BPA Appropriations Refinancing Act
Implementation Steps in 1996 Final Rate Proposal
May 7, 1996

Step 1: Determine principal amounts to be refinanced

Step 2: Determine new principal for each investment being refinanced:

A. Adjust to interest rates on certain principal amounts to be refinanced
B. Construct debt service stream for each investment to be refinanced
C. Calculate present value of debt service stream for each investment
D. Add a prorata share of $100 million to the present value total determined for each investment in Step 2C

Step 3: Assign interest rates to new principal amounts

Step 4: Recalculate IDC for investments projected to be placed in service in FYs 1997-2001

Step 5: Assign interest rates for yield curve to investment projected to be placed in service in FYs 1997-2001

Step 6: Run repayment studies

Step 7: Incorporate repayment study results in functionalized revenue requirements

BPA Appropriations Refinancing Act
Implementation Steps 1, 2, and 3 in 1996 Final Rate Proposal

This attachment to Chapter 9 addresses implementation of subsections (b) and (c) of the BPA Appropriations Refinancing Act in BPA's 1996 Final Rate Proposal. These subsections in the Act cover the refinancing transaction, wherein principal is reset and interest rates are reassigned for outstanding FCRPS appropriations.

Step 1: Determine principal amounts to be refinanced

Refinancing covers principal associated with capital investments funded by appropriations that remains outstanding (unrepaid) at end of FY 1996. (The Act refers to the principal amounts that are to be refinanced as "old capital investments" Subsections (b)(1), (a)(4), and (a)(2)).

Includes:

- The FCRPS portion of COE and Reclamation capital investments that have been funded by appropriations
- BPA transmission capital investments that were funded by appropriations until BPA fully implemented the Federal Columbia River Transmission Act in the late 1970's
- Rate proposal projects these principal amounts outstanding will total $6,807 million at the end of FY 1996, with a weighted average interest rate of 3.5 percent. See Attachment 5 of this chapter
- This projection is based on:
  - Audited FY 1995 FCRPS financial statements, including credits on appropriated debt for accumulated property transfers
  - COE and Reclamation investment projections for FY 1996, updated since BPA's 1995 rate proposal to reflect revised fish migration and other investment plans/budgets
  - Updated projection of the portion of the FY 1996 amortization payment scheduled in BPA's 1995 rate filing that will be applied to appropriations principal
  - Continuation of RA 6120.2 policy for calculating IDC and assigning interest rates through FY 1996

Excludes:

- Principal outstanding on bonds that BPA has issued to Treasury, including bonds issued to "direct fund" COE and Reclamation investments under Pub. L. 102-486
- Irrigation assistance
- Debt issued by third parties that is secured by BPA, e.g., Washington Public Power Supply System debt

Step 2: Determine new principal for each investment being refinanced

A: Adjustments to interest rates on principal amounts to be refinanced:

- The Act specifies that no changes will be made in repayment periods (due dates) or in interest rates (including IDC rates) for investments placed in service prior to FY 1995. Subsections (b)(3)(A)(i) and (b)(3)(B)(i), respectively.
- Subsection (b)(3)(B)(ii), however, effectively calls for adjustments to interest rates on appropriations investment placed in service in FYs 1995-1996. These adjustments are made only for purposes of determining new principal amounts as part of the refinancing transaction. The adjustments are made on FY 1995 and FY 1996 investments for financial accounting and reporting purposes in FYs 1995 or 1996. Subsection (b)(3)(A)(ii) effectively requires that repayment periods for investments placed in service in FYs 1995 and 1996 be assigned in accordance with current RA 6120.2 policy.

Capital investments funded by appropriations that are placed in service in FYs 1995-1996

Adjustments to Rates to Calculate Interest During Construction (IDC): CWIP balances in FYs 1995-1996

Historic Practice:	Appropriations Refinancing Act:	Implementation in 1996 Final Rate Proposal:
Per RA 6120.2, Section 11, "Interest Rate Formula," para. a: "Except as otherwise provided by law, the interest rate to be used for computing interest during construction and interest on the unpaid balance of the costs of Federal Power facilities . . . ," is the Treasury yield rate for "the fiscal year in which construction of the investment is initiated." In essence, "Treasury yield rate" under RA 6120.2 policy is the average yield, during the preceding fiscal year, on interest-bearing marketable securities of the U.S. that have terms of 15 years or more remaining to maturity. .	The Act is silent on IDC for investments placed in service in FYs 1995-1996.	Same basis as subsection (f), "Interest Rates for New Investments During Construction", which addresses IDC for investments placed in service beginning in FY 1997: one-year rate taking into consideration prevailing market yields, during the month preceding the beginning of each fiscal year (September), on outstanding interest-bearing obligations of the U.S. with periods to maturity of approximately one year. To calculate IDC for construction work in progress (CWIP) in FY 1995, the one-year rate used is 5.52 percent; for CWIP in FY 1996, the one-year rate used is 5.70 percent. See Attachment 6 to this chapter for these IDC calculations. No adjustments are made to IDC for years prior to FY 1995. This adjustment reduces the total appropriations principal to be refinanced from an estimated $6,807 million to an estimated $6,801 million.

Step 2: Determine new principal for each investment being refinanced (continued)
A: Adjustments to interest rates on principal amounts to be refinanced

Capital investments funded by appropriations that are placed in service in FYs 1995-1996

Adjustments to Interest Rates for Investments Placed in Service

Historic Practice:	Appropriations Refinancing Act:	Implementation in 1996 Rate Case:
The rate assigned to investments placed in service in FYs 1994-1995 is the same rate that is used to calculate IDC for the investment. (See RA 6120.2 provision for IDC above).	Subsection (b)(3)(B)(ii) prescribes that interest rates be based on a Treasury yield curve as follows: ". . . a rate determined by the Secretary of the Treasury, taking into consideration prevailing market yields, during the month preceding the beginning of the fiscal year in which the related project, facility, or separable unit or feature is placed in service, on outstanding interest-bearing obligations of the U.S. with periods to maturity comparable to the period between the beginning of the fiscal year and the repayment date for the old capital investment." This provision is identical to the interest rate yield curve provision for investments placed in service beginning in FY 1997 (subsection (g) of the Act).	Investments are assigned yield curve interest rates as prescribed in subsection (b)(3)(B)(ii) of the Act. The curves include no mark-up. The Treasury yield curve estimates in Chapter & of this volume are used. Each investment's repayment period is correlated to the interest rate on the yield curve associated with Treasury debt issues of comparable maturity. For example, an investment with a repayment period that extends through FY 2010 is assigned a rate commensurate with Treasury obligations that mature in 2010. Investments with estimated service lives of 30 years or greater are assigned yield curve rates for Treasury obligations with 30-year maturities.

***B. Construct debt service stream for each investment to be refinanced*:** Subsection (b)(1) of the Act requires that principal be reset for each investment. Effectively, "investment" means principal that has one or more unique characteristics in terms of: FCRPS agency and project, function (generation or transmission), interest rate, in-service year, or repayment period (due date). Debt service streams run from FY 1997 through the repayment period of each investment. The interest component of each debt service stream reflects the interest rate assigned as of the end of FY 1994 or, in the case of investments placed in service in FYs 1995-1996, the interest rate adjusted per Step 2A above. The principal component of each debt service stream is assumed to be repaid in full at the end of each investment's repayment period, per subsection (b)(3)(A) of the Act.

***C. Calculate present value of debt service stream for each investment, using September 1996 Treasury yield curve for discount rates**:* Yield curve rates are associated with remaining repayment periods to discount the streams of debt service payments, e.g., the debt service stream for an investment with a remaining repayment period that extends through the year 2010 is discounted with the yield curve interest rate for Treasury obligations that mature in 2010 (Subsection (b)(1)(A) of the Act). To determine the present value of the stream of debt service payments for an investment, the annual interest payments are discounted as if they were an annuity and the principal is discounted assuming it would be repaid in full in the year it is due. Discount rates reflect the FY 1996 Treasury yield curve in Chapter 7 of this volume The present value of the annual interest payments and the present value of the principal are then summed. See illustrative examples at attachment 7.

Step 2: Determine new principal for each investment being refinanced (continued)

D. Add a prorata share of $100 million to the present value total determined for each investment in Step 2 C above*:* The new principal for each investment is the total present value of the debt service stream determined in Step 2C above, plus a prorata share of $100 million. The $100 million is prorated based on each investment's old principal, as determined in Step 1. Put differently, proration of the $100 million is determined by first summing all investment to be reconstituted outstanding as of the end of FY 1996. The outstanding principal of each investment is then divided by the outstanding principal of the appropriated investment total, then multiplied by $100 million. Subsection (b)(1)(B) of the Act. The sum of the present value calculated in Step 2C above and the prorata share of $100 million comprise the new principal amount for each investment. Subsection (b)(1) of the Act.

The projected new principal total for appropriations as a result of Step 2 is $4,624 million, with an estimated weighted average interest rate of 6.3 percent. See attachment 9.

Step 3: Assign interest rates to new principal amounts

As called for in subsection (c) of the Act, the new principal determined in Step 2 for each investment is assigned an interest rate from the September 1996 yield curve provided by Treasury. The interest rate assigned to the new principal is the same yield curve rate that is used in Step 2C to discount the investment's debt service stream. That is, the investment's remaining repayment period is correlated to the interest rate on the yield curve associated with debt with a comparable maturity. For example, an investment with a repayment period that extends through FY 2010 will be assigned a rate commensurate with Treasury obligations issued in September 1996 that mature in 2010.

Attachment 8 projects the change in outstanding principal and interest rates for each investment due to the refinancing transaction (Steps 1, 2, and 3).

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