Bonneville Power Administration Overview
As of March 31, 2017

Grand Coulee
High Voltage Transmission
Columbia Generating Station

Moody’s: Aa1/Stable
S&P: AA-/Stable
Fitch: AA/Stable
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### Energy Northwest 2017-A/B Bonds

<table>
<thead>
<tr>
<th>Project 1</th>
<th>Columbia Generating Station</th>
<th>Project 3</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pricing Date</strong></td>
<td>April 11, 2017</td>
<td>April 11, 2017</td>
</tr>
<tr>
<td><strong>Settlement Date</strong></td>
<td>May 3, 2017</td>
<td>May 3, 2017</td>
</tr>
<tr>
<td><strong>2017-A (Tax-Exempt)</strong></td>
<td>$236,775,000*</td>
<td>$191,200,000*</td>
</tr>
<tr>
<td><strong>Optional Redemption</strong></td>
<td>July 1, 2027</td>
<td>July 1, 2027</td>
</tr>
<tr>
<td><strong>2017-B (Taxable)</strong></td>
<td>$1,660,000*</td>
<td>$3,790,000*</td>
</tr>
<tr>
<td><strong>Ratings</strong></td>
<td>Aa1 / AA- / AA</td>
<td>Aa1 / AA- / AA</td>
</tr>
</tbody>
</table>

### Preliminary Energy Northwest 2017-A/B Amortization*

*$Preliminary and subject to change
Overview

Lower Monumental Dam
## BPA at a Glance

| One Agency with Two Business Units | Power Services and Transmission Services revenue exceeded $3.4 billion in FY16
| BPA’s customers primarily include utilities throughout the Pacific Northwest |
| Unique Hydro-Based System | Virtually carbon-free - BPA markets power from 31 federally-owned hydroelectric projects and several Non-Federal projects
| Provides stability, flexibility and reliability to meet electric demands with limited fuel price risk |
| Available Funding Sources | Revolving authority to borrow up to $7.7 billion from the U.S. Treasury ($2.94 billion available at 9/30/2016)
| Non-Federal Debt (such as Energy Northwest net-billed bonds) accounts for approximately half of BPA’s total debt |
| Cost Recovery | BPA is required by law to establish rates to recover all costs
| FERC reviews and approves rates to assure that BPA rates recover all costs |
| Non-Federal Payment Priority and Financial Reserves | Cash payments and monetary credits by BPA for Non-Federal Debt are met before payments by BPA to the U.S. Treasury; Non-Federal Debt coverage has exceeded 2.0x since 2014
| BPA maintains substantial cash and investment balances. When combined with a $750M U.S. Treasury line of credit, BPA had 281 days of liquidity on hand as of 9/30/2016 |
One BPA - Two Business Units

Power Services

- Primarily serves over 125 Preference Customer utilities (which are qualifying publicly-owned utilities and consumer-owned electric cooperatives) and several federal agencies under long-term contracts through September 2028
  - BPA provides about one-third of the electric power consumed within the Region
- Approximately $2.5 billion in revenue (FY16)

Transmission Services

- Delivers power between resources and loads within the Region and transmits imports to and exports from the Region
- 75% of the bulk transmission capacity in the Region
- 15,000 circuit miles of high voltage transmission lines and 261 substations and other facilities
- Approximately $947 million in revenue (FY16)

Top Customers by Business Unit

<table>
<thead>
<tr>
<th>Power Services Top 5 Customers (FY16)</th>
<th>Percentage of Sales*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Snohomish County PUD No. 1 (Preference)</td>
<td>10%</td>
</tr>
<tr>
<td>Cowlitz County PUD No. 1 (Preference)</td>
<td>7%</td>
</tr>
<tr>
<td>City of Seattle, City Light Dep't (Preference)</td>
<td>7%</td>
</tr>
<tr>
<td>Pacific Northwest Generating Cooperative (Preference)</td>
<td>6%</td>
</tr>
<tr>
<td>Tacoma Power (Preference)</td>
<td>5%</td>
</tr>
<tr>
<td>Total</td>
<td>35%</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Transmission Services Top 5 Customers (FY16)</th>
<th>Percentage of Sales*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Puget Sound Energy Inc. (IOU)</td>
<td>12%</td>
</tr>
<tr>
<td>PacifiCorp (IOU)</td>
<td>11%</td>
</tr>
<tr>
<td>Portland General Electric Company (IOU)</td>
<td>9%</td>
</tr>
<tr>
<td>Powerex Corp. (Power Marketer)</td>
<td>7%</td>
</tr>
<tr>
<td>City of Seattle, City Light Dep't (Preference)</td>
<td>5%</td>
</tr>
<tr>
<td>Total</td>
<td>44%</td>
</tr>
</tbody>
</table>

*Approximate; excludes inter-business line transactions between Power Services and Transmission Services. In support of its power marketing activities, Power Services obtains large amounts of transmission and related service from Transmission Services.
Federal and Non-Federal Debt Outstanding*

Total: $15.6 billion

Non-Federal Debt

- Energy Northwest ($5.57B)
- Lease-purchases of transmission facilities ($2.07B)
- Electric power prepayments ($285M)
- Non-Federal generating projects ($93M)

Borrowings from U.S. Treasury

- Revolving authority ($7.7 billion in aggregate) to borrow from the U.S. Treasury

Federal Appropriations/Repayment Obligations

- BPA repays amounts that have been appropriated by Congress to construct the Federal System

BPA’s liabilities to Energy Northwest are part of the Regional Cooperation Debt Program which extends Energy Northwest debt to pay down federal liabilities or preserve federal borrowing capacity.

* As of 9/30/2016; totals may not add due to rounding.
Order in Which BPA’s Costs Are Met

- BPA has numerous financial commitments to meet obligations to Non-Federal entities. These obligations include meeting the debt service on Non-Federal Debt.
- BPA’s payments (and monetary credits) to Non-Federal entities are met prior to all of BPA’s payments to the U.S. Treasury.
- All BPA funds are available to meet Non-Federal costs including debt service costs for Non-Federal Debt.
- BPA-supported debt rated Aa1 (Moody’s) / AA- (S&P) / AA (Fitch).

### Payments/Credits other than to the U.S. Treasury

- Non-Federal Debt Service (e.g., Energy Northwest, Port of Morrow, and Idaho Energy Resource Authority)
- BPA O&M Expenses
- Other
  
  *(No priority implied among Non-Federal payments)*

### U.S. Treasury Payments

- Principal and interest on bonds and line of credit BPA issues to the U.S. Treasury
- Principal and interest to repay federal appropriations that funded capital investments in the Federal System

In FY16, BPA made a $1.9 billion payment to U.S. Treasury which included prepaying $959 million of high interest federal appropriations repayment obligations.
The Federal Hydro System is Expansive

- The Columbia River Basin has the most hydropower capacity in the U.S. and second most in North America
- Geographic footprint of the Federal Hydro System covers numerous distinct watersheds
- Storage at Canadian and U.S. dams provides BPA the ability to manage hydro for power production, reliability, to meet load, and other purposes
- The substantial storage capacity and the hydro generation facilities provide flexibility to meet system loads and stability to respond to unforeseen events
- The Federal Hydro System is subject to certain environmental laws. One such law, the Endangered Species Act, is implemented in part through “biological opinions”
- A federal district court has ordered that a new biological opinion affecting the Federal Hydro System be completed by December 31, 2018
  - BPA is unable to predict the long-term implications of the court’s ruling
Firm energy capability is 8,123 aMW; 80% of which is firm energy from hydro.

Firm energy is the estimated amount of energy to be produced by the Federal System assuming historically low water conditions.

- The fuel supply (streamflow) and generating capability for firm energy from Federal System hydro have a high probability of occurring from year-to-year.

94% of Federal System firm energy is hydro- and nuclear-based and is Carbon Emission-Free.

*Operating Year statistics as of 9/8/16. Operating Year runs through July, which differs from BPA’s Fiscal Year, which runs through September.*
The amount of energy produced by the hydroelectric system above firm energy is seasonal surplus (secondary) energy.

Unlike firm energy, seasonal surplus (secondary) energy varies with annual precipitation and weather conditions.

Under average water conditions this amount is estimated to be 1,891 aMW (Operating Year 2018).

Expected sales of seasonal surplus (secondary) energy is an important part of BPA’s ratemaking and risk mitigation.

Revenue from seasonal surplus was approximately 7% of BPA’s total revenues of $3.4 billion (FY16).
BPA Key Credit Highlights

Irrigation

Chief Joseph Turbine

Wind Farm
# Cost Recovery

<p>| | |</p>
<table>
<thead>
<tr>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1. Organic Statutes</strong></td>
<td>BPA is required by law to establish rates that recover <strong>all</strong> of its costs, including amounts for Non-Federal Debt and lower payment priority Federal Debt</td>
</tr>
</tbody>
</table>
| **2. Two Year Rate Cases** | BPA’s rate process ensures a thorough basis for proposed rates. BPA has elected to conduct a rate case every two years  
- Transparency and customer involvement are fundamental goals  
- To assure repayment, BPA’s rates are established to achieve at least a 95% Treasury Payment Probability over the two year rate period |
| **3. FERC Ensures Rates are Adequate** | FERC reviews rates primarily to ensure they are sufficient to recover costs |
| **4. Cost Recovery Obligation is Carried Forward** | Under its cost recovery obligation, if BPA were unable to meet all of its costs in a period because its rates (together with its financial reserves) were insufficient, BPA would be required to recover the un-met costs in future rates |
## Additional Non-Federal Obligation Assurance

<table>
<thead>
<tr>
<th></th>
<th>Description</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>Overnight Access to Treasury</td>
<td>BPA has overnight access to a $750 million line of credit with the U.S. Treasury</td>
</tr>
<tr>
<td>2.</td>
<td>Cost Recovery Adjustment Clause</td>
<td>BPA rates include provisions to increase Power Services’ rate levels to obtain up to $300 million per year in additional revenues within the rate period without undertaking a formal rate process</td>
</tr>
<tr>
<td>3.</td>
<td>Defer Treasury Payment</td>
<td>By law, BPA must defer its U.S. Treasury payments to meet Non-Federal obligations</td>
</tr>
<tr>
<td>4.</td>
<td>Fish &amp; Wildlife Adjustment</td>
<td>BPA rates include provisions to increase Power Services’ rate levels within a rate period to recover cost impacts arising from the Endangered Species Act litigation</td>
</tr>
<tr>
<td>5.</td>
<td>Expedited Rate Case</td>
<td>BPA may initiate, and believes it would be able to complete within 6 months, an expedited rate case to propose increased rates to recover costs</td>
</tr>
</tbody>
</table>
How BPA Manages Reserves

- Total Financial Reserves are cash and readily-liquidated U.S. Treasury securities held in BPA’s account at the U.S. Treasury together with the ability to borrow on short notice for limited amounts of capital costs that BPA theretofore funded with cash (deferred borrowing)
  - As of 9/30/2016, BPA had $724 million of Total Financial Reserves

- As of 9/30/2016, BPA had $602 million in Reserves Available for Risk (RAR) and a $750 million short-term line of credit with the U.S. Treasury (no outstanding balance as of 9/30/2016)
  - RAR is a financial metric BPA uses as a measure of accumulated financial reserves derived from operations

- BPA sets rates every two years, and will set higher rates (for the relevant business line) to generate additional RAR when needed to meet BPA’s 95% Treasury Payment Probability standard

- BPA forecasts that it will finish FY17 with $395 million in RAR. The decrease is attributable to (i) a decline in sales due to lower than expected Regional firm power loads and revenues from seasonal surplus (secondary) power sales, and (ii) the planned use of reserves for debt management and to fund certain capital investments

- BPA is considering implementing a reserves policy that would target higher RAR levels over time

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<table>
<thead>
<tr>
<th>Year-End BPA Financial Reserves ($millions)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Fiscal Year</strong></td>
</tr>
<tr>
<td>-----------------</td>
</tr>
<tr>
<td>2012</td>
</tr>
<tr>
<td>2013</td>
</tr>
<tr>
<td>2014</td>
</tr>
<tr>
<td>2015</td>
</tr>
<tr>
<td>2016</td>
</tr>
<tr>
<td>2017 Est²</td>
</tr>
</tbody>
</table>

1 Days Liquidity on Hand = (RAR + U.S. Treasury Short-Term Line)/(Operating Expenses/360)

2 RAR FY17year-end forecasts as of 12/31/2016

3 Certain Operating Expenses in the Days Liquidity on Hand calculation are not currently forecast for FY17
Financial Coverage

<table>
<thead>
<tr>
<th>($ millions excluding ratios)</th>
<th>FY2016</th>
<th>FY2015</th>
<th>FY2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Total Operating Revenue</td>
<td>3,433</td>
<td>3,404</td>
<td>3,600</td>
</tr>
<tr>
<td>2 Less Operating Expense(^2)</td>
<td>1,735</td>
<td>1,654</td>
<td>1,744</td>
</tr>
<tr>
<td>3 Net Funds Available for Debt Service</td>
<td>1,698</td>
<td>1,750</td>
<td>1,856</td>
</tr>
<tr>
<td>4 Non-Federal Debt Service</td>
<td>332</td>
<td>306</td>
<td>425</td>
</tr>
<tr>
<td>5 Non-Federal Debt Service Coverage Ratio</td>
<td>(5.1x)</td>
<td>(5.7x)</td>
<td>(4.4x)</td>
</tr>
</tbody>
</table>

- Non-Federal Debt Service Coverage increased in FY14, FY15 and FY16 over historical ranges due to Non-Federal Debt management actions including Regional Cooperation Debt (RCD)
  - RCD actions enabled BPA to prepay additional $959 million in high-interest Federal Appropriations Repayment Obligations in FY16, $229 million in FY15, and $321 million in FY14, over the amounts otherwise scheduled for repayment in BPA’s rates
  - The effect of these prepayments and the extension of Energy Northwest debt resulted in atypically high Non-Federal Debt Service Coverage. In FY11 through FY13, which immediately preceded the RCD program, coverage ranged between 2.2x and 2.5x. BPA can provide no assurance regarding the future Non-Federal Debt Service Coverage

\(^1\) This information is presented in more detail in Official Statements for BPA-backed, Non-Federal Debt bond issuances. BPA’s audited financial statements do not include a similar table.

\(^2\) Operating Expenses include the following items from the Federal System Statement of Revenues and Expenses: Bonneville O&M, Purchased Power, Book-outs, Non-Federal entities O&M-net billed, Non-Federal entities O&M non-net-billed, and the Residential Exchange Program. Operating Expenses do not include certain payments to the Corps and Reclamation.
Historical BPA Power Rates

Average Rates for Power Sold to Preference Customers & Federal Agencies (Excludes Associated Transmission Costs)

- BPA power rates have remained relatively stable, especially on an inflation-adjusted basis.
- BPA implemented a significant rate increase when needed in 2002 following the 2001 West Coast Power Crisis.
The relationship of operating revenues to operating expenses has been stable relative to wide variances in stream-flows and hydro-generation. Much of this stability in revenues is attributable to the high proportion of revenues that BPA derives from sales of firm energy and transmission services.

FY17 water supply for the Columbia River basin is forecast to be approximately 128% of the 30-year average as of March 28, 2017.

BPA Operating Revenues and Expenses ($millions) Comparison to Streamflow (% of Average*)

* Average of 132 Million Acre Feet (MAF) at The Dalles Dam. Streamflow reflects BPA’s operating year results (August 1-July 31) and financial results reflect BPA’s fiscal year (October 1-September 30)
BPA Finance Plan

Harvalum-Big Eddy Line

Cellio Converter Station

Central Ferry LoMo
BPA supplements its federal borrowings with Non-Federal Debt
BPA will continue to assess tools available to fund these investments

*AFUDC - allowance for funds used during construction
Non-Federal Debt – Energy Northwest

Bonds supported by BPA 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

- Washington State Joint Operating Agency
- Owns/operates Columbia Generating Station
- $5.57 billion in BPA-supported debt outstanding as of 9/30/2016
  - Columbia Generating Station (operating)
  - Project 1 (terminated)
  - Project 3 (terminated)
- Interest on most Energy Northwest debt is exempt from federal income tax
  - $3.83 billion tax-exempt
  - $1.74 billion taxable
- BPA expects that Energy Northwest will debt finance 100% of new capital needs at Columbia Generating Station in addition to refinancing and/or extending certain debt

Energy Northwest Revenue Bond Debt Service*  
- Columbia
- Project 1
- Project 3

Energy Northwest Expected Capital Improvements ($ millions)*

*As of 9/30/2016. Debt service is shown net of certain forward sales of uranium fuel that was purchased with bond proceeds.

*Columbia capital needs for FY17 have been funded from prior issuance
Regional Cooperation Debt

- In 2014, BPA and Energy Northwest identified RCD as an integrated debt management approach that can provide substantial benefits to the Region’s ratepayers.
  - Under RCD, Energy Northwest issues refunding bonds to extend the average weighted maturities of outstanding bonds to match more closely the originally expected useful lives of the financed facilities.

- RCD maturity extensions free up BPA revenues primarily to:
  - Prepay higher interest federal appropriations repayment obligations.
  - Restore BPA’s available U.S. Treasury borrowing capacity by reducing the outstanding principal amounts of bonds issued by BPA to the U.S. Treasury.

- This program will not increase the aggregate long-term BPA debt outstanding or its aggregate average weighted maturity.

- BPA believes that after the Series 2017 Bonds are issued, additional RCD issuances could exceed $2.2 billion (excludes new money issuances for the Columbia Generating Station).

RCD Intra-Year Cash Management

- Subject to Executive Board approval, Energy Northwest periodically enters into lines of credit to fund capital expenditures or manage cash flows.

  - Energy Northwest recently entered into lines of credit totaling $500 million to manage RCD and intra-year cash flows between BPA and Energy Northwest.

  - The lines of credit are being used to pay operating expenses and interest payments of Energy Northwest, allowing for earlier prepayment of higher interest federal appropriations repayment obligations by BPA.

  - This is forecast to result in $24 million of additional savings to BPA in FY18.
Expected BPA-Supported Bond Offerings

- Regional Cooperation Debt / Energy Northwest
  - Pricing April 11, 2017
  - Estimated amount - $500 million to $600 million
  - Tax-Exempt and Taxable

- Transmission Lease-Purchase
  - Idaho Energy Resources Authority
  - Pricing August 2017
  - Estimated amount - $200 million
  - Taxable

*Preliminary, subject to change
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