Finance Workshop

May 3, 2019

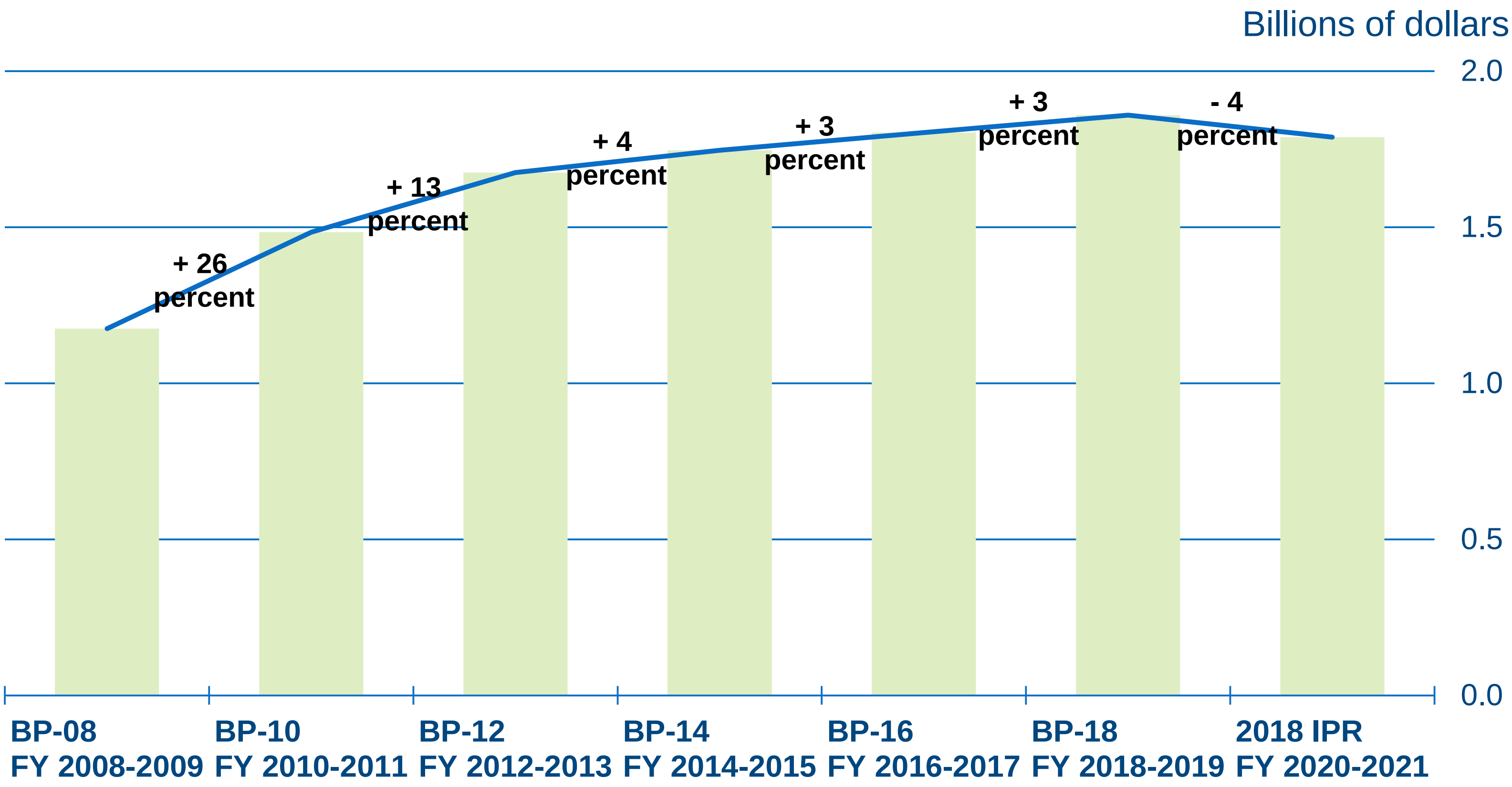
Agenda

- Integrated Program Review update
- Second quarter financial reserves forecast
  - Crosswalk from BP-20 Initial Proposal to Q2
  - Risk adjustment mechanism probabilities
  - BP-20 impacts
  - Reserves not for risk
- Columbia Generating Station decommissioning trust fund

Integrated Program Review Update

Bending the Cost Curve

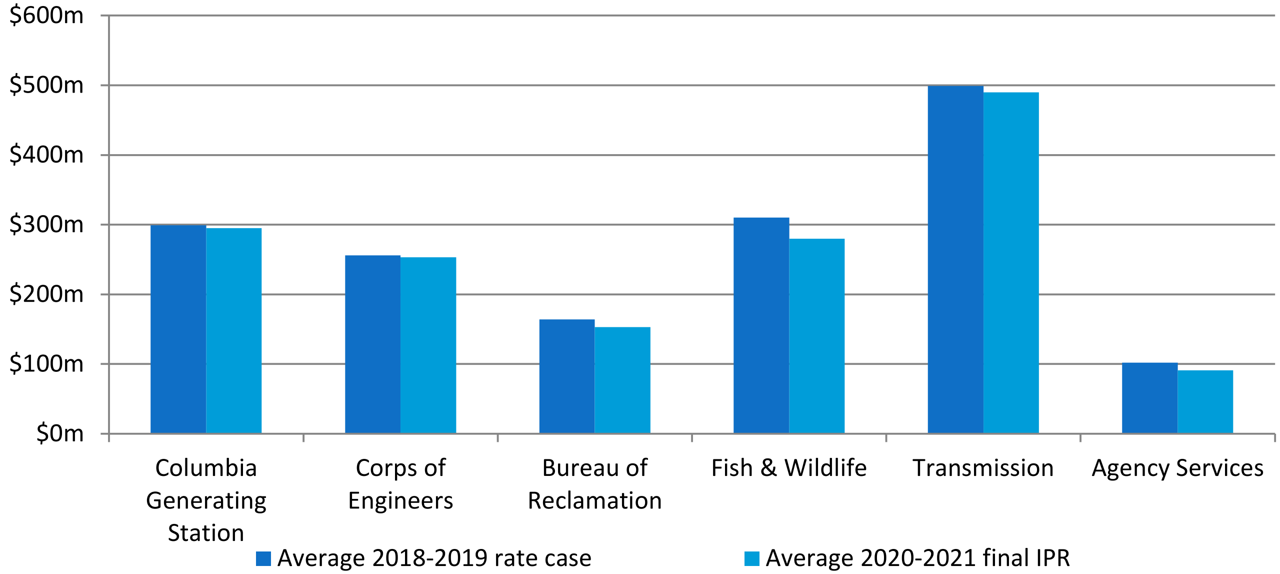
Average annual program costs in billions of dollars and percentage of cost change by rate period.



IPR Update

- In October 2018, BPA concluded the IPR for fiscal years 2020 and 2021 and reduced its costs by $66 million per year compared to the FY 2018-2019 rate period.

- Each major expense program individually took reductions in addition to absorbing inflationary pressures.



IPR Update

- Since the IPR conclusion, BPA has continued to evaluate its programs and spending in key areas:
  - Generating Partners: Corps of Engineers, Bureau of Reclamation, CGS
  - Fish and Wildlife
  - Transmission Operations, Maintenance and Engineering
  - Corporate Services

- Each major expense program significantly reduced its IPR budget from the last rate case while also absorbing inflationary pressures.

- Additional reductions on top of what was already taken would not be prudent at this time.

- BPA will continue to aggressively look for savings during the operating fiscal years 2020 and 2021.

Q2 Financial Reserves Forecast

Second Quarter Forecast

- **BPA's second quarter net revenues forecast** shows that the agency expects to end fiscal year 2019 $70 million above rate case expectations however this is $84 million below rate case expectations when adjusted for debt management actions.
  - **Power Services** expects to end the year with net revenues $92 million below rate case after adjusting for debt management actions. The losses are primarily due to lower sales and higher purchased power expense than expected.
  - The **Transmission Services** net revenues forecast is negative $7 million, which is equal to rate-case forecast.

- **The Reserves forecast** includes BPA's initial leaning of re-allocating $330 million from Transmission to Power due to the error in the Intergovernmental Payments and Collections (IPAC) module of the business unit split model. The final decision on the business line reserves will be made in September after a full review.

Second Quarter Reserves Forecast

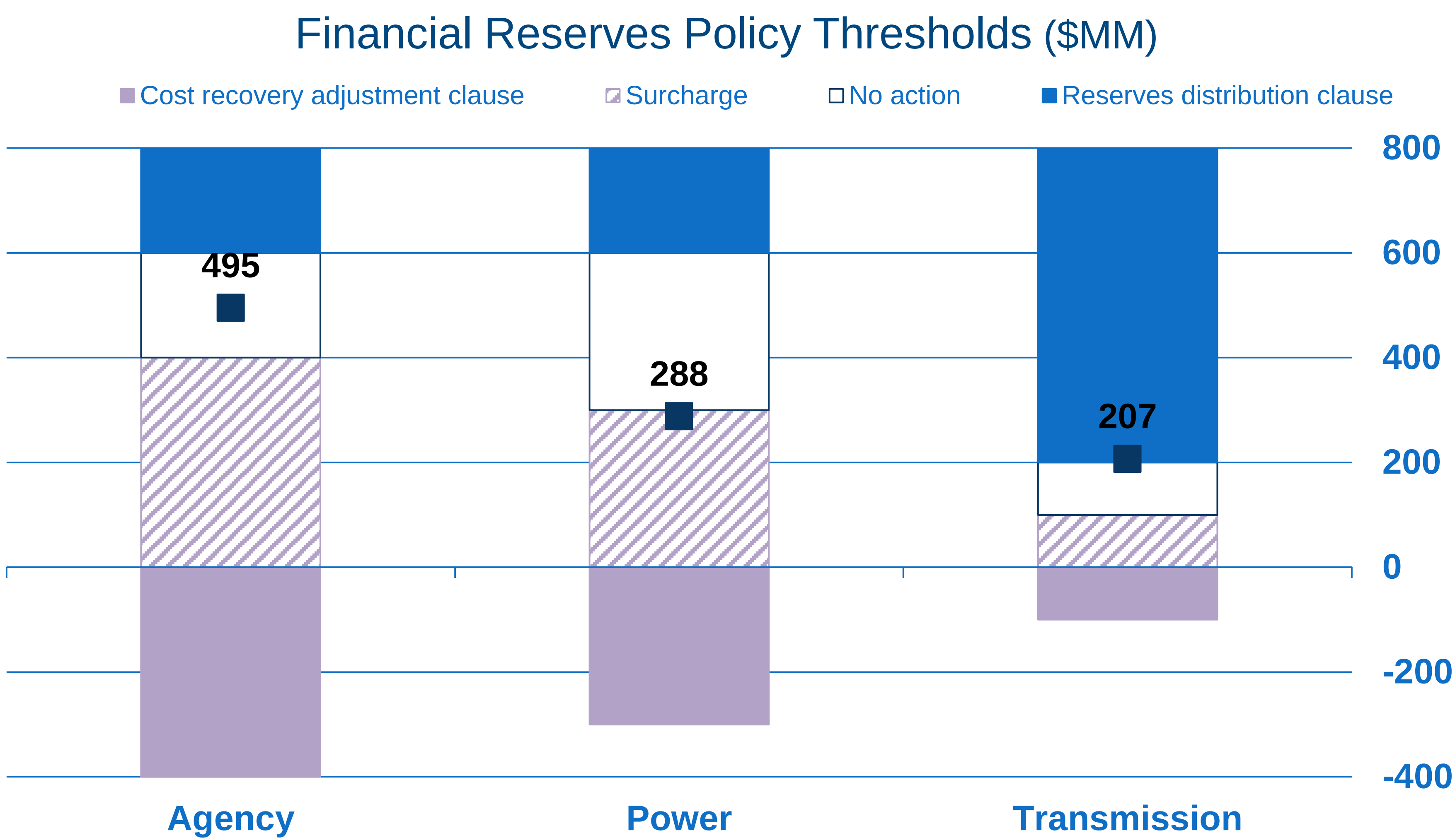
FY2019 Q2 Reserves Forecast - HOSS 16

	(in $ Thousands)	A	B	C	D	E	F	G	H
		BP-18		FY 2019				DELTA	
	POWER	FY 2019	Days Cash	SOY/IP	Days Cash	Q2	Days Cash	(E - C)	(E - A)
1	**PS RESERVES for RISK**	61,000	12	48,088	9	288,052	58	239,965	227,052
2	PS RESERVES not for RISK	78,800		87,067		126,832		39,764	48,032
3	**PS TOTAL RESERVES**	**139,800**		**135,155**		**414,884**		279,729	275,084
	TRANSMISSION								
4	**TS RESERVES for RISK**	368,539	220	539,470	319	206,520	122	**(332,950)**	**(162,019)**
5	TS RESERVES not for RISK	40,000		106,302		115,349		9,046	75,349
6	**TS TOTAL RESERVES**	**408,539**		**645,772**		**321,868**		**(323,904)**	**(86,671)**
	AGENCY								
7	RESERVES for RISK	429,539	62	587,558	86	494,572	74	**(92,985)**	65,033
8	RESERVES not for RISK	118,800		193,370		242,181		48,811	123,381
9	**AGENCY TOTAL RESERVES**	**548,339**		**780,927**		**736,753**		**(44,175)**	**188,414**

Notes:

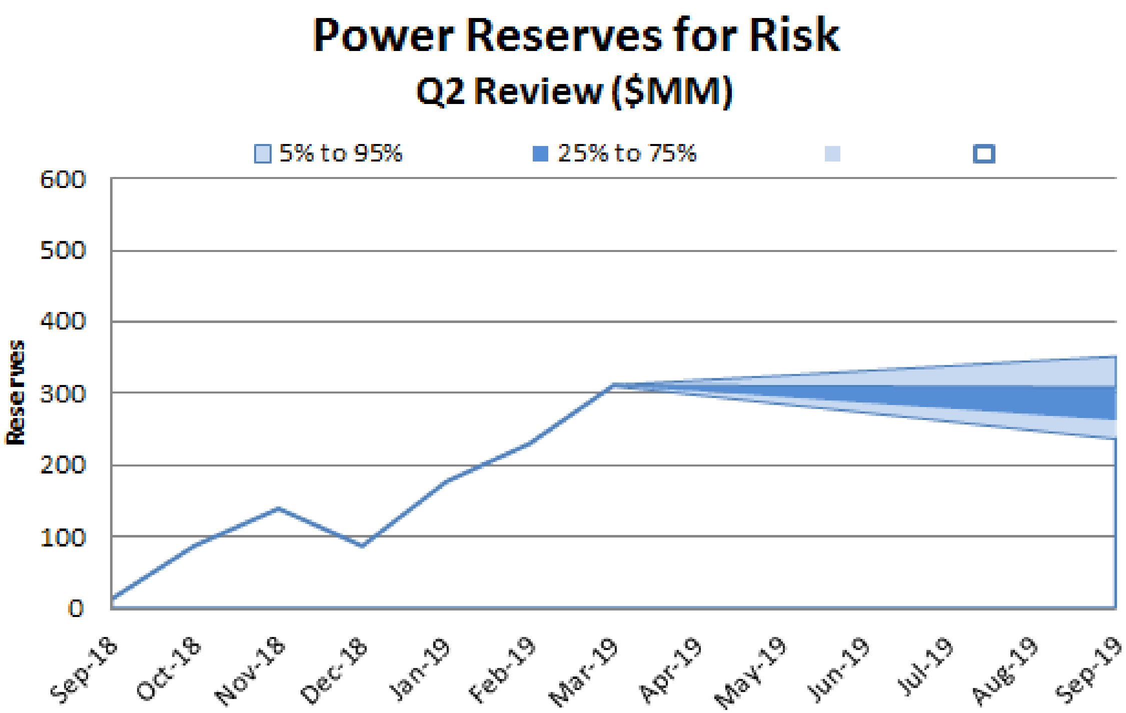
- The next several slides provide forecasts of end-of-FY2019 reserves and the resulting effect on risk adjustments that assume the staff internal leaning that $330 million of reserves are moved from Transmission to Power.

Financial Reserves Update



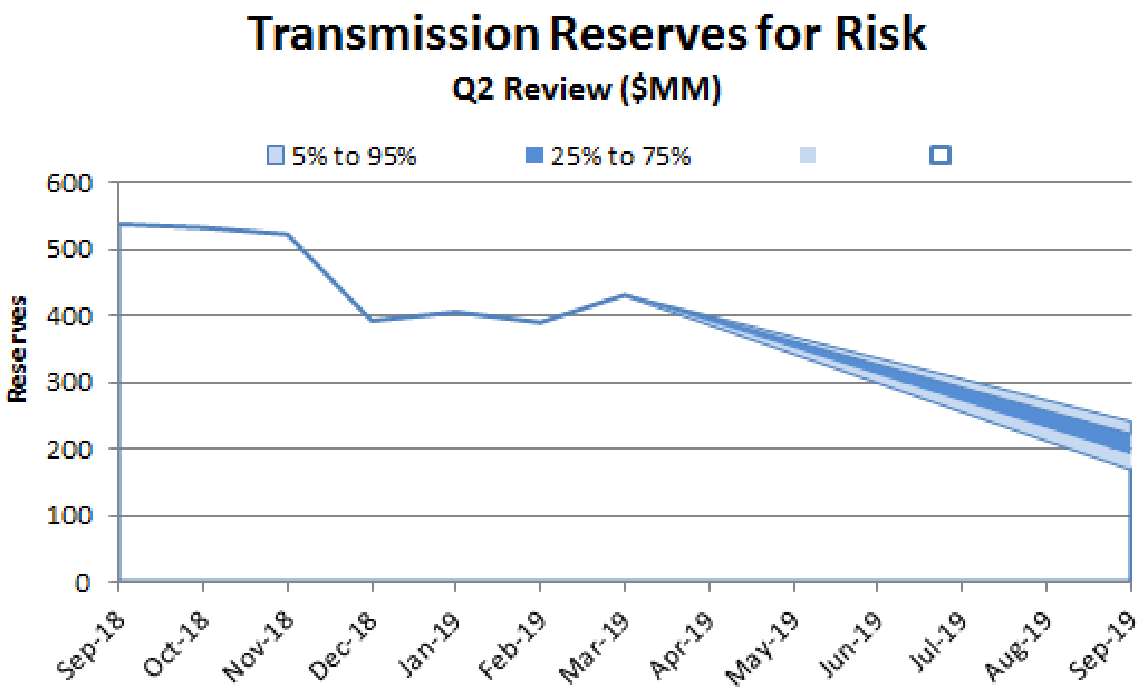
Power Reserves Forecast (end of FY19)

- 5% probability reserves end up less than $238m
- 25% probability reserves end up less than $263m
- 75% probability reserves end up less than $309m
- 95% probability reserves end up less than $352m



Transmission Reserves Forecast (end of FY19)

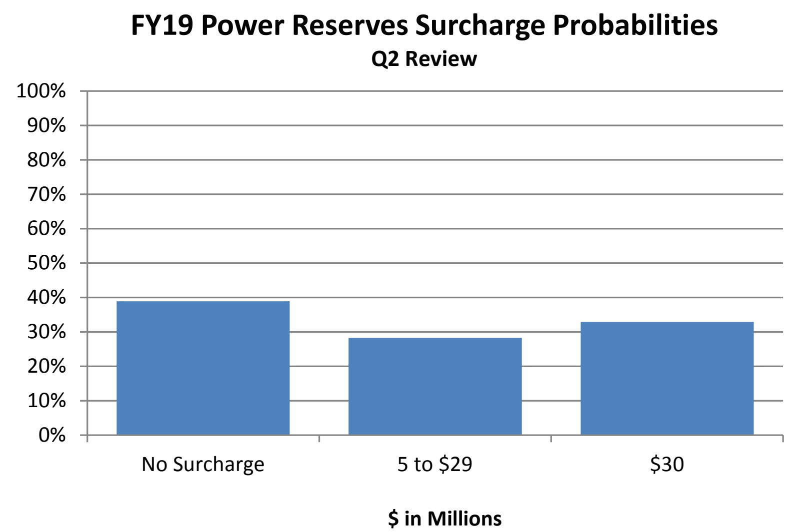
- 5% probability reserves end up less than $170m
- 25% probability reserves end up less than $191m
- 75% probability reserves end up less than $222m
- 95% probability reserves end up less than $241m



Financial Reserves Policy

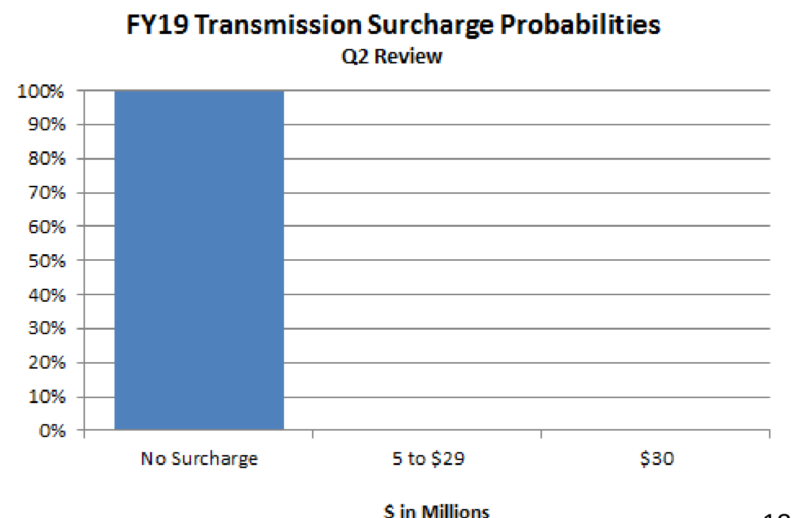
Power Trigger Threshold Tracking

- Probabilities of triggering a Surcharge:
  - 61% chance of a Surcharge
  - 28% chance of a $5-$29m Surcharge
  - 33% chance of a $30m Surcharge
- No modeling scenarios resulted in a CRAC or RDC Triggering.



Transmission Trigger Threshold Tracking

- 2% chance of an RDC.
- No modeling scenarios resulted in a CRAC or surcharge triggering.



BP-20 Impacts

BP-20 Impacts assuming BPA uses the Q2 reserves forecast for the final rate proposal –

- BP-20 revenue requirements interest credits.
  - Power: An interest credit based on the $330 million reserve increase would result in about a $3 million/year interest credit increase.
  - Transmission: no impact on rate levels if Administrator adopts BP-20 settlement; transmission revenue requirement would reflect an interest credit reduction of about $3 million/year.

- Risk adjustments (CRAC and FRP Surcharge).
  - The thresholds that are included in CRAC, RDC and FRP Surcharges in Power and Transmission's General Rate Schedule Provisions will be calculated using the Q2 reserve forecast.
  - Regardless of what reserves forecast is used in the final rate proposal, the final decision on the BU split error will be reflected through calibration when the risk adjustments are calculated in the Fall of 2019.
    - The risk adjustments will be based on FY 2019 actuals.

Reserves Not for Risk

In general, BPA classifies funds as "Reserves Not For Risk" when (i) the funds are, or may be, obligated for a specific purpose; or (ii) the funds misrepresent BPA's cash position, in relation to performance, due to timing differences. The following are general categories of situations, including a general "Other Reserves Not For Risk," that have led BPA to classify certain Financial Reserves as Reserves Not For Risk.

1. **Capital Funds** include amounts that BPA has borrowed or received from customers in advance of anticipated capital spending.
2. **Liquidity Facility Borrowings** include amounts from liquidity facility borrowings from the U.S. Treasurer.
3. **Funds Held for Others** include amounts that have been deposited by third parties for specific use by BPA in satisfying contractual requirements.
4. **Cash Timing Differences** include amounts that are earmarked to be paid or received in a fiscal year that are different than the associated operations.
5. **Other Reserves Not For Risk** includes other amounts that do not fall within any of the four categories above, but that BPA has determined are not available for risk mitigation or liquidity planning in the rate-setting process.

Q2 Reserves Not for Risk

Power

	A	B	C	D	E
POWER	EOY FY18 Actuals	IP Forecast EOY FY19	Q2 Forecast EOY FY19	Delta (C - A)	Delta (C - B)
Total Reserves Attributed to Power	191	135	415	224	280
1. Capital Funds	0	0	0	0	0
2. Liquidity Facility Borrowings	0	0	0	0	0
3. Funds Held for Others	106	50	32	-74	-18
4. Obligated Funds for Accrual/Cash Timing Differences	73	37	95	22	58
5. Other Reserves Not for Risk	0	0	0	0	0
Less: Reserves Not for Risk (RNFR) Attributed to Power	179	87	127	-52	40
Total: Reserves for Risk (RFR) Attributed to Power (PS Reserves)	13	48	288	275	240

Transmission

	A	B	C	D	E
TRANSMISSION	EOY FY18 Actuals	IP Forecast EOY FY19	Q2 Forecast EOY FY19	Delta (C - A)	Delta (C - B)
Total Reserves Attributed to Transmission	648	646	322	-327	-324
1. Capital Funds	70	44	62	-8	18
2. Liquidity Facility Borrowings	0	0	0	0	0
3. Funds Held for Others	41	31	22	-18	-9
4. Obligated Funds for Accrual/Cash Timing Differences	0	31	31	31	0
5. Other Reserves Not for Risk	0	0	0	0	0
Less: Reserves Not for Risk (RNFR) Attributed to Transmission	110	106	115	5	9
Total: Reserves for Risk (RFR) Attributed to Transmission (TS Reserves)	538	539	207	-331	-333

Columbia Generating Station Decommissioning Trust Fund

Columbia Decommissioning Study

- In February 2019, BPA and Energy Northwest (EN) received the first ever site-specific decommissioning study from TLG Services.

- The study estimates the cost to decommission the Columbia Generating Station which includes:
  - Dismantling the power plant and removing low level waste.
  - Storage of the spent nuclear fuel and high level waste.
  - Returning the site to be available for other purposes.

Columbia Decommissioning Study

The study looked at two methods to decommission the plant – DECON and SAFSTOR.

- **DECON** is defined as “the alternative in which the equipment, structures, and portions of a facility and site containing radioactive contaminants are removed or decontaminated to a level that permits the property to be released for unrestricted use shortly after cessation of operations.”

- **SAFSTOR** is defined as “the alternative in which the nuclear facility is placed and maintained in a condition that allows the nuclear facility to be safely stored and subsequently decontaminated (deferred decontamination) to levels that permit release for unrestricted use.” Decommissioning is required to be completed within 60 years, although longer time periods will be considered when necessary to protect public health and safety.

Decommissioning Trust Fund

- BPA and EN are using DECON with a plant termination date of FY 2044 for both the Trust Fund target and the accounting Asset Retirement Obligation (ARO) treatment.
- The TLG study estimated the total cost in 2018 dollars to be $1.43 Billion with a nominal value of $3.57 Billion.
- BPA currently has ~$350 million in the CGS decommissioning trust fund and contributes ~$4 million annually increasing at 4% per year.
- BPA does not believe it is necessary to adjust any funding contributions for BP-20:
  - BPA has been contributing towards the NRC requirement plus 25%.
  - The study provided a detailed draw schedule for DECON work starting in 2044 through 2097 which for the first time allowed BPA to model the draws and continued earnings on the portfolio over that time period. This alleviated the need to have the full balance of the target available in 2043. However, BPA is still modeling no further contributions to the fund beyond 2043.
  - Given the above, under the current contribution schedule, if the real rate of return on the portfolio is 4.2% or greater, BPA expects that the portfolio will be able to fully fund the DECON scenario starting in 2043. As a point of reference the portfolio has historically returned a real rate of return in excess of 4.5%.
- BPA intends to review future contributions to the trust fund and key assumptions which will be discussed with customers in pre-rate case workshops prior to BP-22.

Decommissioning ARO

- An asset retirement obligation (ARO) is an accounting concept that represents the legal requirement to retire a tangible asset.

- In the case of CGS, there is a legal requirement to decommission the plant, restore the site to its previous condition, store the spent fuel, and to decommission the spent fuel storage site.

- Prior to FY 2019 BPA reported the ARO as calculated by EN. In FY 2019 EN will be changing their calculation methodology to comply with a standards update from their accounting standard setting body, the Governmental Accounting Standards Board (GASB).

- This change will require BPA to calculate a different value of the ARO to comply with guidance from the Financial Accounting Standards Board (FASB).

- The FASB requires that the ARO be calculated by escalating the study costs to the appropriate future value and then discounting to a present value based upon the entity's credit adjusted risk-free rate.

Financial Statement Impacts

- Balance sheet at March 31, 2019:
  - Asset retirement obligation (ARO) liability increased by $595 million.
  - Nonfederal generation asset increased by $595 million for the capitalization of the asset retirement cost (ARC).

- Income statement at Oct. 1, 2019:
  - Columbia O&M decreases by the amount of the trust fund contribution, which will still appear as a cash outflow in the statement of cash flows.
  - Amortization expense will grow:
    - The ARC component of nonfederal generation asset will be amortized straight-line through FY 2044 like the CGS asset.
    - The accretion expense of the ARO liability is 4-5% of the liability which compounds over time.
  - Interest income will increase by the amount of interest earned on the decommissioning trust fund.
  - Other income (expense) is a new line in the non-operating section of the income statement. It recognizes realized gains and losses on the trust fund.

Interaction with Rates

- Rate Case:
  - It may be possible to include these changes in the BP-20 rate case. This will be discussed in the rate case meeting following this workshop.
  - These changes will be included in the BP-22 rate case and discussed in pre-rate case workshops.
  - We expect no net change to the revenue requirement.

- At a minimum, the 2020-2021 Slice true-up will incorporate the accounting changes related to the new study.
  - Columbia O&M reduced by the removal of the fund contribution.
  - Amortization expense increased by the amortization of the ARO and the accretion of the ARO.
  - Interest income changes by the interest earned on the fund.
  - Other income (expense) reflects realized gains or losses on the fund.
  - Minimum required net revenues calculation:
    - Add fund contribution as a cash requirement.
    - Amortization expense will track with income statement.
    - Interest income and other income (expense) related to the fund removed because these funds never appear in the Bonneville Fund.

Potential Changes to Slice True-up

		FY 2020 forecast ($000)		Adjusted 2020	Differences
1	**Operating Expenses**				
2	**Power System Generation Resources**				
3	**Operating Generation**				
4	COLUMBIA GENERATING STATION (WNP-2)	266,571		262,471	(4,100)
5	BUREAU OF RECLAMATION	153,609		153,609	-
6	CORPS OF ENGINEERS	252,557		252,557	-
7	LONG-TERM CONTRACT GENERATING PROJECTS	12,709		12,709	-
8	**Sub-Total**	**685,445**		**681,345**	(4,100)
78	**Bad Debt Expense**	-		-	-
79	**Other Income, Expenses, Adjustments**	-			-
80	**Depreciation**	138,781		138,781	-
81	**Amortization**	320,370		378,139	57,769
82	**Total Operating Expenses**	**2,021,550**		**2,075,219**	53,669
83	**Other Expenses and (Income)**			-	-
84	Net Interest Expense	284,319		275,903	(8,415)
85	LDD	43,294		43,294	-
86	Irrigation Rate Discount Costs	21,375		21,375	-
	Other Expense and (Income)	-		(5,100)	(5,100)
87	**Sub-Total**	**348,988**		**335,472**	(13,515)
88	**Total Expenses**	**2,370,538**		**2,410,691**	40,153
116	**Minimum Required Net Revenue Calculation**				
117	Principal Payment of Fed Debt for Power	163,736		163,736	-
118	Repayment of Non-Federal Obligations (EN Line of Credit)	227,000		227,000	-
119	Repayment of Non-Federal Obligations (CGS, WNP1, WNP3, N. Wasco, Cowlitz Falls)	100,270		100,270	-
120	Irrigation assistance	24,319		24,319	-
121	**Sub-Total**	**515,325**		**515,325**	-
122	Depreciation	138,781		138,781	-
123	Amortization	320,370		378,139	57,769
124	Capitalization Adjustment	(45,937)		(45,937)	-
125	Non-Cash Expenses	-		-	-
126	Customer Proceeds	-		-	-
127	Cash freed up by DSR refinancing	16,590		16,590	-
128	Prepay Revenue Credits	(30,600)		(30,600)	-
129	Non-Federal Interest (Prepay)	9,826		9,826	-
	Contribution to decommissioning trust fund			(4,100)	(4,100)
	Gains/losses on decommissioning trust fund			(8,415)	(8,415)
	Interest earned on decommissioning trust fund			(5,100)	(5,100)
130	**Sub-Total**	**409,030**		**449,183**	40,153
131	Principal Payment of Fed Debt and Non-Fed Debt plus Irrigation assistance exceeds non cash expenses	106,295		66,141	(40,153)
132	Minimum Required Net Revenues	**106,295**		**66,141**	(40,153)

FOR ILLUSTRATION PURPOSES ONLY

Based on BP-20 Initial Proposal.

Costs associated with the decommissioning trust are only for illustration purposes.

Appendix

TLG Credentials

- Over the past 36 years, TLG has provided decommissioning financial planning services to owners of 85%-90% of US and 100% of Canadian commercial nuclear units, including:
  - Shippingport (first commercial reactor)
  - Cintichem (production reactor)
  - Trojan
  - Maine Yankee
  - Mallinckrodt Medical (hot cells/cyclotron vault)
  - ABB/Combustion
  - Worcester Polytechnic Institute (research reactor)
- Research reactors, industrial, and government facilities, and:
- Reactors in South Africa, Italy, and Japan, Sweden, UK, and to the IAEA for reactors in Kazakhstan, Ukraine and Lithuania.
- TLG's decommissioning cost estimates have been accepted by the US NRC for financial planning and demonstration of financial assurance.

DECON Cash Flows (2018 dollars)