

HIGH PROFILE NEW ISSUE

Energy Northwest

Bonneville Power Administration

Sale Details	
Revenues Bonds	Tax Exempt (Delayed Delivery) and Taxable
Security:	Net billing agreements with BPA
Bond Amount:	\$676 million
Sale Date:	June 2011
Use of Proceeds:	Refunding
Key Facts	
BPA Coverage of Non-Federal Project Debt Service, 2010 (reported)	2.2x
BPA Wholesale Power Rate, FY 2011	2.9 cents/kwh
Energy Northwest outstanding revenue bonds: Project 1, Columbia Nuclear and Project 3	\$5.7 BN

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Rating Rationale

The Aaa rating (under review for possible downgrade) on Energy Northwest revenue bonds is rooted in the legal arrangements between Energy Northwest and Bonneville Power Administration (BPA) that secure the bonds and obligates BPA to pay for debt service. BPA has an Aaa issuer rating under review for possible downgrade.

Strengths

- » Event and court-tested net billing agreements obligate BPA to ensure timely and sufficient revenues to pay debt service on Energy Northwest revenue bonds
- » BPA has strong business fundamentals and is a U.S. Energy Department line agency
- » BPA has power supply contracts through FY 2028 with 125 participants

Challenges

- » Significant hydrology and wholesale power market exposure
- » Conflicting uses of Columbia River and environmental litigation or mandates
- » Extensive ratemaking process
- » Decline in financial reserves and financial metrics

Outlook

The review for possible downgrade reflects BPA's sustained decline in its financial reserves available for risk and debt service cover ratios, BPA's proposed rate plan for FY 2012-2013 and extended period of below average hydrology prior over the last ten out of twelve years. To a lesser extent, the review for possible downgrade also reflects a small uncertainty regarding BPA's ability to draw on its US Treasury lines of credit. The resolution of the review for possible downgrade will likely occur once BPA's rate plan is approved in Q3 2011.

What Could Change the Rating-UP

The ratings could stabilize if BPA executes policies to ensure strong internal reserve levels or implements enhanced risk management policies that fully mitigates hydrology and market price risk.

What Could Change the Rating-DOWN

The rating is likely to be lowered if BPA continues to experience declines in its reserves available for risk, if BPA does not execute policies to ensure strong internal reserve levels, if BPA does not implement enhanced risk management policies that fully mitigates hydrology and market price risk, if there are federal constraints placed on BPA, if BPA is unable to draw on its US Treasury lines of credit for an extended period or if BPA's net billing agreement obligation is violated.

Analysis

Moody's has assigned the provisional credit rating of (P)Aaa to Energy Northwest's sale of approximately \$157 million of Project 1 Electric Revenue Refunding Bonds, Series 2012-A (Delayed Delivery), \$445 million Columbia Generating Station Electric Revenue Refunding Bonds, Series 2012-A (Delayed Delivery), \$69 million Project 3 Electric Revenue Refunding Bonds, Series 2012-A (Delayed Delivery) and also assigned Aaa ratings to \$5 million Columbia Generating Station Electric Revenue Bonds, Series 2011-C (Taxable). Moody's has also placed under review for possible downgrade the ratings on the bonds for Project No. 1, Columbia Generating Station, Project No. 3, Bonneville Power Administration's (BPA) issuer rating and BPA's related ratings. The bonds are expected to price in June 2011 and the provisional rating designation on the delayed delivery bonds is expected to be removed when the bonds settle on or about April 3, 2012. The final ratings are expected to match Energy Northwest's Project 1, Columbia Generating Station and Project 3 bond ratings at that time. The \$5 million in taxable bonds are expected to settle on June 23, 2011. The total issuance amount could be lower depending on refunding opportunities.

The Aaa rating on Energy Northwest's revenue bonds is rooted in the legal arrangements, principally in the net billing agreements between Energy Northwest and Bonneville Power Administration (BPA) that secure the bonds and obligates BPA to pay for debt service on the Project No 1, Columbia Generating and Project No 3 revenue bonds.

The ratings under review for possible downgrade reflects BPA's sustained decline in its financial reserves available for risk and debt service cover ratios, BPA's proposed rate plan for FY 2012-2013, low market prices and extended period of below average hydrology on a historical basis. Driven by poor hydrology, low wholesale market prices and rising non-federal debt service, total reserves available for risk dropped a cumulative 34% over a two year period ending FY 2010 while non-federal debt service coverage dropped to around 1.9 times compared to 4.4 times average from 2004 to 2008. While the above average hydrology for FY 2011 will likely result in BPA performing above its budget, Moody's does not expect a major improvement in reserves and non-federal debt service coverage ratios though the decline will be less than expected. Moody's recognizes that BPA effectively assumes average hydrology in their forecast while BPA's hydro generation has experienced below average levels for the past 10 of the 12 years. Additionally, BPA's secondary sales faces challenging market conditions over the next several years of low wholesale prices, sustained lower demand and increasing

wind generation during BPA's peak surplus energy sales season. The resolution of the review for possible downgrade will likely occur once BPA's rate plan is approved in Q3 2011.

To a lesser extent, the review for possible downgrade also reflects a small uncertainty regarding BPA's ability to draw on its US Treasury lines of credit since BPA expects to make draws between now and September 2011 and the US government has reached its debt ceiling on May 16, 2011. That said, Moody's also recognizes that BPA was able to draw on its US Treasury lines on May 19, 2011 and significant internal liquidity exists at BPA.

Legal Security: Event - and Court - Tested Net Billing Agreements with BPA Provide Strong Security to Energy Northwest Revenue Bonds

Bond security is the pledge of revenues including amounts derived from the net billing agreements with the United States Government, acting by and through the BPA Administrator. The bonds 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. The 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, such as the legal challenges in the early 1980s to Nuclear Project 1, the Columbia Generating Station, and the Project 3 bonds brought about by the Project 4 and 5 bond defaults (Projects 4 and 5 were not backed by the BPA net billing agreements). Also, despite the termination of the construction of Projects 1 and 3, (the projects were formerly nuclear generation units that were expected to be constructed) the net billing agreements are still in force and debt service on those project bonds are being paid.

The net billing agreements obligate project participants, consisting of numerous public utility districts and municipal and electric cooperative utilities, to pay Energy Northwest a proportionate share of the Energy Northwest 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 is in effect until the Energy Northwest bonds are retired.

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.

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.

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.

Use of Bond Proceeds

The proceeds of the offering is expected to be used to refunding existing debt at Project 1, Columbia Generating Station and Project 3, pay down drawn amounts under an anticipated bank line of credit and pay transaction fees. Currently, Energy Northwest expects to obtain a \$150.2 million, 1-year bank line of credit to potentially make payments on outstanding bonds until the settlement of the Columbia Generating Station delayed delivery bonds.

Background on BPA

In 1937, an act of Congress created BPA to market power from hydroelectric facilities constructed on the Columbia River. The Army Corps of Engineers and the Bureau of Reclamation operate the hydro projects. BPA is one of four regional power marketing agencies within the US Department of Energy. Many of the statutory authorities of BPA are vested with the Secretary of Energy, who appoints and acts through the BPA administrator. 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 78% of BPA's revenues in FY 2010. 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 wholesale power rates are approved by the Federal Energy Regulatory Commission (FERC) to ensure full-cost recovery. Federal law requires BPA to meet specified energy requirements in the Northwest region. BPA is also required to implement conservation measures and to provide transmission services. The federal hydro projects also serve numerous purposes, including irrigation, navigation, recreation, municipal and industrial water supply, fish and wildlife protection, and power generation. The amount of power produced by the federal hydro generation units varies with annual precipitation and other weather conditions.

Credit Fundamentals

Strengths

- » BPA benefits from U.S. government support including limited direct borrowing authority with the US Treasury and the legal ability to defer its annual US Treasury repayment if necessary to meet non-Federal debt service commitments (which includes Energy Northwest bonds) under the net billing agreements. BPA has established the planning policy of meeting a 95% probability over the next two years of making its U.S. Treasury payment on time which is a key strategy to ensure timely revenue bond debt service payment
- » BPA's extensive hydroelectric system strongly anchors its competitive wholesale rate position relative to market based prices over the long term
- » BPA owns and operates 75% of the bulk transmission system and markets low cost hydroelectric power amounting to 35% of the region's power which highlights BPA's important role in the northwest region of the U.S
- » BPA sells a majority of its power under an 18-year power supply contracts with creditworthy public power entities and derives roughly 25% of revenues from a stable electric transmission business

Challenges

- » Significant exposure to hydrology risk and wholesale power markets contributes to cash flow volatility
- » Extensive ratemaking process creates potential complications in timely rate recovery
- » Conflicting uses of Columbia River, (flood control, irrigation, navigation, recreation, municipal and industrial water supply, fish and wildlife protection and power generation), can hinder the ability of the system to meet load and contribute to substantial additional costs
- » Development of wind energy is likely to negatively pressure power prices in the region and has presented complicated transmission and load balancing issues
- » Columbia Generating Station is likely to face increased costs due to the nuclear accident in Fukushima, Japan
- » BPA's historically strong liquidity has declined substantially and is expected to decline further
- » BPA's financial metrics have declined over the last two years.

Key Rating Drivers

BPA's Status as a U.S. Energy Department Line Agency and Its Relationship to the Federal Government Are Important to the Credit Rating

While BPA's obligations do not benefit from the full faith and credit of the United States Government, BPA benefits from significant support from the US government and strong interrelationships as shown below. 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 lines or deferral of payments to the US Treasury.

Borrowing Authority with US Treasury. BPA has authority to sell to the United States Treasury \$7.7 billion principal amount of bonds, which benefited from a \$3.25 billion increase in February 2009. At March 31, 2011, BPA had \$2.88 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 capital and environmental programs. 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. Some uncertainty exists regarding BPA's ability to draw on its US Treasury lines of credit since BPA expects to make draws between now at September 2011 and the US government has reached its debt ceiling on May 16, 2011. That said, Moody's also recognizes that BPA was able to draw on its US Treasury lines on May 19, 2011.

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 obligations on the Energy Northwest net billed bonds. 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 could have negative political implications. Over the next three years, BPA is forecasted to make payments to the US Treasury equal to roughly \$700-800 million per year.

Line Agency of US Department of Energy. BPA is not a government corporation but a traditional line agency that is part of the US Department of Energy. The link between BPA and the federal

government is further strengthened because BPA must submit annual budgets to Congress and the Department of Justice remains responsible for BPA litigation. There were no adverse proposals to BPA operations or finances contained in the FY 2011 budget. The Federal Energy Regulatory Commission (FERC) must confirm the electric rates established by BPA.

Powerful Political Constituencies. Due to the importance to the region BPA serves, there is important northwest U.S. representation on key U.S. House and Senate committees that deal with legislation related to BPA. For example, several US senators from the Northwest are on the Senate Energy and Natural Resources Committee.

BPA Serves Important Public Policy Objectives. Since the creation of BPA, numerous statutes have been enacted to address issues involving BPA and the Northwest region. Among them are the Bonneville Project Act of 1937, The Flood Control Act of 1944, the 1974 Federal Columbia River Transmission System Act, the Pacific Northwest Electric Power Planning and Conservation Act of 1980, and the 1996 BPA Appropriations Refinancing Act. Each of these federal statutes include provisions that aid BPA's financial health while meeting broader public policy obligations.

In the 2001-2003 Pacific Northwest energy crisis, BPA demonstrated it had other federal financial liquidity tools that were available should there be an adverse situation. For example, in 2001, BPA used credits under Section 4(h)(10)c of the Northwest Power Act which relate to federal payment of fish and wildlife protection costs to reduce the actual cash payment to the U. S. Treasury. Without the credits, the power rate increase on customers would have been more significant. BPA identified sources of liquidity of over \$1.5 billion to bridge any gaps due to short-term cash flow shortfalls.

Economic, Social, and Political Ramifications of A Failure of BPA. BPA provides 35% of the electric power in the Pacific Northwest, owns 75% of the bulk electric power transmission, and 80% of the transmission capacity of the Pacific Northwest-Pacific Southwest Intertie . BPA is also responsible for significant regional environmental protection programs as well as for coordinating river operations and certain treaty responsibilities with Canada. BPA funds 70% of the fish and wildlife mitigation and recovery efforts in the Columbia Basin. A BPA failure would have a far-reaching effect on the region, which would serve as an important incentive. In addition, as the Northwest region looks to diversify and add to its power resources, BPA is playing a major role in building new transmission lines to insure new wind generation constructed in the region can efficiently get to the regional marketplace.

Fundamentally Strong Underlying Assets and Competitive Power Costs

BPA markets energy to nearly 12 million people from 31 federally owned hydroelectric facilities constructed on the Columbia River. About 94% of generating capacity is from 12 projects. The facilities comprise more than 80% of BPA's firm power supply (See Figure 1). Power dispatched from Energy Northwest's Columbia Generating Station nuclear plant represents about 10% of BPA's total energy resources. Output of the federal hydro system is 10,756 average megawatts annually during median water conditions and 8,478 average megawatts annually under low water conditions. BPA's key business consists of power sales to public and private utilities for resale purposes.

Over a long-term horizon, BPA's cost structure remains competitive as a result of the dominant and low-cost hydroelectric generation though BPA's cost competitiveness has decreased over the last two years. In FY 2011, BPA's Full Requirement Power Rate is around \$29/MWh. Historical regional market prices in the region were around the \$50/MWh range from 2004 to 2008 though prices in 2009 and 2010 averaged around \$32/MWh due to the recession and low natural gas prices. For 2011,

market prices are expected to be around \$25/MWh due to high hydrology, reduced demand and low natural gas prices. Moody's believes that the long-term fundamental strength of BPA's hydroelectric assets remains strong and BPA remains well positioned against potentially tougher emissions regulations including CO2.

FIGURE 1

Operating Federal System Projects for Operating Year 2011

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	6,192	2,813	2,393	1,827
Hungry Horse	1952	4	379	154	104	83
Other Reclamation Projects		16	125	182	171	126
1. Total Reclamation Projects		53	6,696	3,149	2,668	2,036
United States Army Corps of Engineers (Corps) Hydro Projects						
Chief Joseph	1955	27	2,535	1,331	1,342	1,060
John Day	1968	16	2,484	1,213	1,075	781
The Dalles w/o Fishway	1957	24	2,074	900	805	589
Bonneville	1938	20	1,052	581	557	404
McNary	1953	14	1,127	653	645	487
Lower Granite	1975	6	930	357	282	192
Lower Monumental	1969	6	923	419	310	192
Little Goose	1970	6	928	388	296	194
Ice Harbor	1961	6	693	267	249	167
Libby	1975	5	579	294	226	184
Dworshak	1974	3	445	284	202	148
Other Corps Projects		20	235	334	300	250
2. Total Corps Projects		153	14,005	7,021	6,289	4,648
3. Total Reclamation and Corps Projects (line 1 + line 2)		206	20,701	10,170	8,957	6,684
Non-Federally-Owned Projects						
Columbia Generating Station	1984	1	1,130	785	785	785
Other Non-Federal Hydro Projects		7	47	86	70	65
Other Non-Federal Projects		11	34	87	87	87
4. Total Non-Federally-Owned Projects		19	1,211	958	942	937
Federal Contract Purchases						
5. Total Bonneville Contract Purchases		0	1,017	857	857	857
Total Federal System Resources						
6. Total Federal System Resources (line 3 + line 4 + line 5)		225	22,929	11,985	10,756	8,478

BPA and Regional Utilities Signed Power Supply Contracts for Beyond 2011

Under the Northwest Power Act, BPA has a statutory obligation to meet electric power loads in the Northwest region that are placed on BPA by electric power utilities. In December 2008, BPA executed new offtake contracts with 125 publicly owned and cooperatively owned utilities for power service from FY 2012 through FY 2028. The longer-term take-or-pay contracts are to establish greater longer-term certainty for both price and infrastructure development decisions. As part of the new offtake contracts, BPA has developed tiered rates so pricing signals can be incorporated into resource planning. Tier one rates would be for the power from the federal hydro system and tier two for augmentation if the utility contracts for any additional power resource needs.

Japan's Fukushima Nuclear Accident Energy Creates Uncertainty While Debt Of Three Nuclear Projects Are a Substantial Cost Burden to BPA

Of the original five planned nuclear units, the Columbia Generating Station is the only nuclear unit of the original five planned in operation with all the power economically dispatched by BPA. Consequently, BPA only benefits from power generated at Columbia Generating Station but remains responsible for debt at Project No 1, Columbia Generating Station and Project No 3. The debt at all three projects totaled \$5.7 billion at FY 2010 and represented 90% of BPA's non-federal debt and 44% of BPA's total debt. Non-federal debt service associated with the three projects totaled \$547 million in FY 2010 and remains a major cost burden on BPA.

While the Energy Northwest's nuclear related debt is a substantial burden on BPA, Moody's recognizes that the 1,150 MW Columbia Generating Station continues to have an overall improved performance record. In FY 2010, the nuclear facility generated 8,124 GWhs of energy and output from the Columbia Generating Station amounts to around 9.3% of BPA's energy resources. BPA dispatches all of the energy generated at the nuclear unit.

The Columbia Generating Station has had an improving record with capacity factors over the last nine years ending December 2010 at around 87% compared to a low capacity factor of around 73% since commercial start date. Total production energy production increased in FY 2010 to 8.1 million MWh produced compared to 7.7 million MWh produced in FY 2009 due to an off year of the two-year refueling and maintenance outage cycle. The Columbia Generating Station incurred four unplanned outages in FY 2009 resulting in lost production estimated at roughly 418 GWhs, which represented a manageable 5% of total production.

In 2010, Columbia Generating Station's cost of production was around \$34/MWh. For FY 2011, the cost of production at Columbia Generating Station is budgeted at \$55/MWh, mainly due to a refueling outage scheduled which started on April 1, 2011 and is expected to end in July 2011. During the 2011 outage, approximately one-third of Columbia Generating Station's 764 fuel assemblies will be replaced with fresh fuel assemblies and the plant's main condenser will be replaced.

Energy Northwest expects to spend \$96.6 million on capital improvements at Columbia Generating Station in FY 2011 and around \$50 million per year in FY 2012 and 2013. The capital improvements at Columbia Generating Station include such items as computer system and security upgrades; plant fire detection system upgrade; plant license extension; replacement of the main condenser; replacement or rebuilt of various motors and pumps and other improvements

The plant has had a relatively good safety-performance record with satisfactory ratings from both the Nuclear Regulatory Commission and the Institute of Nuclear Power Operations. Energy Northwest's

operating license extends to 2023. The facility has sufficient spent fuel storage including capacity expansion through 2024. In January 2010, Energy Northwest filed an application with the NRC for a 20-year license renewal to 2043. That said, Columbia Generating Station Mark II design is similar to the Fukushima reactors' Mark I design, which suffered a major nuclear accident in 2011 due to an earthquake and tsunami. While the ultimate implications of the Fukushima accident is unknown at this time, Moody's see increased political intervention, greater regulatory scrutiny and emboldened opposition groups all of which will likely to lead to higher costs for Columbia Generating Station (See Moody's special comment, 'Re-evaluating Creditworthiness for Global Nuclear Generators').

Extensive 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 hearing provides an opportunity for third parties to refute or rebut material submitted by BPA or other parties and provides an opportunity for cross-examination. 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. Furthermore, the US Ninth Circuit Court reviews all of BPA's ratemaking for conformance with all Northwest Power Act standards. Moody's notes that the 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. While BPA's approach should ensure a high probability of payment to the US Treasury and an extremely high probability of payment on non federal debt service, the 95% confidence level does not ensure the sustaining of strong reserves and could result in substantial decline in reserves during low water or poor wholesale price years such as FY 2009 and FY 2010. Beginning with the Fiscal 2010-2011 Rate Case, BPA plans rate cases every two years, which is shorter than the prior 3-year rate case period. 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.

BPA has historically demonstrated willingness to raise rates in a difficult situation such as the power crisis of 2000-2001. Wholesale power rates were raised by more than 40% to manage the combination of the impact of drought conditions on hydro production and BPA's need to purchase power during a high power price environment. Subsequently wholesale rates have fallen and BPA remains competitive within the region though currently market prices are below BPA's rates. For FY 2012-2013, BPA is proposing an 8.5% average rate increase and approval of the rate is expected around third quarter of 2011.

BPA is also able to make rate adjustments at beginning of the first year of the rate period and one time in the middle of the two-year rate period under the Cost Recovery Adjustment Clause (CRAC). CRAC permits an one-year increase in rates up to \$300 million if accumulated net revenues are at or below a pre-determined threshold. The CRAC feature serves as an additional tool to reduce BPA's exposure to hydrology and wholesale price volatility though the annual basis of the test and low trigger point limit the benefit of the CRAC mechanism. BPA can also add a surcharge if fish recovery costs are higher than budgeted. For the FY 2007-2009, the CRAC trigger points equated to roughly \$750 million in projected remaining reserves in the Bonneville Fund available attributed to BPA's Power Services operations. The CRAC trigger points in the FY 2010-2011 Rate Period equate to roughly zero projected remaining reserves in the Bonneville Fund available for risk attributable to Power Services operations. At Fiscal Year 2010, reserves tied to Power Services represented approximately \$233 million. For the FY 2012-2013 rate proposal, BPA has continued to set the CRAC mechanism

at a similar level and the continuation of the low threshold in the face of declining reserves is one of the drivers of the review for possible downgrade.

For FY 2010-2011, BPA has a NFB Adjustment, which would increase the CRAC adjustment cap if costs rise due to adverse events related to the litigation over the 2008 Columbia River System Biological Opinion (2008 Biological Opinion). Additionally, BPA has a related NFB Emergency Surcharge that would allow BPA to increase power rate levels at any time in the 2010-2011 Rate Period in order to recover certain costs tied to the 2008 Biological Opinion if the probability for payment to the US Treasury falls below 80%. For the FY 2012-2013 rate proposal, BPA has proposed the same NFB Adjustment and surcharge mechanism.

Material Hydrology and Wholesale Price Risk Exposure Partially Mitigated by Strong But Declining Liquidity

BPA's financial results can be materially impacted by hydrology in the Columbia River Basin and wholesale power prices in the region since wholesale power sales represent roughly 20% of total revenues in a typical year and contributed significant, but volatile cash flows to BPA (Figure 2 for historical regional prices and water flows). For example, BPA's hydro generation assets has experienced below average hydrology for the last 10 of the 12 years. In a positive development, hydrology levels for FY 2011 was substantially above average and the latest estimate is around 124% of average resulting in BPA likely performing above its original FY 2011 budgeted performance.

FIGURE 2
Regional Power Prices and Water Flows

	Mid Columbia On Peak (\$/MWh)	Mid Columbia Off Peak (\$/MWh)	Columbia River Runoff at Dalles, OR
2004	45	39	85%
2005	63	50	82%
2006	51	38	106%
2007	56	44	92%
2008	65	52	95%
2009	36	28	88%
2010	36	28	83%
2011*	30	18	124%

*Estimated for 2011

From 2006 to 2008, BPA benefited from above average water or high power prices that contributed to a high level of total financial reserves totaling \$1.646 billion at FY 2008 consisting of \$1.27 billion of reserves available for risk and \$378 million of encumbered reserves. Moody's focuses primarily on the reserves available for risk since the encumbered reserves consist of customer deposits for transmission interconnection, deposits for energy efficiency and other funds meant for specific purposes. For the two-year period ending FY 2010, BPA experienced a cumulative decline in reserves available for risk of \$429 million to \$839 million due to low wholesale prices and hydrology in addition to higher operating costs. This demonstrates the material impact that hydrology and the regional wholesale power prices can have on BPA's financial performance.

For FY 2011, BPA expects reserves available for risk to decline further to \$790 million, which is an improvement relative to original \$685 million expected at the end of FY 2011. The improvement is primarily due to the above average hydrology for FY 2011 as shown by Power Services' reserves available for risk forecast showing only modest decline in reserves to \$211 million compared to \$93 million originally expected. Transmission Services' reserves available for risk remains strong and is forecasted be around \$579 million in FY 2011 though this is modestly lower than the \$593 million originally expected. Power Services can utilize the Transmission Services's reserves; however, Power Services will have to 'repay' with interest any reserves it utilizes from Transmission Services. Over the longer term, Moody's views the Transmission Services reserves will be needed by BPA given the nearly five-fold increase in transmission capital expenditures by FY 2013 compared to FY 2008. Additionally, BPA could utilize the forecasted \$272 million of encumbered reserves in FY 2011 though BPA would have to replenish any utilized amount as the encumbered reserves are meant for specific purposes.

BPA separately has an aggregate availability totaling \$750 million under multiple lines of credit with the US Treasury to fund BPA's operating costs. The last line of credit expires in September 30, 2013 and any draw needs to be repaid by September 30, 2014. Given the decline in BPA's internal reserves, BPA is increasing its reliance on the US Treasury line as a source of liquidity. Low hydrology and lower wholesale prices and increases in non-federal debt service have also contributed to non-federal debt service coverage ratios dropping from the 2004-2008 average of 4.4 times to an average of 1.9 times over the last two fiscal years while total debt service coverage ratio (including US Treasury payments) decreased to 0.80 times from an average of 1.1 times according to Moody's calculations. For FY 2012 and 2013, Moody's estimates non-federal debt service will be moderately higher than 2 times based on BPA's current forecasts, which assumes average hydrology.

FIGURE 3

Bonneville Power Administration

Financial Performance (fiscal years ended 9/30 in \$millions) (1)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Sales to NW public utilities	749	899	934	939	1,798	1,723	1,738	1,717	1,712	1,837	1,505	1,673	1,776
Direct Service Industrial Customers	0	323	363	421	58	18	92	82	80	0	0	0	81
Investor-owned utilities in NW	451	407	649	701	378	437	363	391	503	281	214	144	134
Sales outside NW	439	586	652	1,084	638	628	489	601	692	461	604	274	243
Transmission	344	355	402	1,133	660	805	727	716	641	689	722	714	771
Book outs	276	0	0	0	-1	-1	-404	-428	-221	-95	-110	-37	-121
Fish Credits and Other Revenues	<u>56</u>	<u>49</u>	<u>39</u>	<u>1</u>	<u>1</u>	<u>1</u>	<u>192</u>	<u>189</u>	<u>13</u>	<u>95</u>	<u>102</u>	<u>103</u>	<u>172</u>
Total Net operating revenues (1)	2,313	2,619	3,040	4,279	3,534	3,612	3,198	3,268	3,419	3,269	3,037	2,870	3,055
O & M (including Corps/Reclamation O&M)	1,089	1,116	1,520	3,247	2,463	2,098	1,668	1,693	1,700	1,539	1,707	1,691	1,790
Residential exchange	<u>64</u>	<u>64</u>	<u>64</u>	<u>68</u>	<u>144</u>	<u>144</u>	<u>126</u>	<u>144</u>	<u>157</u>	<u>340</u>	<u>-1</u>	<u>205</u>	<u>180</u>
Operating Costs	1,153	1,180	1,584	3,315	2,607	2,242	1,794	1,837	1,857	1,880	1,706	1,896	1,971
	-	-	-	-	-	-	-	-	-	-	-	-	-
Net Revenues (Moody's)	1,161	1,439	1,456	964	927	1,371	1,404	1,431	1,562	1,389	1,330	974	1,084
Reported Net Revenues	-48	123	241	-337	9	555	504	497	611	457	265	-101	-128
Non-Federal and US Treasury Debt Service													
Net-billed debt service	520	625	535	455	214	104	223	267	315	319	458	462	547
Non-net billed debt service	<u>25</u>	<u>26</u>	<u>25</u>	<u>22</u>	<u>16</u>	<u>15</u>	<u>26</u>	<u>24</u>	<u>23</u>	<u>24</u>	<u>22</u>	<u>39</u>	<u>53</u>
Total nonfederal project debt service	545	651	561	477	230	120	248	292	338	343	479	501	600
U.S. Treasury (net of Corp/Reclamation O&M)	<u>696</u>	<u>620</u>	<u>701</u>	<u>623</u>	<u>940</u>	<u>976</u>	<u>970</u>	<u>972</u>	<u>977</u>	<u>928</u>	<u>851</u>	<u>710</u>	<u>763</u>
Total Debt Service Including Treasury	1,241	1,271	1,261	1,101	1,170	1,095	1,218	1,264	1,315	1,272	1,330	1,211	1,364

FIGURE 3

Bonneville Power Administration

Financial Performance (fiscal years ended 9/30 in \$millions) (1)

	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010
Financial Reserves, Cash Days on Hand & DSC													
Reserve for risk (Power Service)	NA	NA	NA	NA	NA	NA	330	333	885	917	834	553	233
Reserve for risk (Transmission Service)	NA	NA	NA	NA	NA	NA	179	131	193	229	434	516	606
Total Reserves Available For Risk	NA	NA	NA	NA	NA	NA	510	463	1,078	1,147	1,268	1,068	840
Total Financial Reserves	559	670	811	625	188	511	638	554	1,193	1,463	1,646	1,363	1,114
Non Federal Debt	6,650	6,692	6,409	6,172	6,202	6,287	6,454	6,494	6,515	6,551	6,467	6,565	6,322
US Treasury Borrowings	2,461	2,515	2,513	2,689	2,770	2,698	2,900	2,777	2,482	2,241	2,186	2,130	2,513
Federal Appropriations	4,405	4,498	4,566	4,671	4,643	4,681	4,444	4,342	4,324	4,338	4,258	4,396	4,259
Total Debt	13,516	13,706	13,488	13,531	13,615	13,665	13,798	13,612	13,321	13,129	12,911	13,092	13,095
Unencumbered liquidity days on hand							104	92	212	223	271	206	156
Non-Federal Project DSCR (BPA Reported)	2.4x	2.5x	2.9x	2.4x	4.9x	13.1x	6.5x	5.6x	5.3x	4.7x	3.2x	2.4x	2.2x
Non-Federal Project DSCR(Moody's)	2.4x	2.2x	2.6x	2.0x	4.0x	11.5x	5.7x	4.9x	4.6x	4.0x	2.8x	1.9x	1.8x
Total DSCR(Moody's)	0.9x	1.1x	1.2x	0.9x	0.8x	1.3x	1.2x	1.1x	1.2x	1.1x	1.0x	0.8x	0.8x

Over the medium term, BPA faces a challenging wholesale market environment whereby the recession has contributed to electricity demand in the Northwest region falling by an estimated 9.4% from 2008 to 2010 according to the North American Reliability Council's (NERC) 2010 long term reliability assessment. Based on NERC's forecasted 1.2% demand growth, total annual energy consumption in the region is not expected to exceed 2008 levels of demand until 2019 and the lower demand levels will likely contribute to lower energy prices compared to the 2004 to 2008 time period.

Moody's also recognizes that forward prices at Mid Columbia reference price remain low at around \$25/MWh in 2011 and average around \$33/MWh for from 2011-2013, which is well 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 3,400 MW of wind generation is connected to BPA's transmission system and BPA expects another 2,300 MW could be built through by September 2013. The peak wind generation occurs during the spring months, which approximately matches BPA's main seasonal surplus power generation and could result in negative energy prices especially since wind projects receive other non-energy related payments like renewable energy credits (REC) and federal production tax credits (PTC). Recently, BPA implemented a policy of 'environmental redispatch' that includes curtailing wind production to prevent negative power prices.

Weakening of BPA's internal financial reserves, sustained decline in coverage ratios and likely challenging market conditions over the next three years represents several of the major drivers of the review for possible downgrade. The continued decline in reserves and a lack of a robust plan to ensure historically strong reserves or structural change in BPA's rate mechanism to fully mitigate wholesale and hydrology risk will likely result in a rating downgrade.

Conflicting Uses of Columbia River Including Fish and Wildlife Conservation Results in Major Costs for BPA

BPA faces conflicting uses of the Columbia River and environmental issues contribute significantly to BPA's costs. BPA is subject to the Endangered Species Act (ESA) and approximately fifteen fish species are affected by the operation of the federal dam system. For FY2010, BPA's fish and wildlife costs to meet ESA and non-ESA requirements is estimated at approximately \$802 million and is another major cost burden to BPA. Included in the \$802 million are \$393 million of direct costs including such items as fish hatcheries and \$403 million of operational impacts such as replacement power purchase costs and forgone revenues.

In May 2008, the 2008 Biological Opinion sought major changes compared to prior biological opinions and implementation of the 2008 Biological Opinion with associated tribal and statement funding agreements could raise BPA's costs by \$100 million per year over a ten-year period. The 2008 Biological Opinion remains subject to litigation in federal court. In May 2010, four federal agencies, including BPA, completed the voluntary remand of the 2008 Biological Opinion and a 2010 Supplemental Biological Opinion was filed with the federal court, which included the Adaptive Management Implementation Plan and other updates. Oral arguments on the Biological Opinion was held on May 9, 2011 at the federal district court. Moody's expects that the 2008 Biological Opinion will ultimately lead to higher costs for BPA likely around BPA's cost estimate of \$100 million per year and an extreme scenario such as breaching of one or more the Snake River Dams is highly unlikely. Moody's understands any breaching of the Snake River Dams will require approval by the US Congress and extensive studies that will likely to take multiple years.

Moody's notes that BPA was able to recover a portion of the Fish and Wildlife costs borne by the BPA from the US Treasury since a portion of the costs are allocated to non-power related federal purposes such as irrigation and flood control. For FY 2010, BPA recovered \$123 million, which was credited against payments owed to the US Treasury.

Ultimately, the heavy cost burden of BPA's fish and wildlife costs weighs down the benefits of BPA's highly competitive hydro generation and large unexpected costs could be negative for credit quality.

Debt List

FIGURE 4

Bonneville Power Administration Non-Federal Project Debt

Outstanding As Of Fiscal Year 2010

Energy Northwest Revenue Bonds	Amount Outstanding	Final Maturity
Nuclear Project No.1	\$1,739,835,000	7/1/2017
Columbia (Nuclear Project No.2)	\$2,327,455,000	7/1/2024
Nuclear Project No.3	\$1,637,715,000	7/1/2018
	\$5,705,005,000	
Lewis County PUD 1-Cowlitz Falls Project	\$122,410,000	10/1/2024
Tacoma Conservation System Project Rev.	\$8,180,000	12/1/2014
Northern Wasco County-McNary Dam	\$22,785,000	12/1/2024
NIFC II	\$89,999,997	7/1/2014
NIFC III	\$200,000,000	1/1/2015
NIFC IV	\$40,106,267	1/1/2016
Northwest Infrastructure Financing Corp.	\$119,585,000	1/1/2034
Conservation and Energy Renewable System	\$13,685,000	10/1/2014
	6,321,756,264	

(1) Excluding Energy Northwest Nine Canyon Wind Project which is not secured by net-billing agreements

FIGURE 5

Energy Northwest

Rating History

Nuclear Project No. 1 (1):		Nuclear Project No. 3 (3)	
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 1983:	Baa
May 1982:	A1	May 1982:	A1
February 1982:	A1	February 1982:	Aa
September 1975:	Aaa	November 1975:	Aaa
Nuclear Project No. 2 (2)		Nuclear Projects Nos. 4 and 5 (4):	
March 2004:	Aaa	June 1983:	Withdrawn
August 1996:	Aa1	June 1983:	Caa
		January 1982:	Suspended
May 1990:	Aa	June 1981:	Baa1
August 1989:	A	February 1977:	A1
February 1985:	Withdrawn	(1) Not a BPA-backed obligation.	
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.
- (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.
- (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.

Moody's Related Research

Global Risk Perspectives:

- » [2010 in Perspective and Global Macro Risk Scenarios 2011-2012: Curbing Contagion, January 2011 \(130911\)](#)
- » [Global Macro-Risk Scenarios 2011-2012: Oil Price Supply Shock Downside Scenario, April 2011 \(132426\)](#)

Industry Outlooks:

- » [Annual Outlook: U.S. Power Companies - Regulation Provides Stability As Risks Mount, January 2011 \(129930\)](#)
- » [US Power Project Outlook 2011: Offtake Contracts Provide Stability While Merchant Generators Face Severe Challenges, March 2011 \(131504\)](#)
- » [U.S. Public Power Electric Utility Median, March 2011 \(131623\)](#)
- » [Global Independent Exploration and Production Industry: Historically High Oil Prices Spur Production Push, Outpacing Escalating Costs for E&Ps, April 2011 \(132846\)](#)

Rating Methodologies:

- » [U.S. Municipal Joint Power Agencies, September 2006 \(99024\)](#)
- » [U.S. Public Power Electric Utilities, April 2008 \(106322\)](#)

Special Comments:

- » [U.S. Electric Utilities See Some Clarity in Evolving Federal Energy Policies, February 2010 \(123062\)](#)
- » [U.S. Electric Utilities: Uncertain Times Ahead; Strengthening Balance Sheets Now Would Protect Credit, October 2010 \(128462\)](#)
- » [Re-evaluating Credit Worthiness for Global Nuclear Generators: Post Fukushima political intervention depends largely on society's willingness to accept risks, March 2011 \(131818\)](#)

To access any of these reports, click on the entry above. Note that these references are current as of the date of publication of this report and that more recent reports may be available. All research may not be available to all clients.

» contacts continued from page 1

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