

# Financial Plan Refresh: Grounding Workshop #2

November 16, 2021

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STRENGTHEN  
FINANCIAL HEALTH

# Agenda

- Comments – October 19<sup>th</sup> workshop
- Customer Presentation Process & Parameters
- Grounding Session Topics
  - Depreciation & Rates
  - Repayment Modeling (continued)
  - Financing Tools
  - Leverage
  - Power Marketing Administration Practice
- Next Steps

# Oct 19<sup>th</sup> Comments Review

- Three parties submitted comments and questions: NIPPC, PPC and NRU.
- Comments and requests, generally fell into one of the following categories:
  - Comments supporting the scope of the FPR; the importance of grounding sessions.
  - Comments highlighting the importance of continued focus on cost management and value delivery.
  - Comments/requests asking for detailed or specific additional data and information.
  - A request to record the workshops.
- Written responses to the comments is available at [bpa.gov](http://bpa.gov)

# Public Presentations

- In response to a request to accommodate stakeholder presentations as part of the public process for the Financial Plan Refresh, BPA will extend the existing workshops in January by 1 hour, allocating that hour for public participants to make their own presentations.
- BPA believes hearing public participants early in this process will allow enough time for BPA to consider the information provided and incorporate it into future workshops where appropriate.
- Workshop dates are January 12<sup>th</sup> and 26<sup>th</sup>.
- BPA would appreciate written requests be submitted to [communications@bpa.gov](mailto:communications@bpa.gov) no later than two weeks prior to the workshop at which you wish to present.
- Instructions and the presentation request form are provided on the Financial Plan Refresh webpage at [bpa.gov](http://bpa.gov).

# Public Presentations

General requirements for public participant presentations are as follows:

- Please ensure presentation material is relevant to the stated scope of the FPR project
- The presentation must include a disclosure message on the first slide indicating that the following content was developed without BPA input and may not reflect BPA's opinions or views. Specific language is provided in the instructions on [bpa.gov](http://bpa.gov).

# Grounding Session: Depreciation & Rates

# What Is Depreciation?

- FERC defines depreciation as “**the loss in service value**” that can be caused by “wear and tear, decay, action of the elements, inadequacy, obsolescence, changes in the art, changes in demand and requirements of public authorities.” 18 C.F.R. § 101; Federal Power Commission Order No. 218, 25 Fed. Reg. 5,014, 5,029 (June 7, 1960).
- The service value equals:
  - Original cost of the asset, direct and indirect plus any AFUDC
  - End of life costs such as the cost to remove it net of any salvage value
- Depreciation serves as a source of cash in a utility’s revenue requirement since no one actually pays cash for depreciation. The resulting cash flow can be used to:
  - Repay debt
  - Finance capital investments
  - Build reserves

} Indirect revenue financing

# What Do We Depreciate?

- Plant is depreciated regardless of the source of financing.
  - Generally tangible, physical assets
- Plant to be depreciated does not include regulatory assets e.g. fish & wildlife capital, South of Alston. These assets are “amortized”.
- Regulatory assets are generally amortized over a fixed period of time.
  - Like depreciation, it spreads the cost over a fixed period.
  - Generally recorded as amortization expense.



# How Is Depreciation Calculated?

- For BPA general plant and Transmission assets, we classify assets using FERC's system of accounts.
- BPA uses the group method of depreciation for most types of assets rather than tracking and depreciating individual components.
- Generally, depreciation is calculated as the total value of the account times an accrual rate.
  - The accrual rate is from BPA's most recent depreciation study so it may change over time.
  - The rate takes into account the average service life of the assets, the net salvage value, the accumulated depreciation for the account, and the total remaining depreciation.
  - A few accounts, e.g. software, are depreciated using the straight-line method.
- Fed Hydro assets are different.
  - An accrual rate is not used.
  - All Corps of Engineers and Bureau of Reclamation assets are depreciated over a fixed 75-year period.

# Examples: Trans. Asset Categories

FERC Account	Asset Type	Life (Years)	Salvage Value	Accrual Rate
355	Poles/Fixtures	57	-100	3.80%
356	Overhead Conductor	60	-60	3.62%
392.2	Helicopter	15	40	3.08%
392.3	Airplane	11	20	7.53%

- *Life* is the average service life for the asset category.
- *Salvage Value* represents a percentage of the original cost of the asset.
  - The negative salvage values mean that BPA will need to pay to retire the asset.
  - The positive salvage values mean that others will pay BPA for it when we retire the asset.
- *Accrual Rate* is the multiplier used to calculate depreciation.
- Poles/Fixtures, Account 355: assuming an asset is retired at 57 years, we would expect to recover about twice what it originally cost to install.
- Helicopter, Account 392.2: assuming the asset is retired at 15 years, we would expect depreciation to recover about 60% of the original cost.

# How Is Depreciation Treated In Rates?

- Depreciation is included as a cost in the revenue requirement.
  - Similar to Investor Owned Utilities and some public utilities and cooperatives.
- Depreciation is forecast as part of the revenue requirement development.
  - Power depreciation forecasts apply the straight-line convention.
  - Transmission depreciation uses weighted averages.
    - Depreciation is calculated in block for lines, substations, and general plant which then feeds the segmented revenue requirement.
    - Historical data is used to weight the accrual rates for accounts that fit into these categories.
    - Why use weighting? Forecast data is not available by FERC account so a proxy method is needed.

# An Exception

- Not all depreciation is included in revenue requirements.
- Transmission Projects Funded in Advance (PFIA) includes projects funded by customers that are exclusively for their use.
  - The advance funding is recognized as revenue over the asset's life and offsets depreciation.
- Transmission rate cases exclude these revenues and costs because they are not intended to be recovered from all customers and should not affect their rates.
- This approach produces a result similar to how “contributions in aid of construction” (CIAC) are treated by other utilities.
- We are not aware of any utility adjusting the depreciation in their revenue requirement or cost of service study for general revenue financing, i.e. funds raised through rates and not associated with CIAC.

# Assets Financed Non-Federally

- Power:
  - Generally for non-Federal resources, e.g. Columbia Generating Station, we do not depreciate them, we amortize the cost.
  - The assets are generally amortized over the life of the license of the resource.
- Transmission:
  - Lease purchased assets are treated as if they are Federal assets and are depreciated as described earlier.
  - Non-lease purchased assets, such as Hooper Springs, are amortized over the life of the lease agreement.

# Grounding Session: Repayment Modeling Continued

# Critical Years

- Recall that the repayment model is seeking the lowest debt service that can be held level over the repayment period (levelizing).
- Debt service can be propped up by a “critical year”.
- A critical year exists when no discretionary principal payments are being made. Only debt due in that year is being paid.
- The critical year is the lowest point at which the repayment model can “levelize” total debt service.
- If it is driven by historical debt, we will generally assume it is refinanced into a future year.
  - This is not always possible if the historical debt is at the end of its maximum possible term.
- If it is driven by projected debt, we will generally change the term and place it where discretionary payments are being made.

# “Hardwiring” Repayment

- Rates are set to meet two tests.
  1. Income statement test: sufficient revenue to meet the forecast of expenses.
  2. Cash flow test: sufficient cash to make principal payments.
- Sometimes more cash is produced than is needed for principal payments calculated by the repayment model.
- In these cases, repayment is increased above what the model is calculating to fully utilize the available cash flow.
  - This results in added debt repayment with no negative rate impact.
- Fixing the amount of repayment is called “hardwiring”.



# Projecting Federal Bond Issuances

- Projected borrowing is a major input to the repayment model.
- Determining the placement of projected debt is an iterative process.
- Placement can be adjusted to:
  - Avoid critical years
  - Minimize premiums in the rate period being studied
    - Premiums may occur when bonds are repaid early; increases debt service.
    - Placing projected debt in the years where premiums occur can eliminate the premiums.
  - Ensure sufficient bond placement for Regional Cooperation Debt 2 transactions.
    - May also avoid premiums.

# Treasury Bond Terms

- Maximum term for any single debt issuance is 30 years per Treasury MOU.
  - Bonds can be refinanced so that debt exists as long as the associated repayment period.
- In practice, terms are much shorter for a number of reasons, including borrowing authority constraints and anticipated RCD2 transactions.
- Maximum period debt can be outstanding
  - Transmission construction bonds – 35 years
  - Transmission environment bonds – 15 years
  - Power direct funding bonds – 45 years
  - Fish & wildlife – 15 years
  - Agency services/IT – 6 years
- Given the interest rate environment over the past several years, bonds have typically been issued with “make whole” call terms.

# Congressional Appropriations

- BPA does not directly receive capital appropriations which it must repay.
- BPA is responsible for the repayment of appropriations received by the Corps of Engineers and Bureau of Reclamation.
- Primarily the Columbia River Fish Mitigation (CRFM) program.
  - 50 year maximum term
  - Can be repaid early without premiums
  - Distinct from CRFM expense appropriations, formerly treated as a regulatory asset and capitalized.
- May occasionally see small amounts of appropriations for other Corps and Reclamation projects that had joint purposes.

# Non-Federal Debt Placement

- The placement of non-Federal debt maturities can be as important as the placement of Federal debt.
  - Large peaks of non-Federal debt repayment can prop up debt service.
  - In the past, Power non-Federal payments were so high in some years that no Federal payments were scheduled.
  - Generally we try to avoid large peaks of debt repayment in favor of a smoother payment stream.
- Projected RCD2 refinancings have a maximum maturity of 2044, when the current CGS license expires.

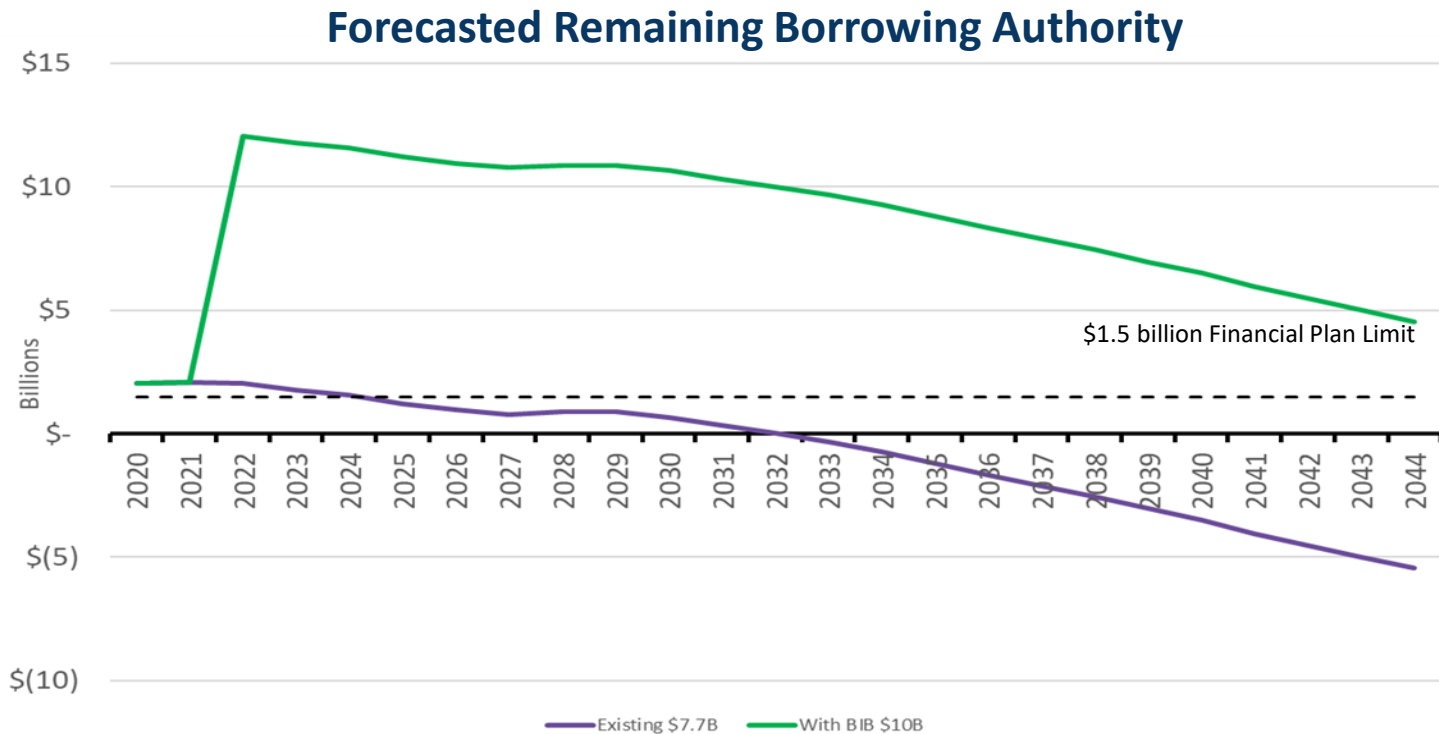
# Grounding Session: Financing Tools

# Borrowing Authority

- Available to both Power and Transmission
- \$17.7b limit, assuming signing of the Bipartisan Infrastructure Bill (BIB)
  - Based on six separate statutes with varying restrictions
    - ARRA is the most restrictive, with Buy America clauses
  - Revolving - as bonds are paid, replenishes borrowing authority
  - Borrowing authority available under BIB - cannot use more than \$6 billion through 2028
- Financial Plan objective to maintain \$1.5b of availability
- Includes ability to issue both fixed and variable rate debt
- Variable rate debt
  - Provides flexibility
  - Reprices every three or six months

# Current Status

- Congress has passed the Bipartisan Infrastructure Bill; it is awaiting signature by the President.
- It provides \$10 billion of additional borrowing authority, dramatically changing BPA's borrowing authority outlook. While this solves the near-term borrowing authority issue, it does not address the larger debt management issues.



Note: Green line does not reflect limitation of BIB borrowing authority – use limited to \$6B through 2028; for simplicity, shown as all immediately available

# Appropriations

- BPA has the responsibility to repay Congressional appropriations provided to the Corps of Engineers and the Bureau of Reclamation for work done on the “power purpose” of the dams.
- BPA’s obligation begins when the capital investments are completed and placed in service
  - Appropriation funds spent before the assets are placed in service are considered “unscheduled”
- The repayment period is “not to exceed 50 years” for Power.
- Paying off appropriations does not restore access to US Treasury borrowing authority.



# Lease Purchase

- Available only to Transmission. Program Summary:
  - A third party enters into a 5-7 year line of credit (LOC) agreement with a bank with future BPA lease payments as collateral.
  - BPA and the third party enter into a master lease agreement.
  - Supporting lease schedules match the LOC payments (plus third party operating costs).
  - The third party borrows on the bank LOC and BPA acts as the construction provider.
  - When the assets have been placed in service, the LOC is refinanced to bonds. The term of the bonds plus the LOC time cannot exceed the asset lives.
- This \$2.1b program has helped retain BPA US Borrowing availability.
- Currently all LOC have been fully drawn and BPA is not currently forecasting new short term lease agreements.
- However, BPA has actively been assessing the lease purchase program to:
  - Develop a more streamlined approach to evaluate and manage lease purchase projects.
  - Develop different financing options.
  - Evaluate near-term upcoming projects for lease purchase eligibility.

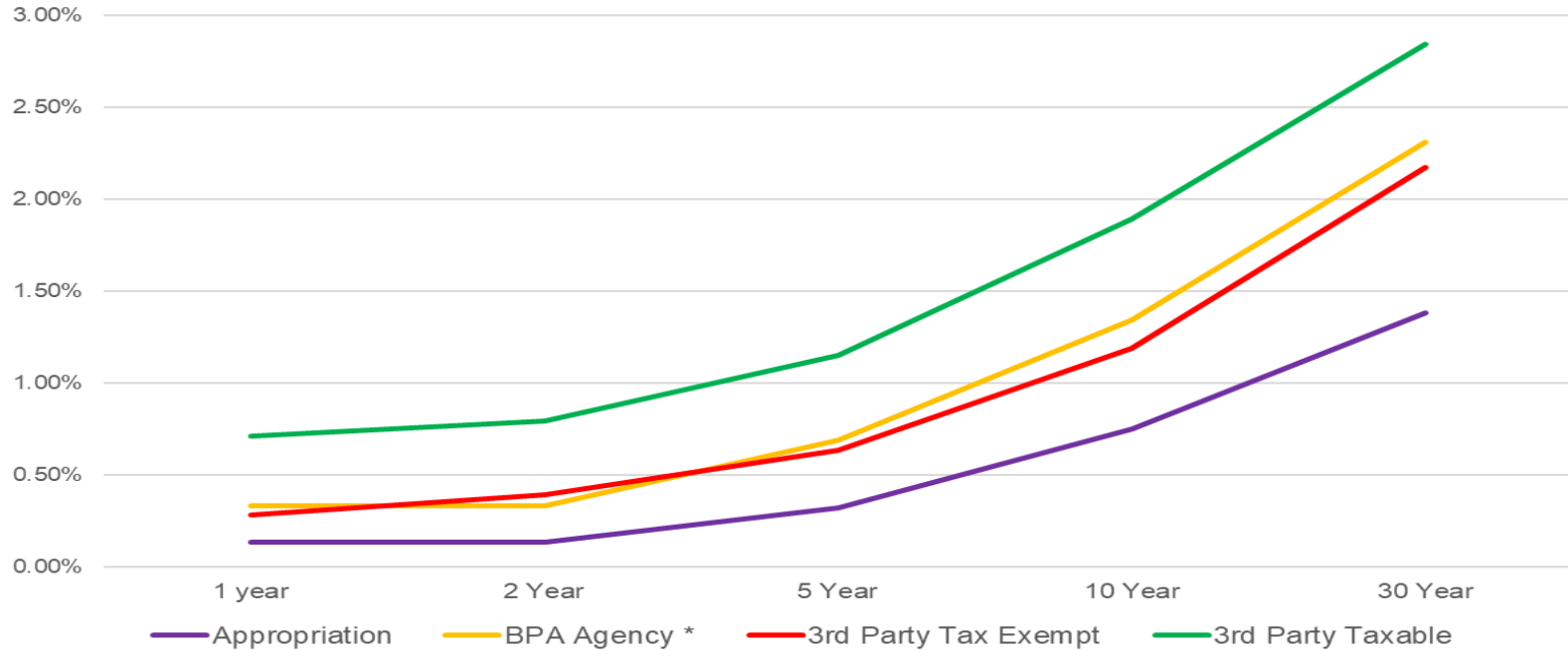
# Regional Cooperation Debt

- Regional Cooperation Debt is available to both the Power and Transmission. Refinancing of RCD creates capacity to accelerate the payment of Treasury Bonds.
- Under statute, BPA cannot issue bonds directly to the market.
- Through cooperation with Energy Northwest (EN) and under the net billing agreements, BPA has been able to extend the maturities on EN bonds.
- The EN Board approved a motion of support to issue up to \$3.5 billion in tax-exempt bonds between 2021 and 2030. The bonds will be placed to mature no later than 2044.
- Once these bonds are paid off, they cannot be re-issued and our access to the lower tax exempt interest rates is gone

# Other Non-Federal

- Customer Prepay (Power Only)
- Miscellaneous Leases
  - Power
    - Cowlitz Falls Hydro Project
    - Northern Wasco Hydro Project
  - Transmission
    - Lower Valley
    - Hooper Springs
    - Antelope-Fossil Transmission Lines & Substation
    - Minor Various Other

# Interest Rate Forecast\*\*



- Historically, tax-exempt has been the least expensive, followed by US Treasury bonds, with taxable being the most expensive.
- Rates on appropriated debt are provided to BPA by the Bureau of Fiscal Services.

\*Rate that BPA pays on US Treasury bonds

\*\*From 2021 Interest Rate Forecast published in BP22 documentation, assuming debt issued in 2021

# Grounding Session: Leverage

# General

- BPA uses “leverage” as shorthand for a debt to asset ratio.
- Not all debt to asset ratios are the same.
  - Simplest is total liabilities divided by total assets.
  - More refined is to look at physical assets, “revenue generating assets”.
  - Some (not BPA) include financial reserves or working capital on the asset side.
  - Some (not BPA) include pension liabilities as debt.
  - BPA includes deferred borrowing (a BPA concept) as debt.
  - Some utilities are referring to how much of its capital program is financed with debt in each year, e.g. 60% means that it will debt finance 60% of its capital program.
- Not all references to “leverage” are the same.
  - To BPA, it is in reference to its debt to asset ratio formula.
  - To Fitch, leverage is in reference to its debt-to-funds available for debt service (debt to FADS) calculation.

# BPA's Formula

## Debt = Sum of:

Non-Federal Debt (e.g. RCD, lease purchase)  
Capital Leases  
Power Prepay  
US Treasury Bonds  
Appropriations  
Deferred Borrowing

## DIVIDED BY

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## Assets = Sum of:

Plant Net of Accumulated Depreciation  
Non-Federal Generation Asset Net of Accumulated Amortization  
Construction Work in Progress (CWIP)

# Grounding Session: Power Marketing Administration Practice



# What Do the Other PMA's Do?

- Western (WAPA), Southwestern (SWPA), and Southeastern (SEPA) all receive annual appropriations.
  - Only WAPA has borrowing authority but it is not for its use to finance its capital construction.
  - None have non-Federal debt like BPA.
- The PMA's are dependent on customer financing of capital projects.
  - It is difficult to get appropriations, particularly for partner agencies.
  - They tend to rely on contractual arrangements rather than specific rate mechanisms or designs.
  - In budget documents, it is identified as “alternative financing.”
- “Alternative Financing”
  - Rates are designed to recover capital funding contributions.
  - The funds for capital are managed and tracked separately.
- WAPA power customers, e.g. Parker-Davis project, may provide funds in advance for O&M and capital projects and receive credits on their future bills.

# Next Steps

- Please submit written questions and feedback related to the content shared today to [communications@bpa.gov](mailto:communications@bpa.gov) by Nov. 30<sup>th</sup> with “Financial Plan Refresh” in the subject line.
- The next Financial Plan Refresh workshop is scheduled for January 12<sup>th</sup>, 2022.

# Appendix

- BPA's depreciation studies were posted externally during the development of the Leverage Policy. They can be found at:
  - 2016 study. <https://www.bpa.gov/Finance/FinancialPublicProcesses/Financial-Reserves-Leverage/frpdocs/Depreciation%20Study%20implemented%20in%202018.pdf>
  - 2012 study. <https://www.bpa.gov/Finance/FinancialPublicProcesses/Financial-Reserves-Leverage/frpdocs/Depreciation%20Study%20implemented%20in%202012.PDF>