Overview of BPA's Finances

November 19, 2019

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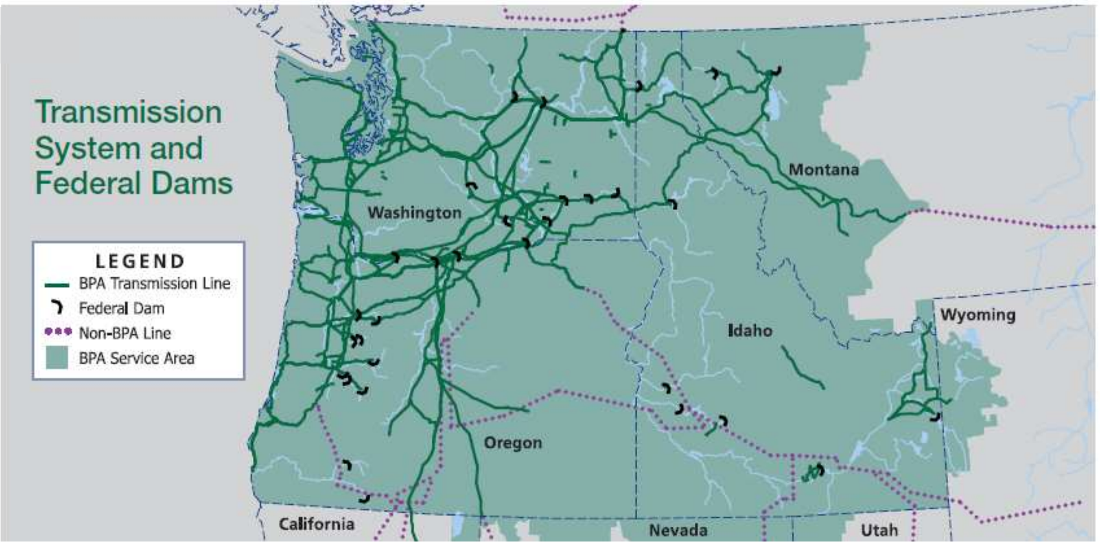
Financial Planning and Analysis

Note: this information was made publicly available on November 14, 2019, and contains some information not sourced directly from BPA financial statements.

Agenda

1. Introductions
2. BPA Financial Background
3. Strategic & Financial Plans
4. Q&A

Background - Overview



Transmission System			
Operating voltage	>=230 kV	<230 kV	Total
Curcuit miles	11,261	3,977	15,238
% of total system	74%	26%	100%

Federal Hydro Projects			
Max Capacity	>= 115 MW	< 115 MW	Total
Number of projects	16	15	31
Total max capacity	22,015 MW	443 MW	22,458 MW
Average	1,376 MW	30 MW	1,405 MW
% of total	98%	2%	100%

Columbia Generating Station	
Total max capacity	1,144 MW

Transmission Services

- Delivers power between resources and loads within the Region and transmits imports to and exports from the Region.
- Approximately 75% of the bulk transmission capacity in the Region.
- 15,000 circuit miles of high voltage transmission lines and 260 substations and other facilities .
- Approximately $963 million in revenue in FY18.

Power Services

- BPA markets power from 31 federally-owned hydroelectric projects and several Non-Federal projects - virtually carbon-free .
- Provides approximately 27% of the electric power consumed within the Region.
- Primarily serves over 135 Preference Customer utilities (which are qualifying publicly-owned utilities and consumer-owned electric cooperatives) and several federal agencies under contracts through September 2028.
- Approximately $2.8 billion in revenue in FY18.

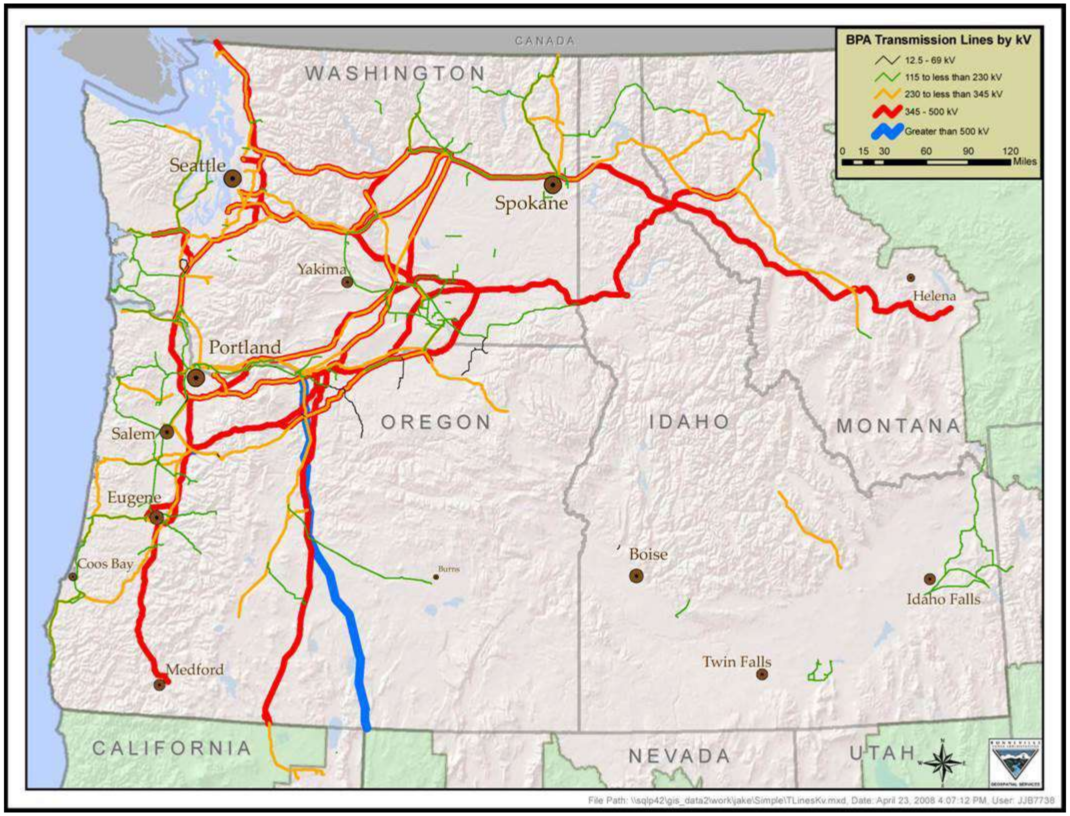
Background – Transmission Assets

$5.5B NBV in Assets

$500M/yr total capital investment

$264M/yr sustain investment

$332M/yr depreciation



260 Substations

15,000+ Circuit miles of transmission lines

196,500 Acres of right of way

500+ customers

3.5k miles of fiber

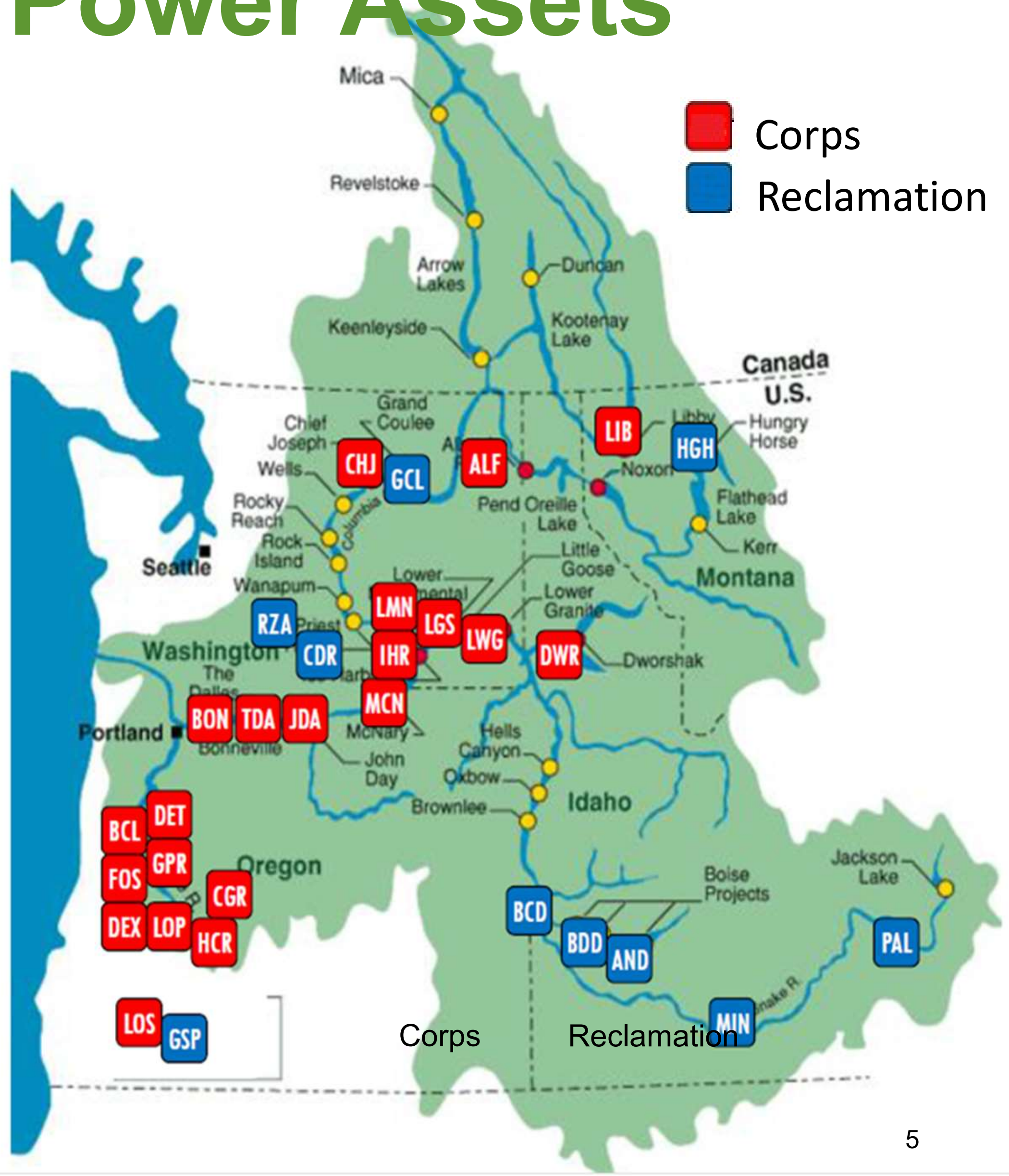
300,000+ Square miles service territory

~400 Communications sites

Background – Power Assets

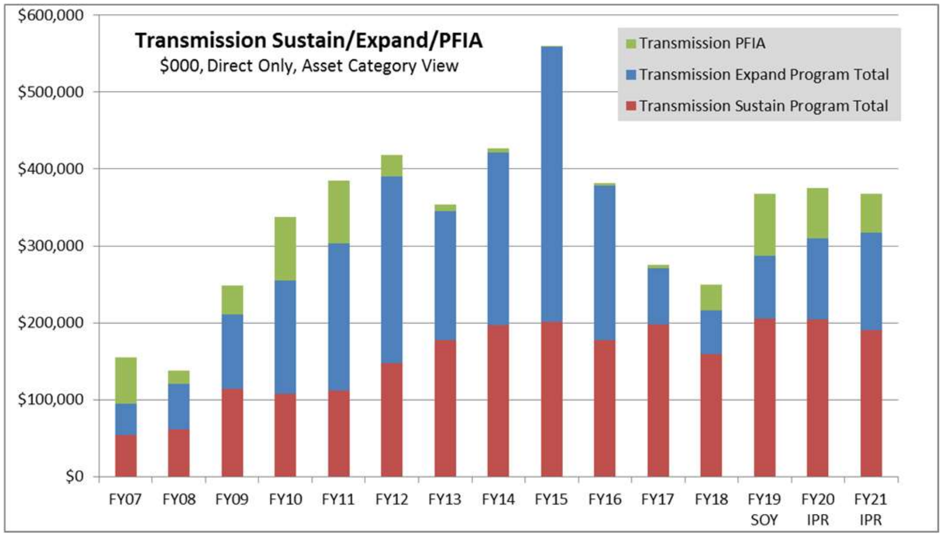
The Federal Columbia River Power System (FCRPS) is a partnership between the US Army Corps of Engineers (Corps), the US Bureau of Reclamation (Reclamation), and Bonneville Power Administration (BPA).

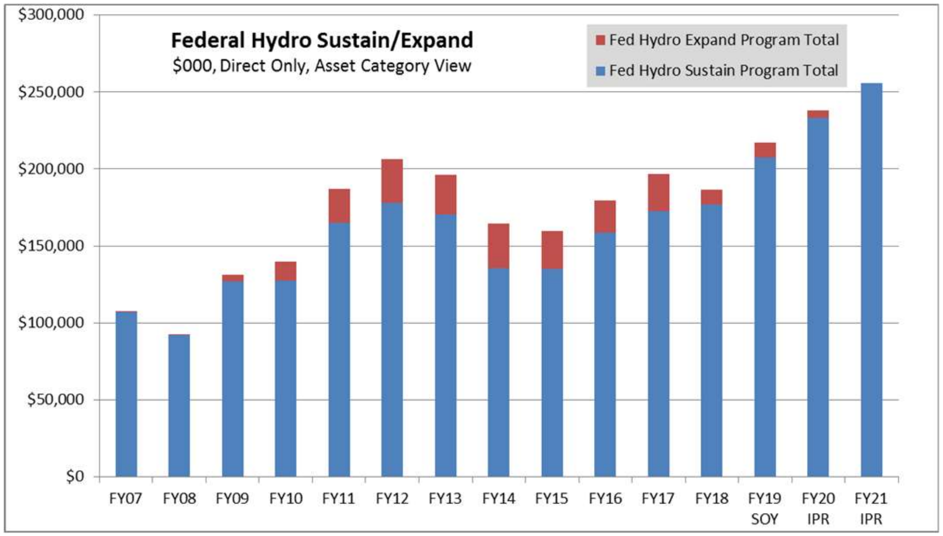
- 31 Powerplants (21 Corps, 10 Reclamation)
- 22,458 MW max capacity
- 196 generating units
- 76,000 GWh of electricity per year
    - $1.9 billion value at 5-year Mid-C market index average
- Displaces fossil-fired generation that would result in emissions in excess 40 million tons of carbon dioxide per year
    - $1.4 billion benefit based on the EPA's Social Cost of Carbon.
- Provides balancing and voltage support.
- Funds the protection, mitigation, and enhancement of fish and wildlife.



Background – Power & Transmission Assets

Capital Investment historic and forecast

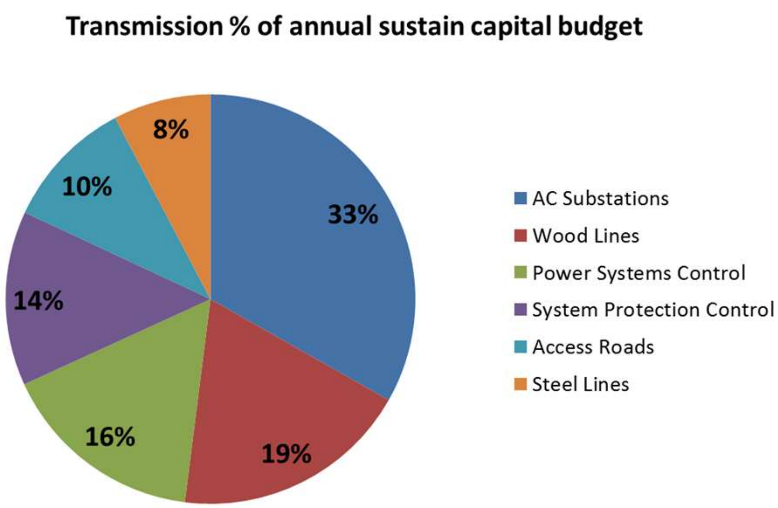


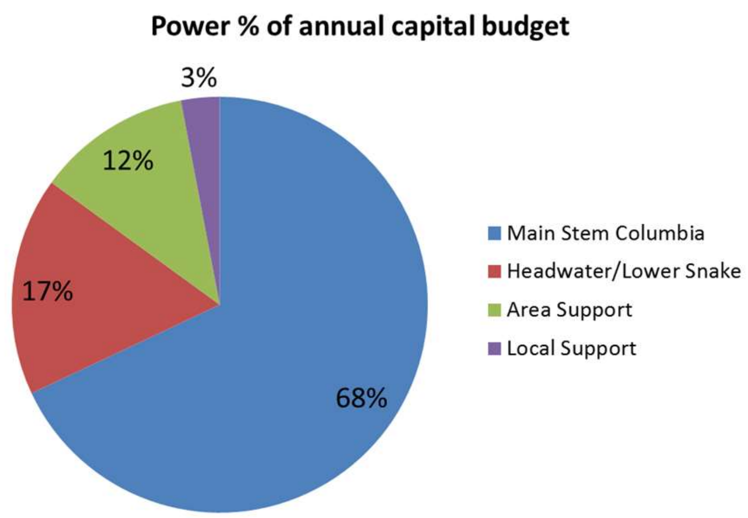


- The Transmission capital investment profile is transitioning to more sustain capital investments. The prior decade saw more expansion investments predominately for renewable integration.
- Power (Federal Hydro) predominately sustain capital investments with a few upgrades over time.

*Projects Funded in Advance (PFIA). Projects funded by customers where BPA performs the work.

Background – Power & Transmission Assets





- Transmission capital investments are prioritized based upon minimizing total economic costs, a primary factor is reliability.
- Power capital investments are prioritized largely by minimizing lost generation risk.
- The majority of Power capital investments and O&M are directed to the most economic projects.

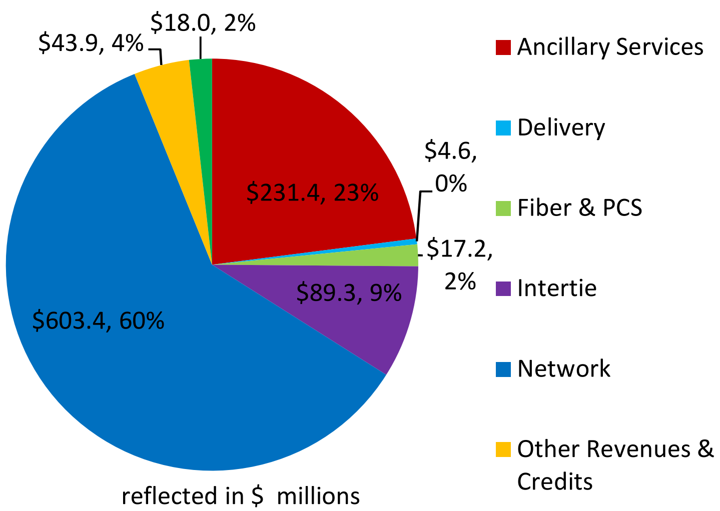
Power Capital, O&M & Cost of Generation

Asset Class	% of Average Annual Generation	% of Capital Forecast	% of O&M Forecast	Levelized Cost of Generation ($/MWh)
Main Stem Columbia	77%	68%	65%	$9.03
Headwater/Lower Snake	18%	17%	22%	$11.41
Area Support	4%	12%	10%	$30.83
Local Support	1%	3%	3%	$44.28
FCRPS	100%	100%	100%	$10.56

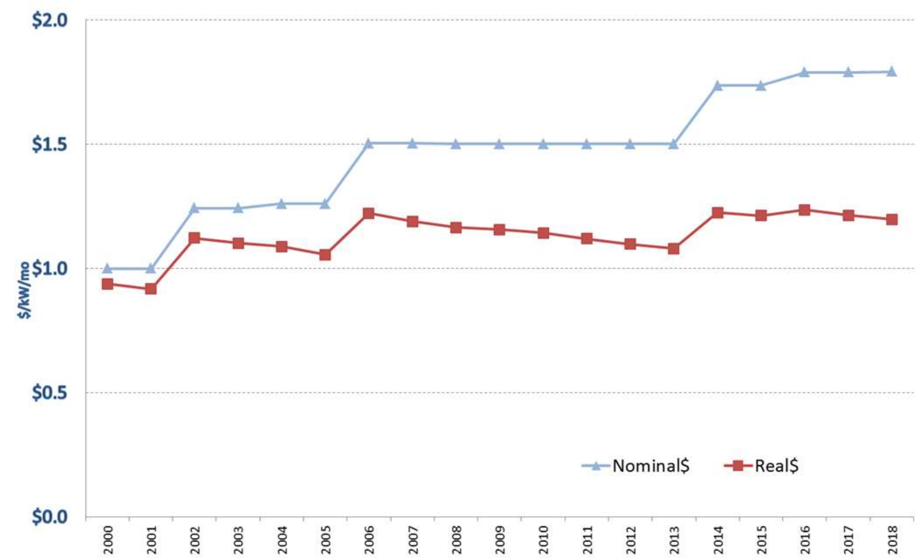
*Transmission based on SOY 2019, Power based on Integrated Program Review (IPR) 20/21

Background – Transmission Revenue

Total Average Transmission Revenue by Product - FY10 through FY18



Firm Transmission Rates FY 2000-2018



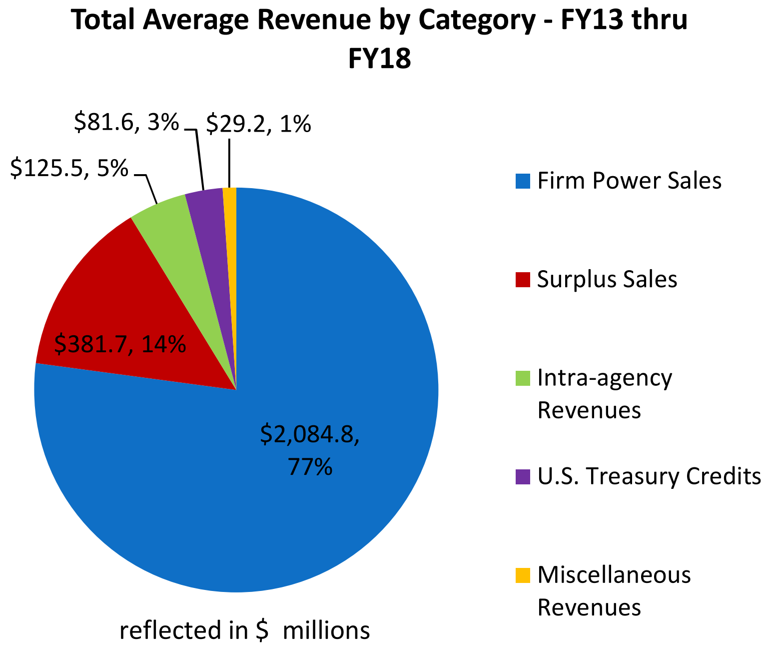
(1) Transmission rates equal to PTP Base Charge plus Scheduling, System Control and Dispatch.

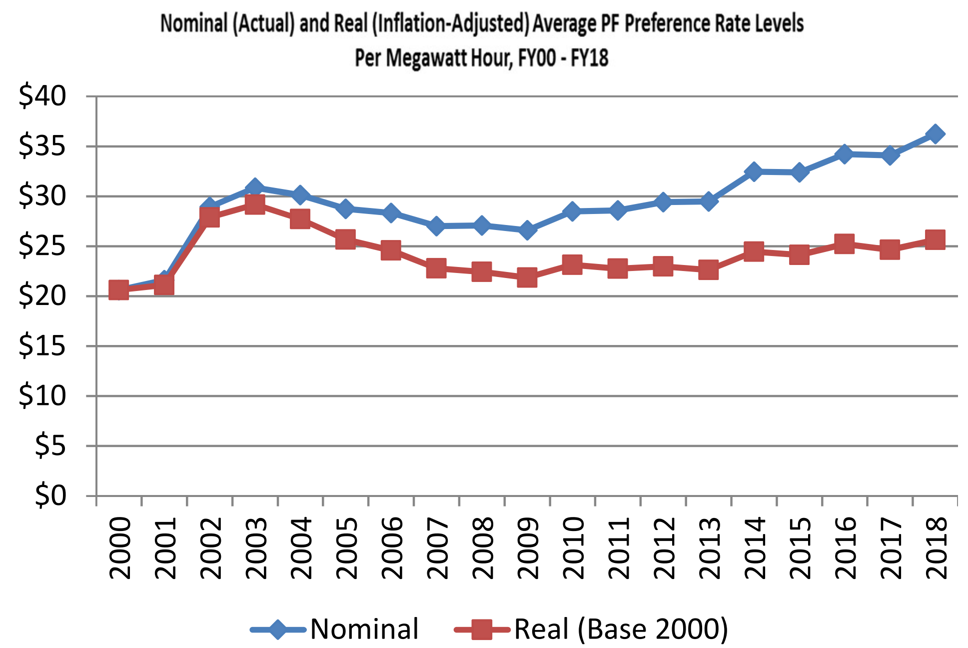
Transmission Services Top 5 Customers (FY18)

Customer	Percentage of Sales*
Puget Sound Energy Inc. (IOU)	12%
PacifiCorp (IOU)	10%
Portland General Electric Company (IOU)	9%
Powerex Corp. (Power Marketer)	7%
Avangrid Renewables LLC (Wind Developer)	5%
Total	**43%**

- Graphs reflect BPA's Transmission sales by product, historic transmission rates and largest customers.
- On an inflation adjusted basis, BPA Transmission rates have remained relatively stable.

Background – Power Revenue



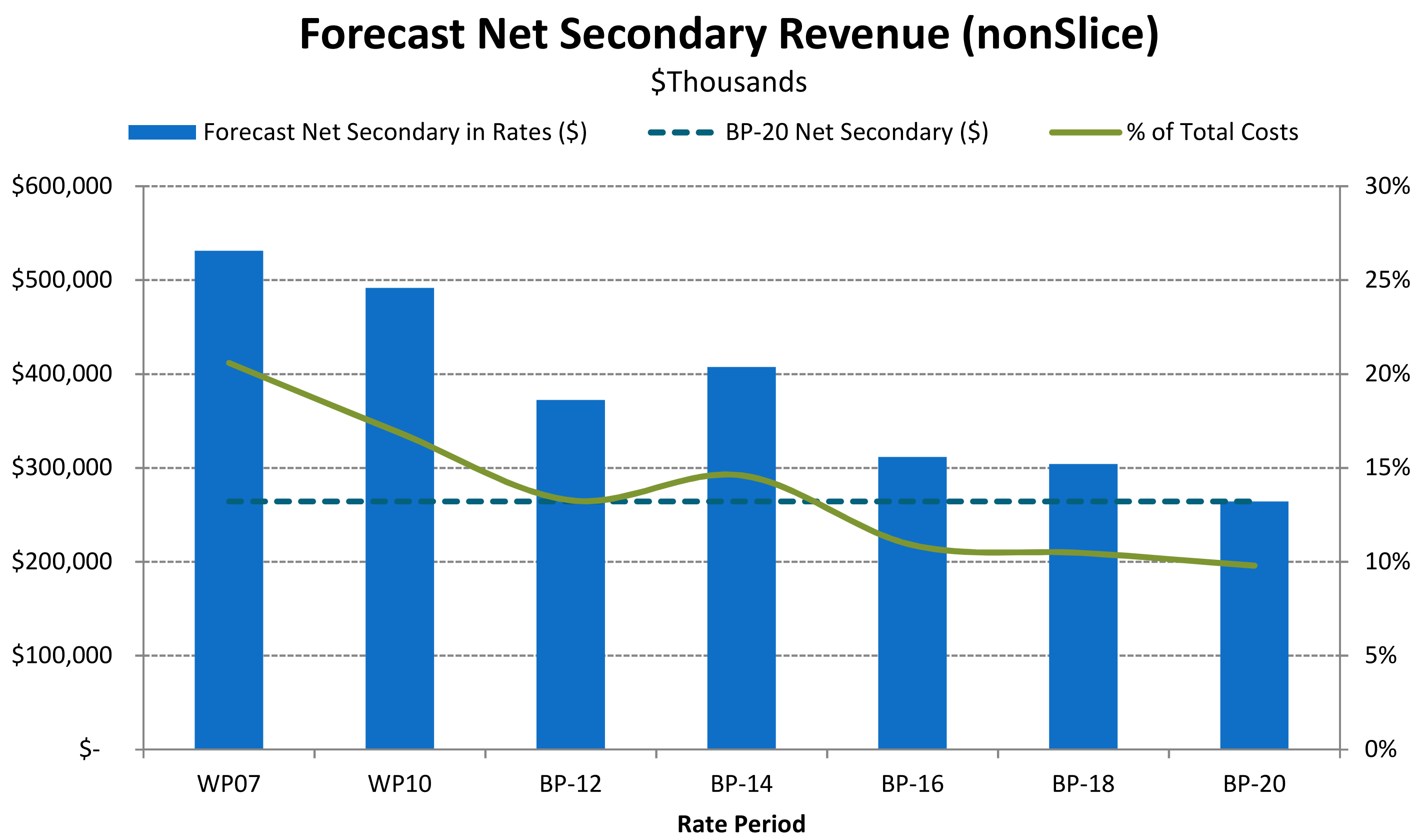


Power Services Top 5 Customers (FY18)

Customer	Percentage of Sales*
Snohomish County PUD No. 1 (Preference)	9%
Pacific Northwest Generating Cooperative (Preference)	7%
City of Seattle, City Light Dep't (Preference)	6%
Cowlitz County PUD No. 1 (Preference)	6%
Tacoma Power (Preference)	5%
Total	**33%**

- On an inflation adjusted basis, BPA Power rates have remained relatively stable and flat with the exception of the time period following the 2001 West Coast Power Crisis.

Net Secondary Revenue



- Net secondary revenues provide an offset to costs in BPA’s nonSlice Power rates
- BPA’s rates are less reliant on net secondary revenue to cover costs today than in the past

Background – Transmission P&L

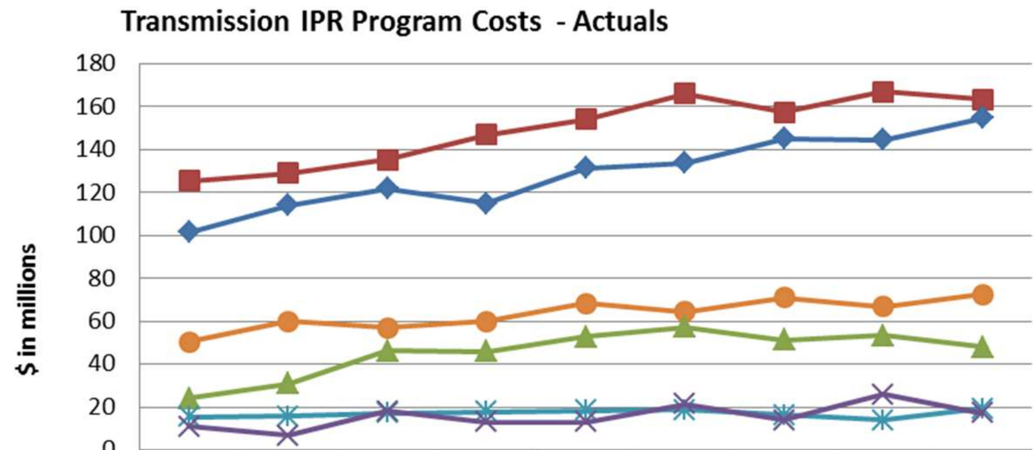
Transmission FY20 Profit & Loss

			% Total Expenses
Total Revenue		$1,075m	
O&M Expense	$478m		46%
Transmission & Ancillary Services	$128m		12%
Other Expenses	-$58m		-6%
Depreciation and Amortization	$336m		32%
Net Interest Expense	$164m		16%
Total Expenses		$1,048m	
Net Revenue		$26m	
Federal Debt Repayment		$200m	
Non-Federal Debt Repayment		$99m	
Total Debt Repayment		$299m	

- The table above shows BPA's total cost charged in Transmission rates for FY20.
- $1.048 billion total expenses, 46% O&M, 48% Depreciation and Interest, 6% Other.
- Debt repayment represents 28% of total revenue ($299m/$1075m)
- Interest expense represents 15% of total revenue ($164m/$1075m)

*figures from BPA final rate proposal revised revenue test, FY20

Background – Transmission Program Costs



	2010	2011	2012	2013	2014	2015	2016	2017	2018	CAGR
Transmission Maintenance	125	129	135	147	154	166	157	167	163	3.4%
Transmission Operations	102	114	122	115	131	134	145	145	155	5.4%
Agency Services G&A	50	60	57	60	68	64	71	67	72	4.6%
Transmission Engineering	24	31	46	46	53	57	51	53	48	8.9%
Post-Retirement Contribution	15	16	17	18	19	19	16	14	19	2.9%
Non-BBL Trans Acq. and Anc. Svcs.	11	7	18	13	13	21	14	26	17	5.9%

- Transmission IPR Program Costs reflect O&M on the Transmission system.
- The graph shows the actual expenditures by program from 2010-2018.
- The table to the right labeled CAGR (Compound Annual Growth Rate) shows the average annual percentage growth in these costs over the period. These figures are comparable to inflation.
- Transmission Maintenance and Engineering have grown faster than inflation predominately due to increasing maintenance requirements to maintain the aging Transmission assets.

Background – Power Costs

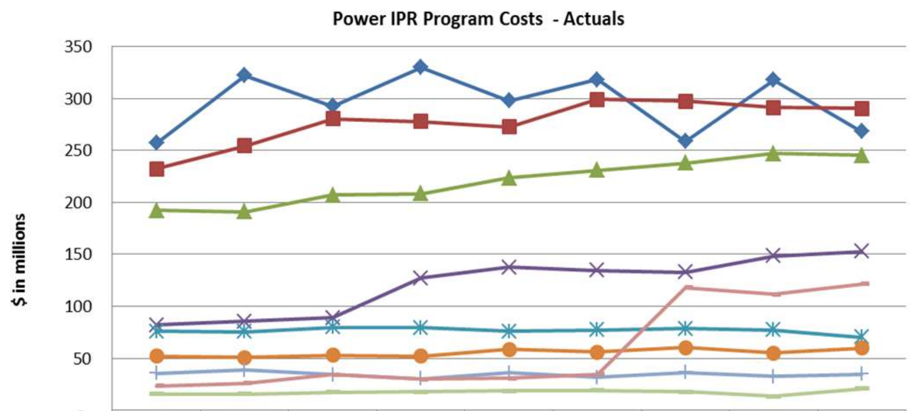
Power FY20 Profit & Loss

			% Total Expenses
Total Revenue		$2,710m	
O&M Expense	$903m		34%
Power Purchases & Transmission	$308m		12%
Fish & Wildlife	$292m		11%
Residential Exchange & Settlements	$250m		9%
Conservation	$122m		5%
Depreciation and Amortization	$518m		19%
Net Interest Expense	$270m		10%
Total Expenses		$2,662m	
Net Revenue		$48m	
Federal Debt Repayment		$173m	
Non-Federal Debt Repayment		$269m	
Total Debt Repayment		$442m	
*Irrigation Assistance Payment		$24m	

- The table above shows BPA's total cost charged in Power rates for FY20.
- $2.662 billion total expenses, 34% O&M, 29% Depreciation and Interest, 20% Fish & Wildlife and Residential Exchange, 17% Other.
- Debt repayment represents 16% of total revenue ($442m/$2710m)
- Interest expense represents 15% of total revenue ($270m/$2710m)

*figures from BPA final rate proposal revised revenue test, FY20

Background – Power Program Costs

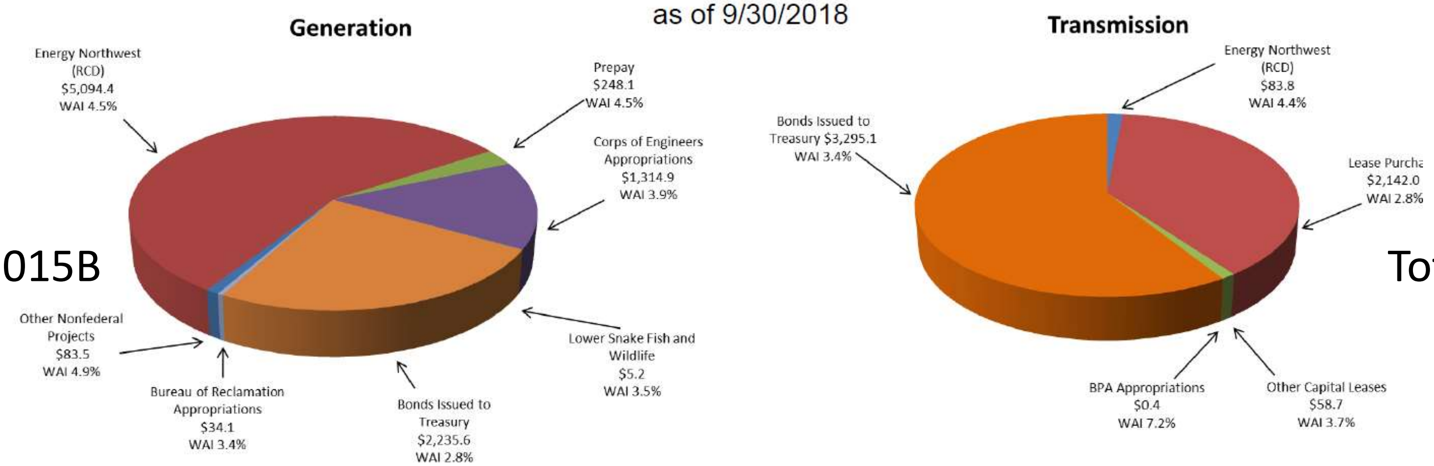


	2010	2011	2012	2013	2014	2015	2016	2017	2018	CAGR
Columbia Generating Station	257	322	293	330	298	318	259	318	268	**0.5%**
F&W/Planning Council/Environmental Req.	232	254	280	278	272	299	298	291	290	**2.8%**
Corps of Engineers	192	191	207	208	223	231	238	247	245	**3.1%**
Bureau of Reclamation	82	85	89	127	138	134	133	148	153	**8.1%**
Power Non-Generation Operations	76	75	80	79	76	77	79	77	70	**-1.0%**
Agency Services G&A	52	51	53	52	58	56	60	55	60	**1.8%**
Renewables	35	39	34	30	36	31	36	32	35	**-0.3%**
Generation Conservation (IPR)	23	26	34	30	31	35	118	111	122	**23.0%**
Additional Post-Retirement Contribution	15	16	17	18	19	19	18	13	21	**3.7%**

- Power program costs reflect BPA's O&M expenses on the generating projects, Fish and Wildlife and Conservation expenses.
- The graph shows the actual expenditures by program from 2010-2018.
- The table to the right labeled CAGR (Compound Annual Growth Rate) shows the average annual percentage growth in these costs over the period. These figures are comparable to inflation.
- The only cost growing materially faster than inflation is Bureau of Reclamation O&M which is predominately related to Grand Coulee Dam. Generation Conservation increased due to a change in accounting from capitalizing the majority of the cost prior to 2016 to expensing all of it.

Background – Debt 9/30/2018

Federal Columbia River Power System (FCRPS)
Total Liabilities to Federal and Non Federal Parties
as of 9/30/2018



Total: $9.015B

Total: $5.580B

$ millions	Generation Liabilities Outstanding	Generation WAI Rate	Transmission Liabilities Outstanding	Transmission WAI Rate	Total Liabilities Outstanding	Total WAI Rate
Total Appropriations 1/	1,354.2	3.9	0.4	7.2	1,354.6	3.9
Total Bonds Issued to Treasury	2,235.6	2.8	3,295.1	3.4	5,530.6	3.2
Total Federal Liabilities	3,589.7	3.2	3,295.5	3.4	6,885.2	3.3
BPA Liabilities to Energy Northwest (RCD) 3/	5,094.4	4.5	83.8 2/	4.4	5,178.2	4.5
BPA Liabilities to Other Nonfederal Parties	83.5	4.9			83.5	4.9
BPA Liabilities for Lease Purchases			2,142.0	2.8	2,142	2.8
BPA Liabilities for Other Capital Leases			58.7	3.7	58.7	3.7
BPA Liabilities for Prepay	248.1	4.5			248.1	4.5
Total Nonfederal Liabilities	5,426.0	4.5	2,284.5	2.9	7,710.5	4.0
Total FCRPS Liabilities	9,015.7	4.0	5,580.0	3.2	14,595.7	3.7

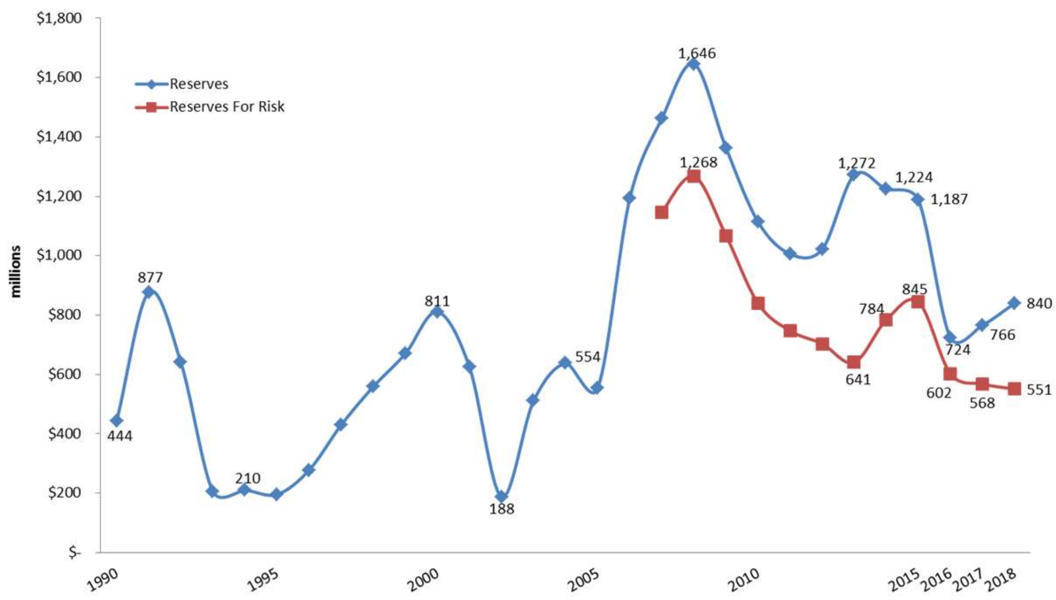
1/ Federal Appropriation amounts are less than the amount per the FCRPS financial statements because the repayment obligation does not begin until the related assets are placed in service. Appropriation amounts exclude appropriations for construction w ork still in progress (CWIP), w hich w as $170 million in FY 2018. Unspent appropriations received by the COE and BOR as w ell as some adjustments are also excluded.

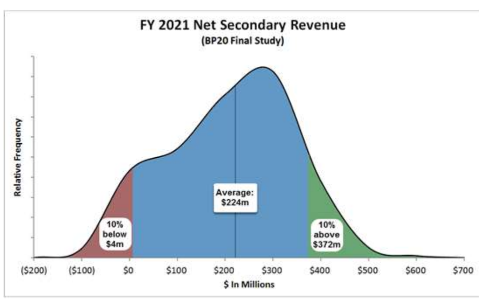
2/ Transmission principal is different from the Nonfederal repayment obligation due to: 1) premium bonds issued, 2) timing differences, and 3) transactions costs. Transmission is assigned the repayment obligation for these items, w hich equals the additional Federal prepayment made on Transmission's behalf.

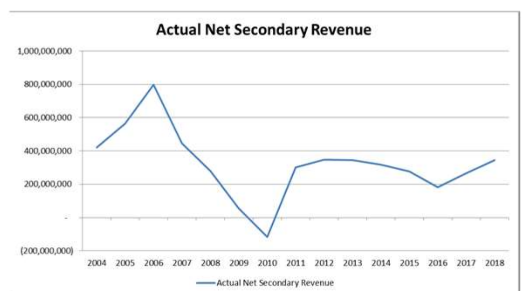
3/ BPA's liabilities to Energy Northw est are part of the Regional Cooperation Debt Program (RCD), w hich extends Energy Northw est debt to pay dow n federal liabilities or preserve federal borrow ing capacity.

NOTE: This data does not include irrigation assistance commitment of $364 million at zero percent interest as of 2018 year-end.

Background – Liquidity





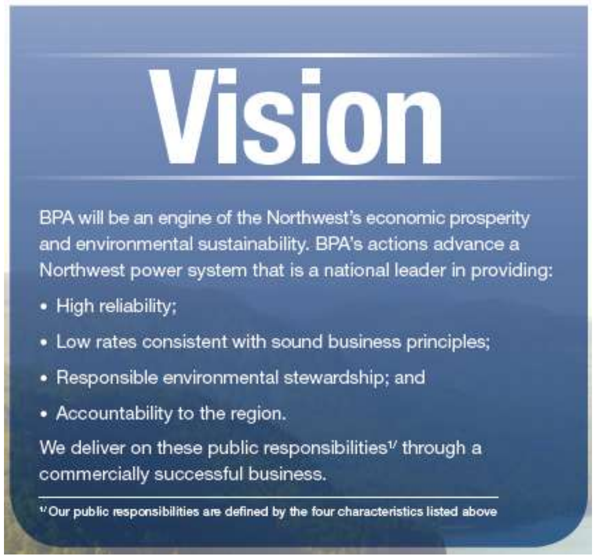


- Operational Liquidity
  - Financial Reserves
  - US Treasury Line of Credit – specifically for NW Power Act expenses

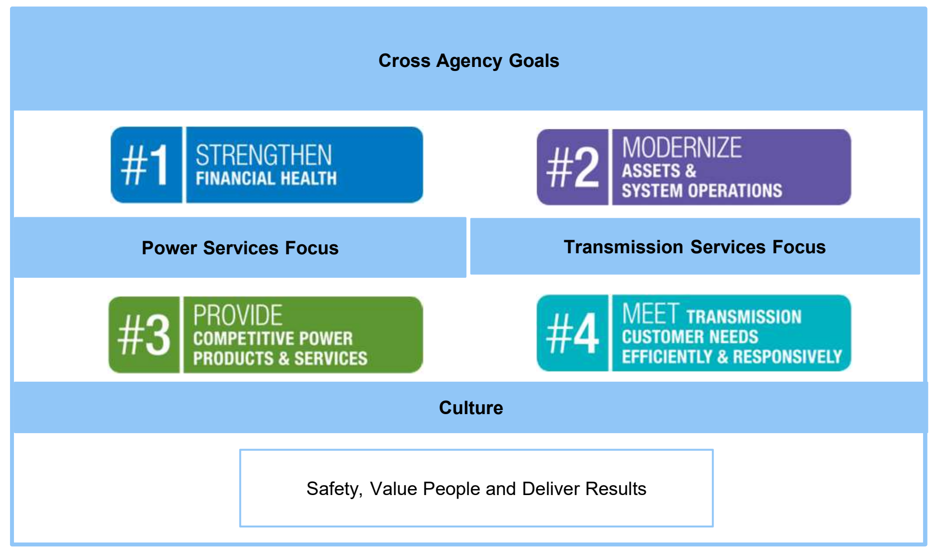
- Financial Risk Mitigation
  - 2 Year rate periods
  - Tiered Rates
  - Cost Recovery Adjustment Clause (CRAC)
  - Financial Reserves Surcharge

- Net Secondary Revenue reflects BPA's primary source of financial uncertainty, driven by stream flow and market price volatility. The downside risk to net secondary revenue has been reduced over the past 10 years as wholesale prices have declined.

The Strategic Plan Story



This Strategic Plan identifies the prioritized set of actions BPA will take to improve the agency's commercial performance and sustain our vital role within the region



What defines a commercially successful BPA?

- A strong customer base and revenues that recover our costs
- Financial strength to raise low cost capital and weather business disruptions
- High performing assets and system operations that can boost revenues and interface with the modern energy economy
- A skilled, motivated and high performing workforce capable of delivering on our strategy

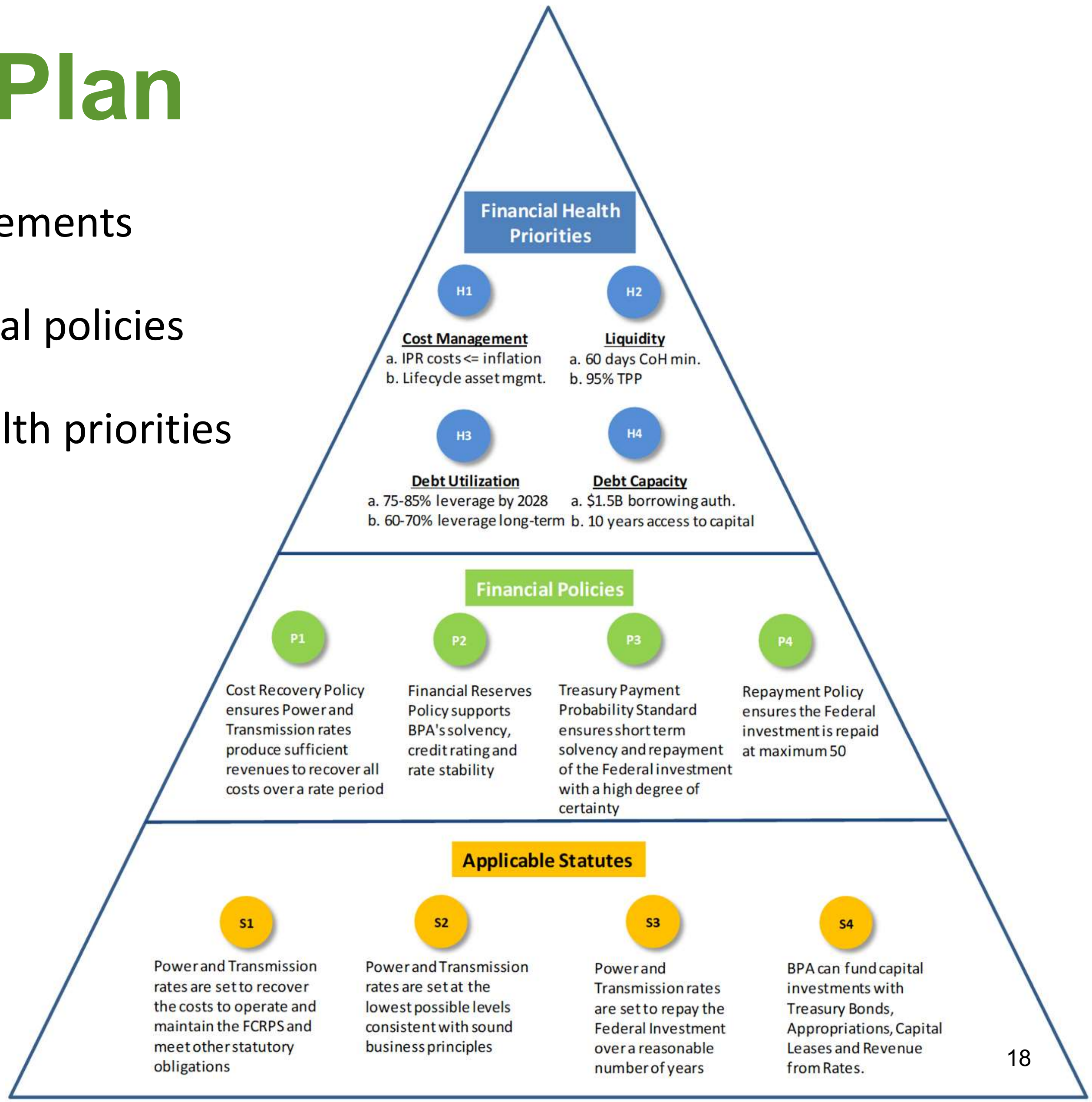
Core Strategic Goal: Sustain BPA's role as an engine of the Northwest's economic prosperity and environmental sustainability through improved business discipline and strong commercial performance

Desired Outcomes: Increased Customer Trust and Confidence; A Modernized BPA Prepared for Industry Change, and Public Responsibilities Delivered Through a Commercially Successful Business

Financial Plan

- Meet statutory requirements
- Follow existing financial policies
- Focus on financial health priorities
  - Cost management
  - Liquidity
  - Debt Utilization
  - Debt Capacity

*Financial Plan issued January 2018



Cost Management Discipline

Maintain low rates, enhance asset value, and reliability

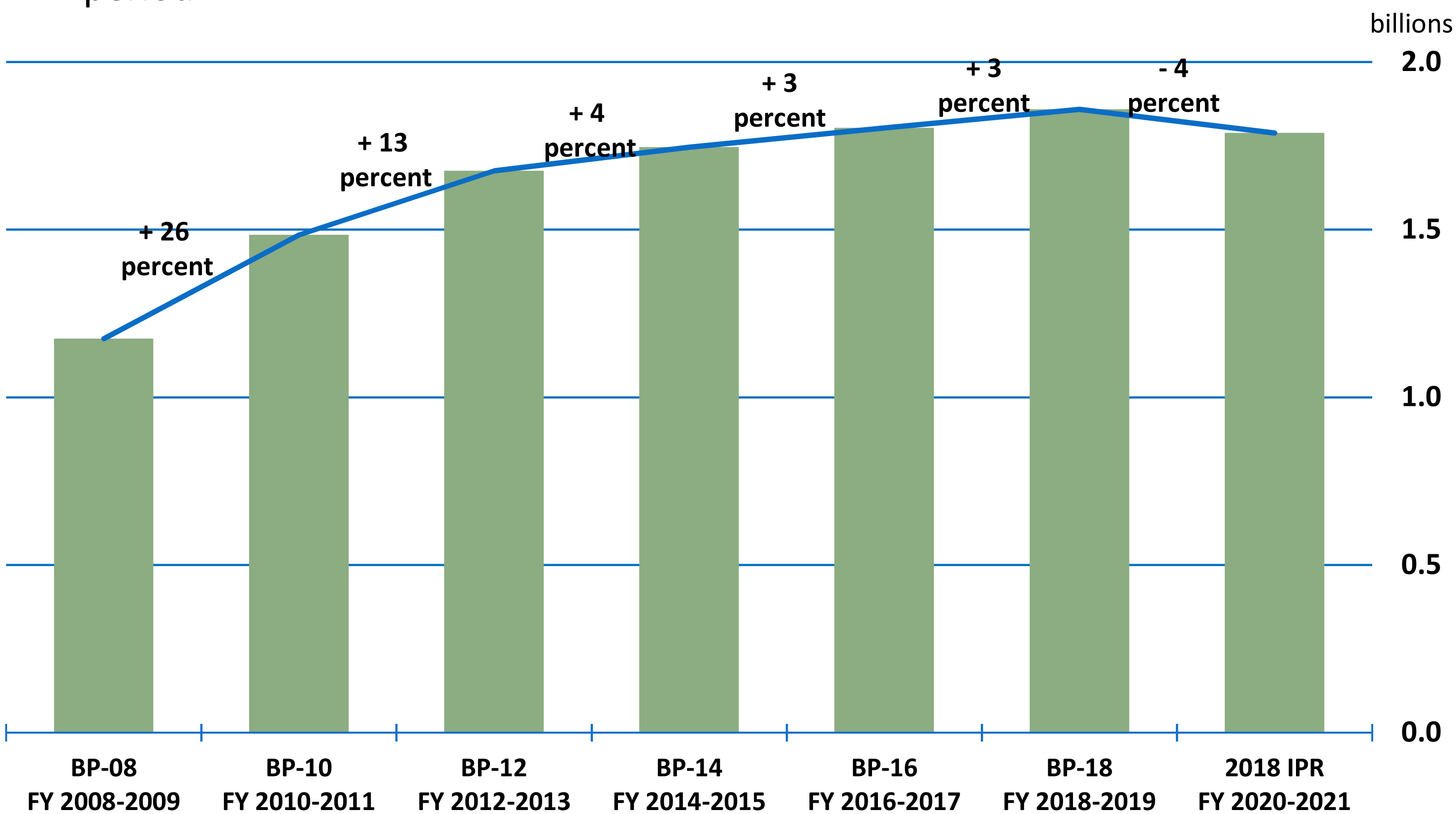
- Financial Plan Goal
  - Manage Integrated Program Review (IPR) costs to no more than inflation per year, on average, beginning in BP-20 through BP-26 rate cases.
    - IPR costs include: O&M, Fish & Wildlife, and Energy Efficiency.

- Current Status
  - Final IPR agency costs were $66 million per year below BP-18 spending levels .
    - $56 million from Power Services, $9.5 million from Transmission Services.
    - Major areas of savings were Bureau of Reclamation, Corps of Engineers, and Energy Northwest as well as internally with Fish & Wildlife and Transmission Services.
  - The final IPR expense spending levels were approximately $140 million below inflation.

Cost Management Discipline Continued

Maintain low rates, enhance asset value, and reliability

Average annual program costs and percentage of cost change by rate period



*program costs are BPA's IPR costs

Debt Utilization

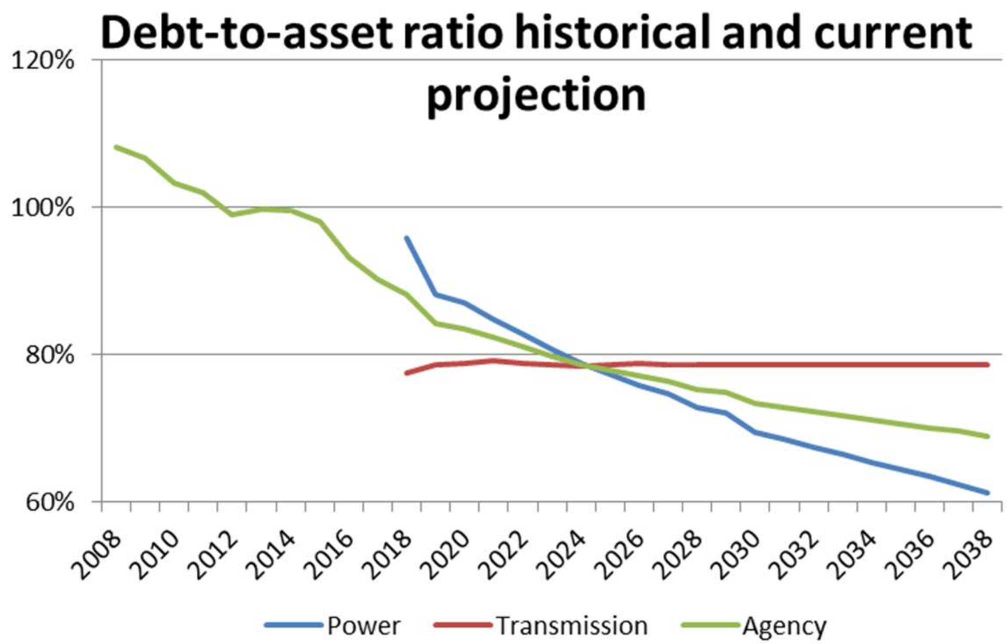
Reduce interest expense, maintain financial flexibility

- Financial Plan Goal
  - Decrease debt-to-asset ratio from 90% to 75%-85% by 2028.
  - Long term goal of 60%-70%.
  - Requires the Transmission business line to increase the amount of planned debt repayment and/or increase revenue financing.

- Status
  - The Administrator's Record of Decision on the leverage policy was issued on September 25.
    - The Transmission BP-20 Initial Proposal includes approximately $26 million for either debt repayment or revenue financing.
  - The Power business line is expected to achieve the leverage policy goals without additional rate action.

FP #2 Debt Utilization *continued*

Reduce interest expense, maintain financial flexibility



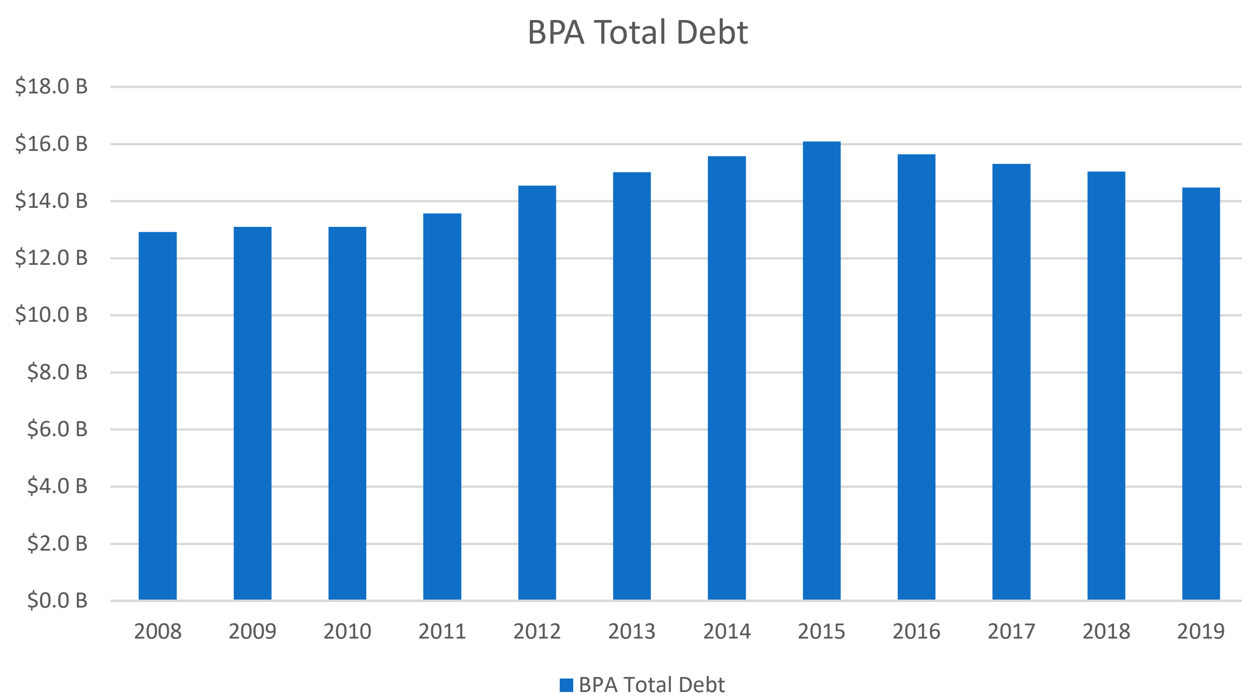
Debt-to-asset ratio, or Leverage

- Ratio of total book value of revenue producing assets to total debt
- Excludes non-revenue producing assets, e.g., Fish and Wildlife, Energy Efficiency

- BPA policy does not allow the debt-to-asset ratio to go up for Power or Transmission. BPA is planning for both Power and Transmission to decline.
- Rate increases will force the ratio to be flat or decline over time, rate increases are especially likely for Transmission in order to hold flat or decline.
- Power’s debt-to-asset ratio is declining naturally because large debt payments as a percent of Power’s total debt are already built into the Power revenue requirement. Power rates will not have to increase to de-lever.

Debt Utilization *continued*

Reduce interest expense, maintain financial flexibility



- BPA's total debt has risen slightly since 2008 but declined since 2015.
- The debt increase was primarily a result of building large Transmission expansion projects during the 2009-2015 timeframe (see pg. 6 for capital investments).

Debt Capacity

Maintain access to secure and low-cost debt financing

- Goal
  - Maintain $1.5 billion in available U.S. Treasury borrowing authority capacity on a rolling 10-year basis.
    - $750 million retained for operational liquidity to manage financial volatility primarily from streamflow and market price uncertainty.
    - $750 million for capital liquidity, to be able to mitigate changes in capital needs, if necessary, as a result of BPA planning decisions or factors outside of BPA's control (i.e., weather or natural disasters resulting in damage to BPA assets that require unexpected capital investments).
- Status
  - At 9/30/19, $2.4 billion of borrowing authority was available out of the $7.7 billion authorized.
  - Continuing to deploy an "all of the above" strategy to identify current and future tools to adequately fund BPA's future capital investments at the lowest possible cost.
    - These tools include: Revenue financing, Regional Cooperation Debt, Reserves financing, Lease-purchase, additional borrowing authority, authority to issue debt directly to capital markets.
  - Included $26 million/year revenue financing in BP20 Transmission rates.
  - Regional Cooperation Debt extension, providing $3.5 Billion future capital.

Liquidity

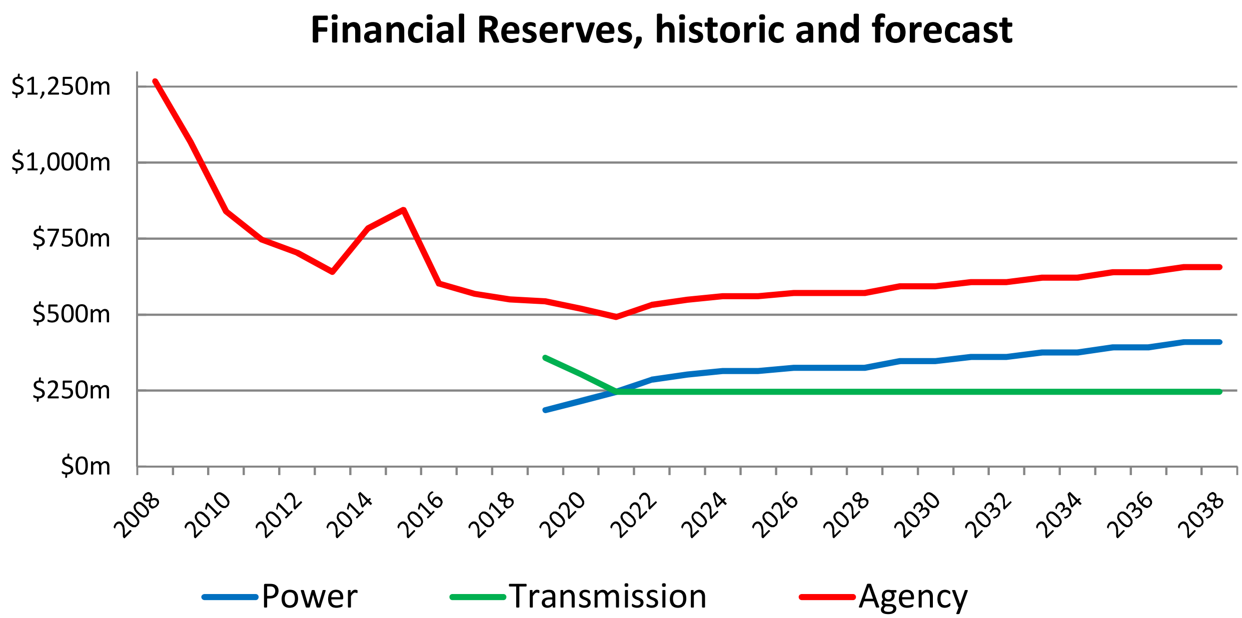
Maintain financial reserves for solvency and stability

- Goal
  - Maintain a minimum of 60 days cash on hand for each business line, and maintain a 97.5% annual Treasury payment probability.

- Status
  - BPA established a final financial reserves policy by issuing the Administrator's Record of Decision on September 25th.
    - The policy allows an increase to Power and Transmission rates in order to increase cash flow when a business lines' days cash on hand goes below 60 days. Power can collect up to $40m/year and Transmission $15m/year
  - The Cost Recover Adjustment Clause (CRAC) remains in effect, which is a secondary rate mechanism that triggers when financial reserves go below $0 with a goal to replenish reserves back to $0 quickly.
  - BPA expects the financial reserves policy to trigger a rate surcharge for Power in the amount of $30 million for FY20.
  - BPA expects the financial reserves policy to rebalance Power and Transmission reserves to appropriate levels over time.

FP #4 Liquidity *continued*

Maintain financial reserves for solvency and stability



- The graph shows historic and forecast financial reserves for risk.
- Forecast shows expected value results and is based upon BPA's final rate proposal and BPA's Financial Reserves Policy.
- The Financial Reserves Policy will force a gradual increase in Power's financial reserves, maintaining Transmission financial reserves, and an increase in the Agency's overall reserves over time.
- The Financial Reserves Policy combined with the CRAC have the ability to increase financial reserves quickly if necessary due to extraordinary financial events.

Credit Ratings

- Fitch – **AA Stable**
  - Operating costs are very low, largely due to a predominantly hydroelectric generation fleet. Capital needs relate to reinvestment in the again power-generation assets and transmission investments across the six-state service area.
  - Bonneville's financial profile is very strong, although highly leveraged. Given planned capex and debt issuance, Fitch expects leverage to decline slightly over the next five years, further supporting the ratings. Variability is likely in the short term as a result of variable hydroelectric sales, and is considered in the rating. Liquidity is adequate with the proposed reallocation of reserves and implementation of a financial-reserves policy.[1/]
- Moody's **Aa1 Negative**
  - In 2018, BPA published a new strategic plan that represent a positive step towards creating objectives for leverage and US treasury line availability that did not exist before. The current plan seeks a debt ratio in the 75% to 85% range through 2028, maintaining $1.5 billion of US treasury line availability, and incorporates BPA's reserve targets ranging from 60 to 120 days. However, the implementation of the new strategic goals in the FY2020-2021 rate proposal mostly lessens the decline of BPA's credit quality and generally does not revers the trend of BPA's weakening financial strength that has occurred since 2015. Additionally, not all aspects of BPA's strategic plan are credit supportive such as the continued extension of ENW's nuclear debt. [2/]
- Standard & Poor's, **AA- Stable**
  - The rating reflects S&P's view of: Bonneville's status as a federal agency and ongoing support through federal loans and credit lines. An exceptionally broad and diverse service territory supports the revenue stream. Tiered rates underlying the customer contracts help shield BPA from market volatility by assigning to customers the costs of their energy needs that exceed their allotments of capacity from the federal hydroelectric projects and CGS. BPA's capital spending program is important to maintaining the integrity of its generation fleet and managing forced outage incidents. Bonneville and ENW project substantial capital needs that could add to both organizations debt and consume BPA's Treasury borrowing authority. The utility uses nonfederal financing arrangements, including leases and energy prepayments by its customers, to help preserve federal borrowing capacity.[3/]

1/ Excerpts from Fitch's rating report, page 2

2/ Excerpts from Moody's rating report, page 7

3/ Excerpts from S&P's rating report, pages 3 & 4