FitchRatings

Public Finance
Public Power
United States

Bonneville Power Administration (OR) and Energy Northwest (WA)

Bonneville Power Administration (OR)'s 'AA-' IDR reflects very strong revenue defensibility and very low operating costs that support the utility's 'aa' financial profile assessment. Bonneville's leverage, measured as net adjusted debt to funds available for debt service, is variable due to its reliance on wholesale sales (i.e. net secondary revenues), but Fitch Ratings expects it to range between 9.0x and 10.0x through Fitch's forward-looking base and stress analysis, supporting the rating.

Wholesale sales and overall financial performance remain highly dependent on hydrological conditions and market energy prices.

Security

Bonneville's payments to Energy Northwest, WA (ENW), for debt service on the bonds are unconditional and are made as an operating expense from the Bonneville Fund. All Bonneville's revenues are required to be deposited in the Bonneville Fund, a separate fund within the U.S. Treasury. Expenditures from the Bonneville Fund do not require further federal appropriation.

Nonfederal debt obligations are consolidated as obligations on Bonneville's financial statements and are paid prior to Bonneville's payments on its borrowings from the U.S. Treasury and federal appropriations debt.

Ratings

Long-Term IDR	AA-
Outlook	
Long-Term IDR	Stable

New Issues

$514,400,000 Energy Northwest (Columbia Generating Station) Electric Revenue Refunding bonds, Series 2024-A	AA
$9,600,000 Energy Northwest (Columbia Generating Station) Electric Revenue Refunding bonds, Series 2024-B	AA
$169,900,000 Energy Northwest (Proj 2) Electric Revenue Refunding bonds, Series 2024-B	AA
$54,800,000 Energy Northwest (Proj 3) Electric Revenue Refunding bonds, Series 2024-A	AA
$66,900,000 Energy Northwest (Proj 3) Electric Revenue Refunding bonds, Series 2024-B	AA

Sale Date

The bonds are separated into two transactions and will both price via negotiation. The series 2024A bonds are expected to price on April 23 and the series 2024B bonds are expected to price on May 8.

Outstanding Debt

Energy Northwest (WA) (Columbia Generating Station) Electric Revenue Refunding Bonds	AA
Energy Northwest (WA) (Columbia Generating Station) Electric Revenue Bonds (Taxable)	AA
Energy Northwest (WA) (Columbia Generating Station) Electric Revenue Refunding Bonds (Taxable)	AA
Energy Northwest (WA) (Columbia Generating Station) Electric Revenue Refunding Bonds (Taxable Build America Bonds)	AA
Energy Northwest (WA) (Proj 1) Electric Revenue Refunding Bonds	AA
Energy Northwest (WA) (Proj 1) Electric Revenue Refunding Bonds (Taxable)	AA
Energy Northwest (WA) (Proj 3) Electric Revenue Refunding Bonds	AA
Energy Northwest (WA) (Proj 3) Electric Revenue Refunding Bonds (Taxable)	AA
Idaho Energy Resources Authority (ID) transmission Facilities Revenue Bonds (Taxable)	AA
Idaho Energy Resources Authority (ID) Wells Fargo note purchase agreement	AA
Lewis County Public Utility District No. 1 (WA) (Cowlitz Falls Hydroelectric Project) Revenue Refunding Bonds	AA
Port of Morrow (OR) transmission Facilities Revenue Bonds	AA

Applicable Criteria

U.S. Public Sector, Revenue-Supported Entities Rating Criteria (January 2024)

U.S. Public Power Rating Criteria (March 2024)

Related Research

Fitch Rates Energy Northwest, WA Elec Rev Ref Bonds 'AA'; Affirms Bonneville IDR at 'AA-' (April 2024)

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Key Rating Drivers

Revenue Defensibility - aa

Geographic and Revenue Diversity

Bonneville's revenue defensibility is very strong. Long-term power sales contracts with over 125 customers and Bonneville's dominant role as the regional transmission provider result in long-term revenue security, despite some degree of renewal risk related to the power supply contracts, which is considered an asymmetric rating consideration but does not constrain the assessment.

Bonneville establishes its own rates, although rates are subject to Federal Energy Regulatory Commission approval that the rates are sufficient to recover all of Bonneville's costs. The use of formal two-year rate cases represents a lengthy and rigid process, but the rate structure has automatic adjustment features that can occur prior to the next rate case, to increase rates if reserves fall to critical levels and to return reserves to customers if they exceed 120 days cash on hand (DCOH).

Power and transmission customers' purchaser credit quality is borderline very strong/strong. The largest customers have favorable service area characteristics and very strong financial profiles. Power sales still account for the majority of Bonneville's revenues at approximately 73% in fiscal 2023.

Operating Risk - aa

Very Low-Cost Hydroelectric Power Supply

Bonneville's operating cost burden (measured by total costs to kWh sold) is typically very low, averaging 3.9 cents/kWh between 2019 and 2022, largely due to a very low-cost, predominantly hydroelectric generation fleet. However, the operating cost burden increased to 9.0 cents/kWh in fiscal 2023. While low hydroelectric conditions drove a decline in volumetric sales by 48% last year, market prices were higher than usual, mitigating the impact of the reduction in annual revenues to only 10%. Hydrological conditions in fiscal 2024 have improved from the prior year, although they are below average levels.

Operating cost flexibility is considered weaker given the dominance of one fuel type in the fleet. However, hydroelectric generation provides protection against inflationary natural gas prices affecting other generation sources in the market.

Capital needs are considered moderate based on an age of plant calculation of 10 years, but projected capex totals are sizable at $4.88 billion over the next five years at Bonneville and an additional $1.30 billion at CGS. Projected capex at CGS represents a substantial increase from the $744 million amount estimated last year.

Management attributes the increase to overall inflationary cost pressures and the inclusion of large reinvestment projects related to the license extension of CGS (to operate until Dec. 20, 2043 from its original license expiration date in 2023). Projected capex also includes funding related to the evaluation of a potential extended power uprate initiative at CGS. If ENW and Bonneville decide to move forward with the uprate project, it could add another $644 million to capex between 2027-2031 and increase capacity by 10%-15%.

Financial Profile - aa

Highly Leveraged; Tighter Financial Performance in 2023

Financial performance tightened in fiscal 2023 with a very low water year (76% of average, and the lowest levels since 2001). In addition, Bonneville returned $363 million to customers through its Reserve Distribution Clause (RDC) that reduced net revenues by this amount in fiscal 2023. This followed very strong financial margins in fiscal 2022, with an above-average water year (103% of average) and very strong market prices for net secondary sales. The rating incorporates a degree of anticipated financial variability that results from Bonneville's hydroelectric portfolio.

Fitch Ratings' liquidity calculation at YE 2023 was $1.73 billion, or 191 DCOH, down from 263 DCOH at YE 2022 as excess reserves were distributed back to customers through the RDC and used to repay debt. The adoption of Bonneville's first Financial Reserves Policy in 2018 and refresh of the plan in 2022, provide improved certainty that reserves will be maintained over time within the target range of between 60 and 120 DCOH. Financial performance that builds reserves to above 120 DCOH will lead to a return of those revenues to customers, as is occurring following the build-up of above-target reserves over the past two years.

Leverage shows a relatively high degree of variability, declining to 6.1x in fiscal 2022, but ranging as high as 12.0x in fiscal 2023 and 11.4x in fiscal 2019. However, leverage in fiscal 2023 was adversely affected by the return of RDC funds. If those funds had been returned in fiscal 2022, the year they were collected, leverage in fiscal 2022 would have been higher at 7.2x and leverage in fiscal 2023 would have been 9.4x. Over the last five years, total outstanding debt declined incrementally but changes to annual cash flow and cash reserve levels also affect the leverage ratio.

Fitch expects Bonneville's leverage to range between 9.0x and 10.0x given planned capex and debt issuance, although leverage could periodically increase to 11.0x under adverse water conditions, as occurred in 2019 and 2023. In Fitch's view, transmission business lines are able to support slightly higher leverage than the power business line, resulting in rating tolerance for leverage periodically trending slightly higher than the 10.0x 'aa' threshold.

Asymmetric Additive Risk Considerations

No overall asymmetric risk considerations affect the final rating.

Sensitivities

Factors that Could, Individually or Collectively, Lead to Negative Rating Action/Downgrade

- Leverage trending consistently above 11.0x in Fitch's base or stress cases with limited expectation of reduction, which could occur if debt reduction targets are weakened or abandoned
- An erosion of revenue defensibility over the medium term that reduces Bonneville's ability to support existing leverage at the current rating. The potential for dilution could occur from reductions in load or more permissive contract terms, should they emerge during the contract-renewal process

Factors that Could, Individually or Collectively, Lead to Positive Rating Action/Upgrade

- Material and consistent declines in leverage below 8x in Fitch's base and stress cases

Profile

ENW is a joint operating agency formed in 1957 with 28 member utility systems. ENW owns and operates CGS, an operating nuclear plant with a license to operate until 2044. EWN also has financial responsibility for Projects 1 and 3, which are terminated nuclear projects. Bonneville is responsible for the repayment of ENW costs for these three projects, including debt service. Given Bonneville's unconditional payment obligation for this particular project debt of ENW, Bonneville and ENW have agreed to a regional debt cooperation program that optimizes debt repayment and structuring across the two entities to achieve the lowest overall cost for Bonneville's preference customers.

Bonneville provides wholesale power to a population of more than 15 million in the Pacific Northwest through a resource portfolio consisting of low-cost hydropower and nuclear generation. Bonneville is required by the Bonneville Project Act (1937) to sell its electricity first to public entities, also known as preference customers.

Bonneville also provides transmission services to a similar six-state region, but to a broader number of utilities. Bonneville is the largest of four federal power-marketing agencies within the U.S. Department of Energy. Bonneville's authority is vested in the secretary of energy, who appoints the Bonneville administrator or CEO. A predominantly hydroelectric generation portfolio (85% of energy production based on average water) results in hydrology risk and a variable energy supply.

Revenue Defensibility

Revenue Source Characteristics

Bonneville has very strong revenue source characteristics, as 100% of its revenues come from wholesale power and transmission services. Bonneville is required by statute to sell power at cost-based rates, with a preference to 125 municipal utilities, public utility districts and cooperatives. The publicly and cooperatively owned utilities, Bonneville's preference customers, account for around 87% of power sales and are required to purchase nearly all their energy from Bonneville pursuant to power sales contracts that extend through Sept. 30, 2028.

The administration makes the remaining firm power sales (estimated based on critical water conditions) to federal entities (4%), direct service industrial customers (less than 1%) and contract sales (9%). If water conditions are above critical levels, surplus energy is sold into the market, as available, as net secondary sales. Bonneville assumes average water conditions for rate setting and financial forecasting purposes, which leads to variability in financial performance as hydrology conditions are above or below average.

Transmission Revenues

The transmission business line is becoming an increasing share of consolidated operations. Bonneville's transmission assets consist of approximately 15,000 miles of high-voltage transmission lines and over 250 substations located across six states. Transmission revenues accounted for between 23% and 26% over the last five years, up from 16% in fiscal 2008. Transmission customers represent a wider group than Bonneville's preference customers and include investor-owned utilities (IOUs) and power generators in the region. Transmission customers do not have long-term contracts, but this business provides very strong revenue defensibility given the monopolistic nature of high-voltage transmission, the absence of excess transmission capacity from other providers, and the prohibitive capital cost of building excess transmission lines.

Rate Flexibility

The administration establishes its own power and transmission rates, and we view rate flexibility as very strong. However, determining a final federal record of decision on each rate case is a lengthy and rigid process, imposing practical limitations on Bonneville's ability to adjust rates outside the rate case process compared with public power peers. The Federal Energy Regulatory Commission (FERC) reviews and approves Bonneville's rates, but regulatory concerns are mitigated, as the FERC provides oversight to ensure Bonneville's ability to cover its full costs, including debt service on U.S. Treasury obligations. FERC regulates transmission rates to further ensure they are non-discriminatory, and just and reasonable.

Bonneville establishes its power and transmission rates for two-year periods. The 2024–2025 rate case, effective Oct. 1, 2023, consisted of a power rate decrease of less than 1% and no change in transmission rates. Bonneville's Tier 1 power rate declined to 3.469 cents/kWh. This followed a 2.5% decline in power rates in the prior 2022-2023 rate case. Tier 1 power rates and transmission rates were held relatively constant due to the notable increase in Bonneville's expected net secondary revenues, despite inflationary and power market cost increases at Bonneville and across the industry. Bonneville's Tier 2 power rate increased 83% to reflect much higher market energy prices in the last two years, but Bonneville makes limited Tier 2 power sales.

Automatic Rate Mechanisms

Bonneville's rates include automatic rate mechanisms that allow rates to be adjusted, under specific circumstances, between the two-year rate periods. Automatic rate mechanisms include the following:

- Cost Recovery Adjustment Clause: Implemented to recover up to $300 million annually if reserves are below zero at the beginning of the fiscal year;
- Financial Reserves Policy (FRP) Surcharge: Implemented to increase reserves to 60 DCOH for each business line, if reserves fall below this threshold at the end of the fiscal year;
- RDC: Implemented to decrease reserves by returning funds to customer if reserves are over 120 DCOH at each respective business line at the end of the fiscal year.

Inclusion of Capital Funding in Rates

The 2024–2025 rates include revenue funding of capex at $89 million per year for both the power ($34 million) and transmission ($55 million) business lines. The inclusion of revenue-funded capex in rate setting is a relatively recent policy shift that signals management's increased focus on its debt metrics and intent to reverse the increasing leverage trend.

Revenue funding of $89 million accounts for a relatively modest 9% of the estimated $951 million in capex planned in fiscal 2024, but Bonneville's intent was to gradually increase funding in future rate cases for the transmission business line, where it expects the majority of planned capex to occur in the next decade. In fiscal 2023, given the low water conditions and high market energy prices, management reduced the capex funding component for the power business line to $0.

Purchaser Credit Quality

Purchaser credit quality is borderline very strong/strong, with a collective Fitch Purchaser Credit Index Score hovering between 1.5 and 1.7 over the past five years. Power and transmission customers are geographically and operationally diverse, reflecting a service area extending across Idaho, Oregon, Washington and portions of Montana, Wyoming, Nevada, Utah and California. Bonneville's system accounts for approximately 28% of the electricity sold in the region and a significant share of its transmission infrastructure.

The largest power and transmission customers, accounting for approximately 40% of Bonneville's total operating revenues, include Snohomish County Public Utility District (PUD) No. 1, WA (AA–/Stable); Portland General Electric Company (not rated); Puget Sound Energy, Inc., WA (BBB+/Stable); Seattle City Light, Washington (not rated); Cowlitz County PUD No. 1, WA (A/Stable); Pacificorp (not rated); Tacoma, WA (AA–/Stable); Clark County PUD No. 1, WA (AA/Stable); Eugene Water & Electric Board, OR (AA–/Stable); and Umatilla Electric Cooperative, OR (not rated). Most of these utilities are municipally or community owned, have independent rate-setting authority, favorable service area characteristics, competitive rates and strong financial profiles.

Additional Considerations – Revenue Defensibility

Reliance on Wholesale Energy Revenues

Hydroelectric power supply depends on hydrology in the Columbia River Basin and the pace and timing of the snowpack melt and resulting runoff. Bonneville balances its firm load commitments with supply based on critical water conditions, which is provided to preference customer Tier 1 loads first and then Bonneville can make additional firm power sales commitments. Power produced in excess of critical water conditions can be considerable in above-average water years, but revenues depend in large part of market prices received for those surplus energy sales.

Net surplus revenues accounted for between 8% and 15% of total revenues between fiscals 2017 and 2021. The percentage increased to 28% in fiscal 2022 from the combination of above average-water conditions and strong market prices, but declined to 23% in fiscal 2023 with the below average water conditions. Bonneville's revenue reliance is inherent to the variable nature of its hydroelectric fuel supply, but it creates heightened revenue variability that informs Fitch's assessment of revenue defensibility of 'aa'.

For rate-making and financial planning purposes, Bonneville considers the additional energy production available for sale under average water conditions. These wholesale sales, netted against market purchases Bonneville makes during certain months to shape the output of the federal system, compose net secondary-system revenue. There is revenue risk in this budgeting practice. Revenues can be lower than budget if water conditions are below average, or water conditions could be modestly above average, but market prices fall below assumed levels. Bonneville incorporates the benefit of expected net secondary revenues into its established Tier 1 power rates to its contracted customers.

Asymmetric Factor Considerations

Power Supply Contract Renewal Credit Considerations

Bonneville's power supply contracts expire in 2028, well before the final maturity of Bonneville's debt, and represent an asymmetric rating consideration. However, credit risk from the mismatch is mitigated by the regional depth of the existing customer base and the likelihood that many, if not all of the existing preference customers will elect to re-sign new contracts.

Bonneville does not anticipate significant differences in the long-term preference contracts compared to the current contracts. Negotiations expected to conclude and result in executed contracts by December 2025. A material reduction of purchaser load under long-term contract or a notable change in contract terms could result in a dilution of Bonneville's revenue source characteristics.

Current contracts allocate approximately 50% of the federal system firm output in a block/slice product to 10 customers, the slice portion of which shifts the risk of supply variability to the slice purchaser. The 'slice' purchaser receives a percentage of the actual output of the federal system as generated, and the remaining 'block' portion is delivered in fixed amounts or blocks by month. The 'slice' product accounts for approximately half of the block/slice product. If the 'slice' product is discontinued and the full hydro-variability returns to Bonneville, to shape power supplies, Bonneville's financial performance could experience greater variability. The remaining 50% of firm supply is delivered to the other 125 preference customers and all seven federal agency customers in load following contracts.

Operating Risk

Operating Cost Burden

The operating cost burden is very low, typically between 3.1 cents/kWh and 4.2 cents/kWh. The operating cost burden was higher in fiscal 2023 with the low volume of sales in the challenged water year.

Bonneville sells energy produced by 31 low-cost hydroelectric plants owned and operated by the U.S. Army Corps of Engineers and the U.S. Bureau of Reclamation. The federal hydroelectric projects were constructed between 1941 and 1975. Bonneville has direct-funding agreements with both federal agencies to pay operating and capex costs. Direct funding of capital improvements allows Bonneville to direct decision making and prioritization of reinvestment in the hydroelectric fleet.

Output from the federally owned hydro assets and a small amount of hydroelectric power from nonfederally owned projects accounts for approximately 87% of Bonneville's total firm power supply. Output is heavily affected by water conditions, which were at a historical low in 2023 (76% of average or the seventh lowest water year on record since 1949) and below average in the 2024 water year to date (83%).

Bonneville also markets energy from nonfederal projects, the largest of which is the CGS, a 1,178MW nameplate nuclear plant that entered commercial operation in December 1984. CGS accounts for approximately 10% of Bonneville's power supply. Bonneville's resources, even under low water conditions, are sufficient to meet projected preference customer loads with the exception of small energy deficits under low-water conditions, with deficits most pronounced in the winter and late summer. Bonneville manages these periods through its conservation investments and short-term power purchases from wholesale markets.

Operating Cost Flexibility

The reliance on hydroelectric power for over 80% of the power supply contributes to weak operating flexibility, given the dominance of a single fuel type.

Environmental Considerations and Clean Energy Transition

Bonneville's power supply portfolio is predominantly carbon free, which positions Bonneville's customers well in terms of efforts to reduce greenhouse gas (GHG) emissions. Washington State passed the Clean Energy Transformation Act in 2019, requiring the state's power supply to be free of carbon emissions by 2045. Bonneville's customers in Washington are well positioned to achieve the 2045 target, given Bonneville's existing power supply portfolio, which is stable and not expected to change or grow, other than from efficiency investments.

Columbia River Fish Mitigation and Phase 2 Implementation Plan

Bonneville has a federal statutory obligation to protect, mitigate and enhance fish and wildlife resources. This obligation requires Bonneville to fund projects that reduce the impact of the federal hydroelectric projects on fish and wildlife mortality. Operation of the federal hydroelectric projects is subject to the Endangered Species Act (ESA). Environmental mitigation efforts are the subject of ongoing oversight and litigation. Bonneville's operational and financial obligations have increased over time. Bonneville's share of these costs is included in its power rates, although Bonneville receives a credit against its U.S. Treasury obligations equal to a percentage of the amount spent on fish and wildlife mitigation.

To provide clarity to fish and wildlife mitigation that should be undertaken, Bonneville and relevant federal agencies construct a Biological Opinion report. The federal Biological Opinion has a material impact on Bonneville's operations in regards to the ESA. Each of the Biological Opinions completed since 1993 has been the subject of litigation.

Bonneville and a number of interested parties, including tribal nations and other agencies and departments of the U.S. government recently reached two settlement agreements with regards to ongoing litigation related to the ESA. The settlement known as the Phase 2 Implementation Plan, includes an agreement by Bonneville to fund $200 million in capital projects such as fish habitat conservation. The December 2023 settlement agreement commits BPA to spend $100 million on programmatic expenses over 10 years. It also commits Bonneville to make available $200 million of funding for the Lower Snake River Compensation Plan hatcheries. The parties agreed to halt the existing and new litigation related to these topics. The agreements provide cost clarity to Bonneville and power system ratepayers and allow for spending to proceed on environmental projects to support identified fish species.

Columbia River Treaty

The treaty governs Canadian and US entitlements to the river flows and how much can be diverted for storage by Canada for example, which would reduce hydroelectric production in the U.S. The Treaty runs through 2024, but will continue thereafter if neither party terminates (with 10 years' notice). The U.S. and Canada began negotiations to modernize the treaty in May 2018 and the Bonneville Administrator is directly involved as decisions may affect Bonneville's operations and power supply. The 19th round of negotiations between representatives from the two countries was held in October 2023 and Bonneville management indicates that progress is being made on the key issues.

Capital Planning and Management

Capital reinvestment is adequate, demonstrated by an average age of plant of 10 years. Capital spending as a percentage of depreciation averaged a healthy 90% annually over the past five years. However, even with continued investment, Bonneville faces issues such as aging infrastructure, capital reinvestment in its hydroelectric fleet and transmission business line growth needs. Bonneville projects increasing its capital spending from historical levels. Total capital spending over the past five years averaged $712 million annually, with 66% of the spending directed toward transmission. Annual capex increased since 2020, reaching $886 million in fiscal 2023.

The administration estimates capital needs over the next five years at $4.88 billion, or an average of $975 million per year. Project needs are still weighted toward transmission, with an estimated 56% of spending, or approximately $2.75 billion, in the transmission business line. In addition to these amounts, ENW expects to spend $1.3 billion on reinvestment to CGS. ENW and Bonneville are also spending approximately $121 million between 2024 and 2026 to evaluate the feasibility of an extended power uprate initiative at CGS. If the two parties decide to move forward with the initiative, there could be an additional $644 million of capex between 2027 and 2031. Early indications are that the uprate initiative could result in an increase to CGS' generation capacity of 10%-15%.

Capital Funding Strategy

Bonneville's ability to fund its capital needs was enhanced by the increase to its Treasury Borrowing Authority enacted in 2021 through the Infrastructure Investment and Jobs Act (IIJA). The IIJA provided a permanent $10 billion increase to Bonneville's Treasury Borrowing Authority, staggered in its implementation with $6 billion in authority available immediately and the remaining $4 billion available in fiscal 2028. The total increase will result in borrowing authority of $17.7 billion in fiscal 2028.

Over the past decade, Bonneville developed a taxable lease-financing program for transmission assets and created a regional cooperation debt program with ENW to preserve federal borrowing authority. The flexibility the increased federal borrowing authority provided should have a positive impact on Bonneville's cost structure and allow it to reduce its reliance on higher cost debt-financing alternatives.

Additional Considerations – Operating Risk

N/a

Asymmetric Factor Considerations

N/a

Financial Profile

Financial Performance and Fitch Analytical Stress Test (FAST) Analysis

Bonneville's financial statements, issued as the Federal Columbia River Power System, include the accounts of Bonneville, the federal hydroelectric generating facilities of the U.S. Army Corps of Engineers and the Bureau of Reclamation dispatched by Bonneville, and O&M costs of the U.S. Fish and Wildlife Service for the lower Snake River facilities. The statements consolidate the activity of a financing corporation that finances transmission assets leased to Bonneville and nonfederal debt paid by Bonneville.

Fitch's calculated coverage of full obligations (COFO) is typically just below 1.0x and has been the same in four out of the last five years. Strong financial performance in fiscal 2022 resulted in 1.5x COFO. The COFO calculation below 1.0x in most years is due to advance repayment of nonscheduled principal as part of Bonneville and ENW's regional debt cooperation strategy. Nonfederal debt service coverage increased due to the regional debt cooperation strategy. Bonneville-calculated debt service coverage of non-federal debt was at or above 3.6x over the past four years due to refunding and restructurings performed for all three ENW projects on principal payments.

Bonneville's leverage has some variability based on hydrology conditions across the region, including the timing of snowmelt, market prices, and the timing and fluctuations of contracted load. This trend reflects the variability in cash flow and reserves; outstanding debt balances gradually decreased over the period. Leverage over the past four fiscal years ranged between 6.1x in fiscal 2022 (slightly above average water, late snowmelt and very strong market energy prices) and 12.0x in fiscal 2023 (a very low water year and RDC reduction in revenues of $363 million).

Liquidity Profile and Financial Reserves Policy

Cash reserves play a key role in managing aspects of Bonneville's revenue variability related to hydrology risk and wholesale energy sales. The trajectory and pace of declines in the power business line reserves available for risk between 2015 and 2018 were an ongoing weakness that contributed to Bonneville's decision to adopt the FRP and RDC. Prior declines in power business line reserves resulted from the underperformance of net secondary revenues and declining preference customer load. The implementation of the FRP is a credit positive in that it allows reserves to be built and maintained at minimum operating levels. Additional short-term liquidity flexibility is provided by Bonneville's $750 million line of credit with the U.S. Treasury, which can be drawn for any purpose.

The FRP, implemented in 2018, is designed to maintain operating reserve balances between 60 days and 120 days for each business line - power and transmission - and on a combined basis. Bonneville's total cash reserves improved between fiscal 2020 and fiscal 2022 to build reserves to meet the FRP. With the very strong cashflow in fiscal 2022, reserves were substantially in excess of the FRP, which triggered a $63 million transmission reserves RDC and a $500 million power supply reserves RDC, the maximum RDC allowable in any one year. Of the total $563 RDC amount, $363 million was returned to customers in rates between December 2022 and September 2023, $100 million was used to offset above-budget costs, $50 million was retained for liquidity, and $50 million was used for power supply debt reduction.

As a result of the RDC distributions and uses, unrestricted cash reserves at the end of fiscal 2023 declined to $1.73 billion, and Fitch-calculated DCOH was 191 days. The portion of this amount Bonneville considers reserves available for risk, or unrestricted cash, was $1.29 billion, of which $923 million was attributable to the power business. We expect reserves to decline further based on balances at the end of fiscal 2023 and the triggering of an additional $285 million RDC for the power business and $130 million for the transmission business. Bonneville is returning $165 million to power customers through rates between Dec. 2023 and Sept. 2024.

FAST — Base Case and Stress Case

Fitch's FAST analysis indicates Bonneville's financial performance under the base case should produce leverage between 8.3x and 9.5x, but the results will vary with hydroelectric conditions. Bonneville does not provide a financial forecast. Fitch's base case model assumptions include Bonneville's capex and ENW's planned capex for CGS, debt funding assumptions, a return to more typical water conditions, and a potential return to more historical market energy prices. No base rate increases are assumed. The model assumes the required RDC returns noted above.

The stress case imposes a moderate stress based on Bonneville's historical movement in total sales, which can be large based on hydrological conditions. However, the ultimate impact to revenues will be determined by wholesale market prices at the time. Fitch's stress case includes large declines in total wholesale sales in the first two years of 14.2% and 7.9%, respectively, followed by a recovery to positive sales growth. In this stress case, leverage could temporarily rise to approximately 10.0x. Fitch's analysis assumes that a stress scenario involving low water conditions could produce years where leverage temporarily increases above 10.0x.

Debt Profile

Total debt outstanding is split between Bonneville's federal debt and appropriations of roughly $7.4 billion at the end of fiscal 2023 and nonfederal debt of approximately $7.4 billion. Power business line debt is declining as a percentage of total debt. Power debt ($8.6 billion) accounted for only 58% of total outstanding debt at the end of fiscal 2023, compared with 67% in fiscal 2015 ($10.7 billion).

Bonneville's federal and appropriations debt offer a layer of structural support to nonfederal debt. Bonneville must defer payment on its federal obligation if revenues in the Bonneville Fund are insufficient to meet its nonfederal debt. This provision provides payment flexibility.

Additional Considerations – Financial Profile

N/a

Asymmetric Additive Risk Considerations

N/a

ESG Considerations

The ESG Relevance Score of '2' for GHG Emissions & Air Quality for Bonneville Power Administration varies from the public power sector guidance score of '3' since carbon-free systems (hydro, wind, nuclear, biomass and biowaste, geothermal) are not significantly exposed to the generation of GHG emissions from operations.

The highest level of ESG credit relevance is a score of '3', unless otherwise disclosed in this section. A score of '3' means ESG issues are credit neutral or have only a minimal credit impact on the entity, either due to their nature or the way in which they are being managed by the entity. Fitch's ESG Relevance Scores are not inputs in the rating process; they are an observation on the relevance and materiality of ESG factors in the rating decision. For more information on Fitch's ESG Relevance Scores, visit www.fitchratings.com/topics/esg/products#esg-relevance-scores.

Financial Summary

(Audited Fiscal Years Ended Sept. 30)	2019	2020	2021	2022	2023
Net Adjusted Debt to Adjusted FADS (x)	11.37	9.31	9.63	6.07	11.98
Net Adjusted Debt Calculation ($000)					
Total Short-Term Debt	222,800	511,500	0	0	0
Total Current Maturities of Long Term Debt	1,097,800	1,125,900	1,030,000	762,500	704,500
Total Long-Term Debt	13,731,800	13,249,100	13,863,000	14,072,900	14,313,500
-Restricted Funds — Cushion of Credit					
Total Debt	15,052,400	14,886,500	14,893,000	14,835,400	15,018,000
+Capitalized Fixed Charge — Purchased Power & Gas	715,920	296,880	595,680	860,880	2,344,800
+Total Pension Obligation (GASB Fitch—Adj. NPL + FASB PBO)					
-Total Unrestricted Cash	773,100	889,500	1,055,800	1,834,500	1,727,300
-Restricted Funds for Debt Service					
Net Adjusted Debt	14,995,220	14,293,880	14,432,880	13,861,780	15,635,500
Adjusted FADS for Leverage Calculation ($000)					
Total Operating Revenue ($000)	3,655,900	3,683,700	3,823,000	4,721,500	4,247,900
Total Operating Expenses	2,967,200	3,008,100	3,227,300	3,395,500	4,153,900
Operating Income	688,700	675,600	595,700	1,326,000	94,000
Adjustment for Subsidy Revenue					
Depreciation	531,000	818,800	826,700	841,000	848,900
+Interest Income	9,800	3,300	1,500	10,600	69,400
Amortization					
Funds Available for Debt Service	1,229,500	1,497,700	1,423,900	2,177,600	1,012,300
Adjustment for Purchased Power and Gas	89,490	37,110	74,460	107,610	293,100
-Total Transfers/Distributions					
+Pension Expense					
Adjusted FADS for Leverage	1,318,990	1,534,810	1,498,360	2,285,210	1,305,400
Coverage of Full Obligations (x)	0.83	0.97	0.95	1.49	0.89
Funds Available for Debt Service	1,229,500	1,497,700	1,423,900	2,177,600	1,012,300
Adjustment for Purchased Power and Gas	89,490	37,110	74,460	107,610	293,100
-Total Transfers/Distributions					
Adjusted FADS for Coverage	1,318,990	1,534,810	1,498,360	2,285,210	1,305,400
Full Obligations Calculation					
Cash Interest Paid	335,500	440,200	384,400	396,400	404,200
Prior Year Current Maturities	1,162,510	1,097,800	1,125,900	1,030,000	762,500
Total Annual Debt Service	1,498,010	1,538,000	1,510,300	1,426,400	1,166,700
Adjustment for Purchased Power and Gas	89,490	37,110	74,460	107,610	293,100
Total Fixed Obligations	1,587,500	1,575,110	1,584,760	1,534,010	1,459,800
Liquidity Cushion (Days)	228	273	275	369	274
Unrestricted Cash (days)	116	148	161	262	191
Liquidity Calculation					
+Total Unrestricted Cash	773,100	889,500	1,055,800	1,834,500	1,727,300
+Total Borrowing Capacity	750,000	750,000	750,000	750,000	750,000
-Amounts Unavailable					

Financial Summary

(Audited Fiscal Years Ended Sept. 30)	2019	2020	2021	2022	2023
Total Liquidity	1,523,100	1,639,500	1,805,800	2,584,500	2,477,300
Cash Operating Expense Calculation					
Total Operating Expense	2,967,200	3,008,100	3,227,300	3,395,500	4,153,900
-Depreciation and Amortization	531,000	818,800	826,700	841,000	848,900
Cash Operating Expenses	2,436,200	2,189,300	2,400,600	2,554,500	3,305,000

Source: Fitch Ratings, Fitch Solutions, Bonneville Power Administration (OR)

SOLICITATION & PARTICIPATION STATUS

For information on the solicitation status of the ratings included within this report, please refer to the solicitation status shown in the relevant entity's summary page of the Fitch Ratings website.

For information on the participation status in the rating process of an issuer listed in this report, please refer to the most recent rating action commentary for the relevant issuer, available on the Fitch Ratings website.

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