Leverage Policy

March 2, 2018, 11a.m.

BPA Rates Hearing Room

WebEx: join the meeting

Meeting Number: 903 905 930

Meeting Password: atkMywsB

Phone Bridge: 415-527-5035

Leverage Policy timeline

- March-April 2018: conduct public workshops, receive feedback on and refine proposals.
  - March 2: Public workshop
    - Comments on policy proposal due by March 8. Comments submitted via email to BPAFinance@bpa.gov.
  - March 20: Public workshop
    - Comments on policy proposal due by March 23. Comments submitted via email to BPAFinance@bpa.gov.
  - April 9: Public workshop
    - April 9 – May 1: Official public comment period. Comments to be submitted to the BPA comment page (www.bpa.gov/goto/comment).
- June: Publish final ROD.

Financial context

- BPA is a federal power marketing administration that owns and operates more than 15,000 miles of high-voltage transmission lines and provides roughly 28 percent of the electric power used in the Northwest and its resources – primarily hydroelectric – make BPA power nearly carbon free.
- BPA is nonprofit and self-funding and covers all of its costs by selling its Power and Transmission products and services.
- BPA is financially healthy.
  - It has a stable, diversified and uniquely valuable asset base.
  - In 2017, Bonneville made its 34th consecutive annual U.S. Treasury payment, on time and in full, totaling $909 million.
  - BPA has strong credit ratings - Aa1 (Stable) Moody's, AA (Negative) Fitch and AA- (Stable) Standard & Poor's.
- The strategic and financial plans highlight key financial policies and practices that need to be addressed to ensure and strengthen financial health including cost management, debt management and liquidity.
- Today's focus is on Debt Management and Liquidity.

Debt portfolio

Agency
2017 debt outstanding
$15.3 billion

Power
$9.7 billion

Transmission
$5.6 billion

Federal $3.9 billion
Nonfederal $5.8 billion

Federal $3.1 billion
Nonfederal $2.5 billion

Source: FY 17 annual report

Capital and financing

- BPA debt finances nearly 100 percent of its capital investments using a combination of treasury bonds, appropriations and third-party financing.
- Power capital investments encompasses:
  - Replacement of aging equipment on the hydro system.
  - Fish and wildlife mitigation activities through BPA’s direct program and the Corps of Engineers’ Columbia River Fish Mitigation Program (CRFM).
  - Power capital investments are funded primarily with treasury bonds, with the primary exception of CRFM which is funded with appropriations.
  - Energy Northwest funds new capital investments in the Columbia Generating Station with nonfederal bond issuances. BPA has the obligation to repay those obligations.
- Transmission capital investments encompasses:
  - Sustain program investments focus on replacing aging equipment and systems. The sustain program investments add no new system capacity or capability.
  - Expand program investments which increase system capacity and capability.
  - Transmission capital investments are funded primarily with a combination of U.S. Treasury bonds and lease-purchase funds.

Leverage

- What is leverage?
  - Debt-to-asset ratio, also known as leverage ratio, measures the amount of total debt compared to revenue-producing assets that ultimately will repay all debt.
  - Debt-to-asset ratio is a common business metric broadly measuring financial health.

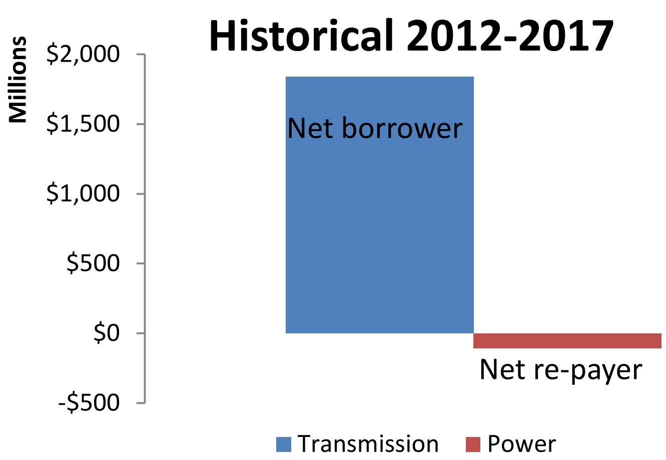
- Why does it matter?
  - A high or increasing debt-to-asset ratio affects current and future financial health through:
    - Debt service (principal and interest).
    - Flexibility.
    - An indicator of available borrowing authority for BPA.
    - Credit quality.

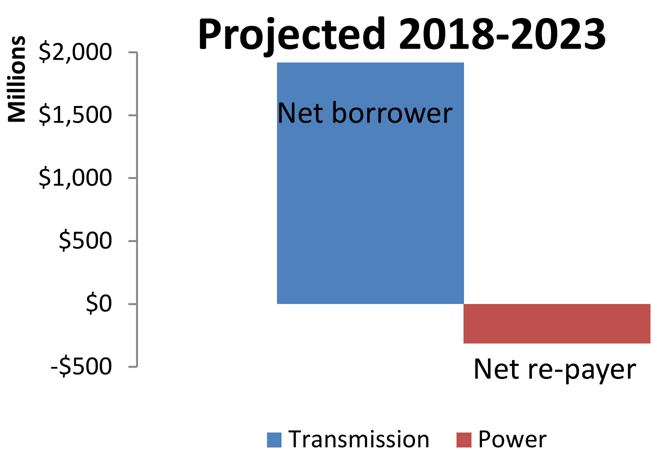
Current practices impacting leverage

- BPA debt finances nearly 100 percent of its capital investments.
- Repayment methodology - how BPA determines when to repay debt.
  - The statutory requirement is that the Federal investment must be repaid over a reasonable number of years; 50 years.
    - The maximum repayment period is 50 years or shorter if the depreciable life of the underlying assets is shorter, at which point the maximum repayment period is equivalent to the depreciable life of the underlying asset.
  - Nonfederal debt repaid at term.
    - Power – Energy Northwest has approved the following maximum terms: 2044 for Columbia Generating Station bonds and 2028 for projects 1 and 3 bonds. BPA’s practice is to select term lengths within these maximum constraints that provide the lowest levelized debt service for BPA’s overall debt portfolio.
    - Transmission – lease-purchase related bonds have a 30 year maximum term and are placed to provide level debt service.
  - Determining the level of federal principal repayment:
    - Federal repayment will, at a minimum, equal the cash generated by the revenue requirement, approximately the sum of depreciation and amortization.
    - The repayment model will schedule the repayment of Treasury bonds and appropriations around nonfederal repayment, within the maximum constraints defined above, in order to produce the lowest level of debt service over the repayment period. (50 years for Power, 35 years for Transmission). As a result, federal repayment will constantly adjust based on actual capital spending, borrowing and repayment; but federal repayment will never be less than the minimum of depreciation and amortization.

What is the impact from these practices?

- Power is a net debt re-payer.
  - Net repaid approximately $100 million since 2012.
  - Forecast to net repay approximately $300 million in the next six years.
- Transmission is a net debt borrower.
  - Net borrowed approximately $1.8 billion since 2012.
  - Forecast to net borrow approximately $1.9 billion in the next six years.
- Why is this important?
  - Net borrowing takes from BPA's limited remaining borrowing authority that is jointly used by Power and Transmission Services.
  - Net borrowing adds significant future fixed costs (interest expense) that will be recovered through transmission rates.
  - Net borrowing increases the leverage and risk of the entire enterprise.





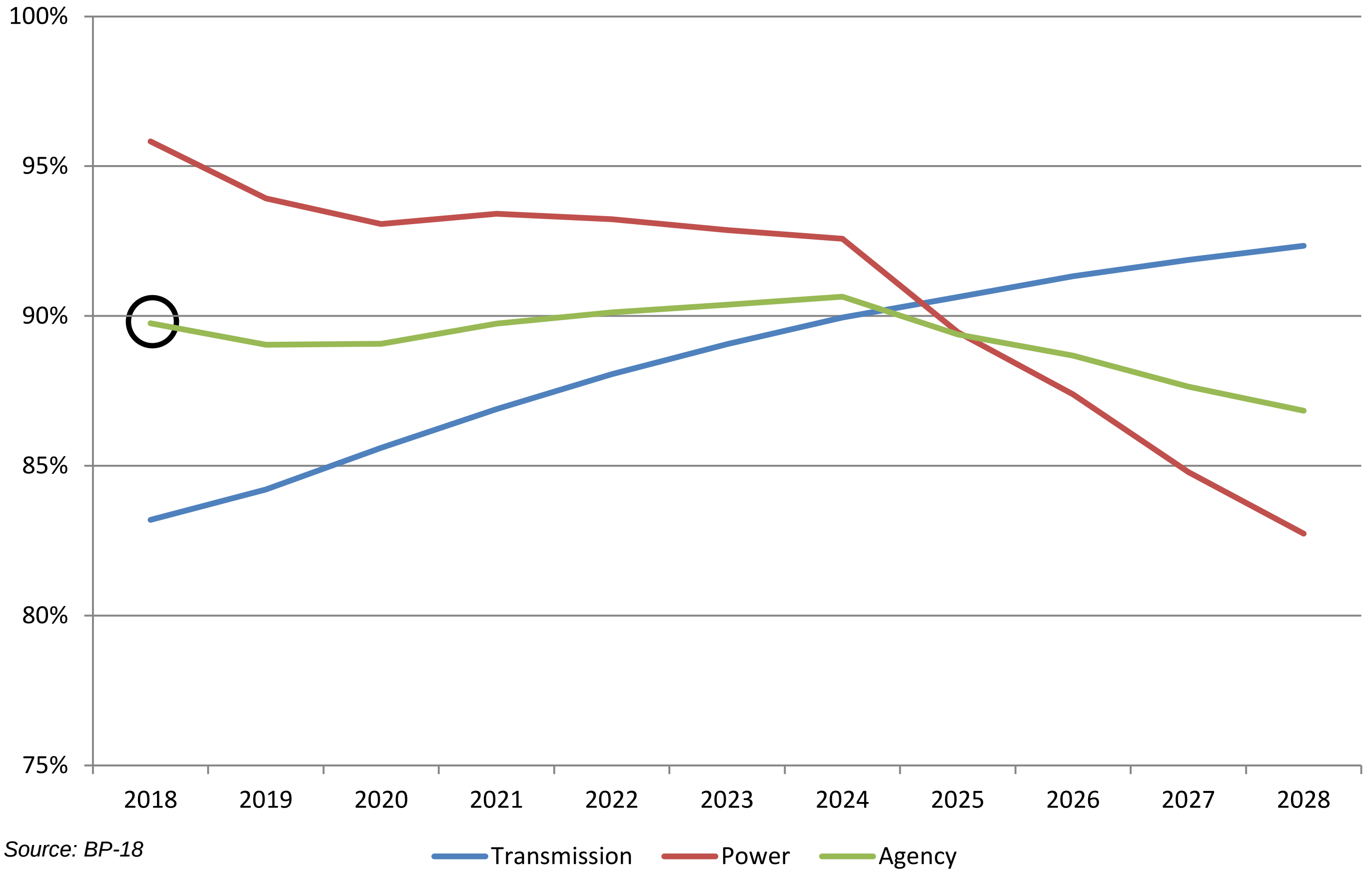
Source: BP-18

Debt-to-asset ratio calculation

(Total Debt)/(Total Revenue Producing Assets)

Actuals	Forecast
Total debt	Total debt + new borrowings less repayments
Total revenue producing assets	Total revenue producing assets + capital Investments less depreciation

Projected leverage (debt utilization)



Source: BP-18

- About 90 percent debt-to-asset ratio is primarily a function of meeting minimum statutory requirements for debt repayment and financing new capital projects, sustain or expand, 100 percent with debt.
- Current practices do not consider the appropriate use of debt for BPA or each business line.
- FY17 leverage ratios: Agency 90 percent, Power 98 percent and Transmission 79 percent.

BP-18 Rate Case detail

Key facts:

Power

- $2.8 billion total costs.
- $890 million to repay principal and interest ($540 million principal and $350 million interest).
- Principal and interest equal to 32 percent of total costs.

Transmission

- $1.0 billion total costs.
- $400 million to repay principal and interest ($245 million principal and $155 million interest).
- Principal and interest equal to 40 percent of total costs.

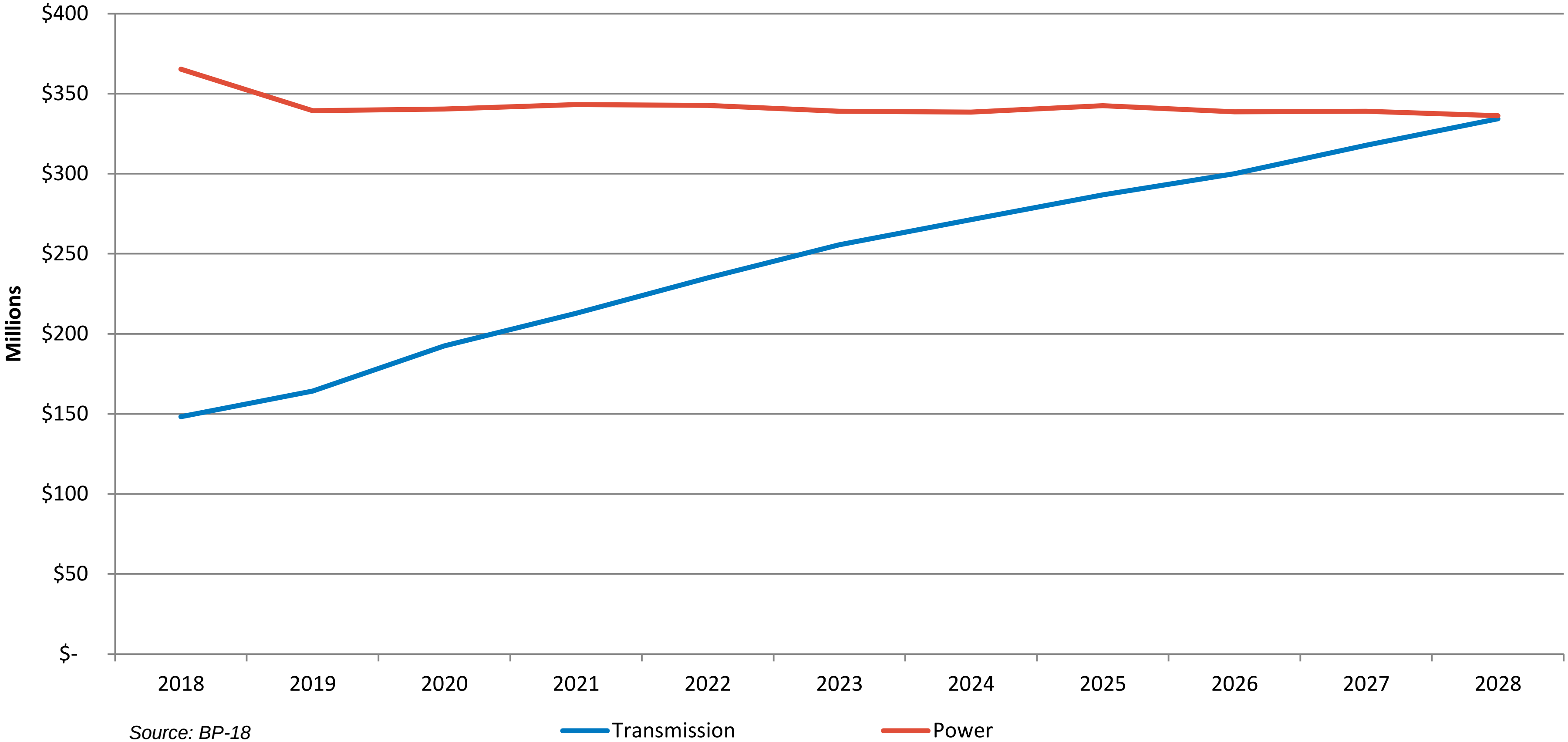
Key Points:

- The amount of principal repayment in each rate period is determined by the repayment methodology as described previously.
- Interest costs in each rate period are primarily the result of debt outstanding at the time of the rate case, which is a result of past capital investment, borrowing, and debt repayment practices.
- Leverage is a slow moving metric that takes years to influence in a specific direction and therefore is better to manage through a long-term policy as opposed to one rate case at a time.

	Power*	**Transmission**	**Agency**
Capital	$507m	$514m	$1,021m
Borrowing	$507m	$499m	$1,006m
Repayment	$541m	$247m	$788m
Net Borrowing	-$34m	$252m	$218m

*includes Energy Northwest

Projected interest expense



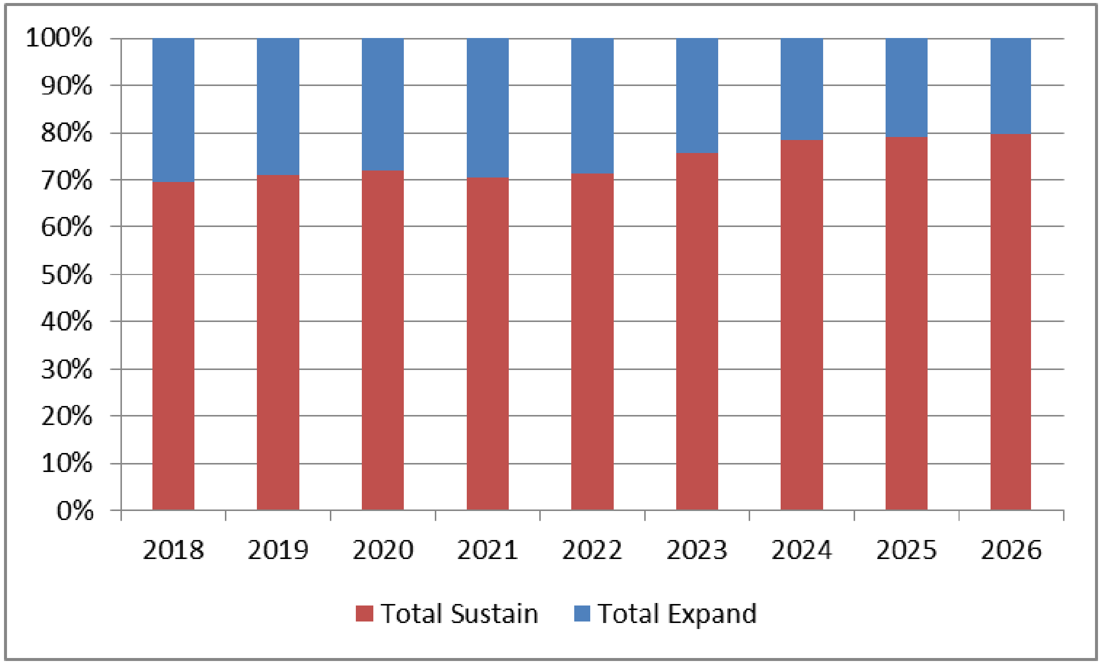
Source: BP-18

- Increasing leverage results in pushing fixed costs (interest expense) into the future.

BPA's primary debt sources

- BPA's primary source of capital financing is U.S. Treasury borrowing authority.
- BPA's borrowing authority is statutorily capped at $7.7 billion.
  - Treasury borrowing authority acts as a revolving line of credit; when outstanding amounts are repaid, they become available to fund future capital investments.
  - As of Sept. 30, 2017, BPA had $2.7 billion in remaining borrowing authority.
- BPA has a constrained nonfederal borrowing ability.
  - The lease-purchase program is available only for Transmission investments. BPA currently assumes only 25 percent of transmission's capital program will meet the funding requirements of this program in the future.
  - Energy Northwest debt can only be directly used to finance its projects. However, it can be refinanced and the resulting cash flow can be used to repay federal debt or even pay directly for capital investments.

BPA's capital investment overview

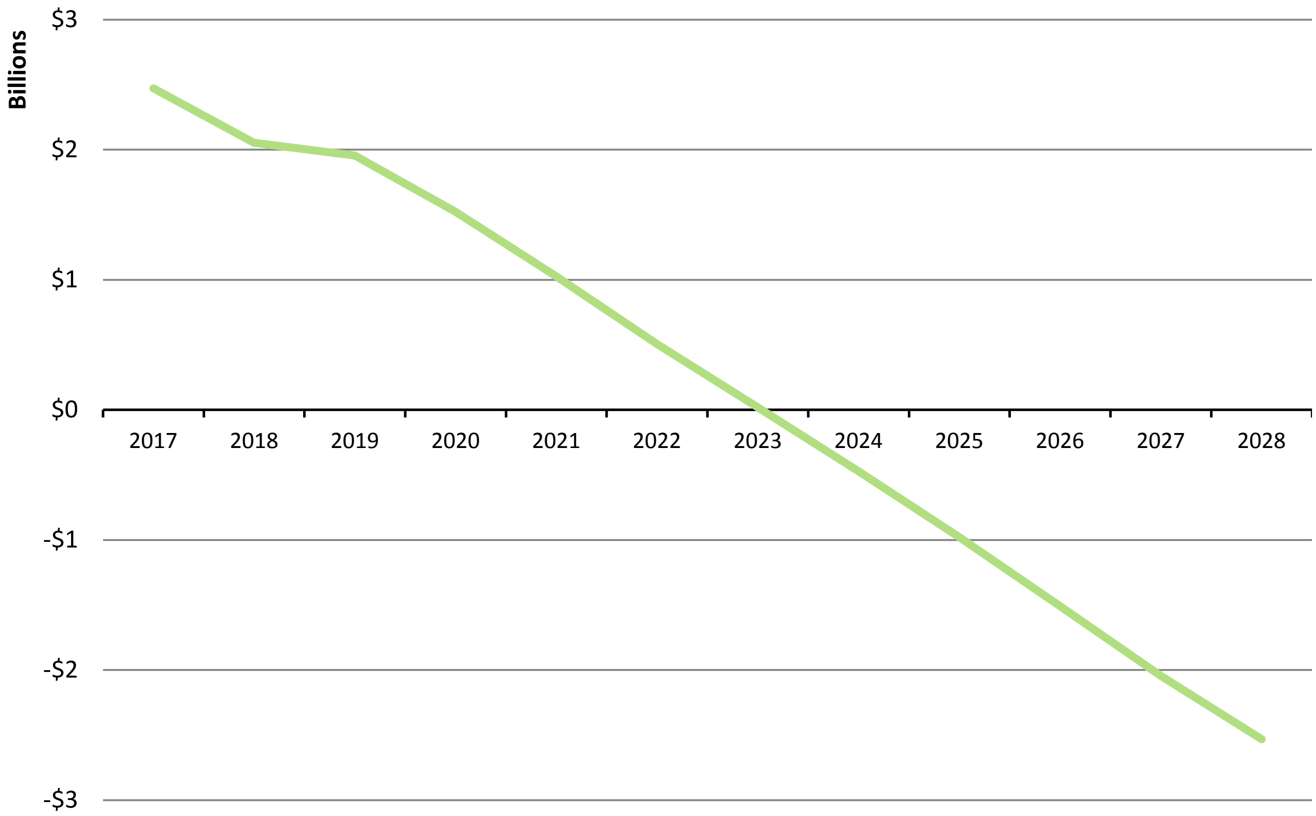


Source: 2016 IPR

- Power and Transmission debt finance nearly 100 percent of the capital program, including replacements.
  - Average program size per year for 2018 to 2026:
    - Sustain is approximately $600 million per year.
    - Expand is approximately $200 million per year.
- Industry practice is to revenue finance a large portion, if not all replacement costs. Replacements for BPA are equivalent to BPA's sustain capital program.

BPA’s borrowing authority is running out

- BPA is projected to run out of borrowing authority in FY 2023 based on BP-18 projections of repayment and capital spending assuming current practices stay the same.



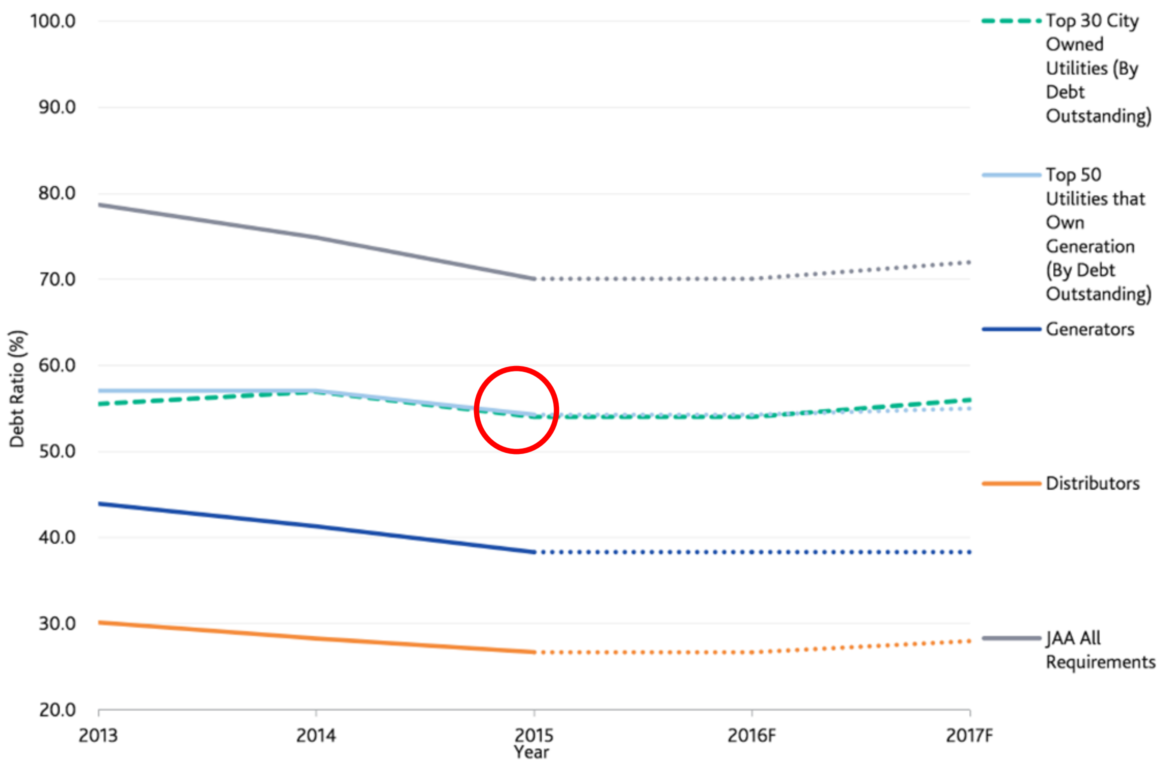
Source: BP-18

Rating agency leverage perspective

Exhibit 3

Debt Ratios Continue Recent Declines in Fiscal 2015

Median debt ratio in fiscal 2013-15, dotted lines represent forecasts for fiscal 2016 and 2017



- BPA is included in the group of "Top 50 Utilities that Own Generation."
- Average debt-to-asset ratio for this group is about 54 percent.
- BPA's debt-to-asset ratio is approximately 90 percent which is the second highest in this group.

	Top 30 City Owned Generators (By Debt Outstanding)				Top 50 Utilities that Own Generation (By Debt Outstanding)			
Ratings	All	Aa	A	Baa	All	Aaa/Aa	A	Baa
Debt Ratio (%)	54.0	53.5	45.0	95.7	54.3	51.9	55.0	84.1
Days Cash on Hand	214	214	269	115	207	214	254	109
Adjusted Days Liquidity on Hand	242	242	269	115	241	242	262	109

Source: Moody's Investors Service, Sector In-Depth, September 15, 2016, Public Power Medians – "Finances Hold Steady with Transition to Lower Carbon Environment"

BPA’s leverage and credit rating

- BPA has a very high debt-to-asset ratio relative to other utilities, 90 percent versus the average of 54 percent.
  - A debt ratio of 90 percent is commensurate with a Baa rating, or lower medium grade, which is the lowest tier of investment grade.
- The most recent rating agency reports are located on BPA’s Investor Relations page.
- Rating agency comments:
  - Moody’s: “On a fully consolidated basis including federal debt, BPA’s financial metrics are commensurate with B to A category scoring on a historic basis…..*BPA’s debt ratio is high* at an average 91 percent which is commensurate with a ‘Ba’ scoring.”
  - Fitch: “The Negative Outlook reflects the continued trend of cash balance declines in the power business line. The relatively moderate 5.4 percent power rate announced in July 2017 reflects increasing competitive pressures at Bonneville. The combined results of these trends and Bonneville’s *high leverage position* could result in a rating downgrade.”
  - S&P: “BPA's capital spending program is important to maintaining the integrity of its generation fleet and managing forced outage incidents. Bonneville and Energy Northwest project substantial capital needs that could add to both organizations' debt and consume BPA's Treasury borrowing authority.”

Summary of current practices and possible impacts

- BPA historically has debt financed nearly 100 percent of its capital program and repaid debt within the maximum statutory constraints.
- BPA's future capital program is approximately 70 percent dedicated to replacing aging assets to maintain the current capabilities of the system. It is common in the utility industry to rate fund a large portion of replacements.
- Power continues to be a net debt re-payer, and as a result is expected to steadily decrease its leverage position over time.
- Transmission continues to be a net debt borrower, and as a result, Transmission's interest expense is expected to roughly double, and its leverage expected to significantly increase over the coming years based on current practices.
- BPA also expects to run out of its primary source of debt, U.S. Treasury borrowing authority, by 2023 based on current practices.
- BPA is highly leveraged with a 90 percent debt-to-asset ratio, this is second highest in the public utility industry, and distant from the industry average of 54 percent.
- Rating agencies have also noted concern over BPA's high leverage, borrowing practices, and limited remaining borrowing authority.
- Leverage is a slow moving metric that takes years to influence in a specific direction and therefore is better to manage through a long-term policy as opposed to one rate case at a time.

Strategic goal

- **Strategic Goal 1: Strengthen financial health and build financial resiliency.**
- The strategic and financial plans set a goal of developing a policy to achieve a debt-to-asset ratio of 75 to 85 percent for the agency and each business unit within 10 years.
  - The long term goal is a ratio of 60 to 70 percent.
- 75 to 85 percent is an interim goal range that acknowledges BPA's leverage is too high currently and should be reduced over time to support its long term financial health.
- The long term goal of 60 to 70 percent is closer in line with industry standards however will take many years to achieve. BPA plans to revisit this goal near the end of this current financial planning cycle.
- Financial health benefits of a lower debt-to-asset ratio include:
  - Lower future interest costs.
  - Increased financial flexibility.
  - Increased available borrowing authority.
  - Support for BPA's credit rating, reducing future interest costs.
  - Stronger competitive position.

Leverage Policy proposal

- The agency and business units will achieve a debt-to-asset ratio in the range of 75 to 85 percent within 10 years with a long term goal of 60 to 70 percent.
- The debt-to-asset ratios will not worsen from rate period to rate period.
- BPA will consider capital spending levels and/or additional rate case measures to ensure achievement of debt-to-asset ratio goals.

Tools to implement policy

- BPA will consider a combination of actions to meet the target that may include:
  - Additional repayment of debt.
    - Revenue from rates is used to repay additional debt above what the repayment methodology schedules.
  - Revenue financing.
    - Revenue from rates is used to directly fund capital investments. Avoids increasing outstanding debt.
  - Reducing capital investments.
    - Reduces the need for debt or revenue financing.
  - Discontinuing regulatory treatment of certain investments.
    - A class of investments would be expensed and funded through current rates rather than capitalized and borrowed for - as was done with Energy Efficiency investments - reducing outstanding debt over time.

Next steps

- BPA is seeking public comments or questions by March 8 on:
  1. Materials and concepts discussed in this first workshop.
  2. Possible alternatives.
  3. Request for additional information or analysis.
- Comments or questions should be submitted to BPAFinance@bpa.gov.
- BPA plans to present scenarios and sensitivity analysis of the proposed Leverage Policy at the March 20 workshop. This will include use of different tools to implement the policy. The meeting will also include:
  - BPA leverage policy proposal mechanics.
  - Preliminary analysis on potential policy impacts.
  - BPA response to public comments or request for additional analysis.

Appendix

Historical debt-to-asset ratio calculation

(Federal debt + nonfederal debt)/(Net utility plant + nonfederal generation)

$ in millions — FY 2017

FCRPS	Debt	Assets
Net utility plant		13,426
Nonfederal generation		3,519
Federal appropriations	2,029	
Borrowings from U.S. Treasury	5,009	
Nonfederal debt	8,262	
Total	15,300	16,944
Debt-to-asset ratio:	90 percent	

$ in millions — FY 2017

Power	Debt	Assets
Net utility plant		6,377
Nonfederal generation		3,519
Federal appropriations	2,022	
Borrowings from U.S. Treasury	1,940	
Nonfederal debt	5,766	
Total	9,728	9,896
Debt-to-asset ratio:	98 percent	

$ in millions — FY 2017

Transmission	Debt	Assets
Net utility plant		7,048
Nonfederal generation		
Federal appropriations	7	
Borrowings from U.S. Treasury	3,068	
Nonfederal debt	2,497	
Total	5,572	7,048
Debt-to-asset ratio:	79 percent	

Example of forecast debt-to-asset ratio calculation

(Total debt)/(Total revenue producing assets)

Transmission Example			
	2017*	2018**	2019**
Debt			
New Borrowing		490,808	506,577
Repayment		(241,284)	(252,320)
Total Debt	5,572,491	5,822,015	6,076,272
Assets			
Capital		505,808	521,577
Depreciation		(273,164)	(284,422)
Net Utility Plant	7,048,335	7,226,088	7,463,243
Debt-to-asset ratio (Total Debt/ Net Utility Plant)	**79.1%**	**80.6%**	**81.4%**

*end of year FY17 annual report and debt pie chart

** BP-18 Transmission revised revenue test