

BPA Financial Reserves Workshop #3

June 15, 2016

1pm-4pm

BPA Rates Hearing Room, 1201 Lloyd Blvd, Suite 200, Portland, OR

Phone Bridge: 877-336-1828 **Passcode:** 2906902#

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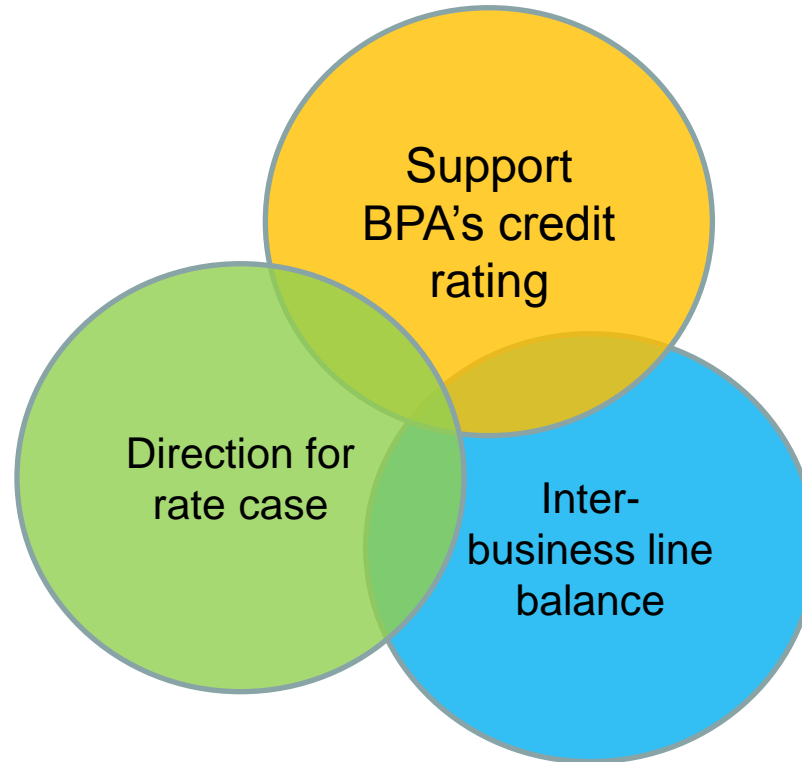
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Workshop #3 Agenda

1. Review policy motivation and objectives
2. Review the general approach under consideration
3. Review alternatives
 - a. Reserve targets
 - b. Lower threshold
 - c. Upper threshold
4. Discuss BPA staff proposal
5. Discuss customer proposals
6. Open Discussion/Next Steps

Policy Motivation



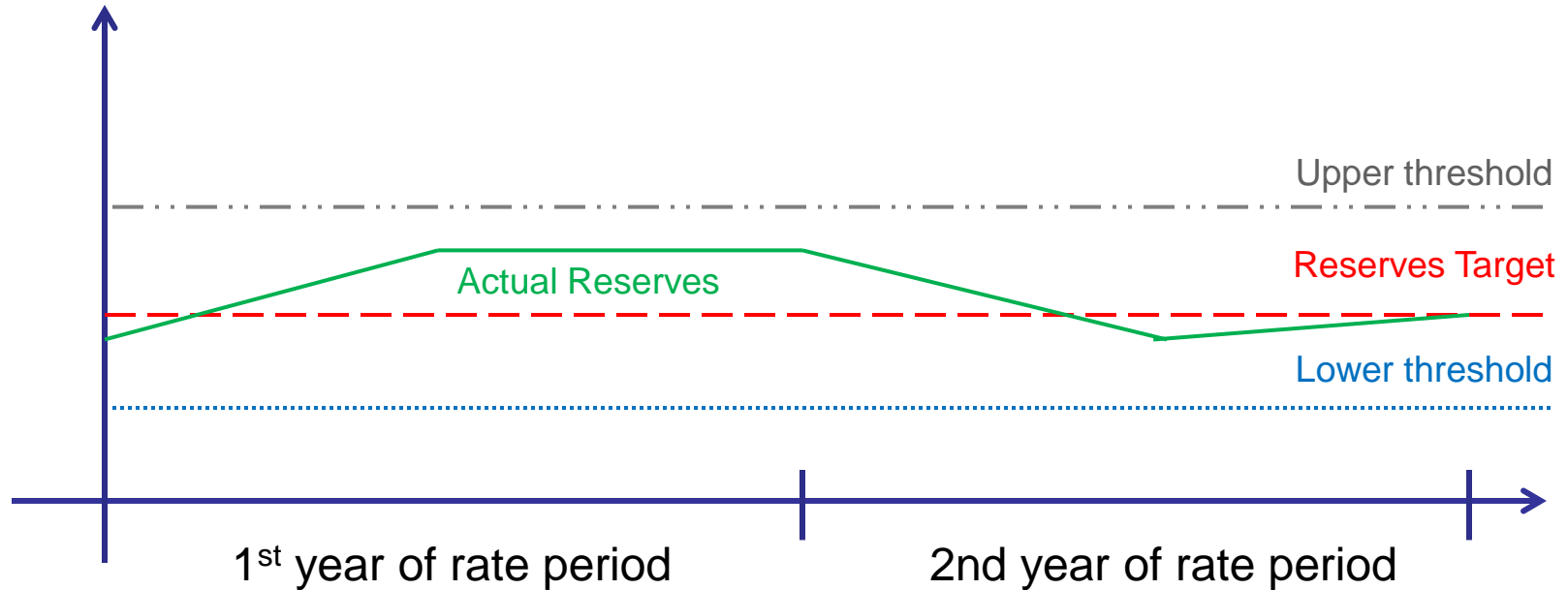
A policy would have many benefits that include:

- Provide support for BPA's credit rating
- Provide direction for implementation of the policy in the rate case
- Provide guidance for balancing different financial characteristics of the business lines

Policy Objectives

- General Framework: A policy needs to be formed from an Agency perspective but also accommodate business line specifics
 - Credit Rating Agencies rate BPA as a whole, not by business line
 - The business lines have different financial characteristics warranting different targets and thresholds
- Policy Objectives:
 - Assure adequate liquidity
 - Support BPA's current credit rating
 - Take an Agency view, while remaining sensitive to business line-specific issues
 - Be compatible with the Treasury Payment Probability standard

Policy Approach



- Establish targets for financial reserves available for risk
 - for the Agency and for each business line
- Establish an acceptable range (dead-band) above and below the reserves target where no action is taken
- Establish what action to take when reserves are outside the acceptable range

Reserves Target Alternatives

Reserve Target Alternatives						
Alternative	Reserves Target	Summary of Target	Target in \$	Benefits of Alternative	Support for Objectives	
Status Quo	Minimum reserves for TPP	The target results from calculating, for each business line individually, the minimum amount of reserves they can carry while still meeting the 95% TPP standard assuming the current allocation of the Treasury Note (\$750m to Power, \$0 Transmission). The Agency reserves target is the sum of the business line targets.	Agency: \$230m Power: \$0m Trans: \$230m	Easy to implement (already implemented)	Assure adequate liquidity Support BPA's current credit rating Take an Agency view, BL equity Compatible with TPP	- - - +
1a	150 Days Cash	Calculate the amount of reserves necessary for each business line to meet 150 days cash on hand. 150 days is the bottom end of the threshold for AA rate utilities according to Moody's. The Agency target is the sum of the business line targets	Agency: \$950m Power: \$700m Trans: \$250m	strong cash flow support, strong credit rating support, standard industry metric (easy to explain), equitable between business lines, not as susceptible to large changes in targets as a TPP measure	Assure adequate liquidity Support BPA's current credit rating Take an Agency view, BL equity Compatible with TPP	++ ++ + +
1b	90 Days Cash	Calculate the amount of reserves necessary for each business line to meet 90 days cash on hand. 90 days is the bottom end of the threshold for A rated utilities according to Moody's. The Agency target is the sum of the business line targets	Agency: \$600m Power: \$450m Trans: \$150m	Good cash flow support, good credit rating support, standard industry metric (easy to explain), equitable between business lines, not as susceptible to large changes in targets as a TPP measure	Assure adequate liquidity Support BPA's current credit rating Take an Agency view, BL equity Compatible with TPP	+ + + +
2	TPP reserves only	The target results from a calculating, for each business line, the minimum amount of reserves they can carry while still meeting the TPP standard w/out aid from the Treasury Note (excludes w/in year need). The Agency reserves target is the sum of the business line targets.	Agency: \$630m Power: \$500m Trans: \$130m	Good cash flow support, good credit rating support, equitable between business lines, increases and decreases with financial risk (correlates with BPA's financial risks), easy to customize to changing BPA circumstances	Assure adequate liquidity Support BPA's current credit rating Take an Agency view, BL equity Compatible with TPP	+ + + +
3	Other					

Determining Upper and Lower Thresholds

- Alternatives for setting upper and lower threshold levels, calculated on a rate period basis:
 1. Percentage based approach
 - Set the upper and lower thresholds at a set percentage above/below the reserves target, for example, 25%
 - Upper threshold would be 125% of the target
 - Lower threshold would be 75% of the target
 2. Days cash on hand approach
 - If the reserves target is set based on the days cash on hand metric, the upper and lower thresholds could be defined in terms of days cash on hand also.
 - If the reserves target were based on 150 days cash,
 - the upper threshold could be 50 days above the reserves target = 200 days cash
 - the lower threshold could be 50 days below the reserves target = 100 days cash
 3. Other options?

Above Upper Threshold Action

- Alternatives for what to do with reserves when they are above the upper threshold:
 1. Rate relief, e.g. DDC, provides a valuable short-term benefit
 - Pros: Immediate benefit to customers
 - Cons: Probably a negative to credit rating; no long-term benefits for BPA stakeholders
 2. Debt retirement increases borrowing authority and lowers interest costs for many years providing a valuable long-term benefit
 - Pros: Increases borrowing authority, and lowers interest costs for many years.
 - Cons: Gradual, not immediate, benefits
 3. Increasing high-value capital investments is another potential action with long-term benefits
 - Pros: Strengthens value of the system, reduces debt burden
 - Cons: Gradual, not immediate, benefits
 4. Mixture of rate relief and debt retirement
 5. Other?

Below Lower Threshold Action

- The purpose of actions taken when reserves are below the lower threshold is to raise reserves into the acceptable range (i.e., between the lower and upper thresholds) by generating incremental revenue.
- Action would be taken if reserves attributed to a business line fall below the lower threshold.
- Alternatives for what to do with reserves when they fall below the lower threshold:
 1. CRAC, assessed annually
 - Pros: can adjust each year, would not require as much of a buffer
 - Cons: potential for more rate volatility
 2. PNRR, assessed each rate period
 - Pros: less frequent potential for rate increases
 - Cons: by waiting perhaps two years, a bad situation could get worse before corrective action is taken; threshold would need to be higher (i.e., would be easier to trigger)
 3. Other?

BPA Staff Proposal

Reserves targets for each business line should be calculated independently based on the higher of what is necessary to meet the status quo TPP test or 90 days cash on hand. The Agency reserves target is the sum of the business line targets.

The lower threshold should be calculated independently for Power and Transmission on a rate period basis based on 60 days cash on hand. For each business line, if reserves fall below the lower threshold, a CRAC recovers the amount of the shortfall the following fiscal year.

The upper threshold should be calculated independently for Power and Transmission on a rate period basis based on 120 days cash on hand. If business line reserves are above the upper threshold and Agency reserves are above the Agency reserve target, the administrator should consider the excess reserves available for other high value purposes such as rate relief (e.g., DDC), debt retirement and/or capital investment.

The Transmission reserves target, lower and upper thresholds should be implemented in the next rate case. The Power reserves target and upper threshold should be implemented in the next rate case while the lower threshold should be phased in over 10 years in equal increments, or sooner if Power accrues reserves and reaches the reserves target prior to the end of the 10 year phase in period.

BPA Staff Proposal Notes

- The proposed two-pronged reserves target test draws on the strength of the TPP methodology to ensure sufficient liquidity to meet all obligations over the rate period while the days cash on hand test ensures that BPA maintains enough financial reserves as measured by a common industry metric.
- A 90 days cash on hand reserves target would have equated to \$450 million for Power and \$150 million for Transmission in BP-16.
- The proposed 60 days cash on hand lower threshold provides support for each business line to maintain positive reserves year over year which is financially prudent and provides support for Agency reserves to stay above 30 days cash on hand which is a level rating agencies have cautioned against.
- A 60 days cash on hand lower threshold would have equated to \$300 million for Power and \$100 million for Transmission in BP-16.
- The proposed two-pronged upper threshold test ensures business line reserves are above 120 days cash on hand and Agency reserves are above 90 days cash on hand before they can be used for other purposes.
- A 120 days cash on hand upper threshold would have equated to \$600 million for Power and \$200 million for Transmission in BP-16.
- The proposed 10 year phase-in of the lower threshold for Power results in an increase in the CRAC threshold of \$30 million per year for 10 years. The phase-in of the full amount of the lower threshold would be accelerated if Power accrues reserves and reaches the reserves target prior to the end of the 10 year phase-in period.

BPA Staff Proposal Discussion

- Discussion Outline
 - General comments
 - Proposed reserve target
 - Pros
 - Cons
 - Proposed lower threshold level and action
 - Pros
 - Cons
 - Proposed upper threshold level and action
 - Pros
 - Cons
 - Proposed implementation plan
 - Pros
 - Cons

Customer Proposals &/or Discussion

Next Steps

1. Formal Comment Period 6/15-7/8
 - Comments can be submitted to the [BPA comment page \(www.bpa.gov/goto/comment\)](http://www.bpa.gov/goto/comment) or directly to [BPA Finance \(BPAFinance@bpa.gov\)](mailto:BPAFinance@bpa.gov)
 - BPA is seeking comments on:
 1. BPA's staff proposal
 2. Alternatives to specific aspects of BPA's staff proposal with supporting rationale
 3. Alternative proposals with supporting rationale
2. Internal BPA decision process - July
3. Publish final reserve position – Late July
4. Rate Case – Financial Risk and Reserves workshops - August

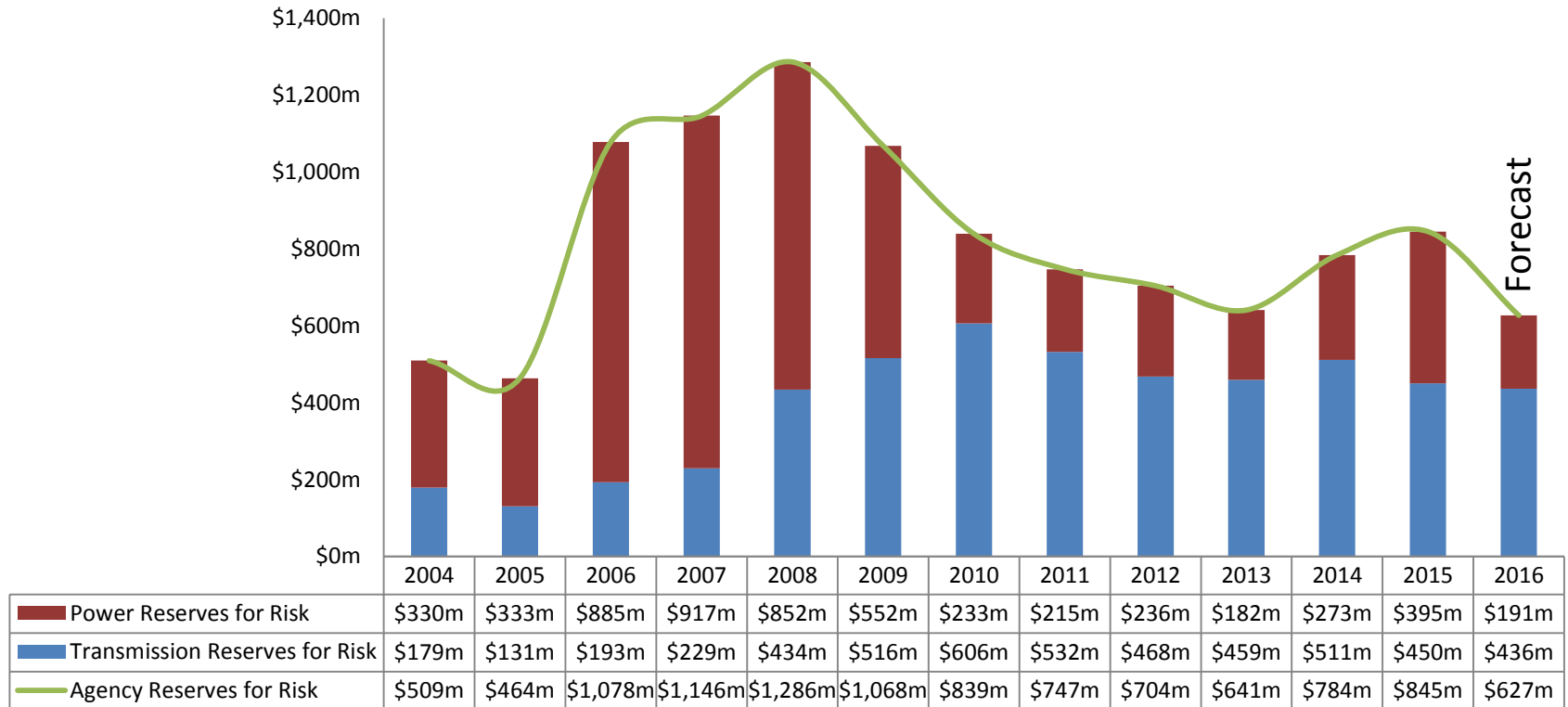
Questions?

Financial Disclosure

- This information has been made publicly available by BPA on June 13, 2016 and contains information not reported in agency financial statements.

Appendix

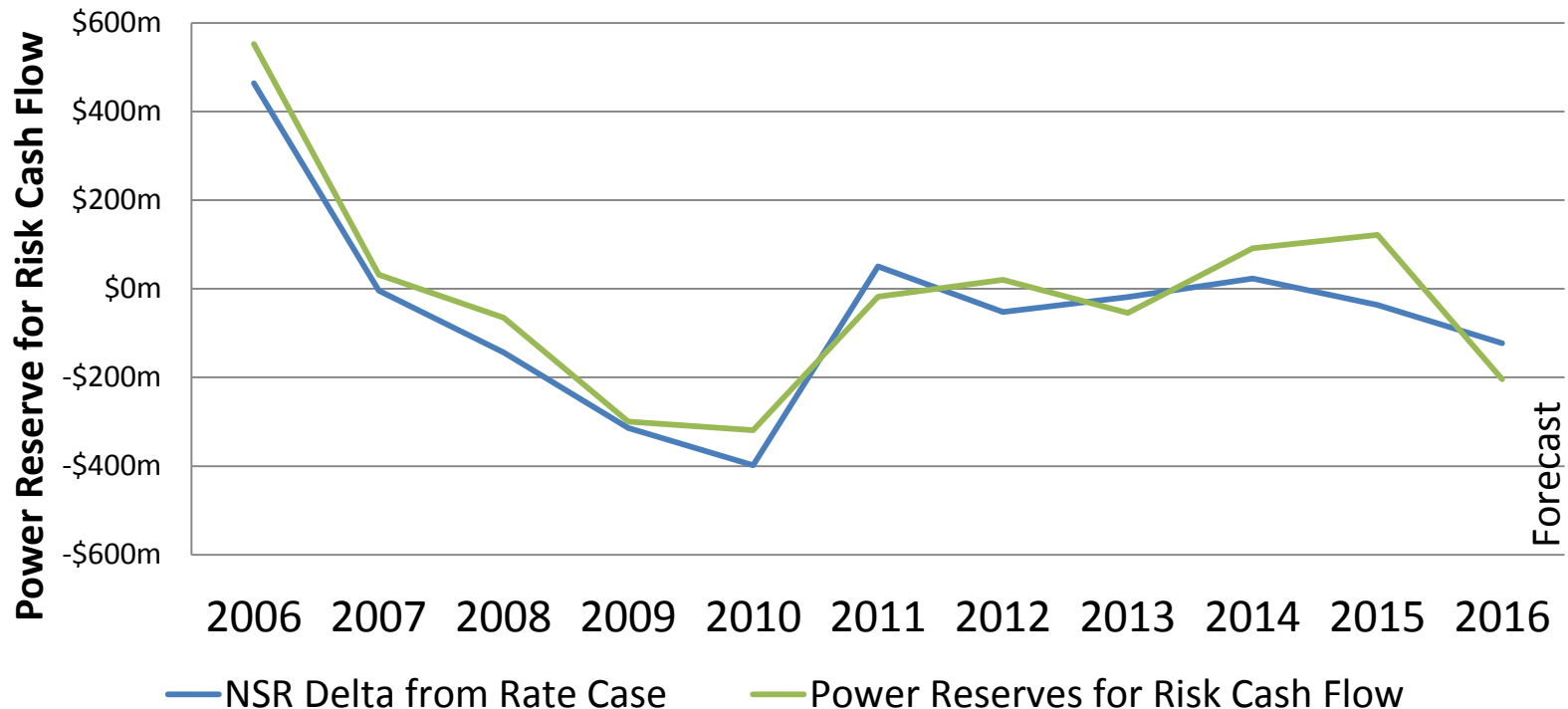
Levels of Financial Reserves over Time



- Agency reserves for risk have declined over \$450m from 2008 to 2015.
- Reserves for risk attributed to Power have decreased roughly \$450m from 2008 to 2015.
- Reserves for risk attributed to Transmission have stayed roughly the same from 2008 to 2015.

Main driver of Power reserves for risk cash flow

Power Reserves for Risk Cash Flow versus the delta between actual Net Secondary Revenue and rate case

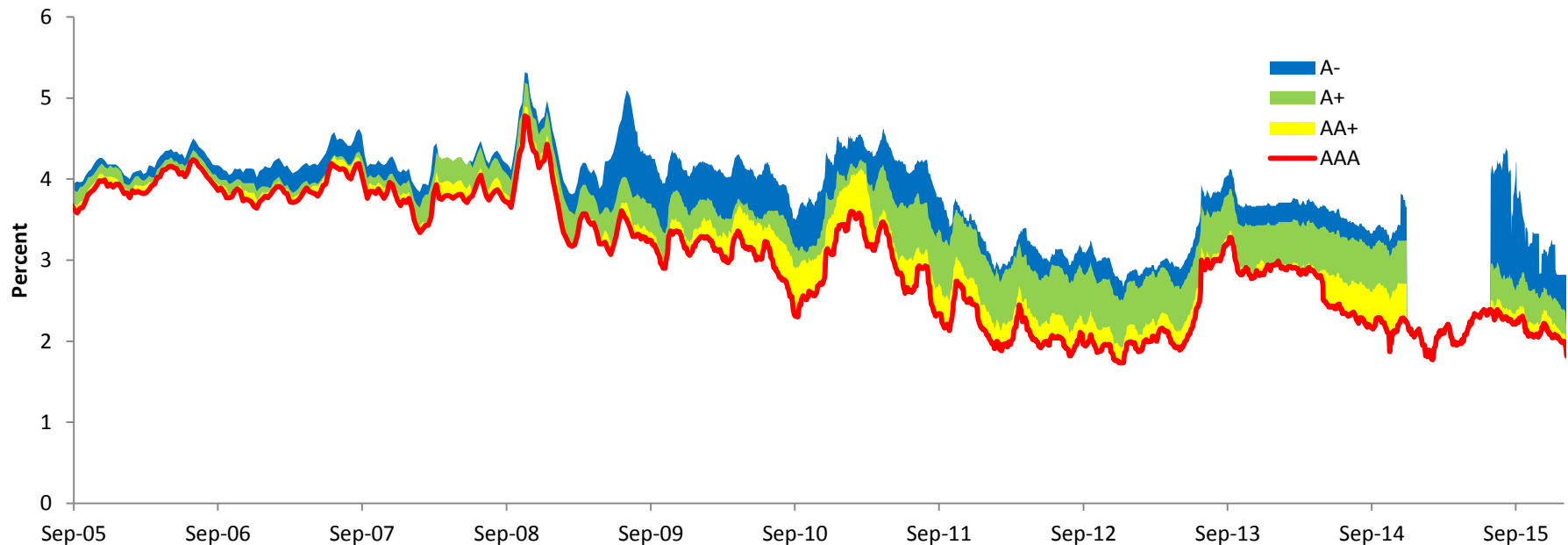


- Graph shows the relationship between actual net secondary revenue (NSR) relative to rate case net secondary revenue and power reserves for risk cash flow

Credit Rating and Cost of Borrowing Over Time

- The value of a higher credit rating in terms of cost of borrowing is greater than before the recession. BPA-supported non-Federal debt continues to be issued, leading to frequent ratings of BPA's creditworthiness.
- Prior to the financial crisis, the average spread between "AA" and "A" rated 20 year tax-exempt municipal debt was 0.17%. Now it is 0.63%, even though borrowing costs are now lower.

Tax Exempt Municipal Market Database Index by Credit Type
(10-year maturity)



There is a gap in interest rate data from November 2014 – June 2015 (except for the AAA curve). This is because Bloomberg discontinued their municipal market indexes and created new ones.

How Much Does BPA’s Credit Rating Matter?

- BPA has direct and indirect responsibility for paying debt service on \$16.1 billion of principal outstanding.
- \$7.5 billion of such debt has been issued by third parties in the municipal bond market and carry BPA’s underlying credit rating (non-federal debt).
- Over the next 10 years, up to ~\$6.4 billion of non-federal debt could be issued, carrying BPA’s underlying credit rating. Of this, \$2.2 billion will be attributed to Transmission and \$4.2 billion will be attributed to Power.
- A 55 basis point^{1/} interest rate increase (+0.55%) today would result in ~\$340 million^{2/} PV increase in interest costs on the ~\$6.4^{3/} billion Non-Federal Debt forecast to be issued over the next 10 years. This equates to an average annual interest expense increase of ~\$19 million per year over the next 30 years
- *Supporting BPA’s credit rating by adhering to additional financial metrics (reserves, debt ratio, & coverage ratio) may be worth the investment and be an advantage for both Power and Transmission.*

Comparison of Debt Outstanding to Credit Rating^{4/} for U.S. Public Power Utilities with Generation Ownership Exposure		
# of Entities	Avg. Debt Outstanding	Average Credit Rating
4	1.9B	AA+
14	2.0B	AA
28	2.4B	AA-
37	0.8B	A+
21	1.2B	A
17	1.3B	A-
5	0.5B	BBB+

- The table above shows the average debt outstanding for all U.S. Public Power Utilities with Generation Ownership Exposure grouped by credit rating.
- On average, utilities with more debt have a higher credit rating likely because of their reliability on debt repayment, size of their economic base and their increased focus on maintaining credit ratings.

^{1/} Possible impact of taxable and tax-exempt interest rate increase between AA and A credit since the financial crisis. Estimate based on municipal market data from 12/7/2007 to 1/12/2015

^{2/} Discounted at BPA’s weighted average cost of capital (4.1% as of 9/30/2015). At a 9% discount rate, PV is \$193m.

^{3/} Estimate is \$3.0 billion issued taxable (\$800 million for P & \$2.2 billion for T) and \$3.4 billion tax-exempt (all P).

^{4/} Source: Fitch U.S. Public Power Peer Study, July 2015

Target Methodology—Status Quo

- BPA's current practice supports the minimum amount of reserves that Power or Transmission need to meet the 95% TPP standard, with another criterion for Power rates.
- Transmission rates
 - The only adjustment that has been contemplated is the addition of PNRR (Planned Net Revenues for Risk) to the revenue requirement if the rate case TPP is below 95% without this addition. (PNRR has never been added to Transmission rates; therefore, Transmission rates have never been increased in order to increase reserves.)
- Power rates
 - PNRR has been added to meet the 95% TPP standard.
 - Power rates have also included a CRAC (Cost Recovery Adjustment Clause), which, if triggered, would increase Power rates at the beginning of a fiscal year.
 - The CRAC threshold is set to be the higher of two levels:
 - The level required to meet the 95% TPP standard as calculated during a rate case; or
 - \$0 in financial reserves for risk attributed to Power.

Target Methodology–Days Cash on Hand

- Days cash on hand calculation
 - Days cash on hand captures the relationship between the amount of cash and the amount of average daily expenses required to operate the business.
 - Days cash on hand is a measure of the number of days a business could continue to operate using its own cash on hand if revenue stopped.
 - A method based on Days cash on hand would define reserves targets as a function of each business line's operating expenses.
 - Some adjustments are made to total expenses so they reflect the true operating expenses that would be required to operate the business.

- A Days Cash on Hand target would naturally grow over time as expenses grow.

- Days Cash on Hand = Reserves for risk ÷ Operating expenses[†] / 365
 - † Excluding:
 - Depreciation
 - Amortization
 - Debt service
 - Power purchases

 - Examples in Appendix

Target Methodology–TPP with reserves only

- BPA’s risk models could be used to calculate a reserves target for both Power and Transmission. The targets calculated for each business line could be summed, resulting in the Agency target.
- The target would be calculated on a forecast basis, for example, over an upcoming rate period.
- Reliance on the Treasury Facility would be removed from the calculation.
- Starting reserves could be adjusted to a point where TPP is exactly 95%.
- Using the BP-16 Toolkit model for Power and BP-16 TRAM model for Transmission resulted in reserves targets of:
 - Power
 - \$500 million
 - Transmission
 - \$130 million
- This methodology would define reserves targets as a function of each business line’s financial uncertainty. As uncertainty increases or decreases, the reserves targets would increase or decrease accordingly.

Financial Reserves Policy Background

- BPA adopted the first financial reserves-related requirement in 1993, the Treasury Payment Probability (TPP) standard. This standard had a single focus: to ensure BPA maintained sufficient financial reserves to achieve a 95% probability of making all year-end Treasury payments in the 2-year rate period. As of the end of 2015, BPA had made 32 consecutive year-end Treasury payments.
- Today, BPA's operating environment is more complex and thus the demands on, and objectives of, financial policies are different. There is an increased focus on Transmission rates, uncertainty in the future electric utility markets, and greater reliance on 3rd party debt to finance capital projects. These drivers in large part have renewed the conversation about BPA's financial policies, and in particular, financial reserves policies and practices.
- In prior rate cases, and again in BP-16, BPA and customers debated the approach to managing levels of financial reserves. The Administrator decided not to adopt new policies or practices on financial reserves in the BP-16 rate case, and to hold workshops after the rate case to discuss a financial reserves policy.

De-facto reserves policy – Treasury Payment Probability (TPP) Standard

- TPP standard first adopted in the 1993 financial plan
 - “BPA shall establish rates to maintain a level of *financial reserves* sufficient to achieve a 95% probability of making its U.S. Treasury payments in full and on time for each 2-year rate period.”
- 95% standard has stayed the same for many years, but the tools available to support the standard have changed.
 - One significant change was moving from using financial reserves solely to meet the TPP to relying on \$300m of the Treasury Facility in place of some financial reserves (2007 wholesale rate case).
 - Additionally significant, was increasing the reliance on the Treasury Facility from \$300m (2007 wholesale rate case) to \$750m (BP10 rate case) to meet the TPP standard while simultaneously relaxing the CRAC threshold from \$750m (2007 wholesale rate case) to \$0m (BP10 rate case) .
 - These changes allow now for Power financial reserves to be \$0, or even negative, and yet TPP above 95%. These combined changes limit the TPP standard’s ability to control for a prudent level of Power financial reserves.

Example Calculation: Days Cash on Hand

- Example calculation using real numbers based on the first quarter forecast of end of year FY 2016.

- Power

Power Days Cash on Hand = Power Reserves Available for Risk / ((Power Total Expenses – (Power Depreciation & Amort. + Power Interest Expense + Power NonFed Debt Service + Power Purchases) / 365)

$$40 \text{ days} = \$191\text{m} / ((\$2,493\text{m} - (\$226.5\text{m} + \$193.6 + \$219.2\text{m} + \$100.2\text{m}) / 365)$$

- Transmission

Trans Days Cash on Hand = Trans Reserves Available for Risk / ((Trans Total Expenses – (Trans Depreciation & Amort. + Trans Interest Expense) / 365)

$$267 \text{ days} = \$436\text{m} / ((\$967\text{m} - (\$240\text{m} + \$130.6\text{m}) / 365)$$

- Agency

Agency Days Cash on Hand = (Power Reserves for Risk + Transmission Reserves for Risk) / ((Power Total Expenses + Trans Total Expenses – (Power Depreciation & Amort. + Power Interest Expense + Power NonFed Debt Service + Power Purchases + Trans Depreciation & Amort. + Trans Interest Expense) / 365)

$$96 \text{ days} = \$628\text{m} / ((\$2,493\text{m} + \$967\text{m} - (\$226.5\text{m} + \$193.6\text{m} + \$219.2\text{m} + \$100.2\text{m} + \$240\text{m} + \$130.6\text{m}) / 365)$$