

Bonneville Power Administration, Oregon

New Issue Summary

Sale Date: Dec. 9, 2020

Series: 2020-2

Purpose: Bond proceeds will refinance an existing Port of Morrow bank loan used to construct various transmission assets and pay costs of issuance.

Security: Port of Morrow owns the financed transmission assets and Bonneville Power Administration makes payments for the facilities according to a lease-purchase agreement. Bonneville's obligation to make lease payments to Port of Morrow is absolute and unconditional, and payments are made as an operating expense from the Bonneville Fund.

The revision of the Outlook to Stable reflects strong financial performance in fiscal 2020 that resulted in strengthening Bonneville's previously weak liquidity profile. Despite the economic and coronavirus-related challenges of fiscal 2020, Bonneville ended the year with lower than budgeted expenditures and higher than budgeted surplus revenues due to favorable late summer water conditions and production at the hydroelectric assets. As a result, Bonneville's total cash reserves increased to the highest point in the last five years.

Bonneville's 'AA-' Issuer Default Rating (IDR) reflects very strong revenue defensibility and very low operating costs, which support the utility's financial profile assessment of 'aa'. Bonneville's leverage ratio, measured by net adjusted debt to funds available for debt service (FADS), exhibits a degree of volatility. Notwithstanding expectations that hydrological variability could result in net secondary revenues that fall below budget periodically and drive leverage higher, Fitch expects leverage to remain mostly below 10x.

Key Rating Drivers

Revenue Defensibility: 'aa'; Geographic and Operational Revenue Diversity; Contracts Expire 2028: 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. However, there is some degree of renewal risk related to the power supply contracts, which is an asymmetric rating consideration.

Bonneville establishes its own rates, but rate flexibility is constrained by a lengthy and rigid process. The purchaser credit quality of Bonneville's wholesale customers is strong. The largest customers exhibit favorable service area characteristics and very strong financial profiles.

Operating Risk: 'aa'; Very Low-Cost Hydroelectric Power Supply: Bonneville's operating cost burden is low at 3.4 cents/kWh in fiscal 2020, largely due to a low-cost, predominantly hydroelectric generation fleet. Capital needs are considered moderate, but total \$4.6 billion over the next five years and relate to reinvestment in aging generation assets and transmission investment across the six-state service area.

Financial Profile: 'aa'; Highly Leveraged; Strong Sales Improved Liquidity in Fiscal 2021: Bonneville's financial performance in fiscal 2020 exceeded budget expectations and the liquidity profile is no longer considered weak. Fitch expects Bonneville's leverage ratio to decline to 9.0x-10.0x over the next five years given planned capital spending and debt issuance, but leverage could periodically increase to 11.0x under adverse water conditions. Transmission business lines are able to support slightly higher leverage.

Ratings

Long-Term Issuer Default Rating AA-

New Issue

\$200,000,000 Port of Morrow (OR) (Bonneville Cooperation Project No. 8) Transmission Facilities Revenue Bonds (Taxable), Series 2020-2 AA

[Outstanding Debt Details on Page 3](#)

Rating Outlook

Stable

Applicable Criteria

[Public Sector, Revenue-Supported Entities Rating Criteria \(March 2020\)](#)

[U.S. Public Power Rating Criteria \(March 2020\)](#)

Related Research

[Public Power - Fitch Analytical Comparative Tool \(FACT\) - 2020 \(June 2020\)](#)

[U.S. Public Power: Peer Review \(June 2020\)](#)

[Fitch Ratings Updates 2020 Sector Outlooks to Reflect Coronavirus Impact \(March 2020\)](#)

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Rating Sensitivities

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

- Material declines in leverage.

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

- Leverage trending consistently above 11.0x with limited expectation of reduction;
- A dilution 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 that might emerge during the contract-renewal process.

Credit Profile

The Port of Morrow is a port district located in Morrow County, OR. It 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 multiple lease agreements between the Port of Morrow and Bonneville, Bonneville makes unconditional lease payments directly to the trustee (the port assigned the lease revenues to the trustee) that are equal to debt service on outstanding bonds, including the series 2020-2 bonds. Bonneville retains operational control of the transmission assets.

Energy Northwest (ENW) owns and operates the Columbia Generating Station (CGS), the Packwood Lake Hydroelectric Project and the Nine Canyon Wind Project. ENW also has financial responsibility for Projects 1 and 3, its terminated nuclear projects. Bonneville is responsible for the repayment of ENW costs, including debt service, related to CGS and Projects 1 and 3 through the terms of the net billing agreements. Bonneville currently pays CGS, Project 1 and Project 3 costs to ENW under direct-pay agreements. The direct-pay agreements permit ENW net billing participants – Bonneville's preference customers – to purchase power from and make payments directly to Bonneville without making net billing payments to ENW to receive bill credits from Bonneville, as outlined under the net billing agreements.

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 number of utilities. Bonneville is the largest of four federal power-marketing administrations within the U.S. Department of Energy. Its 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 place practical competitive pressure on Bonneville to keep rate increases as low as possible and drove Bonneville's net secondary revenues (short-term sales made outside its long-term contracts) lower over the past decade. These factors coupled with declining power demand from Bonneville's preference customers resulted in a tightening of Bonneville's financial profile over the same period.

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

Coronavirus Impact Limited

The coronavirus pandemic and related government containment measures have had limited impact on Bonneville's credit profile to date. Overall load impacts have been modest; commercial and industrial declines were replaced by residential load increases. However, pressure continues, including new economic closures in Washington and Oregon announced in mid-November due to resurgence of the coronavirus, and will likely have a varying degree of

Rating History (IDR)

Rating	Action	Outlook/ Watch	Date
AA-	Affirmed	Stable	11/24/20
AA-	Affirmed	Negative	6/3/20
AA-	Assigned	Stable	4/30/19

IDR – Issuer Default Rating.
Source: Fitch Ratings.

impact across Bonneville's broad service area. Fitch's ratings remain forward looking, and Fitch will continue to monitor developments related to the severity and duration of the pandemic.

Increased Reserves

Bonneville's total cash reserves improved at the end of fiscal 2020 to \$889 million, a Fitch-calculated DCOH of 148 days, up from 116 DCOH in fiscal 2019. The portion of this amount Bonneville considers as reserves available for risk (unrestricted cash) was \$708 million, up from \$485 million at the end of fiscal 2019. The power business line's share of reserves available for risk increased significantly to \$435 million (95 DCOH) from \$203 million (40 DCOH) in fiscal 2019.

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 between 2015 and 2018 in the power business line reserves available for risk were an ongoing weakness that contributed to Bonneville's decision to adopt the FRP. Prior declines in power business line reserves resulted from the underperformance of net secondary sales and declining preference customer load. The increase in fiscal 2020 resulted from revenue and expenditure trends that were favorable to the budget. Power and transmission business line reserves are comingled in the Bonneville Fund but tracked independently for rate-setting purposes.

Revenue Defensibility

Bonneville exhibits very strong revenue source characteristics, as 100% of its 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 their energy from Bonneville pursuant to power sales contracts that extend through 2028.

Transmission Revenues

Bonneville's transmission business line is becoming a larger share of its consolidated operations. Transmission revenues accounted for 26% of total operating revenues in fiscal 2020, up from 16% in fiscal 2008. Transmission customers represent 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, determining 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 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 full cost recovery and revenue sufficient to pay debt service on U.S. Treasury obligations. FERC regulates transmission rates 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% average base power rate increase and a 3.6% average increase in transmission rates. The transmission rate increase primarily reflects increased capital costs to build new transmission interconnections and reinvest in existing transmission in the region.

Purchaser Credit Quality

Purchaser credit quality is strong. 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 75% of the transmission infrastructure.

Outstanding Debt

Energy Northwest (WA) (Columbia Generating Station) Electric Revenue and Refunding Bonds	AA
Energy Northwest (WA) (Columbia Generating Station) Electric Revenue Bonds	AA
Energy Northwest (WA) (Proj 1) Electric Revenue Refunding Bonds	AA
Energy Northwest (WA) (Proj 3) Electric Revenue Refunding Bonds	AA
Idaho Energy Resources Authority (ID) (Bonneville Cooperation Project No. 1) Transmission Facilities Revenue Bonds	AA
Lewis County Public Utility District No. 1 (WA) (Cowlitz Falls Hydroelectric Project) Revenue Refunding Bonds	AA
Port of Morrow (OR) (Bonneville Cooperation Project No. 1) Transmission Facilities Revenue Bonds	AA
Port of Morrow (OR) (Bonneville Cooperation Project No. 2) Transmission Facilities Revenue Bonds	AA
Port of Morrow (OR) (Bonneville Cooperation Project No. 3) Transmission Facilities Revenue Bonds	AA
Port of Morrow (OR) (Bonneville Cooperation Project No. 4) Transmission Facilities Revenue Bonds	AA
Port of Morrow (OR) (Bonneville Cooperation Project No. 5) Transmission Facilities Revenue Bonds	AA
Port of Morrow (OR) (Bonneville Cooperation Project No. 6) Transmission Facilities Revenue Bonds	AA
Port of Morrow (OR) (Bonneville Cooperative Project No. 7) Transmission Facilities Revenue Bonds	AA

Source: Fitch Ratings.

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 & Electric Board (AA-/Stable); Tacoma (AA-/Stable); Benton County Public Utility District No. 1 (AA-/Stable); Cowlitz County Public Utility District No. 1 (A/Stable); and Puget Sound Energy, Inc. (BBB+/Negative). Most of these utilities have independent rate-setting authority, favorable service area characteristics, competitive rates and very strong financial profiles.

Reliance on Wholesale Energy Sales

Bonneville relies on uncontracted wholesale energy sales for a portion of its revenue, between 5% and 12% of total revenues between fiscals 2016 and 2020. 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 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.

Net secondary revenues were lower than budgeted in three of the last five years due to below average water conditions and declining market energy prices due to low natural gas prices and growing renewable energy supplies. These results are primary factors behind the variation in financial reserves for the power business line.

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 consideration. However, Fitch's concern is mitigated by the regional depth of the existing customer base and the likelihood that many of the existing preference customers will elect to re-sign new contracts. Bonneville's ability to offer competitively priced power supply services will be a key factor during the 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 a notable change in contract terms could result in a dilution of Bonneville's revenue-source characteristics.

Operating Risk

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 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 the CGS, a 1,116MW nuclear plant that entered commercial operation in December 1984. CGS accounts for around 15% 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 is very low — between 3 cents/kWh and 4 cents/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 investor-owned utilities. Bonneville makes financial payments, in lieu of supplying 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 the power supply contributes to weak operating flexibility, given the dominance of a single fuel type. However, Bonneville's power supply portfolio is predominantly carbon free, which positions Bonneville's customers well in terms of efforts to reduce greenhouse gas emissions. For example, Washington passed the Clean Energy Transformation Act in 2019, requiring the state power supply to be free of carbon

emissions by 2045. Bonneville's generation portfolio is stable and not expected to change or grow, aside from efficiency investments.

Capital Planning and Management

Bonneville's capital planning and management is adequate, evidenced by an average plant age of 14 years in fiscals 2017–2019, although a change in accounting treatment of nonfederal debt and the resulting increase to depreciation improved the calculation to nine years in fiscal 2020. Capital spending as a percentage of depreciation averaged a healthy 129% annually over the past five years.

Despite ongoing investment, Bonneville faces issues such as aging infrastructure, 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 \$4.6 billion, with 57% of spending, or around \$2.6 billion, occurring in the transmission business line. These capital amounts do not include approximately \$1.1 billion of additional capex ENW estimates CGS will need through 2030. The hydroelectric assets are owned by the U.S. Army Corps of Engineers and the U.S. Bureau of Reclamation, but Bonneville makes the funding decisions regarding the pace and scope of capital reinvestment.

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 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, but Bonneville met all its financial obligations in each year. The COFO calculation below 1.0x is due to advance repayment of nonscheduled principal as part of Bonneville and ENW's regional cooperation debt strategy. ENW's debt service coverage (DSC) increased as a result of the regional debt cooperation strategy. Bonneville-calculated DSC is approximately 4.0x due to refunding and restructurings performed for all three ENW projects on principal payments.

Bonneville's leverage ratio exhibits variability, ranging between 9.1x at the end of fiscal 2020 and 11.4x in fiscal 2019, the highest point over the last five years. This trend reflects the variability in cash flow and reserves; outstanding debt balances gradually decreased over the period.

Financial Reserve Policy

Bonneville and its customers worked for three years to adopt the FRP in advance of the 2020 rate case to address the declining trend in power business line reserves. The FRP established a minimum threshold of 60 days' reserves for risk at each business line individually and for both business lines collectively. Fitch views the FRP as supportive of an improved liquidity profile because it provides Bonneville with the authority to increase rates solely to meet the objective of increasing cash reserves. If either business line has reserves lower than the 60-day target at the end of each fiscal year, rate increases will be implemented at specified amounts, even if they are mid-rate case.

Power business line reserves available for risk ended fiscal 2020 at \$435 million (approximately 95 DCOH) and transmission business line reserves ended at \$273 million (160 DCOH). Given both reserves exceed the 60-day minimum threshold and transmission revenues exceed the maximum 120-day threshold, approximately \$80 million in transmission reserves is proposed to be spent toward capital. The reserves distribution clause of the FRP requires the return of excess reserves to customers or the deployment of the excess reserves toward debt retirement or capex.

Additional short-term liquidity flexibility is provided by Bonneville's \$750 million line of credit with the U.S. Treasury that can be drawn for any purpose. At times when reserves were low in recent years, Bonneville used draws on the facility for interim cash flow purposes, including during 1Q20.

Fitch Analytical Stress Test (FAST) – Base Case and Stress Case

Fitch's FAST analysis indicates Bonneville's financial performance under the base case should include leverage between 9.0x and 10.0x. However, results will vary with hydroelectric conditions and could increase again, as leverage did to 11.4x in fiscal 2019 (a very low water year). Fitch's base case includes strong performance and liquidity levels at the end of fiscal 2020 with no load growth and no assumed power base rate increases. Transmission rates are assumed to increase modestly, and the base case relies on Bonneville's planned amounts of capital spending and the debt funding of all capital spending with the exception of \$80 million in fiscal 2021 that is proposed to be funded from excess transmission reserves.

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 9.1% and 3.5%, respectively, followed by a recovery to positive sales growth. In this stress case, leverage could be elevated to between 10.0x and 11.0x.

Debt Profile

Debt outstanding is split between Bonneville's federal debt and appropriations (roughly \$7.2 billion at the end of fiscal 2020) and nonfederal debt (approximately \$7.3 billion). Power business line debt is declining. Power debt accounted for only 61% of total outstanding debt (\$8.8 billion) at the end of fiscal 2020, compared with 67% in fiscal 2015 (\$10.7 billion).

Bonneville's federal debt 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.

Bonneville and ENW are also engaged in a regional debt-cooperation strategy that involves extension of nonfederal debt to repay greater amounts of federal debt obligations. Bonneville and ENW anticipate issuing approximately \$3.5 billion between 2021 and 2030 to refinance ENW debt coming due for CGS, Project 1 and Project 3. The regional cooperation debt strategy includes extending final maturity of the Project 1 and Project 3 debt to 2044 from the current final maturity date of 2028. The nonfederal debt is being extended to repay federal debt, but the structural distinction between the two liens remains intact as a protection to nonfederal debtholders. Extending power-related debt beyond the expiration date of the current power sales contracts presents additional risk until those contracts are renegotiated.

ESG Considerations

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

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

Financial Summary

(Audited Fiscal Years Ended Sept. 30)	2016	2017	2018	2019	2020
Net Adjusted Debt to Adjusted FADS (x)	11.29	11.29	9.90	11.37	9.31
Net Adjusted Debt Calculation (\$000)					
Total Short-Term Debt	–	–	10,690	222,800	511,500
Total Current Maturities of Long-Term Debt	933,700	1,481,000	1,162,510	1,097,800	1,125,900
Total Long-Term Debt	14,707,700	14,312,700	14,197,200	13,731,800	13,249,100
Total Debt	15,641,400	15,793,700	15,370,400	15,052,400	14,886,500
+ Capitalized Fixed Charge – Purchased Power	268,080	353,760	382,800	715,920	296,880
– Total Unrestricted Cash	724,400	765,700	839,600	773,100	889,500
Net Adjusted Debt	15,185,080	15,381,760	14,913,600	14,995,220	14,293,880
Adjusted FADS for Leverage Calculation (\$000)					
Total Operating Revenue	3,432,600	3,569,800	3,710,300	3,655,900	3,683,700
Total Operating Expenses	2,608,100	2,743,100	2,765,500	2,967,200	3,008,100
Operating Income	824,500	826,700	944,800	688,700	675,600
+ Depreciation and Amortization	471,100	485,000	507,300	531,000	818,800
+ Interest Income	15,400	6,100	6,300	9,800	3,300
FADS	1,311,000	1,317,800	1,458,400	1,229,500	1,497,700
+ Adjustment for Purchased Power	33,510	44,220	47,850	89,490	37,110
Adjusted FADS for Leverage	1,344,510	1,362,020	1,506,250	1,318,990	1,534,810
Coverage of Full Obligations (x)	0.88	0.90	0.80	0.83	0.97
FADS	1,311,000	1,317,800	1,458,400	1,229,500	1,497,700
+ Adjustment for Purchased Power	33,510	44,220	47,850	89,490	37,110
Adjusted FADS for Coverage	1,344,510	1,362,020	1,506,250	1,318,990	1,534,810
Full Obligations Calculation					
Cash Interest Paid	575,800	534,240	343,100	335,500	440,200
Prior-Year Current Maturities	916,515	933,700	1,481,000	1,162,510	1,097,800
Total Annual Debt Service	1,492,315	1,467,940	1,824,100	1,498,010	1,538,000
+ Adjustment for Purchased Power	33,510	44,220	47,850	89,490	37,110
Total Fixed Obligations	1,525,825	1,512,160	1,871,950	1,587,500	1,575,110
Liquidity Cushion (Days)	252	245	257	228	273
Unrestricted Cash (Days)	124	124	136	116	148
Liquidity Calculation					
+ Total Unrestricted Cash	724,400	765,700	839,600	773,100	889,500
+ Total Borrowing Capacity	750,000	750,000	750,000	750,000	750,000
Total Liquidity	1,474,400	1,515,700	1,589,600	1,523,100	1,639,500
Cash Operating Expense Calculation					
Total Operating Expense	2,608,100	2,743,100	2,765,500	2,967,200	3,008,100
– Depreciation and Amortization	471,100	485,000	507,300	531,000	818,800
Cash Operating Expenses	2,137,000	2,258,100	2,258,200	2,436,200	2,189,300

FADS – Funds available for debt service.

Source: Fitch Ratings; Fitch Solutions; Lumesis; EIA; Bonneville Power Administration, Oregon.

Key Definitions

Terms	Definition	Significance
Issuer Default Rating (IDR)	An expression of overall enterprise risk and relative vulnerability to default.	Provides an opinion of the relative ability of an entity to meet financial commitments, expressed as an ordinal measure of credit risk.
Net Adjusted Debt	Adjusted debt – unrestricted cash – funds restricted for debt service	Provides an inclusive evaluation of long-term liabilities offset by funds available for debt service.
Adjusted FADS	EBITDA + interest income + 30% of purchase power expense + operating lease expense – transfers/distributions + pension expense	Provides an indication of cash flow available for the payment of debt service, adjusting for purchased power, operating lease and pension obligations.
Net Adjusted Debt to Adjusted FADS	Net adjusted debt/adjusted FADS	Provides an indication of net total leverage position against available operating cash flow.
Full Obligations	Cash interest paid + scheduled long-term principal payments + 30% of purchase power expense	Provides an indication of inclusive fixed and debt service obligations.
Coverage of Full Obligations	(EBITDA + interest income + 30% of purchase power expense + operating lease expense – transfers/distributions)/full obligations	Provides an indication of the relative cushion of operating cash flow to fixed charges.
Base Case	The expected forward-looking case in the current macroeconomic environment.	Provides the analytical starting point in the forward-looking analysis, and also informs the rating case.
Rating Case	The potential performance under a common set of assumptions.	Illustrates how cycles affect individual issuers differently, and informs the level of rating stability and credit resiliency.

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