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Bonneville Power Administration: On the Hunt for New Capital Sources

Ratings – BPA and BPA Related Ratings

Bonneville Power Administration

Issuer Rating	Aa1
ENW Project 1	Aa1
ENW Project 3	Aa1
ENW Columbia Generating Station	Aa1
Conservation Project	Aa1
Cowlitz Falls	Aa1
NW Infrastructure Financing	Aa1
Port of Morrow Transmission	Aa1

Key Indicators – Key Financial Metrics

	2012	2011	2010
Days Cash on Hand	132	143	155
Non Federal DSCR	2.1x	2.2x	1.8x
Total DSCR	1.1 x	1.1 x	0.9x
Non Federal Debt Ratio	46%	47%	50%
Total Debt Ratio	98%	100%	102%

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Summary

» **Bonneville Power Administration (BPA, Aa1/stable issuer rating) is a power marketing agency within the US Department of Energy primarily responsible for federally owned generation and electric transmission assets in the Pacific Northwest.** Moody's rates BPA's non-federal debt such as Energy Northwest's (ENW) nuclear projects, which are referred to as BPA related ratings (see Appendix 2 for legal security).

» **BPA's Aa1 issuer rating is supported by US Government support features, strong underlying hydro and transmission assets, highly competitive power rates, and 17-year power supply contracts.** Explicit US Government support features including a $7.7 billion borrowing authority with the US Treasury and the legal ability to defer its annual US Treasury repayment if necessary. BPA's importance to the US Northwest region and its role as a US Government agency represent drivers of implicit support.

» **Hydrology and wholesale market price risk, environmental burdens, high debt load, lengthy ratemaking process, declining internal liquidity, and low financial metrics weigh on credit quality.** Hydrology and wholesale market prices are the greatest volatility drivers of BPA's financial performance with an almost $1 billion swing in net revenues between the best (2006) and most challenging years (2001).

» **US Government's May 18, 2013 debt ceiling represents low level event risk.** BPA's ability to access its funds at the US Treasury is uncertain if the US Treasury encounters liquidity problems. We understand BPA has considered contingency plans to address such an event risk. Federal sequestration is viewed as manageable since it only affects $6 million of BPA's administrative expenses.

» **FY 2014-2015 proposed rates will help maintain current credit quality. BPA proposed a 9.6% average power rate increase and 13% average transmission rate increase due to higher operating costs.** Total expected debt service coverage is around 1.1x while reserves for risk are likely to decline 22% by the end of FY 2015 compared to FY 2012. BPA's August 2011 rating downgrade assumed continuing declines in internal reserves though this trend continuing past 2015 remains a concern.

» **Access to capital to fund capital expenditures is a growing challenge. BPA estimates it could fully utilize the $7.7 billion US Treasury borrowing line by 2017 based on its long term capital plans.** BPA is considering alternative sources of capital that should maintain at least $2.2 billion of US treasury line availability through at least 2017 in most scenarios.

Outlook

The stable outlook reflects BPA's proposed FY 2014-15 rates, BPA's ability to withstand difficult market price and hydrology conditions, and Moody's view that BPA will institute an alternative capital sourcing plan to maintain sizeable availability under the US Treasury line. The stable outlook also reflects Moody's assumption that the US Government's upcoming debt ceiling issue will be addressed in a manner that does not affect BPA's ability to access its funds.

What Could Change the Rating-Up

In light of the negative rating outlook that we have on the US Government, very limited prospects exist for BPA's rating to be upgraded in the short-term. BPA's rating could improve if BPA is able to fully mitigate hydrology and wholesale price risk, if BPA implements policies to ensure strong internal risk reserves resulting in at least 250 days cash on hand on a sustained basis, and if the US Government's rating stabilizes at Aaa. BPA related ratings could be upgraded if BPA is upgraded.

What Could Change the Rating-Down

BPA's rating could be negatively pressured if BPA's consolidated debt service coverage ratio drops below 1.0x on a sustained basis, if internal days cash on hand drops to the lower end of the 'Baa' category under the public power with generation ownership methodology or if BPA does not maintain substantial availability under the US Treasury line. Furthermore, BPA's rating could be downgraded if FY 2014-2015 final rates are substantially lower than proposed, if US Government support diminishes, federal constraints are placed on BPA or if the US Government's credit quality deteriorates. BPA's rating could also be downgraded if the BPA is unable to properly access its funds or its US Treasury line of credit. Additionally, BPA related ratings could be downgraded if BPA is downgraded or if the underlying contracts (e.g. net billing agreements) are violated.

Key Rating Drivers

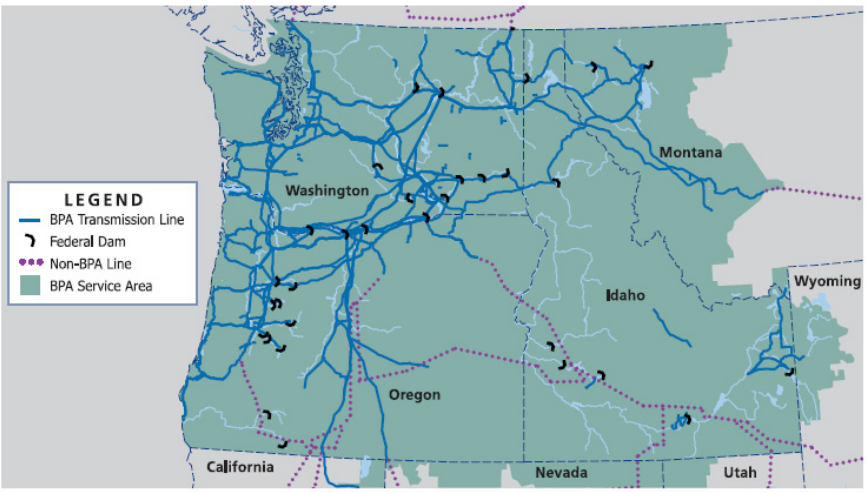
1. Explicit and implicit US Government support features
2. Dominant transmission and power provider in region
3. Highly competitive rates
4. Long term contracts for power sales
5. Long and complex ratemaking process
6. Hydrology and wholesale power price exposure
7. Low consolidated financial metrics and declining reserves
8. High debt load and environmental costs

Brief Corporate Profile

BPA was created in 1937 by an act of the US Congress and is one of four regional power marketing agencies within the US Department of Energy. BPA is primarily responsible for federally owned generation and electric transmission assets in the Pacific Northwest spanning all or parts of eight states (see Figure 1). The federal hydro projects serve numerous purposes, including irrigation, navigation,

recreation, municipal and industrial water supply, fish and wildlife protection, and power generation. The Army Corps of Engineers and the Bureau of Reclamation operate the hydro projects. Many of the statutory authorities of BPA are vested with the Secretary of Energy, who appoints and acts through the BPA administrator.

FIGURE 1
BPA Service Area



Source: BPA

BPA operations are divided between Power Services and Transmission Services though all cash flows ultimately flow into one account (BPA Fund) at the US Treasury. The Power Services business is responsible for the revenue and costs of BPA's generation resources and represents the largest segment at 76% of BPA's revenues in FY 2012. Transmission Services is responsible for the revenue and costs of BPA's electric transmission system and generates the remainder of BPA's revenues. BPA's power rates are reviewed and approved by the Federal Energy Regulatory Commission (FERC) according to the Northwest Power Act.

Detailed Discussion

US Energy Department Line Agency

While BPA's obligations do not benefit from the full faith and credit of the United States Government, BPA benefits from significant explicit and implicit support elements from the US Government as outlined below. These benefits represent at least a 2-3 notch lift to BPA's standalone credit quality and represent key considerations for BPA's Aa1rating. In a major stress scenario, Moody's expects any US Government support to BPA is likely to be provided through the established US Treasury credit line or deferral of payments to the US Treasury.

Borrowing Authority with US Treasury. BPA is authorized to sell to the US Treasury $7.7 billion principal amount of bonds, which benefited from a $3.25 billion increase in February 2009. At September 30, 2012, BPA had $3.42 billion of outstanding borrowings with the US Treasury. The borrowed funds are to be primarily used to fund capital programs including $1.25 billion allocated for conservation and renewable investments. As part of the $7.7 billion, BPA has a $750 million line of credit, which can be used to fund BPA's operating expenses. BPA is developing plans to ensure long term availability of the US Treasury Line (See 'Large Debt Funded Capital Program' section).

Ability to Defer Payments to US Treasury. BPA is required by statute to defer its annual Treasury payments if funds are needed to meet its non-federal debt obligations like the Energy Northwest revenue bonds and thus BPA's US Treasury obligations are considered subordinated to BPA's non-federal debt service obligations. The deferral ability provides BPA a major source of financial flexibility under extreme situations though BPA has not deferred such payments since 1983 and any deferral is likely to have negative political implications. In FY 2012, BPA made debt service payments exceeding $800 million to the US Treasury.

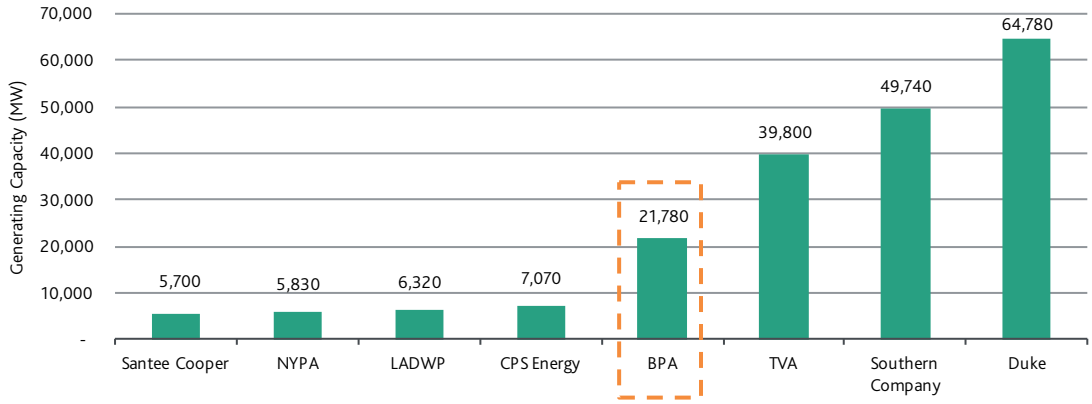
US Government Agency and Importance to the Pacific Northwest. BPA is a line agency of the US Department of Energy and numerous federal statutes have been enacted that aid BPA's financial health while meeting broader public policy obligations. Beyond power and transmission services in the northwest, BPA is also responsible for certain treaty responsibilities with Canada, significant regional environmental protection programs, and coordination of river operations. Northwest US representation on key US House and Senate committees that deal with energy legislation is also viewed positively.

Sound Hydro and Transmission Assets

BPA's dominant hydroelectric generation and transmission assets in the Pacific Northwest are considered one of BPA's key fundamental strengths. BPA has roughly 75% of the Pacific Northwest's bulk transmission consisting of 15,000 miles of high voltage transmission lines and 300 substations and other facilities located in BPA's service area.

BPA also indirectly markets energy to nearly 12 million people from 31 federally owned hydroelectric facilities most of which are located on the Columbia River. Output of the federal hydro system provides more than a third of electric power consumed in the region. BPA is the largest rated public power issuer by generating capacity albeit smaller than TVA or large investor owned utilities (see Figure 2). About 98% of hydro generating capacity is from 13 projects and all the federal hydro plants combined comprise more than 80% of BPA's average power supply (See Appendix 1).

FIGURE 2
Operating Generation Capacity Peer Comparison



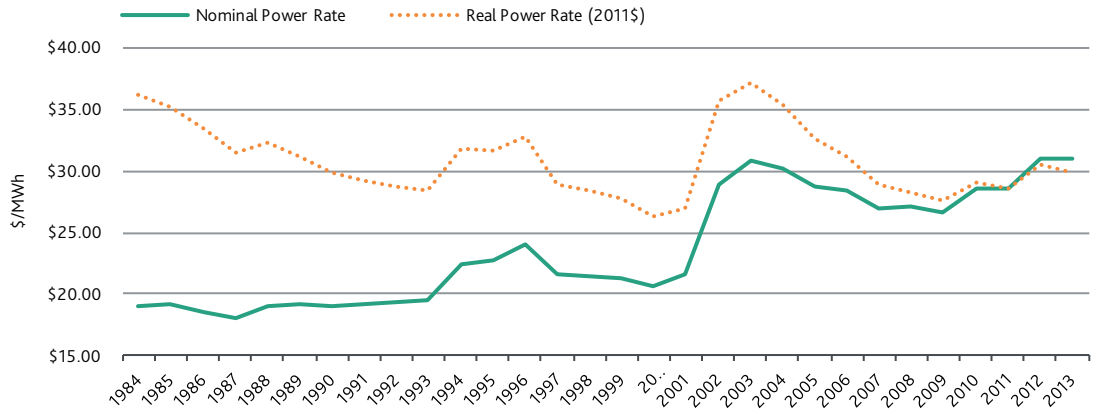
Source: SNL/BPA

Highly Competitive Power Rates

Another major strength of BPA are its highly competitive rates charged to its customers. While BPA's FY 2013 average tier 1 rate around $29/MWh is higher than current low market prices for power, we see BPA's rates as low on an absolute and on an inflation adjusted basis (see Figure 3). These competitive rates represent a key value proposition to BPA's customers and the Pacific Northwest region that enhances BPA's importance. Additionally, BPA's competitive costs boosts rate flexibility all else being equal.

Looking forward, BPA has proposed an average 9.6% increase in power rates and a 13% increase in transmission rates for FY 2014/2015. The proposed increase is not viewed as materially weakening BPA's competitive position. Moody's expects the long-term fundamental strength of BPA's hydroelectric and transmission assets to support BPA's competitive rates and BPA remains well positioned against potentially tougher emissions regulations such as CO2.

FIGURE 3
BPA Historical Power Rates



Source: BPA

Long Term Power Sale Contracts

Long-term power sales contracts with its 133 municipally owned utilities, cooperatively owned utilities, and federal agencies (Preference Customers) support the majority of Power Services's cash flow and BPA's long-term credit quality. The 17-year power sales contracts started in Fiscal Year 2012. Sales to the Preference Customers totaled nearly $1.8 billion in FY 2012 and represent BPA's largest revenue segment at nearly 55% of total revenues. Snohomish PUD (Aa3/stable) is BPA's largest preference customer at 11% of sales and the top ten customers represent approximately 50% of sales assuming conservative water flows (see Figure 4). Eight of the top ten customers are highly rated in the 'A' to 'Aa' category and seven are located in Washington State.

FIGURE 4
Top Ten Preference Customers

Preference Customer	Rating	State	Contract type	Estimated Sales* (aMW)	% of Sales to Preference Customers
Snohomish PUD	Aa3	WA	Slice/Block	786	11%
Cowlitz PUD	A1	WA	Slice/Block	540	8%
Seattle City Light	Aa2	WA	Slice/Block	532	8%
Tacoma Power	Aa3	WA	Slice/Block	393	6%
Clark PUD	A2	WA	Slice/Block	323	5%
Eugene Water & Electric Board	Aa2	OR	Slice/Block	249	4%
Benton PUD	Aa3	WA	Slice/Block	191	3%
Flathead Electric Cooperative	NR	MT	Load Following	163	2%
Central Lincoln PUD	NR	OR	Load Following	154	2%
Grays Harbor PUD	A1	WA	Slice/Block	133	2%

*Estimated assuming critical water levels for slice portion of sales

Source: BPA

Under the new agreements with its Preference Customers, BPA will provide two services; Load Following and Slice/Block. Load Following customers receive power tied to their net requirements and account for roughly 46% of 2013 total sales (MWh) to Preference Customers. Slice/Block customers receive a combination of fixed blocks of power and a portion of the federal hydro system generation. The 17 regional Slice/Block contracts account for roughly 54% of 2013 sales. The Slice portion of the contracts transfer hydrology risk to BPA's customer.

Lengthy Ratemaking Process

BPA's ratemaking procedure involves an extensive process as laid out in the Northwest Power Act and could create complications and delays in timely recovery of BPA's costs. The Northwest Power Act contains specific ratemaking procedures, mandates justification and reasons in support of such rates and requires a hearing. The BPA Administrator ultimately decides the rate based on the hearing record including all information submitted. Rates established by BPA may become effective only upon confirmation and approval by FERC. Currently, BPA has rate cases every two years. In a stress situation, BPA could file an expedited rate with FERC and the whole process could take several months for an interim rate approval. Furthermore, within the rate period, BPA is able to charge up to an additional $300 million per year starting at the beginning of the fiscal year under the Cost Recovery Adjustment Clause (CRAC) if Power Services reserves for risk are around zero. A separate NFB Adjustment for certain environmental costs can raise the $300 million CRAC limit. While the CRAC mechanism adds some flexibility to BPA's two year rate periods, the annual basis of the test and low trigger point limit the benefit of the CRAC mechanism.

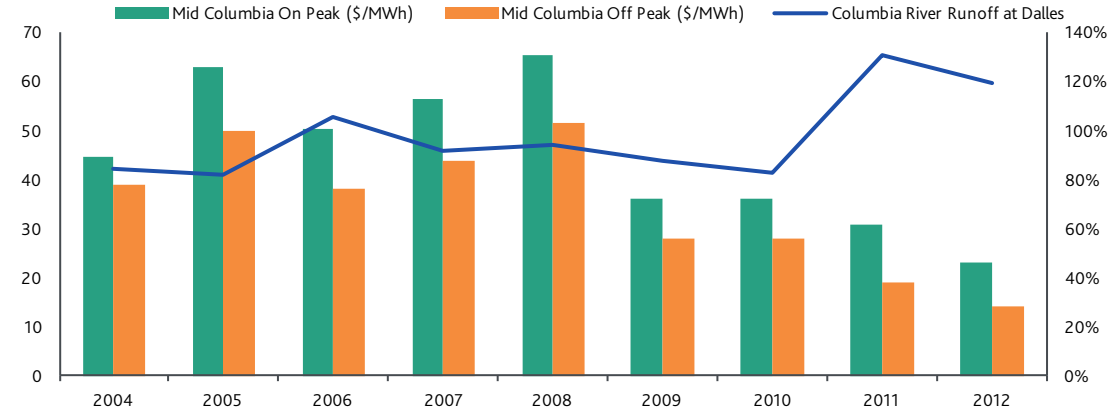
Moody's notes that BPA is required by law to propose rates to meet all its costs and that BPA proposes rates at levels whereby it can meet its US Treasury payments at a 95% confidence level based on its cash flows and reserves. BPA's approach should ensure a high probability of near-term payments to the US Treasury and an extremely high probability of near-term timely payments on non-federal debt service.

Notwithstanding the lengthy ratemaking process that BPA operates under, we note that BPA has historically demonstrated a willingness to raise rates in difficult situations such as the power crisis of 2000-2001 when BPA raised rates by 46%. That said, BPA rate setting has historically result in low consolidated financial metrics and declining internal reserves since 2008 that reduces resiliency to unexpected events (see section 'Declining Liquidity and Low Consolidated Metrics').

Hydrology and Wholesale Price Risks

BPA's financial results can be materially impacted by hydrology in the Columbia River Basin and wholesale power prices since wholesale power sales represent roughly 10-20% of total revenues in a typical year. Since 2001, hydrology has been extremely volatile with high and low around 130% and 60%, respectively, of the long term average. Similarly, power prices have also been volatile with a recent peak nearing $60/MWh in 2008 and a low below $20/MWh in 2012 (See Figure 5). These factors, which are outside of BPA's control, have contributed heavily to nearly a $1 billion swing in net revenues between the best (2006) and most challenging years (2001). BPA's revenue volatility was one of the major contributors to the August 2011 rating downgrade for BPA.

FIGURE 5
Regional Market Prices and Water Flows



Source: SNL \ BPA

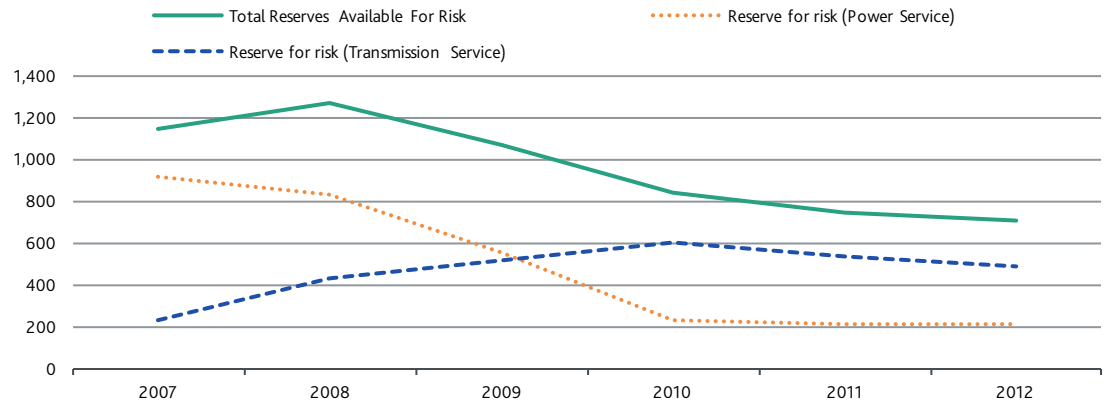
Looking forward, BPA faces a challenging wholesale market environment. North American Reliability Council's (NERC) 2012 long-term reliability assessment for the region forecasts peak demand growth rate at 0.88%, one of the lowest peak demand growth rates in the western US region. Additionally, forward market prices between $30/MWh to $35/MWh are far below the 2006-2008 average of around $53/MWh. Actual realized prices by BPA could be lower given the large amounts of new wind in the region and the correlation between peak wind energy production and BPA's peak surplus energy sales. Approximately 4,700 MW of wind generation is connected to BPA's transmission system by FY 2012 and BPA expects additional wind projects. In addition to difficult wholesale market conditions, an early March 2013 regional water supply forecast shows 2013 water flows are likely to be below average.

Declining Liquidity and Low Consolidated Metrics

Moody's views liquidity as a key mitigant to BPA's exposure to hydrology and wholesale price volatility. For FY 2012, BPA had $704 million (132 days cash on hand) compared to $1.3 billion (276 days cash on hand) in 2008 (see Figure 6). The downward trend is expected to continue through at least 2015 and the continuing decline was one of the major drivers of BPA's rating downgrade in

August 2011. Given the decline in BPA's internal reserves, BPA is increasing its reliance on the $750 million operating expense availability under the $7.7 billion US Treasury line as a source of liquidity for operations. If one factors in the availability of the $750 million portion of the US Treasury line to the liquidity analysis, BPA's days liquidity on hand for FY 2012 would have been 274 days. The line of credit expires in October 30, 2015 and any draw needs to be repaid by October 30, 2016. Our rating incorporates the assumption that the line will continue to be extended prior to maturity.

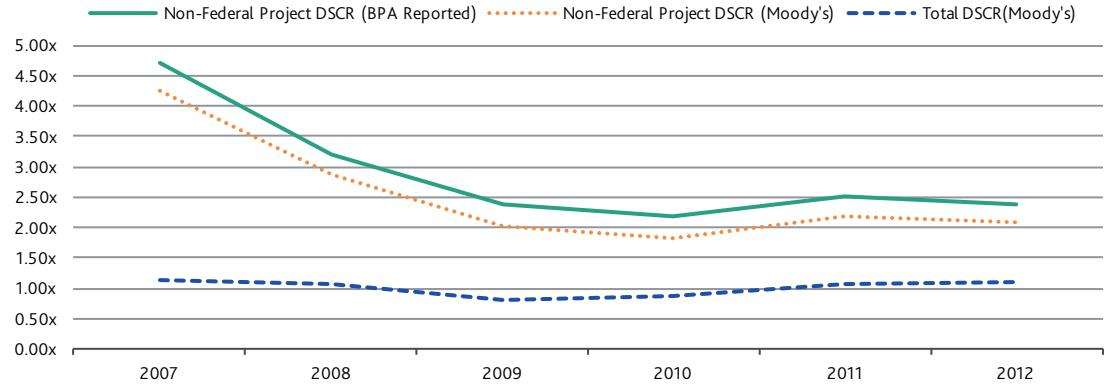
FIGURE 6
BPA's Reserves Available for Risk
(in $ millions)



Source: BPA

On a fully consolidated basis including federal debt, BPA's debt ratio and debt service coverage ratio (DSCR) are low for the rating. Total DSCR has averaged around 1.0x over the last three years (see Figure 7). Additionally, the debt ratio has averaged above 100%. For FY 2012, BPA financial metrics moderately improved with total debt service coverage of around 1.14x and total debt ratio of 98%. Under BPA's FY 2014/2015 proposed rate plan, Moody's expects higher revenue to be offset by substantially higher operating costs resulting in total DSCR around 1.1x. Excluding federal debt, BPA FY 2012 financial metrics are substantially stronger with non-federal DSCR of 2.15x and non-federal debt ratio of 46%. These stronger metrics highlight the substantial benefits of federal debt's effective subordination to non-federal debt and these benefits are supportive of the Aa1 rating.

FIGURE 7
Non-federal and Total DSCR



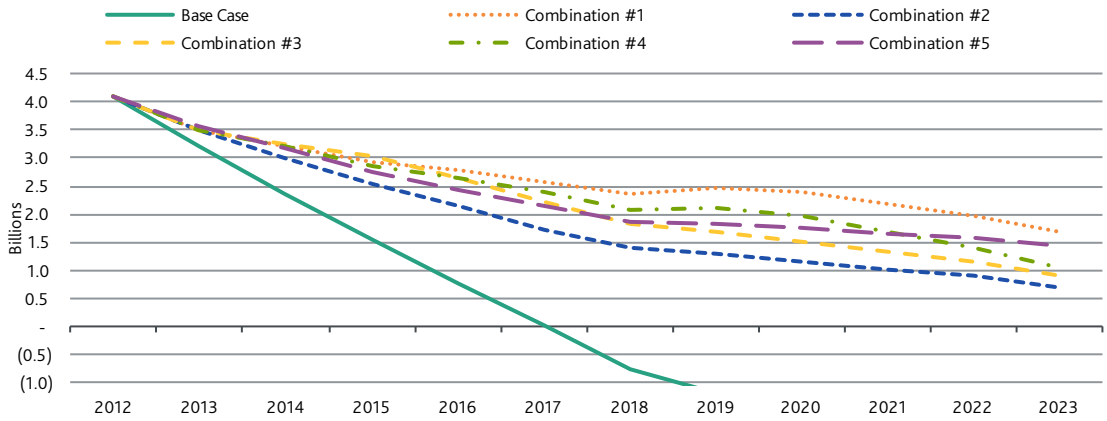
Source: BPA/Moody's

Large Debt Funded Capital Program

BPA's large spending capital program exceeding $1 billion per year is a growing concern since BPA forecasts that its capital needs will result in its $7.7 billion US Treasury line becoming fully utilized by 2017 without using alternate sources of capital (see Figure 8). The capital expenditures program includes modernizing aging infrastructure, integrating new renewable generation, energy efficiency, and environmental costs.

FIGURE 8

Forecasted availability of US Treasury line



Source: BPA

To extend the availability of the US Treasury line, BPA is considering combinations of the alternative financing tools (see Figure 9 for the combination scenarios and appendix 4 for description of alternative financing tools). Moody's incorporates the assumption that BPA will use some combination of available alternative financing tools to maintain significant availability under the US Treasury line. BPA forecasts maintaining at least $2.2 billion in most combination scenarios through at least 2017. Moody's views availability of the US Treasury line as a key credit consideration especially given the lack of debt service reserve on BPA's non-federal debt, BPA's increasing reliance on the US Treasury line for liquidity, low consolidated financial metrics, and inherent volatility of BPA's wholesale revenue.

FIGURE 9

Alternative Financing Combination Scenarios

Financing Tools	Combination #1	Combination #2	Combination #3	Combination #4	Combination #5
Leases	Yes	Yes	Yes	Yes	Yes
Power Prepay	$1.7 BN	N/A	$500 M	$1.7 BN	N/A
Conservation	Yes	Yes	Yes	N/A	N/A
AAC	N/A	Yes	Yes	N/A	Yes
Reserve Usage	Yes	Yes	Yes	Yes	Yes
Revenue	N/A	N/A	N/A	N/A	Yes

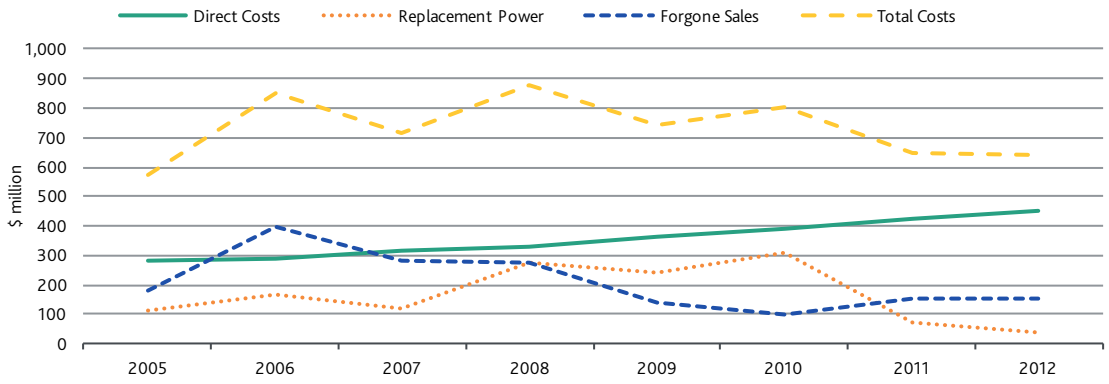
Source: BPA

Environmental Challenges

BPA faces conflicting uses of the Columbia River and environmental regulations, such as the Endangered Species Act (ESA), that contribute significantly to BPA's costs and weighs heavily on BPA's cash flows and competitiveness. Biological opinions prepared by National Oceanic and Atmospheric Administration Fisheries Service and the US Fish and Wildlife Service mandates actions to protect fish species and hydro dam operational changes. In 2011, the federal district court for the district of Oregon upheld through 2013 the current biological opinion and ordered a new biological opinion to cover 2014-2018. BPA estimates around $100 million per year of higher costs under the most recent biological opinion and the higher cost was incorporated in the FY 2012-2013 rate case.

For FY2012, BPA estimates total fish and wildlife costs at approximately $643 million consisting of $453 million in direct costs and $190 million of indirect costs (see Figure 10). For reference, Moody's notes that BPA's fish and wildlife mitigations costs in FY 1981 was $20 million (roughly $51 million on a 2012 inflation adjusted basis). BPA is able to recover non-power related (e.g. irrigation) environmental costs, which totaled $77 million in FY 2012, from the US Treasury and this amount was credited against payments owed to the US Treasury.

FIGURE 10
Historical environmental costs



Source: BPA

Moody's recognizes that an extreme scenario such as breeching of one or more of the Snake River hydro dams remains possible, though we view this as highly unlikely.

Cost Burden of Nuclear Projects

Of the original five planned nuclear units, Columbia Generation Station (CGS) is the only one in operation with all the power economically dispatched by BPA. Consequently, BPA only benefits from power generated at CGS but remains responsible for debt at Project No 1, CGS and Project No 3 that increases BPA's debt burden while reducing BPA's competiveness. Project 4 and 5 defaulted since they did not have net billing agreements. The debt at all three projects totaled $5.9 billion at FY 2012 and represented 87% of BPA's non-federal debt and 41% of BPA's total debt. Non-federal debt service associated with the three projects totaled $644 million in FY 2012 and remains a major cost burden on BPA. That said, Project 1 & 3 debts totaling $2.7 billion are expected to be repaid by 2017 and 2018, respectively, which should provide BPA greater financial flexibility at that time.

While the Energy Northwest's nuclear related debt is a substantial burden on BPA, Moody's recognizes that the 1,150 MW CGS nuclear plant operates and provides almost 10% of BPA's energy resources. Since 2004, CGS generated an average of 8.3 TWh per year with the recent lows in FY2011/2012 caused by an extended refueling outage that ended September 2011 (see Figure 11). Positively, CGS's operating license was extended to 2043 by the Nuclear Regulatory Commission in 2012.

FIGURE 11
Historical CGS Generation and Estimated Cost

Source: Energy Northwest / Moody's

Appendix 1

Operating Federal System Projects for Operating Year 2013

Project	Initial Year in Service	No. of Generating Units	January Capacity (Peak MW)	Maximum Energy (aMW)	Median Energy (aMW)	Firm Energy (aMW)
United States Bureau of Reclamation (Reclamation) Hydro Projects						
Grand Coulee incl. Pump Turbine	1941	33	6,162	2,705	2,417	1,931
Hungry Horse	1952	4	366	151	104	82
Other Reclamation Projects		16	125	182	171	126
1. Total Reclamation Projects		53	6,653	3,038	2,692	2,139
United States Army Corps of Engineers (Corps) Hydro Projects						
Chief Joseph	1955	27	2,535	1,329	1,243	1,109
John Day	1968	16	2,484	1,385	1,074	815
The Dalles w/o Fishway	1957	24	2,034	966	812	610
Bonneville	1938	20	1,054	582	555	415
McNary	1953	14	1,127	721	644	494
Lower Granite	1975	6	930	405	290	192
Lower Monumental	1969	6	923	446	313	192
Little Goose	1970	6	928	422	299	194
Ice Harbor	1961	6	693	343	231	170
Libby	1975	5	579	276	218	177
Dworshak	1974	3	445	287	217	148
Other Corps Projects		20	210	314	278	227
2. Total Corps Projects		153	13,942	7,476	6,174	4,743
3. Total Reclamation and Corps Projects (line 1 + line 2)		206	20,595	10,514	8,866	6,882
Non-Federally-Owned Projects						
Columbia Generating Station	1984	1	1,130	878	878	878
Other Non-Federal Hydro Projects		7	23	61	45	40
Other Non-Federal Projects		11	28	89	89	89
4. Total Non-Federally-Owned Projects		19	1,181	1,028	1,012	1,007
Federal Contract Purchases						
5. Total Bonneville Contract Purchases		0	1,228	715	707	697
Total Federal System Resources						
6. Total Federal System Resources (line 3 + line 4 + line 5)		225	23,004	12,257	10,585	8,586

Source BPA

Appendix 2

BPA Legal Security and Historical Financial Performance

Legal Security: BPA Related Debt

Moody's rates eight of BPA's non-federal debt obligations, which are supported by long-term agreements that obligate BPA to pay for costs including debt service. BPA's direct debt and its related obligations are not general obligations of the United States of America and are not secured by the full faith and credit of the United States of America. Each entity's legal security pledge is described below.

Energy Northwest (Project 1, Columbia Generating Station (CGS), Project 3): Project 1, CGS, and Project 3 are nuclear projects of which only CGS was completed. Each of the nuclear projects is individually secured by a pledge of specific project revenues including amounts derived from the tri-party net billing agreements with BPA and project participants. The net billing agreements obligate the project participants, consisting of numerous public utility districts and municipal and electric cooperative utilities, to pay Energy Northwest a proportionate share of the project's annual costs, including debt service, in accordance with each participant's purchase of project capability. BPA, in turn, is obligated to pay (or credit) the participants identical amounts by reducing amounts the participants owe for power and service purchased from BPA under their power-sales agreements. Even after project termination, such as in the case of Projects 1 and 3 (the construction of the nuclear units was terminated), the obligation for debt service remains until the Energy Northwest nuclear bonds are retired. Most importantly and a source of significant credit strength, BPA has agreed, in the event of any insufficient payment by a participant, to pay the amount due in cash, directly, and in a timely manner. While the net billing agreements may be terminated prior to the maturity on the related net billed bonds, the obligation of the participant to pay their proportionate share of the debt service continues, as does the obligation of BPA to credit these payments or make a payment if in any event there was an insufficient payment by a participant. In 2007, Energy Northwest and BPA adopted a new direct pay agreement whereby Energy Northwest participants directly pay all costs to BPA rather than through Energy Northwest. There is no debt service reserve.

BPA has made a clear and tested commitment to support the payment of the Energy Northwest revenue bonds through the net billing agreements between Energy Northwest participants and BPA. The agreements have withstood more than 25 years of stressful circumstances including legal challenges in the early 1980s. The US Court of Appeals for the Ninth Circuit affirmed in the City of Springfield v. WPPSS; 752 F.2d.1423, the legal authority of all participants to enter into the net billing agreements; the US Supreme Court denied a petition for a writ of certiorari. The obligation of BPA and the participants is in force whether the projects are operable or terminated.

Conservation and Renewable Energy System (CARES)-Conservation Project: CARES is a joint operating agency established to develop and acquire conservation, renewable, and high efficiency energy resources. CARES's Conservation Project bonds are backed by BPA's payments under the Conservation Project Agreement, which obligates BPA to pay debt service to the bond trustee whether or not the Conservation Project is terminated, operating, or operable. There is no debt service reserve. The bonds mature in 2014.

Cowlitz Falls Hydroelectric Project: Cowlitz Falls Hydroelectric Project is a 70 MW hydroelectric dam owned by Lewis County Public Utility District (Aa3). The Cowlitz Falls Hydroelectric Project bonds are secured by take-or-pay power purchase agreement and a separate payment agreement with BPA. Both agreements at a minimum obligate BPA to pay debt service to the bond trustee whether or

not the project is terminated, operating, or operable. The power purchase agreement also obligates BPA to pay operating costs. There is no debt service reserve. The bonds mature in 2024.

Northwest Infrastructure Financing Corporation: Northwest Infrastructure Financing Corporation primarily owns towers and 500 kV transmission lines totaling 64 miles in BPA's service area. These assets have been leased to BPA and Northwest Infrastructure Financing Corporation's bonds are secured by rent payments from BPA under the lease agreement. BPA maintains the asset and has an absolute and unconditional obligation to make the lease rental payments. There is no debt service reserve. The bonds mature in 2034.

Conservation System Project: Conservation System Project is owned by Tacoma Power (Aa3) and was established to provide energy conservation in Tacoma Power's service area. The Conservation System Project bonds are backed by BPA's payments under the Conservation Project Agreement, which obligates BPA to pay debt service and administrative costs to the bond trustee whether or not the Conservation System Project is terminated, operating, or operable. There is no debt service reserve. The bonds mature in 2014.

Port of Morrow Transmission Facilities: Port of Morrow's transmission revenue bonds are supported by an unconditional lease payment obligation by BPA. BPA's obligation to make lease payments is absolute and unconditional and is payable without any set-off or counterclaim, regardless of whether or not the transmission assets are operating or operable. The lease is co-terminus with the bonds and the lease payments have been structured to match debt service payments including the lease bond's bullet maturity expected in 2042. The bond trustee has the right to receive all lease payments and BPA will directly make the lease payments to the bond trustee. There is no debt service reserve.

Appendix 3

Historical Financial Performance

Bonneville Power Administration

Financial Performance (fiscal years ended 9/30 in $millions)

	2007	2008	2009	2010	2011	2012
Sales (aMW)	9,374	8,803	8,748	8,936	11,042	10,819
Sales to NW public utilities	1,837	1,505	1,673	1,776	1,763	1,833
Direct Service Industrial Customers / Investor-owned utilities	281	215	144	214	258	175
Sales outside NW	461	604	274	243	466	443
Transmission	689	722	714	771	776	821
Bookouts / Fish Credits and Other Revenues	1	-8	66	51	22	46
Total Net operating revenues (1)	**3,269**	**3,037**	**2,870**	**3,055**	**3,285**	**3,318**
Operating Costs	1,880	1,706	1,896	1,971	1,912	1,940
Operating Net Revenue	1,389	1,330	974	1,084	1,373	1,378
Other Income	74	81	77	55	38	44
Net Revenues For Debt Service (Moody's)	**1,464**	**1,411**	**1,052**	**1,140**	**1,411**	**1,422**
Reported Net Revenues	457	265	-101	-128	82	87
Non-Federal and US Treasury Debt Service						
Non-federal debt service	343	491	519	621	649	685
Federal Debt Service	934	820	759	679	675	596
Total Debt Service Including Treasury	**1,278**	**1,311**	**1,278**	**1,300**	**1,324**	**1,281**

Bonneville Power Administration

Financial Performance (fiscal years ended 9/30 in $millions)

	2007	2008	2009	2010	2011	2012
Financial Reserves, Cash Days on Hand & DSC						
Reserve for risk (Power Service)	917	834	553	233	215	217
Reserve for risk (Transmission Service)	229	434	516	606	532	487
Total Reserves Available For Risk	**1,147**	**1,268**	**1,068**	**840**	**747**	**704**
Total Financial Reserves	1,463	1,646	1,363	1,114	1,006	1,022
Non Federal Debt	6,551	6,467	6,565	6,322	6,273	6,865
US Treasury Borrowings	2,241	2,186	2,130	2,513	2,943	3,421
Federal Appropriations	4,338	4,258	4,396	4,259	4,350	4,249
Total Debt	**13,129**	**12,911**	**13,092**	**13,095**	**13,566**	**14,535**
Days Cash on Hand	223	271	206	156	143	132
Non-Federal Project DSCR (BPA Reported)	4.70x	3.20x	2.40x	2.20x	2.50x	2.40x
Non-Federal Project DSCR (Moody's)	4.26x	2.88x	2.03x	1.83x	2.17x	2.07x
Total DSCR(Moody's)	1.15x	1.08x	0.82x	0.88x	1.07x	1.11x

Source: BPA

Appendix 4

Description of Alternative Financing Tools

Alternative Financing Tools

	Lease Financing	Power Prepay	Conservation	Revenue Financing	Transmission Reserve Usage	AAC
Description	50% of transmission's capital program is third-party financed	Customer prepayment of a portion of their long term contract payments	70% of the conservation capital program is third party financed	Portion of ongoing capital needs funded directly through rates	Utilization of reserves at transmission business	Hypothetical 'excess' cash flow due to depreciation exceeding debt amortization
Program Size	$2.5 billion	$500 million to $1.7 billion	$570 million	$844 million	$165 million	N/A
Line of Business	Transmission	Power	Power	Both	Transmission	Power

Source BPA

Appendix 5

Debt List

Bonneville Power Administration Non-Federal Project Debt

Outstanding ($ Millions) As Of Fiscal Year 2012

			Amount Outstanding	Final Maturity
Energy Northwest Revenue Bonds(1)				
Nuclear Project No.1	Aa1	$	$1,321	7/1/2017
Columbia (Nuclear Project No.2)	Aa1	$	$3,224	7/1/2044
Nuclear Project No.3	Aa1	$	$1,395	7/1/2018
			$5,941	
Lewis County PUD 1-Cowlitz Falls Project	Aa1	$	$105	10/1/2024
Tacoma Conservation System Project Rev.	Aa1	$	$5	12/1/2014
Northern Wasco County-McNary Dam	NR	$	$20	12/1/2024
Northwest Infrastructure Financing Corp.	Aa1	$	$120	1/1/2034
NIFC III			$200	1/1/2015
NIFC IV			$100	1/1/2016
NIFC V			$118	7/1/2016
NIFC VI			$130	1/1/2019
Port of Morrow (Transmission Facilities)	Aa1		$85	9/1/2042
Conservation and Energy Renewable System	Aa1	$	$6	10/1/2014
			$6,829	

Source: BPA

(1) Excluding Energy Northwest Nine Canyon Wind Project which does not receive payments from BPA

Ratings History

ENW Rating History

Energy Northwest
Rating History

Nuclear Project No. 1 (1):		Nuclear Project No. 3 (3)	
August 2011:	Aa1	August 2011:	Aa1
March 2004:	Aaa	March 2004:	Aaa
August 1996:	Aa1	August 1996:	Aa1
May 1990:	Aa	May 1990:	Aa
August 1989:	A	August 1989:	A
February 1985:	Withdrawn	February 1985:	Withdrawn
June 1983:	Suspended	June 1983:	Suspended
April 1983:	Baa	May l983:	Baa
May 1982:	A1	May l982:	A1
February 1982:	A1	February 1982:	Aa
September 1975:	Aaa	November l975:	Aaa

Nuclear Project No. 2 (2)		Nuclear Projects Nos. 4 and 5 (4):	
August 2011:	Aa1	June 1983:	Withdrawn
March 2004:	Aaa	June 1983:	Caa
August 1996:	Aa1	January 1982:	Suspended
		June 1981:	Baa1
May 1990:	Aa	February l977:	A1
August 1989:	A	(1) Not a BPA-backed obligation.	
February 1985:	Withdrawn		
June 1983:	Suspended		
June 1983:	Baa		
May 1983:	A1		
February 1982:	A1		
February 1975:	Aaa		

(1) Washington Public Power Supply System Project 1 was a partially constructed nuclear unit that Energy Northwest terminated. Energy Northwest has plans for demolition of the project and restoration of the site. Outstanding revenue bonds secured by net billing agreements with BPA.

(2) Columbia Generating Station (formerly Project 2) is an operating 1157 MW nuclear generation facility.

(3) Washington Public Power Supply System Project 3 was a partially constructed nuclear unit that was terminated by Energy Northwest. The site was transferred to the Grays Harbor PUD 1 and developed into a combustion turbine site. Outstanding revenue bonds secured by net billing agreements with BPA.

(4) Projects 4 and 5 terminated in 1982 and projects 4 and 5 bonds went into default on July 22, 1983. Revenue bonds were not backed by net billing agreements.

Appendix 7

US Public Power Electric Utilities with Generation Ownership Exposure Methodology

Methodology – The principal methodology used in rating BPA was the US Public Power Electric Utilities with Generation Ownership Exposure Methodology published in November 2011,which can be found at www.moodys.com in the Credit Policy & Methodology directory, in the Ratings Methodologies subdirectory.

Industry: US Public Power Electric Utilities with Generation Ownership Exposure	Aaa	Aa	A	Baa	Ba	B	Caa
Factor 1: Cost Recovery Framework Within Service Territory (25%)							
a) Cost Recovery Framework Within Service Territory		X					
Factor 2: Willingness and Ability to Recover Costs With Sound Financial Metrics (25%)							
a) Willingness and Ability to Recover Costs & Financial Metrics			X				
Factor 3: Management of Generation Risks (10%)							
a) Management of Generation Risks		X					
Factor 4: Competitiveness (10%)							
a) Rate Competitiveness		X					
Factor 5: Financial Strength (30%)							
a) Liquidity - Adjusted days liquidity on hand (3 year avg) (10%)			X				
b) Leverage - Debt ratio (3 -year average) (10%)		X (non federal)			X (total debt)		
c) Operating Resiliency - Adj DSCR (3 year avg) (10%)		X (non federal)			X (total debt)		
Notching Considerations:							
a) Operational		0					
b) Financial		-0.5					
c) Other – (i.e. factors not appropriately captured in the grid)		+2 (non federal) / +3 (total debt)					
Rating:							
Indicated Rating from Grid Factors		Aa3(non federal) / A2 (total debt)					
Notching Factor		1.5 / 2.5		notch			
Indicated Rating from Methodology		Aa2 (non federal) / Aa2 (total debt)					
Actual Rating Assigned		Aa1					

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