Energy Northwest, Washington and Bonneville Power Administration, Oregon

Electric Revenue Bonds

New Issue Report

Ratings

New Issues

Approximately $194,600 Project 1 Elec. Rev. Rfdg. Bonds, Series 2016 A&B	AA
Approximately $123,900 Columbia Generating Station Elec. Rev. Rfdg. Bonds, Series 2016 A&B	AA
Approximately $213,400 Project 3 Elec. Rev. Rfdg. Bonds, Series 2016 A&B	AA

Outstanding Debt

$885,000 Project 1 Bonds	AA
$3,450,000 Columbia Generating Station Bonds	AA
$1,110,000 Project 3 Bonds	AA
Bonneville Power Administration, Implied Revenue Obligations	AA

Related Ratings

$379,000 Port of Morrow Transmission Facilities Revenue Bonds, Series 2012, 2014 & 2015	AA
$85,000 Lewis County PUD No. 1 Cowlitz Falls Hydroelectric Rev. Rfdg. Bonds, Series 2013	AA

Rating Outlook

Stable

Key Utility Statistics

Fiscal Year Ended 9/30/15

System Type	Wholesale
NERC Region	WECC
No. of Customers	125
Annual Revenues ($ Mil.)	$3,404.4
Fuel Dependency (%)	Hydro
ENW Bond Debt Service Coverage (x)	6.05
Total Debt Service Coverage (x)	1.01
Days Operating Cash	240
Equity/Capitalization (%)	16.5

Related Criteria

U.S. Public Power Rating Criteria (May 2015)

Revenue-Supported Rating Criteria (June 2014)

Related Research

U.S. Public Power Peer Study (July 2015)

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New Issue Details

Sale Information: Bonds are expected to price on March 23, 2016.

Security: Bonneville Power Administration's (Bonneville) payments to Energy Northwest (ENW) for debt service on the bonds are unconditional and are made as an operating expense from the Bonneville Fund. These bond payments are paid prior to Bonneville's payments on its borrowings from U.S. Treasury ($4.6 billion) and federal appropriations debt ($3.9 billion).

Purpose: Refund debt as part of ENW and Bonneville's regional cooperation debt plan.

Final Maturity: Project 1 and 3 – 2027; Columbia Generating Station (CGS) – 2032.

Key Rating Drivers

Bonneville's Obligation Secures Bonds: The ratings on the ENW, Port of Morrow and Cowlitz Falls bonds reflect the credit quality of Bonneville and its absolute and unconditional obligation to make payments for debt service. Bonneville has pledged the Bonneville Fund, which includes revenues from its power and transmission business lines.

Competitive Regional Supplier: Bonneville provides wholesale electricity to a population of more than 12 million in the Pacific Northwest region through a competitive resource portfolio consisting primarily of low-cost hydropower. Transmission services are provided to a similar six-state region but to a broader cast of utilities.

Medium-Term Power Sales Contracts: Bonneville sells power through medium-term contracts that recover cost of service from 125 preference customers. The contract terms limit Bonneville's financial exposure. However, the contracts expire in 2028 and customers are not obligated to continue to purchase from Bonneville if new contracts are not signed.

Cash Reserve Variability: Cash reserves have been variable given market price fluctuations and changing hydrology conditions, but showed some strengthening in fiscals 2014 and 2015. Bonneville also has access to a $750 million federal line of credit with the U.S. Treasury Department, which provides additional liquidity.

Capital Needs Increasing Leverage: Capital needs are sizable to fund aging generation infrastructure and new transmission investment in the region. Bonneville's overall leverage is increasing ($2.5 billion over the past five years).

Rating Sensitivities

Weakening of Reserves: Bonneville's reserve levels exhibit variability. While they have strengthened in the past two years, reserve levels remain linked to seasonal hydrological conditions and power market prices received for excess energy sales. The maintenance of strong reserves is essential to the ratings and a sustained and sizable reduction in reserves could result in downward rating pressure.

Rating History

Rating	Action	Outlook/ Watch	Date
AA	Affirmed	Stable	3/10/16
AA	Affirmed	Stable	8/7/15
AA	Affirmed	Stable	11/24/14
AA	Affirmed	Stable	5/31/13
AA	Affirmed	Stable	8/1/12
AA	Affirmed	Stable	6/1/11
AA	Affirmed	Stable	12/9/10
AA	Affirmed	Positive	2/19/10
AA	Upgraded	Positive	3/4/09
AA–	Affirmed	Positive	3/9/08
AA–	Affirmed	Stable	3/12/04
AA–	Downgraded	Stable	3/12/03
AA	Affirmed	Stable	3/19/02
AA	Affirmed	—	11/16/01
AA	Upgraded	—	5/3/00
AA–	Affirmed	—	12/15/97
AA–	Affirmed	—	10/7/96
AA–	Downgraded	—	8/17/95
AA	Affirmed	—	1/24/94
AA	Affirmed	—	9/7/93
AA	Affirmed	—	9/8/92

Source: Fitch.

Implied Revenue Bond — Bonneville Power Administration Rating History

Rating	Action	Outlook/ Watch	Date
AA	Affirmed	Stable	3/10/16
AA	Affirmed	Stable	8/7/15
AA	Affirmed	Stable	11/24/14
AA	Affirmed	Stable	5/31/13
AA	Affirmed	Stable	8/1/12
AA	Affirmed	Stable	6/1/11
AA	Affirmed	Stable	2/28/11
AA	Assigned	Stable	12/9/10

Source: Fitch.

Port of Morrow Rating History

Rating	Action	Outlook/ Watch	Date
AA	Affirmed	Stable	3/10/16
AA	Affirmed	Stable	8/7/15
AA	Affirmed	Stable	11/24/14
AA	Affirmed	Stable	5/31/13
AA	Affirmed	Stable	8/1/12
AA	Assigned	Stable	6/26/12

Source: Fitch.

Lewis County PUD – Cowlitz Fall Hydro Rating History

Rating	Action	Outlook/ Watch	Date
AA	Affirmed	Stable	3/10/16
AA	Affirmed	Stable	8/7/15
AA	Affirmed	Stable	11/24/14
AA	Assigned	Stable	5/31/13

Source: Fitch.

Credit Profile

Energy Northwest

ENW, formerly known as the Washington Public Power Supply System, was created in 1957. ENW has 27 members, consisting of 22 public utility districts and the cities of Centralia, Port Angeles, Richland, Seattle and Tacoma, WA. ENW owns and operates CGS, the Packwood Lake Hydroelectric Project and the Nine Canyon Wind Project. ENW also has financial responsibility for the terminated nuclear projects 1 and 3.

Bonneville Power Administration

Bonneville is the key power and transmission agency in the Pacific Northwest, and its role in the region is critical. Bonneville's estimated service area includes 12 million people, and extends across Idaho, Oregon and Washington, as well as portions of Montana, Wyoming, Nevada, Utah and California. Bonneville's system accounts for approximately 33% of the electricity sold in the region and 75% of the transmission infrastructure.

Bonneville is the largest of four federal power marketing administrations (PMAs) within the Department of Energy (DOE). The PMAs were formed by the federal government (Bonneville in 1937) to sell power from federal flood control and irrigation projects to repay the investment and supply power to rural areas of the country. Bonneville sells energy produced from 31 hydroelectric plants owned and operated by the U.S. Army Corps of Engineers or the U.S. Bureau of Reclamation. Bonneville has direct-funding agreements with both agencies to pay operating and capex. 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. CGS is a 1,150 MW nuclear plant (approximately 10% of Bonneville's total power supply).

Bonneville is required by statute to sell the power at cost-based rates, with a preference given to public utility districts and cooperatives. These 125 publicly owned and cooperatively owned utilities are referred to as Bonneville's preference customers and account for around 87% of energy sales. Total energy sales fluctuate from year to year and are highly dependent of hydrological conditions in the region.

Security

Bonneville's payments to ENW for debt service on the bonds are unconditional and are made as an operating expense from the Bonneville Fund. 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 ($4.6 billion) and federal appropriations debt ($3.9 billion).

Bondholders are secured by net billing agreements between Bonneville, ENW and the original project participants in each of the three projects, all of whom are Bonneville preference customers (Project 1 – 104 participants; CGS – 94 participants; and Project 3 – 103 participants). In practice, the net billing agreements required project participants to continue to pay ENW directly for their share of the projects, but the net billing agreements allowed them to receive credit on their Bonneville power bills for those amounts paid to ENW.

The effect of the net billing agreements transferred payment risk for the ENW obligations to Bonneville from the project participants. Nonpayment by a project participant to ENW is required by the 1989 letter agreement to be covered by a cash payment from Bonneville to ENW. All project participants are preference customers of Bonneville but under federal law covering the Bonneville Fund if, in the future, one of those participants ceased purchasing power from Bonneville, they would not remain responsible for legacy ENW costs related to the three projects.

Bonneville and ENW entered into direct-pay agreements in 2006 that allow Bonneville to pay ENW directly instead of Bonneville customers sending payments to ENW and receiving a credit on their bills from Bonneville. The direct-pay agreements do not alter or change the security provided by the net billing agreements. However, the direct-pay agreements allow Bonneville to enjoy more level revenue collections over the full fiscal year. Fitch Ratings does not view this as a material difference to the security of payments to ENW bondholders as compared with the historical practice under the net billing agreements.

Bonneville Rating Not Based on Federal Support

Fitch's ratings reflect the credit quality of Bonneville as a self-supporting entity. Bonneville's subordinate obligations to the U.S. Treasury offer a layer of structural support to the ENW, Port of Morrow and Lewis County Public Utility District (PUD) bonds (nonfederal debt), in that Bonneville may defer payment to the Treasury, at its discretion. This could provide payment flexibility but Fitch's rating reflects the expected timely repayment on all obligations.

A linkage with the federal government exists in the form of governance by the DOE, appointment of the administrator, congressional approval on Bonneville's budget, and the banking and lending relationship with Treasury. However, Fitch's ratings reflect Bonneville's stand-alone credit quality and its ability to repay its obligations from ongoing revenues.

Governance and Management Strategy

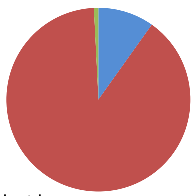
ENW is governed by a 27-member board of directors, with one board member representing each of ENW's member systems. The board works cooperatively with Bonneville regarding the management of the debt obligations related to CGS and Projects 1 and 3, as well as the operations of CGS. Bonneville's authority is vested in the secretary of energy, who appoints the Bonneville administrator or CEO.

The focus of Bonneville's business strategy includes capital reinvestment in the system, financial stability, environmental issues, energy efficiency, and transmission grid capacity and flexibility. Bonneville's relationship with its customers appears strong at this time, and the parties are working together to address capital funding issues and reduce Bonneville's reliance on net secondary revenues in its rates.

Bonneville's forward financial planning has historically focused on its rate setting process. A calculation of 95% treasury probability repayment within the rate case period is used to establish rates and maintain minimum levels of reserves that would provide a 95% probability of meeting all of Bonneville's payment obligations, including repayment of its treasury debt. However, Bonneville does not currently have a specific minimum reserve policy.

Management has initiated planning efforts with preference customers to develop more robust financial policies and forecasting methodologies, which could include a financial reserve policy and a rate forecast that looks out beyond the current rate case. The process is envisioned by

Fuel-Type by Capacity



Source: Bonneville's Median Energy Scenario.

Bonneville to be multi-year process to develop such tools. Fitch views the initial steps toward the development of more formalized policies and forward-looking forecasts as positive.

Assets and Operations

Power Supply Is Carbon Free

Bonneville markets energy from a predominantly hydroelectric generation portfolio, which poses unique risks and challenges from a forecasting and balancing standpoint, but offers tremendous advantages as a low-cost, carbon-free resource. To manage hydroelectric variability, Bonneville sells excess generation during the spring run-off months and purchases energy in other months to shape energy supply.

The federal hydroelectric projects were constructed between 1941 (Grand Coulee) and 1975 (Lower Granite, Libby and Lost Creek) and are operated by the U.S. Army Corps of Engineers or the Bureau of Reclamation. Bonneville has begun the overhaul of all six generating units of Grand Coulee (4,994 MW), which is expected to be a 10-year project. Grand Coulee accounts for 23% of the total generating capacity in a median water flow scenario. The single site risk of this facility is balanced against the importance of the project's broad federal mission aside from power supply, which is primarily flood control and irrigation. The Grand Coulee dam is the largest concrete structure built in the U.S. The lake behind the dam, Lake Roosevelt, is the main storage reservoir for the Columbia River system.

Bonneville receives 10% of its power from ENW's CGS. CGS is a 1,157 MW nuclear plant that commenced operation in December 1984. The plant has operated well, with a cumulative capacity factor of 86.1% for the past 10 years. The CGS is licensed by the Nuclear Regulatory Commission to operate through 2043. The cost of energy in fiscal 2015 was $5.05 per kWh as a result of the biennial refueling outage as compared with $3.70/kWh in fiscal 2014.

Bonneville's power supply portfolio is predominately carbon free. This provides ratepayers with a cost advantage, as many other utilities nationally will likely incur additional expenses related to power supply portfolio investments. Bonneville's portfolio is relatively stable and not expected to change or grow other than efficiency investments. As was determined as part of the regional dialogue process that resulted in the existing 20-year power supply contracts, Bonneville will not acquire additional power supply on behalf of its preference customers.

Financial Planning Based on Average Water Conditions

The *Bonneville Energy Estimates — 2017* table below shows the range of outputs in average MW (aMW) for Bonneville's resources, and how dependent the federal system is on hydrology. For operational planning purposes, Bonneville uses an assumption of low-water conditions,

Bonneville Energy Estimates — 2017

	Capacity (Peak MW)	High Water Flow Energy (aMW)	Median Water Flow Energy (aMW)	Low Water Flow Energy (aMW)
Bureau of Reclamation Hydro Projects[a]	5,472	3,149	2,678	2,121
US Corps of Engineers Hydro Projects[a]	12,569	7,566	6,195	4,547
Non Federally Owned Projects (including CGS)	1,157	1,038	1,023	1,019
Federal Contract Purchases	658	423	413	402
Total Federal System Resources	19,856	12,176	10,309	8,089

[a]The machine capacity of federal hydroelectric projects exceed water available to run through the projects.
aMW – Average MW. CGS – Columbia generating station.
Source: Bonneville Power Administration.

below the 30-year average. Bonneville estimates the total federal system will produce 8,089 aMW of firm energy under low (referred to in the region as critical) water conditions in fiscal 2017. This represents the amount of firm energy (Tier 1) Bonneville expects to divide among preference customers. Bonneville estimates Tier 1 demand from preference customers in fiscal 2017 will be 6.886 aMW.

For ratemaking and financial planning purposes, Bonneville considers the additional energy production available for sale under median or average water conditions. The production in excess of the low water estimate is assumed to be sold at forward market prices. These sales, netted against market purchases by Bonneville during certain months of the year to shape the output of the federal system, compose net secondary system revenues. This fundamental characteristic of a hydro-electric power supply results in revenue variability, linked to hydrology and market prices. Bonneville's actual net secondary revenues have been close to budgeted levels in the last four years, following receipts in fiscals 2010 and 2011 that were well below expectations.

Environmental Costs Are Complex but Stable

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. Environmental costs are the subject of ongoing litigation and have generally increased over time. These costs are included in Bonneville's power rates for its preference customers. Furthermore, the power sales contracts have a cost recovery adjustment mechanism that allows for additional rate recovery for fish-related cost increases in between rate cases. This is viewed positively given ongoing uncertainty with environmental costs.

Transmission

Bonneville's transmission business line has grown from around 16% of revenues 10 years ago to 28% of overall system revenues in fiscal 2015. The federal transmission system, owned and operated by Bonneville, is composed of approximately 15,000 circuit miles of high-voltage transmission lines and 259 substations located in six states. Bonneville's transmission business functions with aspects of a regional transmission organization, and charges users of the system in two methods: point-to-point service and system integration. Bonneville continues to face challenges associated with integration of a substantial amount of wind generation into its transmission system given its variable output and the potential impact to reliability. Transmission customers are a wider group than Bonneville's preference customers and include investor-owned utilities and power generators in the region.

Customer Profile and Service Area

The broad nature of Bonneville's preference customer base and the rate setting methodology that allows costs to be recovered across all customers result in Bonneville's rating not being sensitive to the credit quality of individual customers. Bonneville's service area encompasses six states.

20-Year Power Supply Contracts

Bonneville and its customers began operating under 20-year contracts at the beginning of fiscal 2012. This was a distinct change from Bonneville's previous practice of using shorter-term (two to five-year) contracts, providing longer-term security. However, the contracts do not extend as long as the outstanding debt.

Power Customers

(% of Power Revenue 2015)	% of Sales
Snohomish County PUD No. 1	9
Cowlitz County PUD No. 1	7
City of Seattle, City Light Dep't.	7
Pacific Northwest Generating Coop	6
Tacoma Power	5
Clark Public Utilities	4
Alcoa	3
Eugene Water & Electric Board	3
Benton County PUD No. 1	2
Flathead Electric Coop	2

PUD – Public Utility District.
Source: Bonneville Power Administration.

Transmission Customers

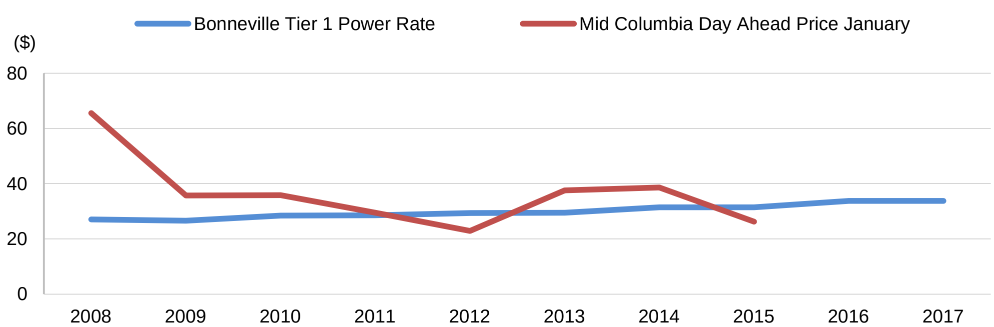
(% of Transmission Revenue 2015)	% of Sales
Puget Sound Energy Inc.	12
PacifiCorp	12
Portland General Electric Company	9
Powerex Corp.	6
City of Seattle, City Light Dept.	5
Iberdrola Renewables Inc.	4
Snohomish County PUD No. 1	4
Pacific Northwest Generating Coop	2
Clark Public Utilities	2
Hermiston Power LLC	2

PUD – Public Utility District.
Source: Bonneville Power Administration.

The 20-year contract terms significantly reduced risk to Bonneville in that they curtailed Bonneville's traditional responsibility of procuring sufficient power supplies in the region to meet load growth. Bonneville is now only required to allocate power generated by the existing federal system at cost-based rates. Any decline in output or capacity in the federal system, including reductions resulting from operating constraints imposed by the Endangered Species Act, will result in a corresponding reduction in power available for sale at what are known as Tier 1 rates. Although the sixteen customers with slice contracts experience this directly with 26.6% of the Tier 1 load, the over 100 customers with load following contracts also bear this specific risk. If it occurs, the costs will be allocated to them in the next rate case or through a midyear cost adjustment, if needed.

The contracts also provide value and flexibility to the preference customers. Bonneville provides all-requirements (minus a preference customers' own resources if they have any), load following service that provide carbon-free energy at $33.75/MWh. However, with very soft market prices in the region in recent years, customers and Bonneville are focused on the competitiveness of the federal resources. The preference customers are entitled to preference power but are not required to purchase from Bonneville after 2028. While day-ahead prices do not represent the same product as Bonneville provides, the cost advantage to the market enjoyed by preference customers has clearly tightened.

Bonneville Rates versus Day-Ahead Prices



Source: Bonneville Power Administration, SNL.

Cost Structure

Bonneville establishes its power and transmission rates for two-year periods. Bonneville implemented an average power rate increase of 7.1% and a transmission rate increase of 4.4% on Oct. 1, 2015. This rate change increased Tier 1 power rates to $33.75/MWh. As the

Bonneville Rates versus Day-Ahead Prices chart on page 6 shows, day-ahead prices at the Mid-Columbia Index (a regional trading hub) have continued to soften. Bonneville does not provide a rate forecast beyond the current rate forecast but rate increases in the past decade have tended to be moderate.

Bonneville's power and transmission rates are regulated by the Federal Energy Regulatory Commission (FERC), which reviews the administration's rates to ensure full cost recovery and revenue sufficient to repay its Treasury obligations. Therefore, the nature of this regulatory support is viewed as supportive of cost recovery in that it is designed to make sure enough revenues are being collected to pay debt service on the nonfederal debt and federal obligations. FERC reviews Bonneville's transmission rates to further ensure they are nondiscriminatory, as well as just and reasonable.

Bonneville's rate methodology allocates the output and cost recovery of the federal system resources within Tier 1 rates. These rates include fish and wildlife costs and the net billed projects. Tier 1 rates absorb the positive or negative effect from Bonneville's net secondary sales. Customers can engage Bonneville to procure and provide Tier 2 power at actual cost, to the extent their load grows beyond their Tier 1 allocation. However, customers have opted to acquire much of their own load growth power needs, as procuring through Bonneville has offered little cost advantage.

Financial Performance and Legal Provisions

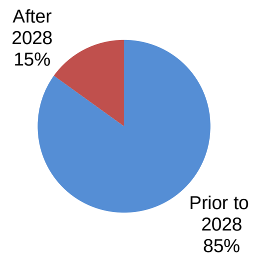
Bonneville's financial statements, issued as the Federal Columbia River Power System, include the accounts of Bonneville, the federal hydro-electric generating facilities of the U.S. Army Corps of Engineers and Bureau of Reclamation that are dispatched by Bonneville and the operation and maintenance costs of the U.S. Fish and Wildlife Service for the lower Snake River facilities. The financial statements also consolidate the activity of northwest infrastructure financing corporations that are being used to finance transmission assets that are then leased to Bonneville. Bonneville's financial statements do not include the assets or debt obligations of ENW and Lewis County PUD. Bonneville's obligations to those entities are shown as operating expenses.

Debt service coverage of the ENW debt has been increasing as a result of the regional debt cooperation strategy. Coverage increased to over 6.0x in fiscal 2015 as a result of the refunding and restructurings done for all three projects on principal payments due in fiscal 2015. Fitch's analysis focuses primarily on the calculation of total debt service coverage of all obligations, including Bonneville's federal obligations. Coverage is typically modest at around 1.0x. Bonneville sets rates to cover costs and does not expect to generate much excess cash flow to fund capital reinvestment.

Financial Flexibility Provided by Line of Credit and Rate Adjusters

Bonneville's sizable hydro-electric generation fleet requires market sales in some months and market purchase in other months to balance the load demands with actual output of the federal system. While Bonneville has more accurately budgeted for net secondary revenues in recent years, there continues to be a degree of variability. The risk of revenue variability is managed through cash reserves and ultimately, a cost recovery adjustment clause, if needed.

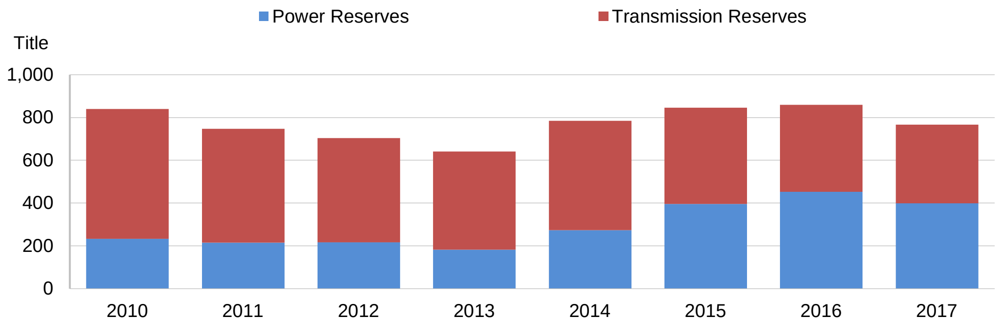
Nonfederal Generation Debt Maturity



Source: Bonneville.

Bonneville's reserves for risk, or unencumbered reserves, improved in fiscals 2014 and 2015, after five previous years of declines. At the end of fiscal 2015, Bonneville had $845 million in unencumbered reserves. The balance of reserves between the power ($395 million) and transmission ($450 million) business lines had become more equitable as well. Management estimates included in the rate case approved for fiscals 2016 and 2017 indicate that reserves will stay in the same general range.

Reserves For Risk



Source: Bonneville.

Debt Profile

Leverage is significant at just over $16 billion. Debt/net plant is 83.5% and debt service (both nonfederal and federal) accounts for 40% of cash expenditures. Bonneville does not have authority to issue its own debt to the public and has a statutory limit on the bonds it may issue to the U.S. Federal Treasury of $7.7 billion, complicating capital funding decisions. The Port of Morrow or similar lease financing structures provide financing for transmission assets while the regional cooperation debt strategy frees up ongoing treasury capacity.

Debt Obligations

Debt Type	2015	2013
Nonfederal Debt		
Project 1 Total		
Prior Lien Revenue Bonds	41,070,000	41,070,000
Electric Revenue Bonds	843,610,000	1,006,935,000
Columbia Generating Station Total		
Prior Lien Revenue Bonds	—	41,070,000
Electric Revenue Bonds	3,445,975,000	1,006,935,000
Project 3 Total		
Prior Lien Revenue Bonds	122,555,000	178,490,000
Electric Revenue Bonds	985,125,000	1,050,755,000
Cowlitz Falls	82,053,000	87,995,000
Northern Wasco McNary Dam	14,240,000	18,375,000
NIFC Lease Financing	437,000,000	713,762,000
Customer Prepayment	302,000,000	334,909,000
Capital Leases (Port of Morrow; IERA)	1,181,000,000	222,420,000
Total Nonfederal Debt	**7,454,628,000**	**4,702,716,000**
Federal Debt		
Federal Appropriations	3,902,000,000	4,291,457,000
Borrowings from U.S. Treasury	4,649,000,000	3,885,040,000
Total Federal Obligations	**8,551,000,000**	**8,176,497,000**
Total Debt Obligations	**16,005,628,000**	**15,013,366,000**

Source: Bonneville, Fitch.

Bonneville and ENW have agreed to a regional cooperation debt plan that extend maturities of ENW debt (CGS and Projects 1 and 3) and use the revenues made available from lower debt service costs on those projects to prepay higher interest rate debt to the U.S. Treasury. While this effectively accelerates payment of Bonneville's subordinate lien obligations by extending the senior ENW bond maturity, it makes available federal borrowing capacity and provides economic benefit to preference customers, who are the ultimate ratepayers that repay both types of debt.

The debt restructuring extends nonfederal generation debt beyond the 2028 maturity of the current power supply contracts. At present, only 15% of the nonfederal generation debt (primarily ENW but includes Cowlitz Falls debt) matures beyond 2028. Debt related to Project 1 and Project 3 will not extend beyond 2028 under the regional debt cooperation strategy. Only CGS is being restructured beyond 2028 to coincide with its operating license through 2043. While a portion of the Port of Morrow debt extends beyond 2028, this is recovered through transmission rates and not through sales made through the power supply contracts.

Large Future Capital Investments Needed

As with many utilities across the county, Bonneville faces the issue of aging infrastructure and delayed capital reinvestment. Capital needs over the next five years are estimated at $4.0 billion, with around half of the spending (around $2.2 billion) occurring in the transmission business line. These amounts do not include approximately $600 million that ENW estimates will be needed at CGS through 2024. Although the hydro-electric assets are owned by the Bureau of Reclamation and U.S. Army Corps of Engineers, Bonneville makes the funding decisions regarding the pace and scope of capital reinvestment.

Bonneville Power Administration Capital Spending

							Projected					Five-Year
($ Mil.)	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	Total
Transmission	470	522	557	506	613	733	530	468	399	388	372	2,157
Hydro Generation	148	200	214	206	173	167	224	230	257	282	307	1,300
Energy Efficiency[a]	58	162	80	78	78	87	—	—	—	—	—	—
Fish and Wildlife	41	91	58	52	37	21	55	31	19	35	35	175
Facilities, IT, Security	45	36	45	40	28	28	100	67	61	58	53	339
Total Annual Spending	762	1,011	954	882	929	1,036	909	796	736	763	767	3,971

[a]Beginning in fiscal 2016, energy efficiency programs are being paid as operating expenditures.
Source: Bonneville.

Financial Summary — Bonneville Power Administration

($ 000, Audited Years Ended Sept. 30)	2011	2012	2013	2014	2015
Debt Service Coverage (x)					
Debt Service Coverage	1.1	1.1	1.1	1.2	1.0
Coverage of Full Obligations (PP as D/S and Transfer/PILOT/Dividend as O&M Expense)	1.1	1.1	1.1	1.2	1.0
Liquidity Metrics					
Days Cash on Hand	170	179	185	149	116
Days Cash and Investments on Hand	226	233	262	247	240
Days Liquidity on Hand	226	375	399	377	375
Leverage Metrics (%)					
Debt/FADS (x)	9.6	10.2	10.9	10.2	11.6
Adjusted Debt (Including PP Adj.)/Adjusted FADS (Including PP Adj.) (x)	9.5	10.2	10.8	10.1	11.6
Net Debt/Net Capital Assets	115.5	117.0	115.1	115.2	114.7
Equity/Capitalization	15.6	15.2	13.9	15.3	16.5
Debt/Capitalization	84.4	84.8	86.1	84.7	83.5
Adjusted Debt/Capitalization	84.8	85.1	86.3	85.0	83.7
Other Financial & Operating Metrics (%)					
Operating Margin	29.8	29.8	27.4	29.4	27.1
Wholesale Electric Revenue/MWh ($/MWh)	33.5	32.9	36.9	40.0	40.7
Capex/Depreciation and Amortization	200.1	221.5	181.2	191.4	215.3
Debt Service/Cash Operating Expenses	40.9	40.9	38.7	37.0	40.2
Income Statement					
Total Operating Revenue	3,284,774	3,317,850	3,346,281	3,600,346	3,404,432
Total Operating Expense	2,305,761	2,329,118	2,427,862	2,540,868	2,483,521
Operating Income	979,013	988,732	918,419	1,059,478	920,911
Adjustment to Operating Income for Deferred Revenue	431,064	432,684	458,654	463,970	463,329
Funds Available for Debt Service	1,410,077	1,421,416	1,377,073	1,523,448	1,384,240
Total Annual Debt Service	1,323,625	1,340,418	1,263,182	1,234,393	1,370,877
Balance Sheet					
Unrestricted Funds (Cash & Liquid Investments)	1,184,602	1,240,977	1,434,003	1,419,540	1,340,944
Total Net Assets/Member's Equity	2,510,373	2,595,940	2,432,217	2,823,085	3,175,668
Total Debt	13,540,912	14,534,245	15,013,366	15,571,630	16,089,851
Cash Flow Statement					
FCF (FADS – Transfer & PILOT – Total Annual Debt Service)	86,452	80,998	113,891	289,055	13,363
Capex	787,384	861,754	778,785	842,983	964,509
FCF Less Capex	(700,932)	(780,756)	(664,894)	(553,928)	(951,146)

FADS – Funds available for debt service. RSF – Rate stabilization fund. D/S – Debt service. PILOT – Payment in lieu of taxes. O&M – Operations and maintenance.
PP – Purchased power.
Source: Bonneville Power Administration (OR), Fitch.

The ratings above were solicited by, or on behalf of, the issuer, and therefore, Fitch has been compensated for the provision of the ratings.