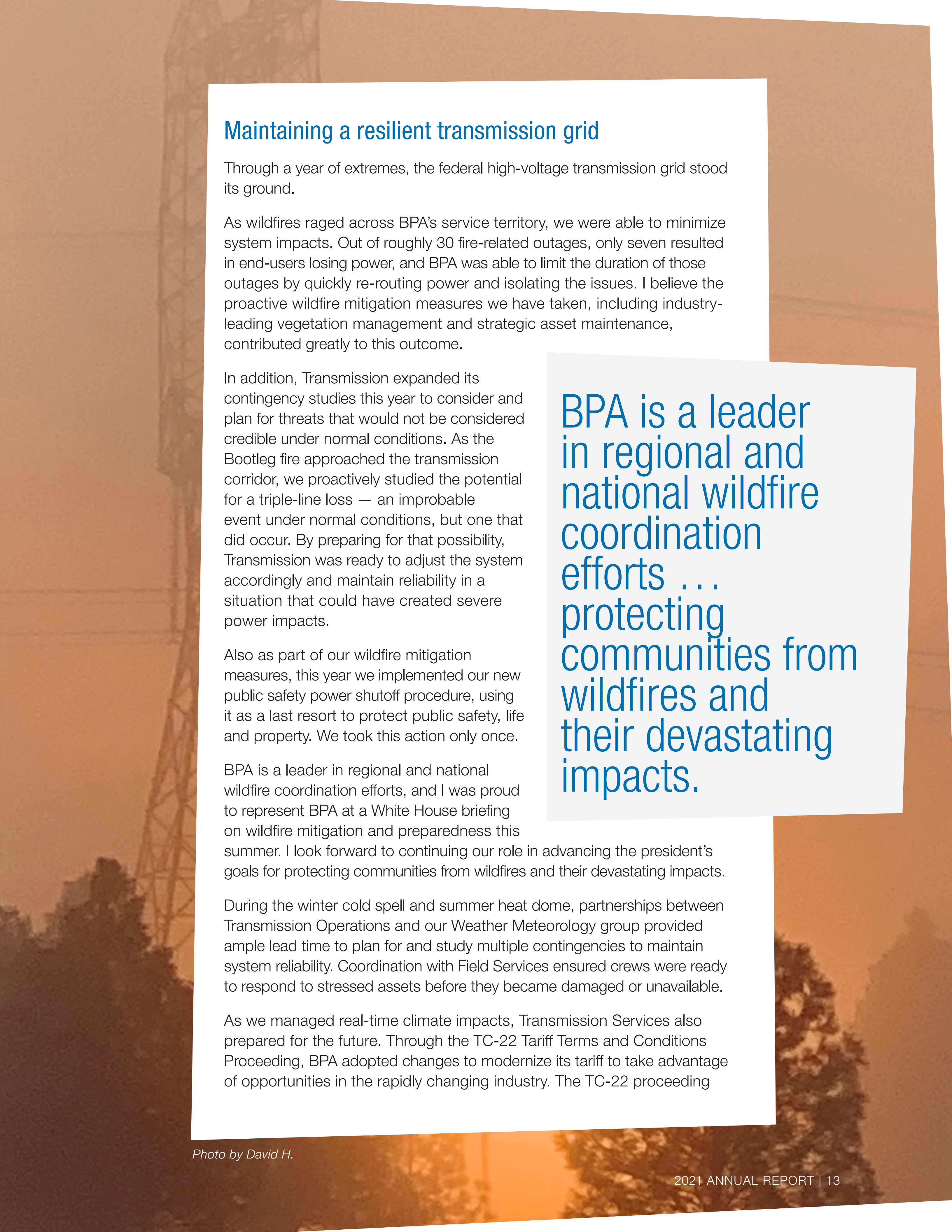
We also began implementing new operations at 14 federal dam and reservoir projects that make up the Columbia River System. These innovative approaches are part of the adaptive management approach BPA and its partner agencies, using input from tribes, states and other cooperating agencies, adopted with the completion of the Columbia River System Operations Environmental Impact Statement and associated biological opinions in 2020.

. . . we remain committed to working with tribes and other partners . . . to ensure the federal system can meet the region's clean energy needs while supporting healthy fish and wildlife populations.

The approaches we are implementing preserve the core economic benefits of the federal system, enhance the protection of fish and wildlife, protect life and property, and sustain cultural resources. We are spilling more water over dams in the spring to help move juvenile salmon and steelhead downstream to the ocean. While results of the 2021 spill season are not yet available, we've found through two years of testing that the flexible spill operation has helped fish encounter powerhouses at lower-than-expected rates, and it has reduced the amount of time it takes young salmon and steelhead to travel from the river to the ocean.

As BPA seeks to remain our customers' provider of choice for low-cost, low-carbon, reliable power, we remain committed to working with tribes and other partners on long-term solutions that ensure the federal system can meet the region's clean energy needs while supporting healthy fish and wildlife populations.





Maintaining a resilient transmission grid

Through a year of extremes, the federal high-voltage transmission grid stood its ground.

As wildfires raged across BPA's service territory, we were able to minimize system impacts. Out of roughly 30 fire-related outages, only seven resulted in end-users losing power, and BPA was able to limit the duration of those outages by quickly re-routing power and isolating the issues. I believe the proactive wildfire mitigation measures we have taken, including industry-leading vegetation management and strategic asset maintenance, contributed greatly to this outcome.

In addition, Transmission expanded its contingency studies this year to consider and plan for threats that would not be considered credible under normal conditions. As the Bootleg fire approached the transmission corridor, we proactively studied the potential for a triple-line loss — an improbable event under normal conditions, but one that did occur. By preparing for that possibility, Transmission was ready to adjust the system accordingly and maintain reliability in a situation that could have created severe power impacts.

Also as part of our wildfire mitigation measures, this year we implemented our new public safety power shutoff procedure, using it as a last resort to protect public safety, life and property. We took this action only once.

BPA is a leader in regional and national wildfire coordination efforts, and I was proud to represent BPA at a White House briefing on wildfire mitigation and preparedness this summer. I look forward to continuing our role in advancing the president's goals for protecting communities from wildfires and their devastating impacts.

> BPA is a leader in regional and national wildfire coordination efforts … protecting communities from wildfires and their devastating impacts.

During the winter cold spell and summer heat dome, partnerships between Transmission Operations and our Weather Meteorology group provided ample lead time to plan for and study multiple contingencies to maintain system reliability. Coordination with Field Services ensured crews were ready to respond to stressed assets before they became damaged or unavailable.

As we managed real-time climate impacts, Transmission Services also prepared for the future. Through the TC-22 Tariff Terms and Conditions Proceeding, BPA adopted changes to modernize its tariff to take advantage of opportunities in the rapidly changing industry. The TC-22 proceeding

Photo by David H.

addressed the terms and conditions to enable BPA's participation in the EIM, which has the potential to improve transmission congestion management and enhance grid reliability.

This year we continued to implement a new process called the secondary capacity model to deliver transmission projects more quickly. It expands on BPA's primary project delivery method, leveraging the use of an owner's consultant to oversee a portfolio of projects. This eliminates inefficiencies created by intermittent contracting within each project. BPA has launched a group of projects through this alternative process, and we expect it will produce results over the next few years as we complete this work.

Another milestone was the completion of the annual cluster study that BPA conducts to study customers' requests for new transmission service. This year's study included 116 transmission service requests submitted by 18 transmission customers seeking 5,842 megawatts of transmission service. Of that total, 4,951 MW were for a combination of solar, wind and battery storage. BPA was able to offer 3,906 MW of new service without making any system upgrades. System upgrades will be required for the remaining service, and we are working with customers to determine which of those projects they want to move forward.

Looking ahead

If BPA's past performance is any indicator of its future, I can say with great certainty that we are prepared to meet our customers' and the region's future needs. I can also say that we are committed to continual improvement, and we are already learning from the lessons of the last year to ensure our performance in FY 2022 is even stronger.

I greatly appreciate everyone who contributed to BPA's success this past year, from our mission-focused workforce to the many customers, tribes, stakeholders and partners who participated in our public forums and collaborated with us on workable solutions.

By continuing to work together and seeking to understand each other's perspectives, I'm confident we will maximize the value of the carbon-free federal hydropower and transmission system for generations to come.

John Hairston, Administrator and CEO

PERFORMANCE TARGET RESULTS

BPA sets annual targets to gauge the agency's 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 $680 million, which meets the end-of-year target to not exceed the rate case expectation of $853 million.

Agency days cash on hand Target met. The agency days cash on hand is 130 days, against a target of 60 or more days.

Agency debt-to-asset ratio Target met. The agency debt-to-asset ratio is 83% against a target of 85% or less.

Agency Integrated Program Review cost expenditures Target met. BPA's IPR cost expenditures for the two-year rate period are $3.48 billion, which meets the target to not exceed the rate case expectation of $3.58 billion.

Agency net revenues Target met. BPA generated net revenues of $398 million, which is $360 million above the rate case expectation of $38 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 milestones Target met. BPA met 100% of milestones for grid modernization projects in the deliver phase or completed, against a target of 90% to 100%.

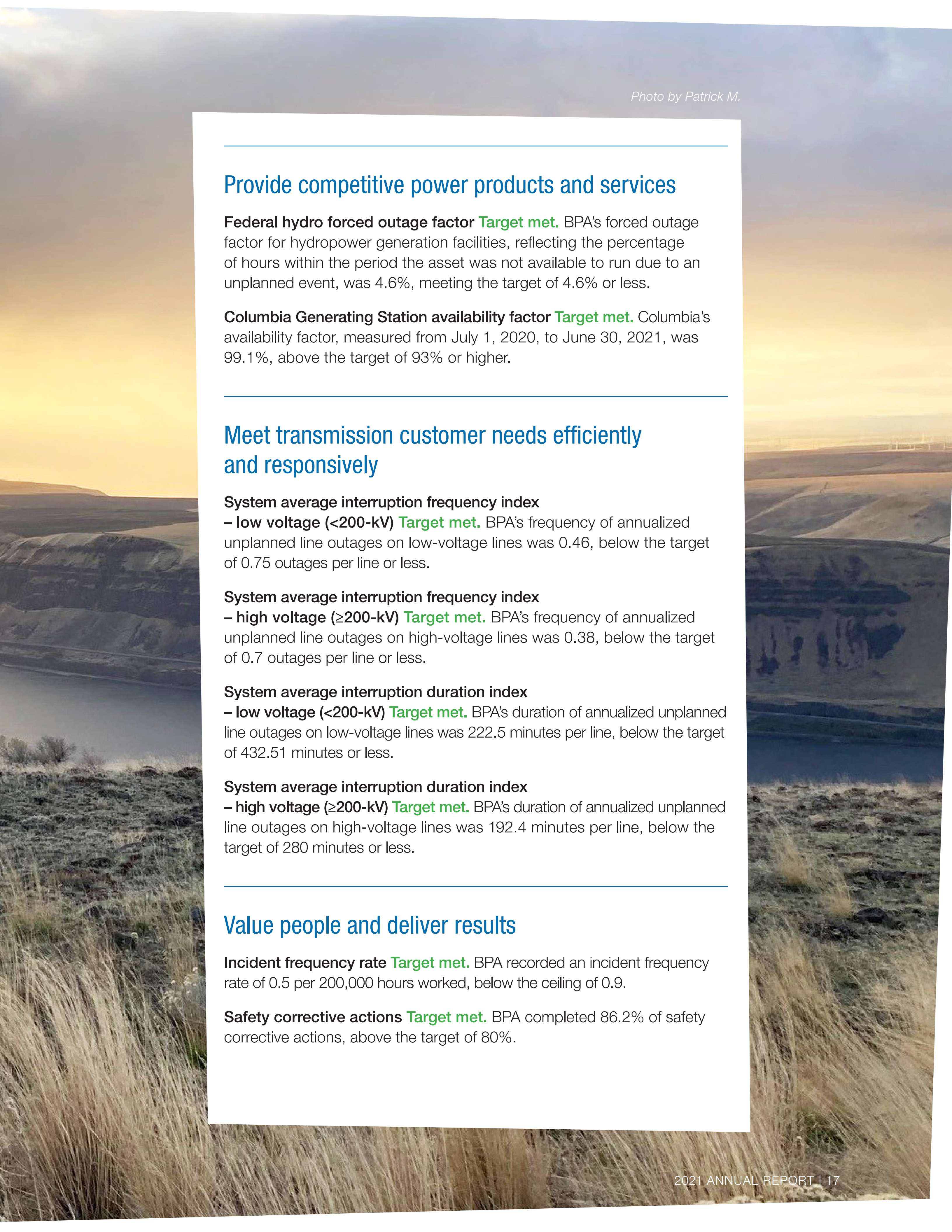


Photo by Patrick M.

Provide competitive power products and services

Federal hydro forced outage factor **Target met.** BPA's forced outage factor for hydropower generation facilities, reflecting the percentage of hours within the period the asset was not available to run due to an unplanned event, was 4.6%, meeting the target of 4.6% or less.

Columbia Generating Station availability factor **Target met.** Columbia's availability factor, measured from July 1, 2020, to June 30, 2021, was 99.1%, above the target of 93% or higher.

Meet transmission customer needs efficiently and responsively

System average interruption frequency index – low voltage (<200-kV) **Target met.** BPA's frequency of annualized unplanned line outages on low-voltage lines was 0.46, below the target of 0.75 outages per line or less.

System average interruption frequency index – high voltage (≥200-kV) **Target met.** BPA's frequency of annualized unplanned line outages on high-voltage lines was 0.38, below the target of 0.7 outages per line or less.

System average interruption duration index – low voltage (<200-kV) **Target met.** BPA's duration of annualized unplanned line outages on low-voltage lines was 222.5 minutes per line, below the target of 432.51 minutes or less.

System average interruption duration index – high voltage (≥200-kV) **Target met.** BPA's duration of annualized unplanned line outages on high-voltage lines was 192.4 minutes per line, below the target of 280 minutes or less.

Value people and deliver results

Incident frequency rate **Target met.** BPA recorded an incident frequency rate of 0.5 per 200,000 hours worked, below the ceiling of 0.9.

Safety corrective actions **Target met.** BPA completed 86.2% of safety corrective actions, above the target of 80%.

FINANCIAL PLAN PROGRESS UPDATE

BPA's 2018 Financial Plan outlines the policies, practices and objectives that will help BPA sustain its financial strength. The following section describes BPA's progress toward its Financial Plan 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 2021, we began measuring program costs against a two-year rate period target. Historically, we used the annual rate case amount as the target. However, due to COVID-19 related execution delays in certain areas, we carried over some of the FY 2020 budget to FY 2021. The two-year rate period target for program expenses held us accountable to our BP-20 rate case commitments.

The BP-20 rate period program costs were $3.48 billion, $95 million below the rate case target of $3.58 billion. Cost-management efforts were a key driver. COVID-19 related work deferrals also contributed to keeping rate period costs low. While this deferred work will increase cost pressure in FY 2022 along with price escalation for equipment, materials and unavailability of labor, BPA remains committed to mitigating these cost pressures and keeping them below the rate of inflation.

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, measured by debt-to asset-ratio; and debt capacity, measured by available borrowing authority. BPA started implementing these goals through the BP-20 Rate Case with the inclusion of the Financial Reserves Policy and the Leverage Policy.

BPA's operational liquidity comes primarily from financial reserves and, as a secondary measure, a short-term line of credit from the U.S. Treasury. 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 FRP also defines the conditions for triggering a reserves distribution clause, or RDC. The RDC can be enacted through either a rate reduction or other high-value purposes, such as additional payment of debt.

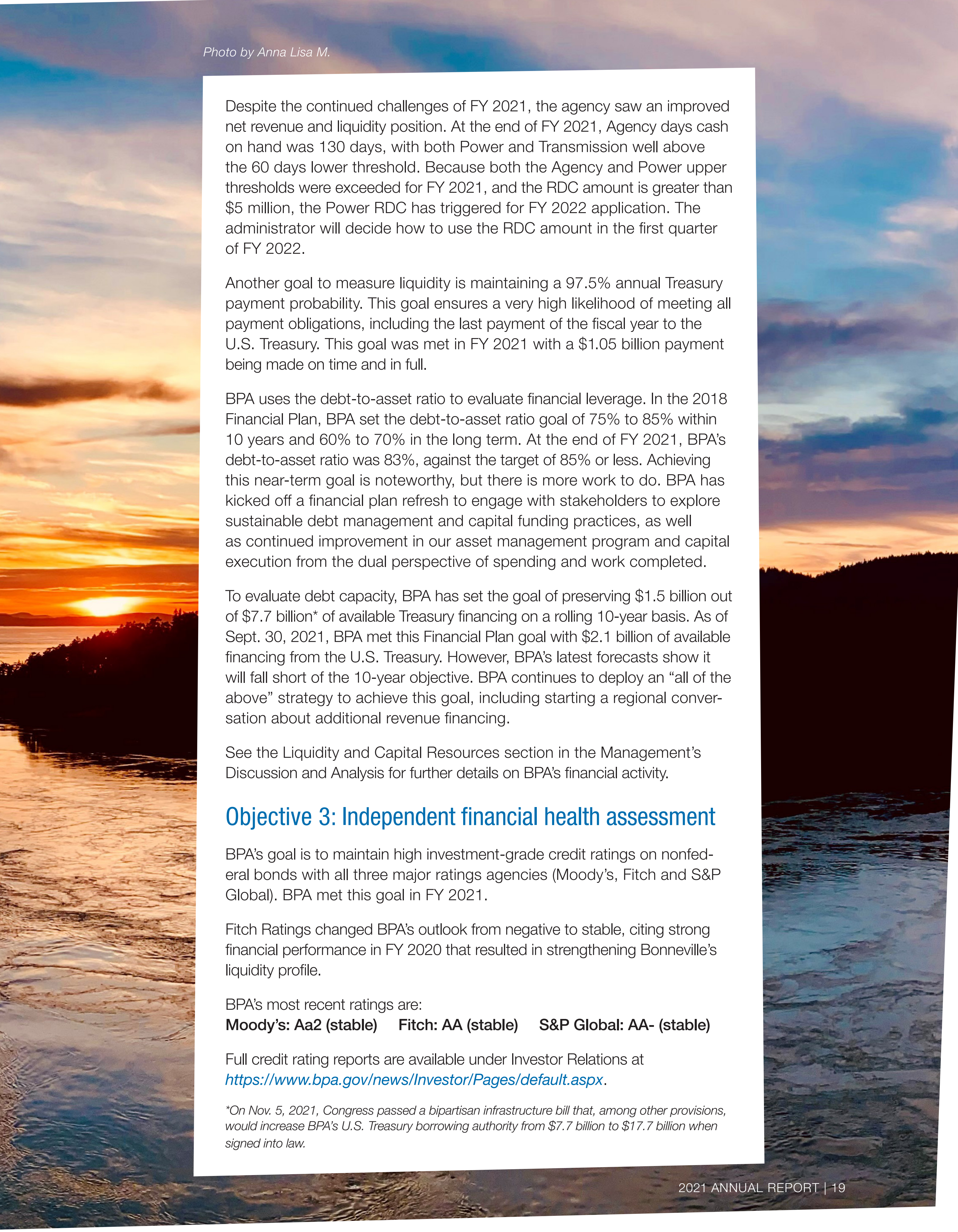


Photo by Anna Lisa M.

Despite the continued challenges of FY 2021, the agency saw an improved net revenue and liquidity position. At the end of FY 2021, Agency days cash on hand was 130 days, with both Power and Transmission well above the 60 days lower threshold. Because both the Agency and Power upper thresholds were exceeded for FY 2021, and the RDC amount is greater than $5 million, the Power RDC has triggered for FY 2022 application. The administrator will decide how to use the RDC amount in the first quarter of FY 2022.

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 2021 with a $1.05 billion payment being made on time and in full.

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 2021, BPA's debt-to-asset ratio was 83%, against the target of 85% or less. Achieving this near-term goal is noteworthy, but there is more work to do. BPA has kicked off a financial plan refresh to engage with stakeholders to explore sustainable debt management and capital funding practices, as well as continued improvement in our asset management program and capital execution from the dual perspective of spending and work completed.

To evaluate debt capacity, BPA has set the goal of preserving $1.5 billion out of $7.7 billion* of available Treasury financing on a rolling 10-year basis. As of Sept. 30, 2021, BPA met this Financial Plan goal with $2.1 billion of available financing from the U.S. Treasury. However, BPA's latest forecasts show it will fall short of the 10-year 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

BPA's goal is to maintain high investment-grade credit ratings on nonfederal bonds with all three major ratings agencies (Moody's, Fitch and S&P Global). BPA met this goal in FY 2021.

Fitch Ratings changed BPA's outlook from negative to stable, citing strong financial performance in FY 2020 that resulted in strengthening Bonneville's liquidity profile.

BPA's most recent ratings are:
Moody's: Aa2 (stable) **Fitch: AA (stable)** **S&P Global: AA- (stable)**

Full credit rating reports are available under Investor Relations at *https://www.bpa.gov/news/Investor/Pages/default.aspx*.

**On Nov. 5, 2021, Congress passed a bipartisan infrastructure bill that, among other provisions, would increase BPA's U.S. Treasury borrowing authority from $7.7 billion to $17.7 billion when signed into law.*

FINANCIAL SECTION

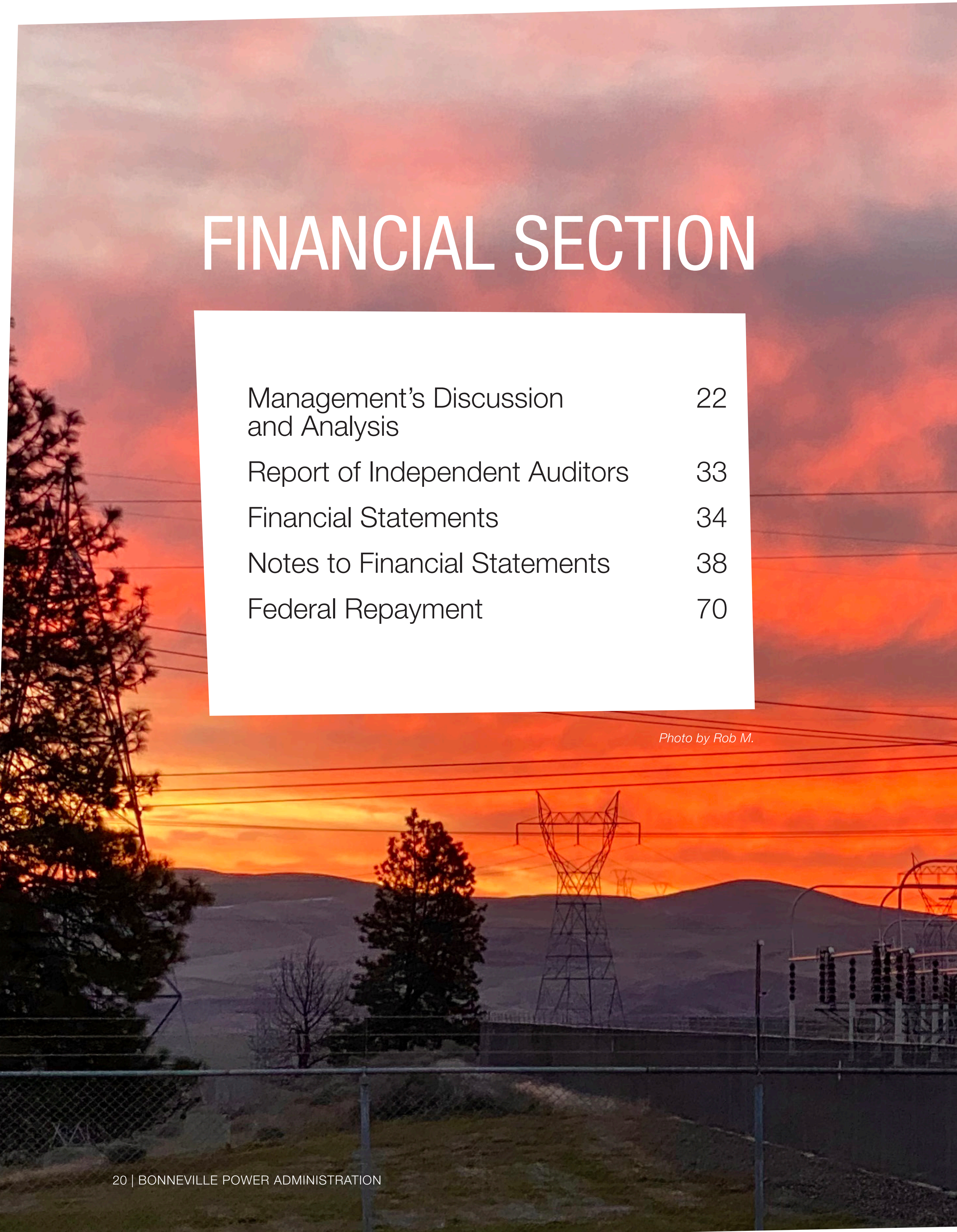


Photo by Rob M.

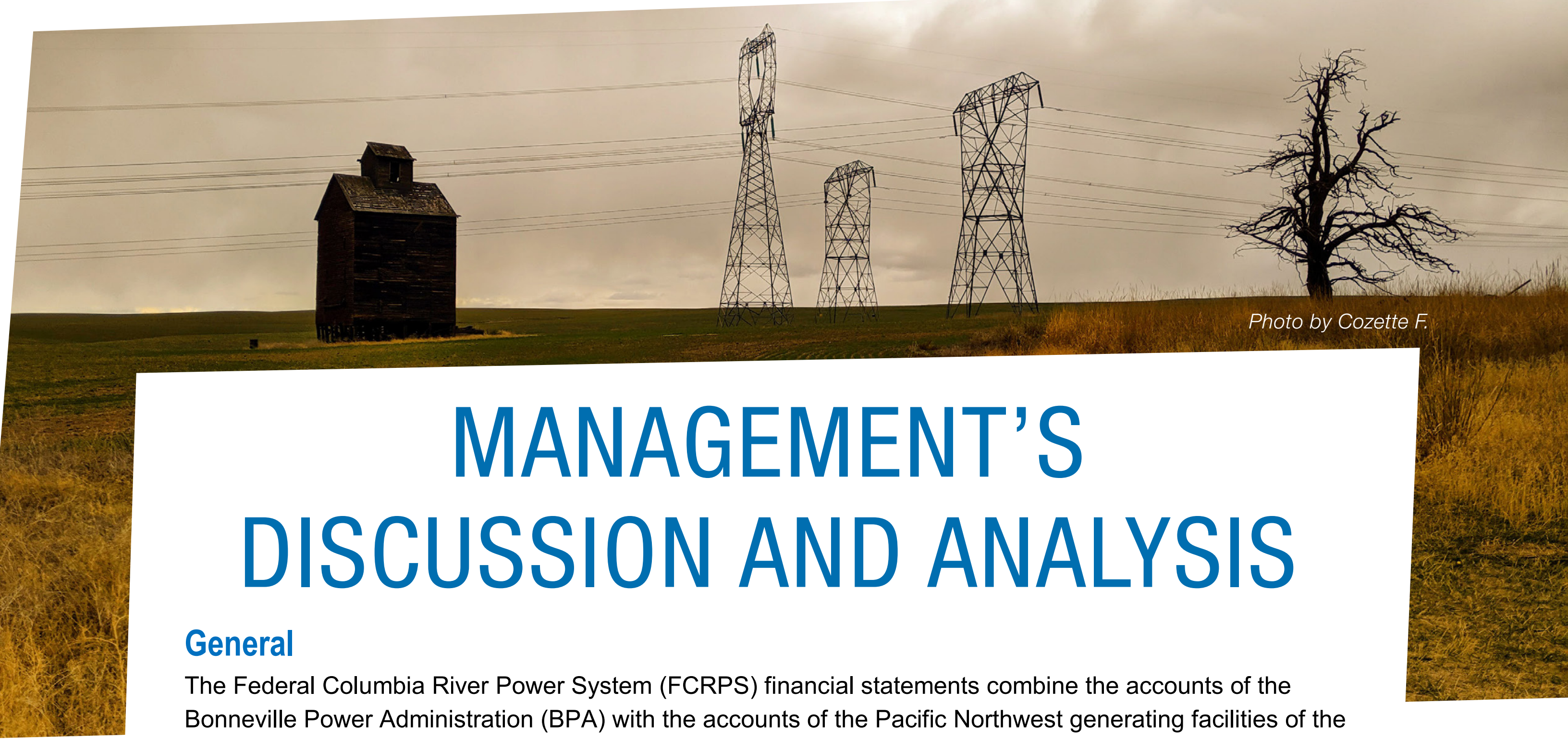


Photo by Cozette F.

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 2022–2023

To establish rates for fiscal years 2022 and 2023, BPA concluded the BP-22 rate proceeding in July 2021 by releasing the Administrator's Final Record of Decision and Final Proposal. On Sept. 30, 2021, FERC granted interim approval of rates for the BP-22 rate period and such rates became effective on an interim basis, pending FERC final review, on Oct. 1, 2021, and will be effective through Sept. 30, 2023. When compared to the BP-20 rate period, the final average power rate decreased by 2.5%, and the final weighted average transmission rate increased by 6.1%.

As with the 2020-2021 rate period, power and transmission rates in the BP-22 rate period also include other rate adjustment mechanisms, such as a Cost Recovery Adjustment Clause (CRAC) and Reserves Distribution Clause (RDC), that BPA employs if certain financial conditions occur.

Rates for Fiscal Years 2020–2021

Rates for the two-year BP-20 rate period began on Oct. 1, 2019, and concluded on Sept. 30, 2021. When compared to the prior rate period, the weighted average transmission rate increased by 3.6%, and the average base power rate did not increase. The base power rate did not include the impact of the Financial Reserves Policy surcharge, which triggered in October 2019 for application to fiscal year 2020 power rates. Under the surcharge, BPA recorded $21 million of revenues from power customers through June 2020.

Due to financial hardship experienced by certain customers in the region because of the COVID-19 pandemic, in June 2020 BPA suspended the Financial Reserves Policy surcharge for the remainder of the BP-20 rate period. As a result, BPA did not collect an additional $9 million of surcharge revenues between July and September of fiscal year 2020. Final approval of the surcharge suspension was granted by the Federal Energy Regulatory Commission (FERC) on Oct. 8, 2020.

As with the 2018-2019 rate period, power and transmission rates in the BP-20 rate period also included other rate adjustment mechanisms, such as a CRAC and RDC, that BPA could employ if certain financial conditions occurred.

Based upon final fiscal year 2020 reserve levels, the Transmission RDC triggered for $79.7 million for application in fiscal year 2021. As defined in the BP-20 rate case, if business line financial reserves and agency financial reserves are above their respective upper thresholds, the BPA Administrator shall consider the above-threshold financial reserves for investment in other high-value business line-specific purposes including, but not limited to, debt retirement, incremental capital investment or rate reduction. In December 2020, the Administrator determined that the entire Transmission RDC of $79.7 million would be applied toward debt reduction in fiscal year 2021. In March 2021 and in alignment with the Administrator’s decision, BPA repaid $79.7 million of variable rate borrowings from U.S. Treasury. With this debt reduction the RDC obligation has been fulfilled and there is no further commitment.

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 sold in fiscal years 2021 and 2020 was 22.4% of the system. The Slice percentage for fiscal year 2022 will remain at 22.4%.

Results of Operations

Operating revenues

Fiscal year 2021 revenues compared to fiscal year 2020

A comparison of FCRPS operating revenues follows for the fiscal years ended Sept. 30, 2021, and 2020:

(Millions of dollars)	Fiscal Year 2021	Fiscal Year 2020	Revenue Increase (Decrease)	% Change
Sales				
Consolidated sales				
Power gross sales	$ 2,740.7	$ 2,604.7	$ 136.0	5 %
Transmission	966.1	938.3	27.8	3
Bookouts (Power)	(56.8)	(45.3)	(11.5)	25
Consolidated sales	3,650.0	3,497.7	152.3	4
Other revenues				
Power	33.9	39.3	(5.4)	(14)
Transmission	43.9	46.6	(2.7)	(6)
Other revenues	77.8	85.9	(8.1)	(9)
Sales	3,727.8	3,583.6	144.2	4
U.S. Treasury credits	95.2	100.1	(4.9)	(5)
Total operating revenues	$ 3,823.0	$ 3,683.7	$ 139.3	4

Total operating revenues increased $139.3 million when compared to fiscal year 2020. Sales of Power and Transmission services, including other revenues and the effect of bookouts, increased $144.2 million.

Power Services gross sales increased $136.0 million.

- Surplus power sales, including revenue from derivative instruments settled with physical deliveries, increased $127.0 million. This increase excludes the effects of bookouts and was mainly driven by higher electricity prices realized for surplus sales when compared to fiscal year 2020.
- January through July 2021 runoff volume at The Dalles Dam was 82 million acre feet (maf), a decrease of 20 maf from the same period in 2020. The volume of runoff measured at The Dalles Dam is one of several indicators of the amount of electricity the hydropower system can produce. The full fiscal year 2021 volume finished at 107 maf, a decrease of 19 maf from fiscal year 2020 and below the historical average (1929-2018) of 134 maf.
- Gross power sales decreased to 76,718,804 megawatt-hours in fiscal year 2021 from 82,019,081 megawatt-hours in fiscal year 2020.

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 $27.8 million, primarily due to an increase in the sale of point-to-point long-term transmission service. This increase was largely due to the expiration of service deferrals to certain customers who took new service in fiscal year 2021.

Other power revenues decreased $5.4 million largely due to decreases in realized gains on financial futures contracts. These gains declined due to market volatility and high prices experienced at times during fiscal year 2021.

U.S. Treasury credits decreased $4.9 million due to lower replacement power purchases required for fish and wildlife mitigation purposes. 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 2021 Notes to Financial Statements.

Operating expenses

Fiscal year 2021 operating expenses compared to fiscal year 2020

A comparison of FCRPS operating expenses follows for the fiscal years ended Sept. 30, 2021, and 2020:

(Millions of dollars)	Fiscal Year 2021	Fiscal Year 2020	Expense Increase (Decrease)	% Change
Operations and maintenance	$ 2,152.4	$ 2,065.6	$ 86.8	4 %
Purchased power	248.2	123.7	124.5	101
Depreciation, amortization and accretion	826.7	818.8	7.9	1
Total operating expenses	$ 3,227.3	$ 3,008.1	$ 219.2	7

Total operating expenses increased $219.2 million when compared to fiscal year 2020.

Operations and maintenance expense increased $86.8 million, primarily because of the following factors:

- $50.8 million increase for Energy Northwest's Columbia Generating Station nuclear power plant because fiscal year 2021 was a refueling year. Refueling occurs biennially; refueling and maintenance expenses are higher in refueling years.
- $15.0 million increase for Fish and Wildlife Program expenses. This was primarily caused by an increase in spending on offsite mitigation measures in the Columbia River Basin. Offsite mitigation includes habitat restoration, supplementation of fish stocks through hatcheries, research, monitoring and evaluation of fish populations and other related efforts such as data management. In fiscal year 2020, fish and wildlife spending was lower than expected due to the COVID-19 pandemic. However, as expected for fiscal year 2021 the Fish and Wildlife Program performed greater amounts of work, resulting in a corresponding increase to expense.
- $10.8 million increase in Enterprise Services general and administrative expenses to support various Transmission and Power Services programs.
- $10.4 million increase in Transmission Services program expenses for asset management and substation maintenance. This increase was largely due to increased insurance premiums, labor and material costs in fiscal year 2021.
- $6.2 million decrease in USACE and Reclamation expenses, which was largely due to COVID-19 related supply chain delays and staffing issues across multiple USACE and Reclamation projects.
- $5.5 million increase related to the Spokane Reservation Equitable Conservation Act of 2019, which obligates BPA to compensate the Spokane Tribe of Indians for use of reservation lands in the production of power by the Grand Coulee Dam. Fiscal year 2021 is the first year that BPA has recorded this annual settlement expense, which BPA will pay by March 1 of the next fiscal year.

Purchased power expense, including the effects of bookouts, increased $124.5 million primarily due to a $79.6 million increase in contracted power purchases due to the dry weather conditions and high market prices experienced in fiscal year 2021. Additionally, fiscal year 2021 saw a $44.7 million expense increase related to water storage agreements with BC Hydro, an electric utility owned by the Province of British Columbia. Yearly fluctuations in water levels, river operations and storage plans, particularly at certain dams in and near Canada, affect the amounts owed to or from BC Hydro.

Depreciation, amortization and accretion increased $7.9 million, primarily due to higher amortization expense related to capital additions at the Columbia Generating Station.

Interest expense and other income, net

Fiscal year 2021 interest expense and other income, net compared to fiscal year 2020

A comparison of FCRPS interest expense and other income, net follows for the fiscal years ended Sept. 30, 2021, and 2020:

(Millions of dollars)	Fiscal Year 2021	Fiscal Year 2020	Expense Increase (Decrease)	% Change
Interest expense	$ 427.3	$ 467.9	$ (40.6)	(9) %
Allowance for funds used during construction	(25.9)	(27.7)	1.8	(6)
Interest income	(1.5)	(3.3)	1.8	(55)
Other income, net	(202.0)	(7.0)	(195.0)	NM*
Total interest expense and other income, net	$ 197.9	$ 429.9	$ (232.0)	(54)

*The percentage change is not meaningful

Total interest expense and other income, net decreased $232.0 million when compared to fiscal year 2020.

Interest expense decreased $40.6 million, primarily due to a $13.3 million reduction related to borrowings from U.S. Treasury and $22.5 million of reduced interest expense on nonfederal debt, primarily for the Columbia Generating Station. These decreases were due in large part to lower interest rates on debt held through fiscal year 2021 when compared to 2020.

Other income, net, increased $195.0 million primarily because of the following factors:

- $162.5 million increase in dividends and net realized gains on investments held in the nonfederal nuclear decommissioning trusts. Of this increase, $156.7 million is associated with net realized gains in the trust funds for Columbia Generating Station as a result of executed sales of investments to align the investment portfolio with a new asset allocation study.
- $20.0 million associated with the decommissioning and site restoration regulatory liability for the WNP-1 and WNP-4 terminated nuclear plants. In total during fiscal year 2021, BPA recorded $20.0 million of other income ($5.0 million per quarter) and reduced a regulatory liability for decommissioning and site restoration activities. This accounting treatment was consistent with the BP-20 rate case.
- $3.7 million associated with power-related financing adjustments at the Minto Fish Facility in Oregon. In May 2021, USACE and BPA reached agreement on the prior financing and cost assignment to the power purpose related to this facility.
- $3.6 million decrease in lease-purchase loss on debt extinguishment when compared to fiscal year 2020.
- $2.7 million gain from debt extinguishment associated with Energy Northwest issuing bonds in May 2021 and paying off long-term debt with part of the proceeds.

Other Operational Matters

Energy Northwest line of credit activity

In December 2020, Energy Northwest borrowed approximately $141 million under existing short-term borrowing arrangements. Of the $141 million borrowed, EN used $43 million to pay a portion of the interest coupon payment allocable to unamortized bond premiums related to certain outstanding bonds for Columbia Generating Station and terminated nuclear facilities. The remaining $98 million provided EN with interim funding for a nuclear fuel purchase due to anticipated supply constraints resulting in projected significant future price increases. The BPA Administrator has elected to defer recovery of the cost associated with this fuel purchase until BP-30 when the fuel is installed. BPA management anticipates CGS will begin using the fuel in 2030. Future amortization expense is expected to occur over the years in which the fuel will be used.

In December 2020 BPA recorded a $43 million decrease to Accounts payable and other, a $98 million increase to Nonfederal generation asset, and a $141 million increase to current Nonfederal debt on the Combined Balance Sheet.

In May 2021, Energy Northwest used some of the proceeds from a long-term bond offering to repay the $141 million it borrowed in December. In addition, BPA funded the repayment of the $10 million line of credit that was outstanding as of Sept. 30, 2020.

In June 2021, Energy Northwest drew an additional $86 million on an existing line of credit. This amount financed accrued expenses. Energy Northwest repaid this $86 million in August 2021.

COVID-19 Pandemic and Effects on the Bonneville Power Administration

The COVID-19 pandemic did not materially affect FCRPS net revenues for fiscal year 2021. Electric power loads served by BPA remained stable and comparable to fiscal year 2020 levels. There were no significant operational impacts to mission essential functions because of the COVID-19 pandemic.

Consistent with federal and Department of Energy guidance, most of the BPA non-field workforce remained in a telework status. BPA implemented maximum telework operations on March 13, 2020, 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 services 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 Sept. 30, 2021, some operational restrictions have eased to allow access to a facility or worksite for those workers whose jobs cannot be performed remotely. Management continues to evaluate various physical return-to-work options.

BPA cannot predict the potential impacts of COVID-19, if any, on its 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.

Western Energy Imbalance Market

After much consideration, BPA made its final decision to join the Western Energy Imbalance Market (EIM) when it released the Final EIM Close-out Letter on Sept. 27, 2021. This letter concludes an extensive assessment and public process dating to 2018, and BPA plans to enter the EIM with a go-live date of March 2, 2022. An EIM is a voluntary market that provides a sub-hourly economic dispatch of participating resources for balancing supply and demand every five minutes. New market opportunities such as the EIM have the potential to both reduce BPA's costs through greater efficiencies and increase revenues by providing a new way to market surplus power. The Western EIM is operated by the California Independent System Operator.

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 Cost Recovery Adjustment Clause (or CRAC, a rate mechanism BPA can use to 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 $166.3 million during fiscal year 2021:

(Millions of dollars)	As of Sept. 30, 2021	As of Sept. 30, 2020	Increase (Decrease)	% Change
Cash and cash equivalents	$ 1,207.9	$ 846.5	$ 361.4	43 %
Less: Cash and cash equivalents held by USACE and Reclamation	430.2	330.6	99.6	30
Add: Deferred borrowing	278.1	373.6	(95.5)	(26)
BPA financial reserves balance	$ 1,055.8	$ 889.5	$ 166.3	19

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. In addition, beginning in fiscal year 2022 and the BP-22 rate period, certain costs of Columbia River Fish Mitigation studies that do not result in a physical asset will be expensed as incurred.

(Millions of dollars)	Fiscal Year 2022	Fiscal Year 2023	Fiscal Year 2024
Transmission assets	$ 478	$ 580	$ 653
Federal system hydro generation assets	279	306	326
Fish and wildlife	43	43	30
IT and other assets	19	13	13
Total annual capital forecast	$ 819	$ 942	$ 1,022

Access to capital

BPA makes capital investments to support its multifaceted responsibilities to the region. BPA's primary source of financing for its capital program is its ability to borrow from the U.S. Treasury. This 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 expanded its options over the years. These options include nonfederal debt financing and refinancing, lease-purchases, the power prepay program, reserves and revenue financing, and asset management strategies to more rigorously prioritize proposed capital investments. The USACE and Reclamation also receive congressional appropriations to finance certain hydropower-related capital investments. BPA's repayment obligation begins when those capital investments are completed and placed into service by USACE and Reclamation.

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, 2021, BPA had $5.63 billion of bonds outstanding to the U.S. Treasury and $2.07 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. The first phase of this effort ended in fiscal year 2020 and provided multiple benefits to BPA ratepayers. During this phase, Energy Northwest refinanced certain maturing bonds, which enabled BPA to prepay higher-interest-rate federal obligations and to reduce the weighted-average interest rate and maturity of BPA's overall debt portfolio. These actions resulted in realized and projected debt service savings of $2.79 billion from 2014 through 2058.

In fiscal year 2021, BPA entered the second phase of the Regional Cooperation Debt program. This phase is focused on replenishing BPA's U.S. Treasury borrowing authority. Similar to phase one, the second phase of the Regional Cooperation Debt program utilizes 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 $3.2 billion in aggregate future Regional Cooperation Debt phase two bonds in fiscal years 2022 through 2030.

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 in fiscal year 2021 included the Port of Morrow, Oregon and the Idaho Energy Resources Authority, 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 2021 Notes to Financial Statements.

U.S. Treasury payment

BPA made its U.S. Treasury payment of $1.05 billion for fiscal year 2021, the 38th consecutive year in which BPA made its scheduled payment on time and in full. The scheduled principal payment for fiscal year 2020 excluded certain U.S. Treasury bond refinancing transactions, in which BPA extinguished variable-rate debt and reissued fixed-rate debt to secure low interest rates.

(Millions of dollars)	Fiscal Year 2021	Fiscal Year 2020
Scheduled payment		
Principal	$ 394.0	$ 451.0
Interest	187.2	207.6
Irrigation assistance	22.2	24.1
Other FCRPS costs	33.7	32.7
Scheduled payment	637.1	715.4
Advanced payment		
Principal	411.8	20.3
Total Treasury payment	$ 1,048.9	$ 735.7

The fiscal year 2021 payment included an unscheduled advance payment of approximately $411.8 million. This amount included $332.0 million made possible by additional cash in the Bonneville Fund becoming available, primarily as a result of the second phase of the Regional Cooperation Debt Program. The remaining $79.7 million of this advance payment was made available as a result of the Reserves Distribution Clause, which triggered for Transmission Services as a result of fiscal year 2020 reserve levels for application in fiscal year 2021. For further information on the Reserves Distribution Clause, see the Rates for Fiscal Years 2020–2021 section in this Management's Discussion and Analysis.

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, revenues 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.

Photo by Katherine T.

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, 2021 and 2020, 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, 2021.

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 FCRPS as of September 30, 2021 and 2020, and the results of its operations and its cash flows for each of the three years in the period ended September 30, 2021 in accordance with accounting principles generally accepted in the United States of America.

PricewaterhouseCoopers LLP

November 1, 2021

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

(Millions of Dollars)

	2021	2020
Assets		
Utility plant and nonfederal generation		
Completed plant	**$ 20,758.8**	$ 20,499.4
Accumulated depreciation	**(7,758.6)**	(7,507.9)
Net completed plant	**13,000.2**	12,991.5
Construction work in progress	**1,342.8**	1,151.0
Net utility plant	**14,343.0**	14,142.5
Nonfederal generation	**3,527.7**	3,543.3
Net utility plant and nonfederal generation	**17,870.7**	17,685.8
Current assets		
Cash and cash equivalents	**1,207.9**	846.5
Accounts receivable, net of allowance	**18.3**	50.5
Accrued unbilled revenues	**301.3**	299.1
Materials and supplies, at average cost	**109.5**	107.1
Prepaid expenses	**39.5**	36.4
Total current assets	**1,676.5**	1,339.6
Other assets		
Regulatory assets	**4,781.5**	5,018.9
Nonfederal nuclear decommissioning trusts	**515.2**	405.4
Deferred charges and other	**214.6**	209.2
Total other assets	**5,511.3**	5,633.5
Total assets	**$ 25,058.5**	$ 24,658.9

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)

	2021	2020
Capitalization and Liabilities		
Capitalization and long-term liabilities		
Accumulated net revenues	**$ 4,912.6**	$ 4,537.0
Debt		
Federal appropriations	**1,602.8**	1,544.0
Borrowings from U.S. Treasury	**5,049.9**	4,982.6
Nonfederal debt	**6,932.2**	6,348.9
Total capitalization and long-term liabilities	**18,497.5**	17,412.5
Commitments and contingencies (See Note 14 to 2021 Audited Financial Statements)		
Current liabilities		
Debt		
Borrowings from U.S. Treasury	**579.0**	666.0
Nonfederal debt	**451.0**	971.4
Accounts payable and other	**668.7**	559.3
Total current liabilities	**1,698.7**	2,196.7
Other liabilities		
Regulatory liabilities	**1,552.6**	1,649.7
IOU exchange benefits	**1,722.2**	1,910.4
Asset retirement obligations	**929.2**	890.7
Deferred credits and other	**658.3**	598.9
Total other liabilities	**4,862.3**	5,049.7
Total capitalization and liabilities	**$ 25,058.5**	$ 24,658.9

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)

	2021	2020	2019
Operating revenues			
Sales	**$ 3,727.8**	$ 3,583.6	$ 3,553.1
U.S. Treasury credits	**95.2**	100.1	102.8
Total operating revenues	**3,823.0**	3,683.7	3,655.9
Operating expenses			
Operations and maintenance	**2,152.4**	2,065.6	2,137.9
Purchased power	**248.2**	123.7	298.3
Nonfederal projects	**-**	-	232.6
Depreciation, amortization and accretion	**826.7**	818.8	531.0
Total operating expenses	**3,227.3**	3,008.1	3,199.8
Net operating revenues	**595.7**	675.6	456.1
Interest expense and other income, net			
Interest expense	**427.3**	467.9	250.8
Allowance for funds used during construction	**(25.9)**	(27.7)	(32.5)
Interest income	**(1.5)**	(3.3)	(9.8)
Other income, net	**(202.0)**	(7.0)	-
Total interest expense and other income, net	**197.9**	429.9	208.5
Net revenues	**397.8**	245.7	247.6
Accumulated net revenues, beginning of year	**4,537.0**	4,315.4	4,123.8
Irrigation assistance	**(22.2)**	(24.1)	(56.0)
Accumulated net revenues, end of year	**$ 4,912.6**	$ 4,537.0	$ 4,315.4

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

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

		2021		2020		2019
Cash flows from operating activities						
Net revenues	$	**397.8**	$	245.7	$	247.6
Adjustments to reconcile net revenues to cash provided by operations:						
Depreciation, amortization and accretion		**826.7**		818.8		531.0
Amortization of nonfederal projects		**-**		-		181.4
Deferred payments for Energy Northwest-related O&M and interest		**-**		10.0		227.0
Other		**(8.2)**		6.8		-
Changes in:						
Receivables and unbilled revenues		**30.0**		(15.2)		33.2
Materials and supplies		**(2.4)**		(0.6)		2.6
Prepaid expenses		**(3.1)**		(5.4)		17.2
Accounts payable and other		**465.6**		115.0		32.6
Regulatory assets and liabilities		**(291.2)**		(25.9)		67.1
IOU exchange benefits		**(188.2)**		(182.4)		(163.9)
Nonfederal nuclear decommissioning trusts		**(105.5)**		(9.7)		(10.1)
Other assets and liabilities		**25.9**		15.2		(28.1)
Net cash provided by operating activities		**1,147.4**		972.3		1,137.6
Cash flows from investing activities						
Investment in utility plant, including AFUDC		**(623.8)**		(587.6)		(634.8)
Proceeds from sale of utility plant		**2.0**		8.6		-
U.S. Treasury securities:						
Purchases		**-**		-		(110.0)
Maturities		**-**		-		150.0
Deposits to nonfederal nuclear decommissioning trusts		**(4.3)**		(4.1)		(3.9)
Lease-purchase trust funds:						
Deposits to		**(19.6)**		(71.0)		-
Receipts from		**27.1**		110.2		43.3
Net cash used for investing activities		**(618.6)**		(543.9)		(555.4)
Cash flows from financing activities						
Federal appropriations:						
Proceeds		**119.4**		24.1		31.0
Repayment		**(49.1)**		(75.3)		(227.5)
Borrowings from U.S. Treasury:						
Proceeds		**741.0**		1,757.0		255.0
Repayment		**(760.7)**		(1,388.0)		(506.0)
Nonfederal debt:						
Proceeds		**6.6**		71.2		4.0
Repayment		**(225.9)**		(470.0)		(379.5)
Debt extinguishment costs		**(1.5)**		(5.1)		-
Customers:						
Net advances for construction		**42.3**		20.2		29.9
Repayment of funds used for construction		**(17.5)**		(15.8)		(14.6)
Irrigation assistance		**(22.2)**		(24.1)		(56.0)
Net cash used for financing activities		**(167.6)**		(105.8)		(863.7)
Net increase (decrease) in cash, cash equivalents and restricted cash		**361.2**		322.6		(281.5)
Cash, cash equivalents and restricted cash at beginning of year		**857.5**		534.9		816.4
Cash, cash equivalents and restricted cash at end of year	$	**1,218.7**	$	857.5	$	534.9
Less: Restricted cash at end of year, reported in Deferred charges and other		**10.8**		11.0		11.4
Cash and cash equivalents at end of year	$	**1,207.9**	$	846.5	$	523.5
Supplemental disclosures:						
Cash paid for interest, net of amount capitalized	$	**384.4**	$	440.2	$	284.3
Significant noncash investing and financing activities:						
Nonfederal debt increase	$	**1,577.0**	$	916.2	$	753.5
Nonfederal debt decrease	$	**(1,288.2)**	$	(785.8)	$	(494.4)
Nonfederal debt cost of issuance	$	**(6.6)**	$	(4.6)	$	-
Increase in Nonfederal generation asset	$	**-**	$	-	$	594.8
Federal appropriations decrease	$	**(11.5)**	$	-	$	-

A caption from the prior period has been expanded 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 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 concluded on Sept. 30, 2021. On Oct. 1, 2021, new rates for fiscal years 2022-2023 went 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 funds 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; 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 was the first year that accretion expense was 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 Lewis County PUD's Cowlitz Falls Hydroelectric Project. CGS is a nonfederal nuclear power plant owned and operated by Energy Northwest, a joint operating agency of the state of Washington. The current license termination dates for CGS and the Cowlitz Falls Project are in December 2043 and May 2036, respectively. BPA has acquired the output of the Cowlitz Falls Project through June 30, 2032. 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. Beginning with fiscal year 2021, the CGS Nonfederal generation asset also includes approximately $98 million of prepaid nuclear fuel purchased by Energy Northwest that management anticipates CGS will begin using in 2030. Future amortization expense is expected to occur over the years in which the fuel will be used.

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. As of Sept. 30, 2021, cash amounts also include cash held in a margin account with BPA's financial futures broker, which BPA could access within one day. Cash equivalents in the Bonneville Fund consist of investments in non-marketable market-based special securities issued by the U.S. Treasury 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 2021, 2020 and 2019, 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, 2021, and 2020, management considered the effects of the COVID-19 pandemic. The allowance 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 can be 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. 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.

RECENTLY ADOPTED ACCOUNTING PRONOUNCEMENTS

Cloud Computing

In August 2018, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update (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. The standard was adopted prospectively and 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.

Fair Value

In August 2018, the FASB issued 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.” As ASU 2018-13 relates only to disclosure requirements, there were no impacts to the FCRPS financial statements as a result of adopting this guidance, which became effective Oct. 1, 2020. For revised disclosures, see Note 13, Fair Value Measurements.

SUBSEQUENT EVENTS

Management has performed an evaluation of events and transactions for potential FCRPS recognition or disclosure through Nov. 1, 2021, which is the date the financial statements were issued.

2. Revenue Recognition

DISAGGREGATED REVENUE

Years ended Sept. 30 - millions of dollars	2021	2020	2019
Sales			
Power			
Firm	$ 2,122.7	$ 2,113.7	$ 2,189.7
Surplus[1]	561.2	445.7	371.4
Transmission	966.1	938.3	893.3
Other[2]	77.8	85.9	98.7
Sales	$ 3,727.8	$ 3,583.6	$ 3,553.1
U.S. Treasury credits[3]	95.2	100.1	102.8
Total operating revenues[4]	$ 3,823.0	$ 3,683.7	$ 3,655.9

[1] Surplus revenue includes $226.4 million, $198.5 million, and $170.1 million of derivative commodity contracts and related operational hedging activity for fiscal years 2021, 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 $21.6 million, $24.1 million and $18.2 million for fiscal years 2021, 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 $3,479.8 million, $3,361.0 million and $3,364.8 million for fiscal years 2021, 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 2021, 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		2021		2020
Receivable assets				
Accounts receivable, net of allowance	$	18.3	$	50.5
Accrued unbilled revenues		301.3		299.1
Contract liabilities				
Customer prepaid power purchases	$	185.7	$	207.5
Third AC Intertie capacity agreements		87.5		91.8
Unearned revenue from customer deposits		18.5		26.4
Revenue recognized during the fiscal year from amounts included in contract liabilities at the beginning of the year	$	77.2	$	87.0

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		2021		2020	2021 Estimated average service lives
Completed plant					
Federal system hydro generation assets	$	9,958.9	$	9,837.1	75 years
Transmission assets		10,690.5		10,529.6	51 years
Other assets		109.4		132.7	8 years
Completed plant	$	20,758.8	$	20,499.4	
Accumulated depreciation					
Federal system hydro generation assets	$	(3,874.6)	$	(3,739.0)	
Transmission assets		(3,827.5)		(3,684.9)	
Other assets		(56.5)		(84.0)	
Accumulated depreciation	$	(7,758.6)	$	(7,507.9)	
Construction work in progress					
Federal system hydro generation assets	$	570.6	$	512.7	
Transmission assets		738.6		608.3	
Other assets		33.6		30.0	
Construction work in progress	$	1,342.8	$	1,151.0	
Nonfederal generation	$	3,527.7	$	3,543.3	
Net utility plant and nonfederal generation	$	17,870.7	$	17,685.8	

Allowance for funds used during construction

Fiscal year	2021	2020	2019
BPA rate	2.6%	3.0%	3.2%
Appropriated rate	0.1%	1.8%	2.5%

Amounts accrued in Accounts payable and other on the Combined Balance Sheets for Construction work in progress assets were approximately $92 million, $77 million, and $88 million as of September 30, 2021, 2020, and 2019, respectively.

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 37.2 years. Finance leases are primarily for transmission lines and equipment. Finance lease terms range from 2 to 65.7 years. There were no material lessor arrangements as of Sept. 30, 2021, and 2020.

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

As of Sept. 30 — millions of dollars	Financial Statement Line Item	2021	2020
Operating leases			
ROU assets	Deferred charges and other	$ 111.2	$ 115.2
Short-term lease liability	Accounts payable and other	16.3	18.0
Long-term lease liability	Deferred credits and other	94.9	97.2
Finance leases			
ROU assets	Completed plant	93.3	85.1
Short-term lease liability	Nonfederal debt	3.1	1.5
Long-term lease liability	Nonfederal debt	94.8	87.4

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

Years ended Sept. 30 — millions of dollars	Financial Statement Line Item	2021	2020
Operating lease cost[1]	Operations and maintenance	$ 19.0	$ 15.9
Finance lease cost:			
Amortization of ROU assets	Depreciation, amortization and accretion	3.7	2.3
Interest on lease liabilities	Interest expense	5.0	4.1
Total lease costs		$ 27.7	$ 22.3

[1]Includes variable lease costs, which were immaterial for the fiscal years ended Sept. 30, 2021, and 2020.

	Weighted-average remaining lease term	Weighted-average discount rate
Operating leases	8.3 years	2.6%
Finance leases	51.4 years	5.2%

The following provides supplemental cash flow information related to leases:

Years ended Sept. 30 - millions of dollars	2021	2020
Cash paid for amounts included in the measurement of lease liabilities		
Operating cash outflows:		
Operating lease payments	$ 19.0	$ 15.9
Interest on finance leases	5.0	4.1
Financing cash outflows:		
Principal payments on finance lease	2.9	1.7
Right-of-use assets obtained in exchange for new lease obligations		
Operating leases	13.4	115.2
Finance leases	11.9	74.1

The following tables provide maturities of operating lease liabilities:

As of Sept. 30 - millions of dollars	2021
2022	$ 18.7
2023	18.2
2024	17.2
2025	11.1
2026	11.1
2027 and thereafter	48.4
Total undiscounted lease liabilities	$ 124.7
Less: Amounts representing interest	13.5
Total lease liabilities	$ 111.2

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

5. Effects of Regulation

REGULATORY ASSETS

As of Sept. 30 — millions of dollars	2021	2020
IOU exchange benefits	$ 1,722.2	$ 1,910.4
Terminated nuclear facilities	1,566.2	1,636.6
Columbia River Fish Mitigation	786.2	772.0
Fish and wildlife measures	253.9	247.6
Conservation measures	123.3	165.4
Terminated I-5 Corridor Reinforcement Project	78.0	104.0
Trojan decommissioning and site restoration	76.7	76.1
Derivative instruments	67.6	5.4
Spacer damper replacement program	48.6	43.0
Federal Employees' Compensation Act	22.3	22.3
Legal claims and settlements	22.0	23.0
Other	8.4	5.1
Terminated hydro facilities	6.1	8.0
Total	$ 4,781.5	$ 5,018.9

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.

"**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. Through fiscal year 2021, these costs were recovered in rates over 75 years and amortized to depreciation, amortization and accretion expense. Beginning in fiscal year 2022 and the BP-22 rate period, these costs are no longer deferred and instead are expensed as incurred. In addition, beginning in fiscal year 2022 the amortization period for remaining deferred amounts has changed from 75 years to 50 years as stated in the BP-22 rate case. The accounting treatment for these costs will follow rates as set in the BP-22 rate case.

"**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.)

"**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.)

“**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.

“**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.)

“**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.

“**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.)

REGULATORY LIABILITIES

As of Sept. 30 — millions of dollars	2021	2020
Capitalization adjustment	$ 952.7	$ 1,017.7
Accumulated plant removal costs	572.5	533.8
Derivative instruments	25.2	8.2
Decommissioning and site restoration	2.2	90.0
Total	$ 1,552.6	$ 1,649.7

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 2021, 2020 and 2019.

“**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.)

“**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.)

“**Decommissioning and site restoration**” represents unrealized gains in the nonfederal nuclear decommissioning trust assets for the Columbia Generating Station. For fiscal year 2020, this liability also included realized earnings and interest income offset by accretion expense related to the ARO for Energy Northwest Projects 1 and 4. During fiscal year 2021, BPA began amortizing the regulatory liability for Projects 1 and 4. This treatment was consistent with the BP-20 rate case and resulted in $20 million recorded to Other income, net, in the Combined Statements of Revenues and Expenses. Additionally, a significant portion of the unrealized gains as of Sept. 30, 2020, were realized and recorded to Other income, net during fiscal year 2021.

6. Asset Retirement Obligations

As of Sept. 30 — millions of dollars	2021	2020
Beginning Balance	$ 890.7	$ 821.2
Activities:		
Accretion	37.1	34.9
Expenditures	(8.2)	(3.0)
Revisions	9.6	37.6
Ending Balance	$ 929.2	$ 890.7

As of Sept. 30 — millions of dollars	2021	2020
CGS decommissioning and site restoration	$ 848.2	$ 813.7
Trojan decommissioning	76.7	76.1
Energy Northwest Projects 1 and 4 site restoration	4.3	0.9
Total	$ 929.2	$ 890.7

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, primarily associated with the retirement of the Columbia Generating Station. BPA also has AROs for a 30% share of the former Trojan nuclear power plant decommissioning activities and for certain Energy Northwest-related site restoration activities. ARO liabilities are adjusted for any revisions, expenditures and the passage of time.

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 (NRC) extended the fuel storage license through.

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 $1.6 million, $1.3 million, and $1.2 million in fiscal years 2021, 2020, and 2019, respectively.

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.

NONFEDERAL NUCLEAR DECOMMISSIONING TRUSTS

As of Sept. 30 — millions of dollars	2021		2020	
	Amortized cost	Fair value	Amortized cost	Fair value
Equity securities	$ 423.3	$ 417.4	$ 248.4	$ 306.8
Debt securities	76.1	77.5	68.7	72.4
Cash and cash equivalents	20.3	20.3	26.2	26.2
Total	$ 519.7	$ 515.2	$ 343.3	$ 405.4

These assets are trust fund account balances, primarily for CGS decommissioning and site restoration costs, but also for site restoration at Energy Northwest Projects 1 and 4, which terminated prior to completion. The fair value of the trust fund balances for CGS decommissioning and site restoration costs as of Sept. 30, 2021, and 2020 were $494.9 million and $379.2 million, respectively. The investment securities in the CGS decommissioning and site restoration trust fund accounts comprise both equity and debt securities and are recorded at fair value in accordance with applicable accounting guidance. Equity securities include both domestic and international index mutual funds. Debt securities are classified as available-for-sale and include bond mutual funds that hold inflation-protected securities and have also included bond index funds. The trust fund balances for the site restoration at Energy Northwest Projects 1 and 4 were $20.3 million and $26.2 million, respectively. The site restoration fund for Energy Northwest Projects 1 and 4 is invested in a money market fund that is considered cash and cash equivalents.

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 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 a 2019 site-specific decommissioning study for CGS and the current 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.

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 considered when establishing fiscal year 2020 and 2021 rates. These realized gains as reported for fiscal years 2021, 2020 and 2019 were $164.1 million, $4.2 million, and $0, respectively.

Contribution payments to the CGS trust fund accounts for fiscal years 2021, 2020 and 2019 were $4.3 million, $4.1 million and $3.9 million, respectively. Based on current estimates, 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	2021	2020
Operating leases	$ 111.2	$ 115.2
Lease-Purchase trust funds	35.1	43.9
Derivative instruments	25.2	8.2
Funding agreements	24.6	23.3
Spectrum Relocation Fund	10.8	11.0
Other	7.7	7.6
Total	$ 214.6	$ 209.2

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 transaction are used to repay the related lease-purchase debt and associated debt extinguishment costs for that transaction.

The Lease-Purchase trust funds are primarily comprised of held-to-maturity fixed-income investments and cash and cash equivalents.

Investments classified as held-to-maturity were $19.3 million and $19.4 million as of Sept. 30, 2021 and 2020, and are recorded at amortized cost. The fair value of held-to-maturity investments exceeded amortized cost by approximately $7 million and $8 million as of Sept. 30, 2021 and 2020, respectively. Unrealized gains comprise the difference between amortized cost and fair value for both years. Held-to-maturity investments as of Sept. 30, 2021, mature in November 2030.

As of Sept. 30, 2021, and 2020, trust balances also included cash and cash equivalents of $15.8 million and $8.1 million, respectively.

Investments classified as available-for-sale were $0 and $16.4 million at Sept. 30, 2021, and 2020, respectively. These investments are held for construction purposes and are stated at fair value based on quoted market prices. The fair value of these investments approximates amortized cost, with immaterial unrealized and realized gains or losses recorded during fiscal years 2021, 2020, and 2019. (See Note 13, Fair Value Measurements.)

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

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

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

8. Debt and Appropriations

As of Sept. 30 — millions of dollars		2021		2020	
	Terms	Carrying Value	Weighted-Average Interest Rate	Carrying Value	Weighted-Average Interest Rate
Nonfederal debt					
Nonfederal generation:					
Columbia Generating Station	0.9 – 6.8% through 2044	$ 3,246.7	4.5%	$ 3,129.9	4.6%
Cowlitz Falls Hydro Project	4.0 – 5.3% through 2032	60.6	5.4	64.6	5.4
Terminated nonfederal generation:					
Nuclear Project 1	0.9 – 5.0% through 2042	809.0	4.8	792.1	4.9
Nuclear Project 3	2.9 – 5.0% through 2042	929.6	4.9	912.0	5.0
Northern Wasco Hydro Project	5.0% through 2024	6.9	5.0	8.4	4.8
Lease-Purchase Program:					
Lease-purchase liability	1.8 – 3.7% through 2046	1,910.3	2.8	1,979.1	2.7
NIFC debt	5.4% through 2034	119.0	5.4	118.9	5.5
Finance lease liability	0.5 – 6.9% through 2087	97.9	5.2	88.9	5.6
Other financial liability	3.4 – 4.6% through 2043	17.5	3.5	18.9	3.5
Customer prepaid power purchases	4.3 – 4.6% through 2028	185.7	4.5	207.5	4.5
Total Nonfederal debt		$ 7,383.2	4.2%	$ 7,320.3	4.2%
Federal debt and appropriations					
Borrowings from U.S. Treasury	0.05 – 5.9% through 2050	$ 5,628.9	2.6%	$ 5,648.6	2.6%
Federal appropriations	1.4 – 4.5% through 2071	1,233.3	3.3	1,213.5	3.5
Federal appropriations (not scheduled for repayment)		369.5	n/a	330.5	n/a
Total Federal debt and appropriations		$ 7,231.7	2.7%	$ 7,192.6	2.8%
Total debt and appropriations		$ 14,614.9	3.5%	$ 14,512.9	3.5%

NONFEDERAL DEBT

Nonfederal generation and Terminated nonfederal generation

As described in Note 1, Summary of Significant Accounting Policies, Nonfederal generation section, 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. 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 $319.4 million, $267.6 million and $328.8 million in fiscal years 2021, 2020 and 2019, 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.)

During fiscal year 2021, BPA recorded a gain of $2.7 million when certain Energy Northwest debt was extinguished via the issuance of long-term debt. BPA recorded no such gains during fiscal years 2020 and 2019.

Energy Northwest debt of $2.63 billion is callable, in whole or in part, at Energy Northwest's option, on call dates between July 2022 and July 2031 at 100% of the principal amount.

As of Sept. 30, 2021, Energy Northwest could borrow $110 million under a line-of-credit borrowing arrangement with a banking institution. 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. As of Sept. 30, 2021, and 2020, Energy Northwest had $0 and $10 million outstanding, respectively, on these lines of credit. During fiscal year 2021, Energy Northwest amended one of the line-of-credit borrowing arrangements to extend the due date and reduce the principal amount by $40 million, resulting in an aggregate amount of $110 million available under a line-of-credit borrowing arrangement. Also during fiscal year 2021, the other line of credit was terminated upon repayment of the outstanding $10 million.

Lease-Purchase Program

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 years 2021 and 2020, BPA recorded losses of $1.5 million and $5.1 million, respectively, when certain lease-purchase liabilities were extinguished via the issuance of long-term debt.

Under the Lease-Purchase Program, BPA consolidates one special purpose corporation (Northwest Infrastructure Financing Corporation or NIFC). As of Sept. 30, 2021, 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.

Finance lease liability

Included among this liability are finance lease agreements for transmission lines and equipment. The related assets are recorded as completed plant. For additional information regarding finance leases, see Note 4, Leases.

Other financial liability

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 to have outstanding at any 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, 2021, and 2020, no bonds outstanding were related to Northwest Power Act expenses.

As of Sept. 30, 2021, $531.3 million 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 $5.10 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, 2020, $1.01 billion of variable-rate bonds were outstanding.

Federal appropriations

Federal appropriations reflect the responsibility that BPA has to repay the U.S. Treasury for 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 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 repaid 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 2021 and 2020. 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
2022	$ 503.5	$ 8.5	$ 579.0	$ -	$ 1,091.0
2023	515.3	8.0	294.0	-	817.3
2024	552.8	6.7	199.0	-	758.5
2025	647.8	6.6	178.0	-	832.4
2026	580.5	6.6	211.0	-	798.1
2027 and thereafter	5,134.3	176.1	4,167.9	1,602.8	11,081.1
Total	$ 7,934.2	$ 212.5	$ 5,628.9	$ 1,602.8	$ 15,378.4
Less: Executory costs	2.8	-	-	-	2.8
Less: Amount representing interest	838.0	114.6	-	-	952.6
Less: Unamortized debt issuance cost	11.3	-	-	-	11.3
Plus: Unamortized premiums	203.2	-	-	-	203.2
Present value of debt	7,285.3	97.9	5,628.9	1,602.8	14,614.9
Less: Current portion	447.9	3.1	579.0	-	1,030.0
Long-term debt	$ 6,837.4	$ 94.8	$ 5,049.9	$ 1,602.8	$ 13,584.9

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, 2021, and 2020. 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 $20.6 million, $23.2 million and $18.7 million in fiscal years 2021, 2020 and 2019, 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		
2022	$	259.0
2023		259.0
2024		273.6
2025		273.6
2026		286.1
2027 through 2028		572.2
Subtotal of annual payments		1,923.5
Less: Discount for present value		201.3
IOU exchange benefits	$	1,722.2

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, 2021, totaling $1.92 billion. Amounts recorded of $1.72 billion at Sept. 30, 2021, represent the present value of future cash outflows for these IOU exchange benefits.

11. Deferred Credits and Other

As of Sept. 30 — millions of dollars	2021	2020
Interconnection agreements	$ 188.7	$ 168.9
Deferred project revenue funded in advance	144.5	141.4
Operating leases	94.9	97.2
Third AC Intertie capacity agreements	87.5	91.8
Derivative instruments	67.6	5.4
Service deposits	24.0	31.9
Federal Employees' Compensation Act	22.3	22.3
Unearned revenue from customer deposits	18.5	26.4
Fiber optic leasing fees	7.0	6.1
Other	3.3	7.5
Total	$ 658.3	$ 598.9

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.)

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

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

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

“**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.)

“**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.)

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 formal 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 2021, BPA experienced no material losses as a result of any customer defaults or bankruptcy filings. As of Sept. 30, 2021, BPA had $40.7 million in credit exposure related to purchase and sale contracts after taking into account netting rights. Of this $40.7 million, $40.1 million was related to investment grade counterparties and $600 thousand was related to sub-investment grade counterparties who provided letters of credit. 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.

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, 2021, the derivative commodity contracts recorded at fair value totaled 5.2 million megawatt hours (MWh), gross basis, with delivery months extending to September 2023.

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 $22.9 million and $6.4 million, and liabilities of $65.3 million and $3.5 million as of Sept. 30, 2021, and 2020, 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.

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, 2021, and 2020. There were no transfers between Level 2 and Level 3 during fiscal years 2021 and 2020.

ASSETS AND LIABILITIES MEASURED AT FAIR VALUE ON A RECURRING BASIS

As of Sept. 30, 2021 — millions of dollars

	Level 1	Level 2	Level 3	Total
Assets				
Nonfederal nuclear decommissioning trusts				
Equity securities	$ 417.4	$ —	$ —	$ 417.4
Debt securities	77.5	—	—	77.5
Cash and cash equivalents	20.3	—	—	20.3
Derivative instruments [1]				
Commodity contracts	0.1	24.1	1.0	25.2
Total	$ 515.3	$ 24.1	$ 1.0	$ 540.4
Liabilities				
Derivative instruments [1]				
Commodity contracts	$ (26.9)	$ (24.5)	$ (16.2)	$ (67.6)
Total	$ (26.9)	$ (24.5)	$ (16.2)	$ (67.6)

As of Sept. 30, 2020 — millions of dollars

	Level 1	Level 2	Level 3	Total
Assets				
Nonfederal nuclear decommissioning trusts				
Equity securities	$ 306.8	$ —	$ —	$ 306.8
Debt securities	72.4	—	—	72.4
Cash and cash equivalents	26.2	—	—	26.2
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)

[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.

Assets and liabilities classified as Level 3 consist of instruments for which fair value is derived using one or more significant inputs that are not observable for the entire term of the instrument. These instruments consist of 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. Forward prices are considered a key component to contract valuations. All valuation pricing data is generated internally by BPA's risk management organization.

Quantitative information regarding the only significant unobservable input used in the measurement of Level 3 assets and liabilities is presented below:

As of Sept. 30, 2021	Fair Value		Valuation Technique	Significant Unobservable Input	Range (per MWh)		
	Assets[1]	Liabilities[1]			Low	High	Weighted Average
	(in millions)						
Physical forward power contracts	$ 1.0	$ (16.2)	Discounted cash flow	Electricity forward price	$ 28.0	$ 126.4	$ 83.1

[1] The valuation techniques, unobservable inputs and ranges are the same for asset and liability positions

The significant unobservable input listed above is used by the risk management organization to construct the fair value 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	2021	2020
Beginning Balance	$ 5.5	$ 20.9
Changes in unrealized gains (losses)[1]	(20.7)	(15.4)
Ending Balance	$ (15.2)	$ 5.5

[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	2021		2020	
	Carrying Value	Fair Value	Carrying Value	Fair Value
Nonfederal Debt				
Nonfederal generation:				
Columbia Generating Station	$ 3,246.7	$ 3,585.9	$ 3,129.9	$ 3,560.9
Cowlitz Falls Project	60.6	70.1	64.6	72.8
Terminated nonfederal generation:				
Nuclear Project 1	809.0	908.5	792.1	926.1
Nuclear Project 3	929.6	1,101.4	912.0	1,129.2
Northern Wasco Hydro Project	6.9	7.5	8.4	9.3
Lease-Purchase Program:				
Lease-purchase liability	1,910.3	1,980.0	1,979.1	2,079.8
NIFC debt	119.0	160.1	118.9	158.4
Other financial liability	17.5	15.1	18.9	17.4
Customer prepaid power purchases	185.7	185.7	207.5	207.5
Federal debt				
Borrowings from U.S. Treasury	$ 5,628.9	$ 6,126.7	$ 5,648.6	$ 6,468.9

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.

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, 2021, and 2020.

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, 2021, and 2020.

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.

As of Sept. 30, 2021, BPA has entered into long-term fish and wildlife agreements with estimated contractual commitments of $510.2 million, which are likely to result in future expenses or regulatory assets. These long-term fish and wildlife agreements include $502.1 million related to the Columbia Basin Fish Accords. BPA and its federal partners USACE and Reclamation have agreements with Accords partners, namely certain states and tribes, for fish and wildlife protection and mitigation. The Columbia Basin Fish Accords expire Sept. 30, 2022. Remaining fish and wildlife agreements expire at various dates through fiscal year 2027.

IRRIGATION ASSISTANCE

Scheduled distributions

Years ended Sept. 30 — millions of dollars		
2022	$	16.1
2023		13.2
2024		8.1
2025		14.0
2026		20.3
2027 through 2045		191.5
Total	$	263.2

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 $263.2 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

Years ended Sept. 30 — millions of dollars		
2022	$	23.4
2023		15.9
2024		14.0
2025		13.5
2026		13.9
Total	$	80.7

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 that are currently in place to assist in meeting expected future obligations under BPA’s current long-term power sales contracts. Included are two purchases to meet load obligations in Idaho. Power purchase agreements to satisfy load obligations in Idaho utilize 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 $83.7 million, $43.8 million and $43.0 million for fiscal years 2021, 2020 and 2019, 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 2021 or 2020. During fiscal year 2019 BPA had such expenses of $41.1 million. 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 $19.1 million. For the Excess Property, Decontamination Liability and Decommissioning Liability Insurance policy, the maximum assessment is $6.4 million. For the NEIL I Accidental Outage Insurance policy, the maximum assessment is $5.0 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, 2021, 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, 2021, 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 including operational changes at FCRPS federal dams that may restrict hydroelectric generation. 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, 2021, 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 the Federal Energy Regulatory Commission 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.

Photo by Robert Z.

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 or 50 years, whichever is less.
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.

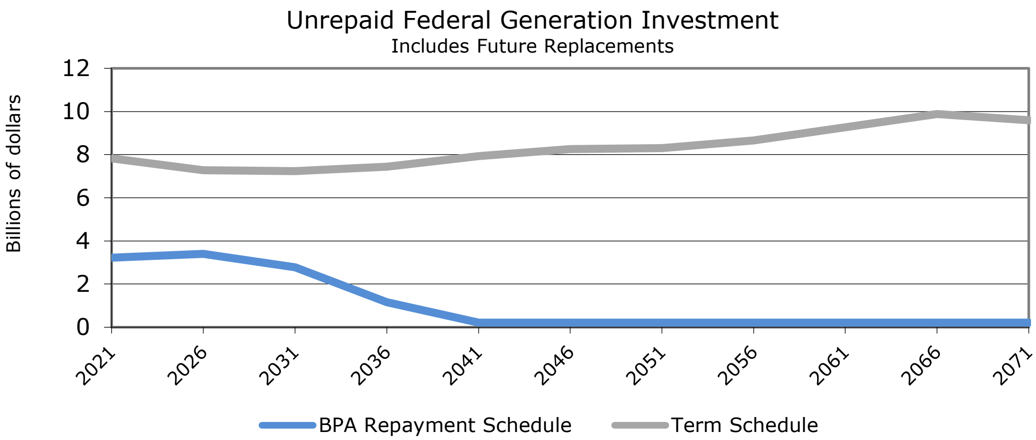
Reporting requirements of Public Law 89-448 are met so long as the unrepaid FCRPS investment and irrigation assistance resulting from BPA's repayment schedule are less than or equal to the allowable unrepaid investment in each year. While the comparison is illustrated by the following graphs representing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

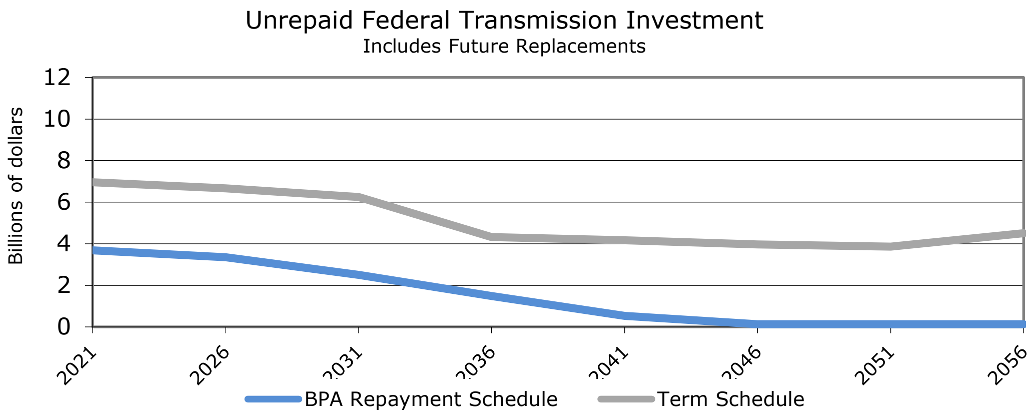
Repayment of FCRPS investment

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.

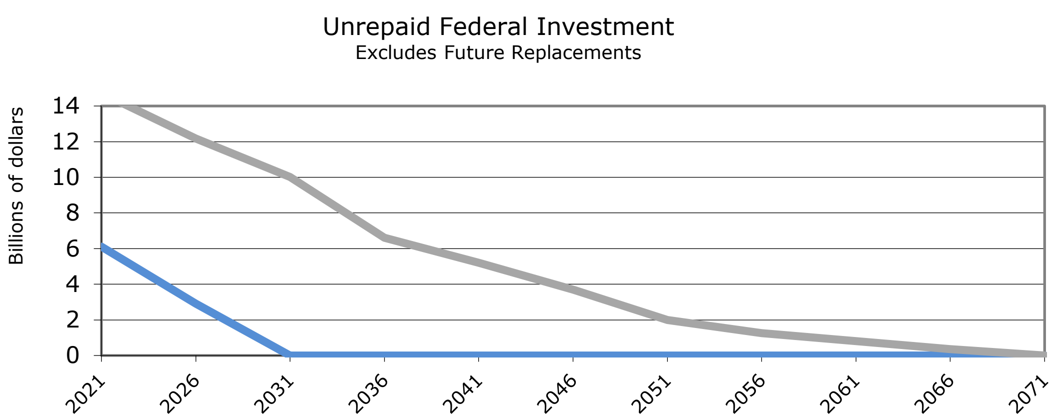
The term schedule lines in the graphs show how much of the obligation can remain unpaid in accordance with the repayment periods for the generation and transmission components of the FCRPS. The BPA repayment schedule lines show how much of the obligation remains to be repaid according to BPA's repayment 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.

Photo by Pat R.





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 2021 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, 2021

John L. Hairston, Administrator and Chief Executive Officer

Joel D. Cook, Chief Operating Officer

Robin R. Furrer, Chief Administrative Officer

Daniel M. James, Chief Workforce and Strategy Officer

Suzanne B. Cooper, Senior Vice President, Power Services

Richard L. Shaheen, Senior Vice President, Transmission Services

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

Tom McDonald, Executive Vice President, Compliance, Audit, and Risk

Benjamin Berry, Executive Vice President and Chief Information Officer

Marcus Chong Tim, Acting Executive Vice President and General Counsel

Marcus Harris, Acting Executive Vice President and Chief Financial Officer

Anne Fickes, Acting Director, Human Resources Service Center

Peter T. Cogswell, Director, Intergovernmental Affairs

Nita Zimmerman, Chief Business Transformation Officer

Joel Scruggs, Director of Communications

Karen Maria Conforti, Enterprise Program Management Officer

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Tri-Cities District
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Pasco, WA 99301
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DOE/BP-5181 • November 2021