



Fitch Rates Port of Morrow, OR Trans Facilities Rev Bonds 'AA'; Affirms Bonneville at 'AA-'

Fitch Ratings - Austin - 27 February 2020:

Fitch Ratings has assigned a 'AA' rating to the following transmission facilities revenue bonds issued by the Port of Morrow, Oregon and secured by lease payments from the Bonneville Power Administration (Bonneville):

--Approximately \$190 million Transmission Facilities Revenue Bonds (Bonneville Cooperation Project No. 7), series 2020-1.

The 2020 bonds are scheduled to price on March 12, 2020, via negotiation. Bond proceeds will refinance an existing bank loan used to finance transmission assets and pay costs of issuance.

Fitch has affirmed the 'AA-' Issuer Default Rating (IDR) of the Bonneville Power Administration. The IDR reflects the credit quality of Bonneville's repayment of all its fixed obligations, including federal and non-federal debt and lease obligations.

Fitch also affirmed the 'AA' debt ratings on the following non-federal debt, which is secured on parity through payments from Bonneville:

--\$794.3 million Energy Northwest (ENW) Project 1 revenue bonds;

--\$3.4 billion ENW Columbia Generating Station revenue bonds;

--\$912.7 million ENW Project 3 revenue bonds;

--\$200.8 million Idaho Energy Resources Authority transmission facilities revenue bonds, series 2017;

--\$899.2 million Port of Morrow transmission facilities revenue bonds, series 2012, 2014, 2015, 2016-1& 2016-2 and 2019;

--\$119.6 million Northwest Infrastructure Financing Corporation transmission facilities lease revenue bonds, series 2004;

--\$68.5 million Lewis County Public Utility District No. 1 Cowlitz Falls hydroelectric project revenue refunding bonds, series 2013.

The ratings on the non-federal debt listed above and issued by Energy Northwest, Idaho Energy Resources Authority, Port of Morrow and Lewis County PUD No. 1, reflect Bonneville's unconditional obligation to pay debt service, as well as structural security features specific to the priority of these obligations ahead of Bonneville's federal debt (approximately \$5.3 billion Treasury debt and \$1.6 billion federal appropriations debt as of Sept. 30, 2019).

The Rating Outlook on all ratings is Stable.

ANALYTICAL CONCLUSION

The 'AA' rating on the Port of Morrow bonds and Bonneville's parity obligations on all other non-federal debt reflects Bonneville's absolute and unconditional obligation to make required lease and other debt service payments.

The 'AA-' IDR on Bonneville reflects its very strong revenue defensibility and very low operating cost, which support the utility's financial profile assessment of very strong despite a leverage ratio of over 9.0x and weaker liquidity profile. The rating incorporates steps taken by Bonneville and its customers since 2017 to implement a financial reserve policy (FRP) and include specific steps within the rate setting process designed to build liquidity and maintain minimum reserves specific to each of the power and transmission business lines. While the initial funding timeline selected (estimated 10 years) to reach the minimum 60-day reserve minimum threshold is considered slow by Fitch, the reallocation of reserves between the two business lines in fiscal 2019 brought the power business line closer to the 60-day minimum while the transmission business line was reduced but remained above the 60-day minimum.

The 'AA' ratings on the non-federal debt obligations -- distinct from Bonneville's 'AA-' IDR -- further reflect Bonneville's obligation to make those payments ahead of its federal debt, and the structural ability to defer federal debt repayments and interest due in the event revenues are insufficient after meeting Bonneville's other obligations, including the non-federal debt.

CREDIT PROFILE

The Port of Morrow (the port) is a port district located in Morrow County, Oregon. The port has the legal authority to own and issue bonds to fund transmission assets throughout the region. This right was validated by a court opinion sought by the Port in March 2012, prior to the first lease transaction executed with Bonneville. According to the terms of lease agreements between the Port of Morrow and Bonneville, Bonneville makes unconditional lease payments directly to the trustee (the port has assigned the lease revenues to the trustee) that are equal to debt service on seven series of bonds, including the series 2020 bonds. Bonneville retains operational control of the transmission assets.

Bonneville provides wholesale power to a population of more than 14 million in the Pacific Northwest through a resource portfolio consisting of low-cost hydropower and nuclear generation. Transmission services are provided to a similar six-state region but to a broader cast of utilities. Bonneville is the largest of four federal power marketing administrations (PMAs) within the U.S. Department of Energy (DOE). Power supply needs are met through a fleet of hydroelectric projects and one nuclear project. Bonneville's predominantly hydroelectric generation portfolio (86% of total owned capacity) results in hydrology risk and a variable energy supply. Low market energy prices in the region are placing practical competitive pressure on Bonneville to keep rate increases as low as possible and have driven Bonneville's net secondary revenues (short-term sales made outside of its long-term contracts) lower over the past decade.

KEY RATING DRIVERS

Revenue Defensibility:: 'aa'

Geographic and Operational 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, notwithstanding some degree of renewal risk related to the power supply contracts. Bonneville establishes its own rates, although rate flexibility is practically constrained by a lengthy and formal process with FERC approval required of each rate case. Finally, the purchaser credit quality of Bonneville's wholesale customers is strong, bordering on very strong. The largest customers exhibit favorable service area characteristics and very strong financial profiles.

Operating Risk:: 'aa'

Hydroelectric Dominant Power Supply

Operating costs are very low, largely due to a predominantly hydroelectric generation fleet. Capital needs relate to reinvestment in the aging generation assets and transmission investment across the six-state service area.

Financial Profile:: 'aa'

Highly Leveraged; Declining Power Reserves but Adequate Total Liquidity

Bonneville's financial profile is very strong, but its leverage ratio remains at the high end of the 'aa' category assessment. Transmission business lines are able to support slightly higher leverage than the power business line, resulting in Fitch's tolerance for leverage that trends slightly higher than the 'aa' threshold in some years. Given planned capital spending and debt issuance, Fitch expects Bonneville's leverage ratio to remain in the 9x-10x range over the next five years, even following a moderate stress scenario. Variability is likely in the short term as a result of variable hydro-electric sales but is considered in the rating. Liquidity is adequate on a combined basis but the declining trend in power agency reserve continues, aided in 2019 by the reallocation of transmission reserves.

Asymmetric Additional Risk Considerations

No overall asymmetric risk considerations impacted the final rating.

RATING SENSITIVITIES

Developments That May, Individually or Collectively, Lead to a Positive Rating Action:

--A consistently higher funding level in rates to support pay-go capex that produced a material lower leverage profile for Bonneville Power Administration could result in upward rating movement.

Developments That May, Individually or Collectively, Lead to a Negative Rating Action:

--Fitch's FAST model indicates that overall leverage is expected to remain in the current range, with annual fluctuations expected related to hydrology. However, in the event that Bonneville's leverage trends consistently above 10.0x, downward rating pressure is likely.

A potential dilution of revenue defensibility over the medium term, could reduce Bonneville's ability to support existing leverage levels at the current rating. The potential for dilution could occur from reductions in load served to Bonneville's power customer base or more permissive contract terms that might emerge during the contract renewal process expected in the next few years.

SECURITY

Bonneville's lease payments to Port of Morrow for debt service on the 2020 bonds are absolute and unconditional and are made as an operating expense from the Bonneville Fund. The payments will be made in accordance with a Lease Purchase Agreement signed in 2020. All of Bonneville's revenues are required to be deposited in the Bonneville Fund, which is a separate fund within the U.S. Treasury. Expenditures from the Bonneville Fund do not require further federal appropriation. The 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.

Revenue Defensibility

Revenue Source Characteristics

Bonneville exhibits very strong revenue source characteristics, as 100% of revenues come from power and transmission services. Bonneville is required by statute to sell power at cost-based rates, with a preference to public utility districts and cooperatives. The publicly and cooperatively owned utilities (Bonneville's preference customers) account for around 88% of power sales and are required to purchase nearly all of their energy from Bonneville pursuant to power sales contracts that extend through 2028.

Power Supply Contract Term Considerations

Bonneville's power supply contracts expire in 2028, which is well before the final maturity of Bonneville's debt and represents an asymmetric rating factor. However, Fitch's concern regarding the remaining term of Bonneville's twenty year power supply contracts is partially mitigated by the regional depth of the existing customer base and the likelihood that many of the existing preference customers will elect to resign new contracts. Bonneville's ability to offer competitively priced power supply services will be a key factor during the upcoming extension of its power sales contracts, with negotiations expected to occur between 2021 and 2026. A material reduction of purchaser load under long-term contract or notable change in contract terms could result in a dilution of Bonneville's revenues source characteristics.

Transmission Revenues

Bonneville's transmission business line is growing and becoming a larger share of Bonneville's consolidated operations. Transmission revenues accounted for 23% of total operating revenues in fiscal 2019, up from 16% in fiscal 2008. Transmission customers are a wider group than Bonneville's preference customers and include investor-owned utilities and power generators in the region. While transmission customers do not have long-term contracts, Fitch believes this business provides strong revenue defensibility given the monopolistic nature of high-voltage transmission and the absence of excess transmission capacity.

Rate Flexibility

Bonneville establishes its own power and transmission rates, and rate flexibility is viewed as very strong. However, the rate process to get to a final record of decision on each rate case is a lengthy and rigid process, imposing practical limitations on Bonneville's ability to adjust rates outside of the rate case process as compared with public power peers. FERC reviews and approves Bonneville's rates but regulatory concerns are mitigated as FERC's oversight is provided to ensure full cost recovery and revenue sufficient to pay debt service on the federal Treasury obligations. Transmission rates are regulated by FERC to further ensure they are nondiscriminatory, as well as just and reasonable.

Bonneville establishes its power and transmission rates for two-year periods. The most recent rate increases, effective Oct. 1, 2019, consisted of a 0.0% base power rate increase and a 3.6% average increase in transmission rates. The final power rate increase of 1.5% over the two year rate period was below the initial 2.9% rate increase considered in Fitch's last review while the final transmission rate increase was the same. The reduction in the final power base rate increase from the earlier 2.9% level was based on lower capital-related costs and forward market sales during the two year rate period (fiscals 2020 and 2021). The transmission rate increase primarily reflects increased capital costs to build new transmission interconnects and reinvest in existing transmission in the region.

Purchaser Credit Quality

Bonneville's purchaser credit quality is strong. Power and transmission customers are geographically and operationally diverse reflecting a service area that extends across Idaho, Oregon, Washington, and portions of Montana, Wyoming, Nevada, Utah, and California. Bonneville's system accounts for approximately 27% of the electricity sold in the region and 75% of the transmission infrastructure.

The largest power and transmission customers, accounting for approximately 40% of Bonneville's total operating revenues, include Snohomish County Public Utility District No. 1 (AA-/Stable), Seattle City Light (not rated by Fitch), Eugene Water and Electric Board (AA-/Stable), Tacoma (AA-/Stable), Benton County Public Utility District No. 1 (AA-/Stable), and Cowlitz County Public Utility District No 1 (A/Stable) as well as Puget Sound Energy, Inc. (BBB+/Stable). Bonneville's Fitch-calculated purchaser credit index of 1.65 reflects the strong revenue defensibility exhibited by these purchasers as evidenced by their independent rate setting, favorable service area characteristics, competitive rates and strong financial profiles.

Reliance on Wholesale Energy Sales

Bonneville relies on uncontracted wholesale energy sales for a portion of its revenue. While this reliance is inherent to the variable nature of its hydroelectric power supply, it creates heightened revenue variability that informs Fitch's assessment of revenue defensibility. For ratemaking and financial planning purposes, Bonneville

considers the additional energy production available for sale under average water conditions. These wholesale sales, netted against market purchases made by Bonneville during certain months of the year to shape the output of the federal system, compose net secondary-system revenue.

The revenue risk in this budgeting practice is that revenues can be lower than budget if water conditions are below average. Net secondary revenues have been lower than budgeted in two of the last three years due to below-average water conditions in certain years and depressed market energy prices. These results have been one of the primary factors behind the decline in financial reserves for the power business over the same timeframe.

Operating Risk

Bonneville sells energy produced from 31 low-cost hydroelectric plants owned and operated by the U.S. Army Corps of Engineers and the Bureau of Reclamation. The federal hydroelectric projects were constructed between 1941 and 1975. Bonneville has direct-funding agreements with both agencies to pay operating and capex costs. The direct funding of capital improvements allows Bonneville to direct decision making and prioritization of reinvestment in the hydroelectric fleet. Bonneville also markets energy from nonfederal projects, the largest of which is CGS, 1,157 MW nuclear plant that commenced operation in December 1984. CGS accounts for around 10% of Bonneville's power supply. Bonneville's resources, even under low water conditions, are sufficient to meet projected preference customer loads.

Bonneville's operating cost burden, as calculated by Fitch, is very low at between 3 and 4 cents per kilowatt hour (kWh) over the past five years. The cost burden includes payments related to the residential exchange program. Bonneville is legally required to provide power to meet the residential load within the Pacific Northwest, including load served by the investor owned utilities. Bonneville makes financial payments (in lieu of supply physical power) to investor owned utilities with retail load in the region to comply with this obligation.

Operating Cost Flexibility

The reliance on hydroelectric power for over 80% of power supply contributes to weak operating flexibility, given the dominance of a single fuel type. However, Bonneville's power supply portfolio is predominately carbon free, which positions Bonneville's customers well in terms of efforts aimed at reducing greenhouse-gas emissions. For example, Washington State passed the Clean Energy Transformation Act in 2019 requiring the state to achieve a power supply free of carbon emissions by 2045. Bonneville's generation portfolio is relatively stable and not expected to change or grow, other than efficiency investments.

Columbia River Fish Mitigation and Biological Opinion

Bonneville is required to protect, mitigate and enhance fish-and-wildlife resources to the extent they are affected by federal hydroelectric projects on the Columbia River and its tributaries. 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 obligations in regards to these efforts have generally increased over time. Bonneville's share of these costs is included in Bonneville's power rates for its preference customers, although Bonneville receives a credit against its federal treasury obligations equal to a percentage of the amount it spends on fish and wildlife mitigation.

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. Often the outcome has been a

requirement for Bonneville to increase spill (resulting in lower generation) in order to protect migrating fish. A new Biological Opinion is required to be completed by March 2021 and the related environmental impact statement is expected by June 2020. Costs resulting from the new Biological Opinion are uncertain although some of the expected operational changes have already been implemented. Bonneville's Administrator has taken the position that the cost impact will need to remain neutral to Bonneville's ratepayers.

Capital Planning and Management

Bonneville's capital planning and management is adequate as evidenced by an average age of plant of 14 years and capital spending to depreciation that has averaged 158% annually over the past five years. However, Bonneville faces the issue of aging infrastructure and delayed capital reinvestment in its hydroelectric fleet and growth needs in the transmission business line. Capital needs over the next five years are estimated at \$4.2 billion, with 55% of the spending, or around \$2.3 billion, occurring in the transmission business line. These capital amounts do not include approximately \$1.2 billion of additional capex that ENW estimates will be needed at CGS through 2030. Although the hydroelectric assets are owned by the Bureau of Reclamation and Army Corps of Engineers, Bonneville makes the funding decisions regarding the pace and scope of capital reinvestment.

New Leverage Policy

Bonneville's historical capital funding practice has been to debt finance nearly all of its capital spending. In 2018, Bonneville adopted a new leverage policy that made a modest change to this historical practice and require the transmission business line to use revenue financing for a small portion of its capital needs. Bonneville's overall goal is to reduce the debt to asset ratio from 90% to between 75%-85% by 2028. The transmission rate increase implemented in fiscal 2020 includes a small amount of \$26 million annually to fund a portion of capex for the transmission business line, which is minimal in relation to the total planned transmission capex. No revenue funding is included for the power business line since scheduled amortization is outpacing new debt and the debt to asset ratio is declining on its own; power will continue to debt finance 100% of its planned capital spending and still meet the decrease targeted in the leverage policy.

Western Energy Imbalance Market (EIM)

Bonneville announced in September 2019 that it signed an implementation agreement with the EIM, a regional trading market run by the California Independent System Operation (Cal ISO) that has grown to cover most of the geographic territory in the western United States. Bonneville's decision is a large step with regional importance to the EIM given the generation and transmission assets Bonneville will bring to the consolidated market place. The decision is expected to result in minimal capex and operating costs but will involve coordination and planning efforts until Bonneville's potential decision whether it will join the EIM. Bonneville anticipates that its participation in the EIM could provide benefits to both the power and transmission business lines.

Financial Profile

Bonneville's financial statements, issued as the Federal Columbia River Power System, include the accounts of Bonneville, the federal hydroelectric generating facilities of the Army and the Bureau of Reclamation dispatched

by Bonneville, and the operation and maintenance costs of the U.S. Fish and Wildlife Service for the lower Snake River facilities. The statements consolidate the activity of financing corporations that finance transmission assets leased to Bonneville.

Bonneville's leverage ratio, as measured by net adjusted debt/adjusted funds available to debt service, declined to 9.9x in fiscal 2018 from 10.7x in fiscal 2015. Declining leverage, while slight, was driven by gradual declines in outstanding debt and relatively stable cash flow, or funds available for debt service (FADS). FADS declined in fiscal 2019 as a result of higher purchased power costs related to below average water conditions and high market prices at times, pushing leverage back up to 11.4x. Total outstanding debt continued its gradual decline.

Bonneville's consolidated coverage of full obligations is typically modest at around 1.0x but fell below 1.0x in the last four fiscal years contributing to Fitch's weaker assessment of liquidity and coverage. This was due to the practice of repaying nonscheduled principal in advance as part of the regional cooperation debt strategy. Fitch's analysis of Bonneville's IDR focuses on the calculation of coverage for all obligations, including Bonneville's federal obligations.

Debt service coverage (DSC) of the ENW debt increased as a result of the regional debt cooperation strategy. DSC, as calculated by Bonneville, is approximately 5.0x as a result of the refunding and restructurings performed for all three ENW projects on principal payments.

Fitch Analytical Stress Test (FAST) - Base Case and Rating Case

Fitch's analysis indicates that Bonneville's financial performance should be stable through the base case and rating case, including variability that can occur on Bonneville's hydroelectric system. The base case indicates that leverage should decline very slightly over time. Fitch has assumed 0% growth in total wholesale sales in the base case. The rating case includes large declines in total wholesale sales in the first two years of 9.1% and 3.5%, respectively, followed by a recovery to positive sales growth. The rating case imposes a moderate stress case based on Bonneville's historical movement in total sales, which can be large based on hydrological conditions, although the ultimate impact to revenues will be determined by wholesale market prices at the time. In the rating case, leverage would be elevated, above 13x, in the initial years but return to between 9x and 10x in the later years. Additional assumptions used in both the base and rating case include Bonneville's planned amounts of capital spending, debt funding of all capital spending and rate increases in line with the financial reserve policy.

Debt Profile

Debt outstanding is split fairly evenly between Bonneville's federal debt and appropriations (approximately \$6.9 billion at the end of fiscal 2019) and non-federal debt (approximately \$7.6 billion). Power business line debt is declining as a percentage of total debt. Power debt accounted for 62% of total outstanding debt (\$9.0 billion) at the end of fiscal 2019, as compared to 67% in fiscal 2015 (\$10.7 billion).

Bonneville's federal debt and appropriation debt offers a layer of structure support to the non-federal debt. Bonneville must defer payment on its federal obligation if revenues in the Bonneville Fund are insufficient to meet its non-federal debt. This provision provides payment flexibility. Although Bonneville is engaged in its regional debt cooperation strategy that involves debt extension of non-federal debt in order to repay greater amounts of federal debt obligations, the structural distinction between the two liens remains intact and a protection to non-federal debt holders.

Declining Trend in Reserves

Overall cash reserves provided 116 days cash at the end of fiscal 2019, down steadily from 213 days cash at the end of fiscal 2015. Additional liquidity is provided by the \$750 million line of credit with the U.S. Department of Treasury that can be drawn for any purpose.

Cash reserves play a key role in managing aspects of Bonneville's revenue variability related to hydrology risk and wholesale energy sales. Bonneville's risk of revenue variability is managed primarily through power business line cash reserves for risk, which are a subset of Bonneville's overall reserves. The trajectory and pace of declines in recent years in the power business line's reserves are an ongoing weakness in the financial profile and final IDR of Bonneville. The reserves are all co-mingled in the Bonneville Fund and total reserves are adequate but the declines indicate the extent of under-recovery in the power business due to underperformance of net secondary sales and declining preference customer load.

Power reserves received a one-time boost from the reallocation of \$182.3 million from transmission reserves to the power business in fiscal 2019. The result was an increase in power reserves for risk to \$203 million at the end of fiscal 2019, up from a low point of \$13 million at the end of fiscal 2018. The reallocation occurred after an internal study and record of decision reached by Bonneville regarding the misallocation of reserves between the two business lines. The reallocation reduced transmission reserves to \$282 million in fiscal 2019 from \$538 million in fiscal 2018.

Financial Reserve Policy Adopted; Additional Funding in 2020 Rate Adjustment for Reserves

Bonneville and its customers worked over multiple years to adopt the FRP in advance of the 2020 rate case. The FRP established a minimum threshold of 60 days reserves for risk at each business line individually and for both business lines collectively. The initial targets are approximately \$300 million for power and \$100 million for transmission and \$400 million for the combined agency.

FRP gives Bonneville the ability to increase rates solely to increase reserves for the first time. If either of the business lines have reserves lower than the 60 days target at year end, rate increases will be implemented at specified amounts. For example, power business line reserves ended fiscal 2019 at \$203 million, which was below the 60 day target of approximately \$300 million. As a result, rates were increased by 1.5% in fiscal 2020 (Oct. 1, 2019) in order to recover an additional \$30 million to add to power business line reserves. Transmission reserves were above the threshold, even with the reallocation. Conversely, the Bonneville may return funds to customers or repurpose funds for capex or debt reduction if each of the business lines exceeds 120 days of reserves.

In addition to the sources of information identified in Fitch's applicable criteria specified below, this action was informed by information from Lumesis.

ESG Considerations

Unless otherwise disclosed in this section, the highest level of ESG credit relevance is a score of 3 - 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.

For more information on Fitch's ESG Relevance Scores, visit www.fitchratings.com/esg.

RATING ACTIONS

ENTITY/DEBT	RATING	PRIOR
Bonneville Power Administration (OR)	LT IDR AA- ● Affirmed	AA- ●
Bonneville Power Administration (OR) /Issuer Default Rating/1 LT	LT AA- ● Affirmed	AA- ●
Bonneville Power Administration (OR) /Transmission Revenues/1 LT	LT AA ● Affirmed	AA ●
Energy Northwest (WA) /Electric System Revenues/1 LT	LT AA ● Affirmed	AA ●

Additional information is available on www.fitchratings.com

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Applicable Criteria

U.S. Public Power Rating Criteria (pub. 03 Apr 2019)

Public Sector, Revenue-Supported Entities Rating Criteria (pub. 07 Nov 2019)

Additional Disclosures

Dodd-Frank Rating Information Disclosure Form
Solicitation Status
Endorsement Policy

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