

BPA Rates Overview
Statutory Provisions
Power and Transmission Rates
Rate Case Process



The BPA System

- BPA markets the power output of 31 federal dams
- BPA transmits federal and non-federal power on 15,000+ miles of high voltage lines throughout the Pacific Northwest
- BPA has contracted to purchase the output of several plants
 - Columbia Generating Station nuclear plant
 - Idaho Falls hydro facility
 - Cowlitz Falls hydro facility
 - Wauna co-generation facility
- Other resource purchases are made as needed

BPA firm power output = 9,575 aMW

BPA maximum hourly output = 13,491 MW



What is a BPA Rate?

- $(\text{Cost of Production} - \text{Revenue Credits} + \text{Risk Protection})$
Amount of Sales
- Cost of Production = \$2,645 million
- Revenue Credits = \$ 883 million
- Risk Protection = \$ 11 million
- Amount to Collected = \$1,773 million

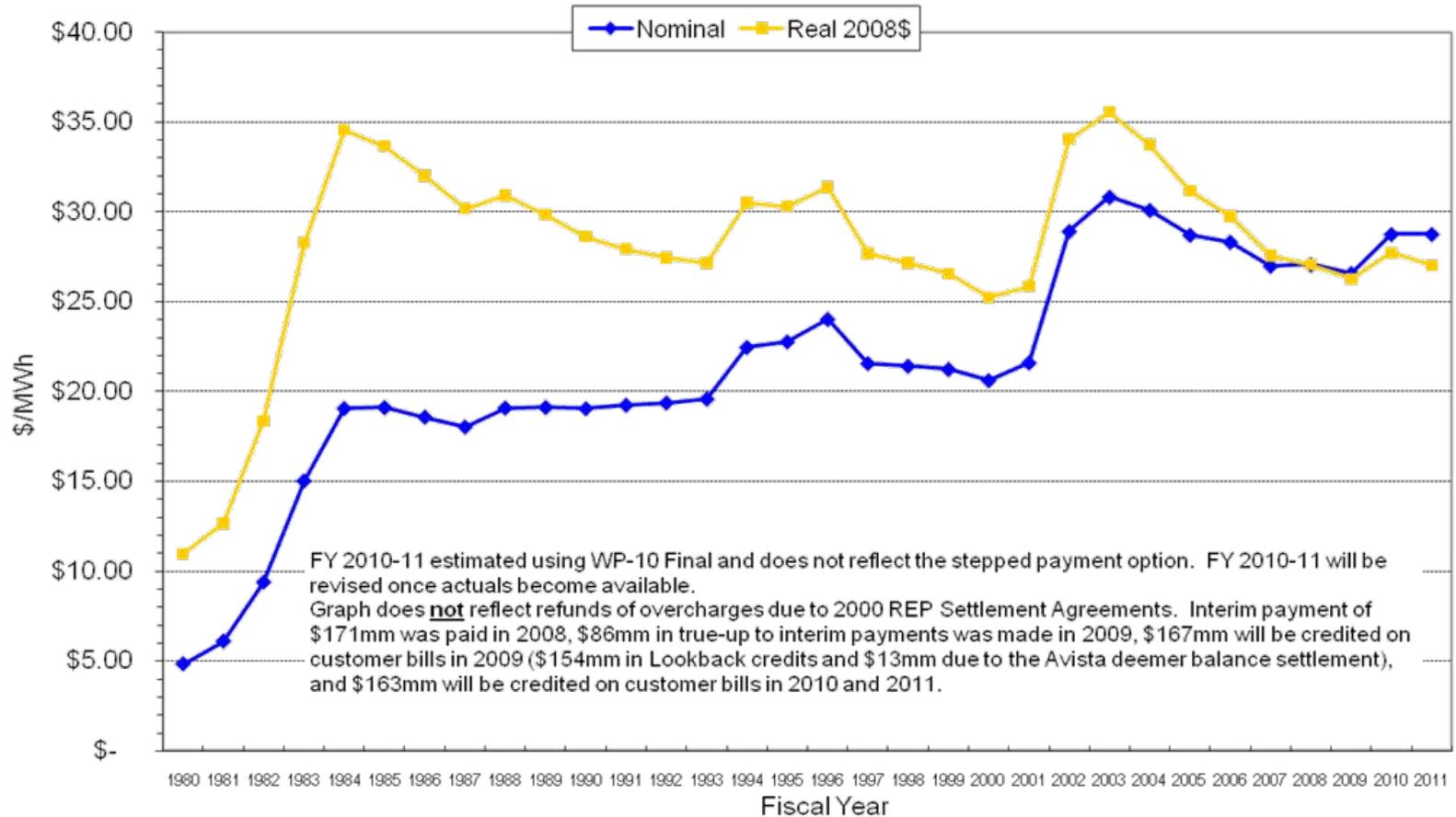
- Slice allocation = \$ 510 million

- PF Rate = \$1.3billion / 5,400 aMW = \$27.33/MWh (average)



Power Rate History

Historical Priority Firm Power Rates - No Transmission FY 1980-2011

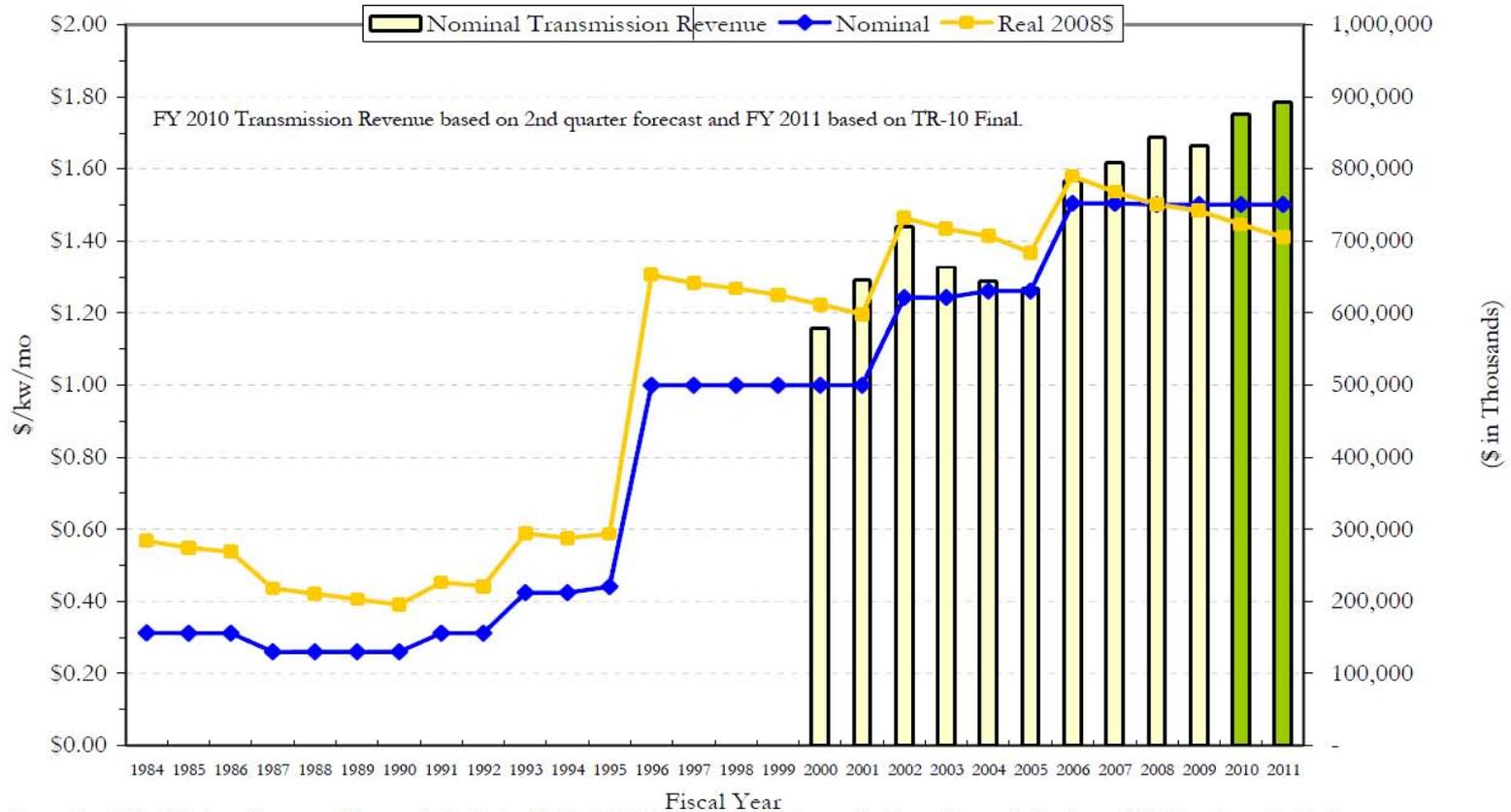


Deflators for 1980-2009 from Bureau of Economic Analysis - Table 1.1.9. Implicit Price Deflators for Gross Domestic Product; 2010-11 estimated with 5-year average



Transmission Rate History

Firm Transmission Rates - No Power 1984-2011

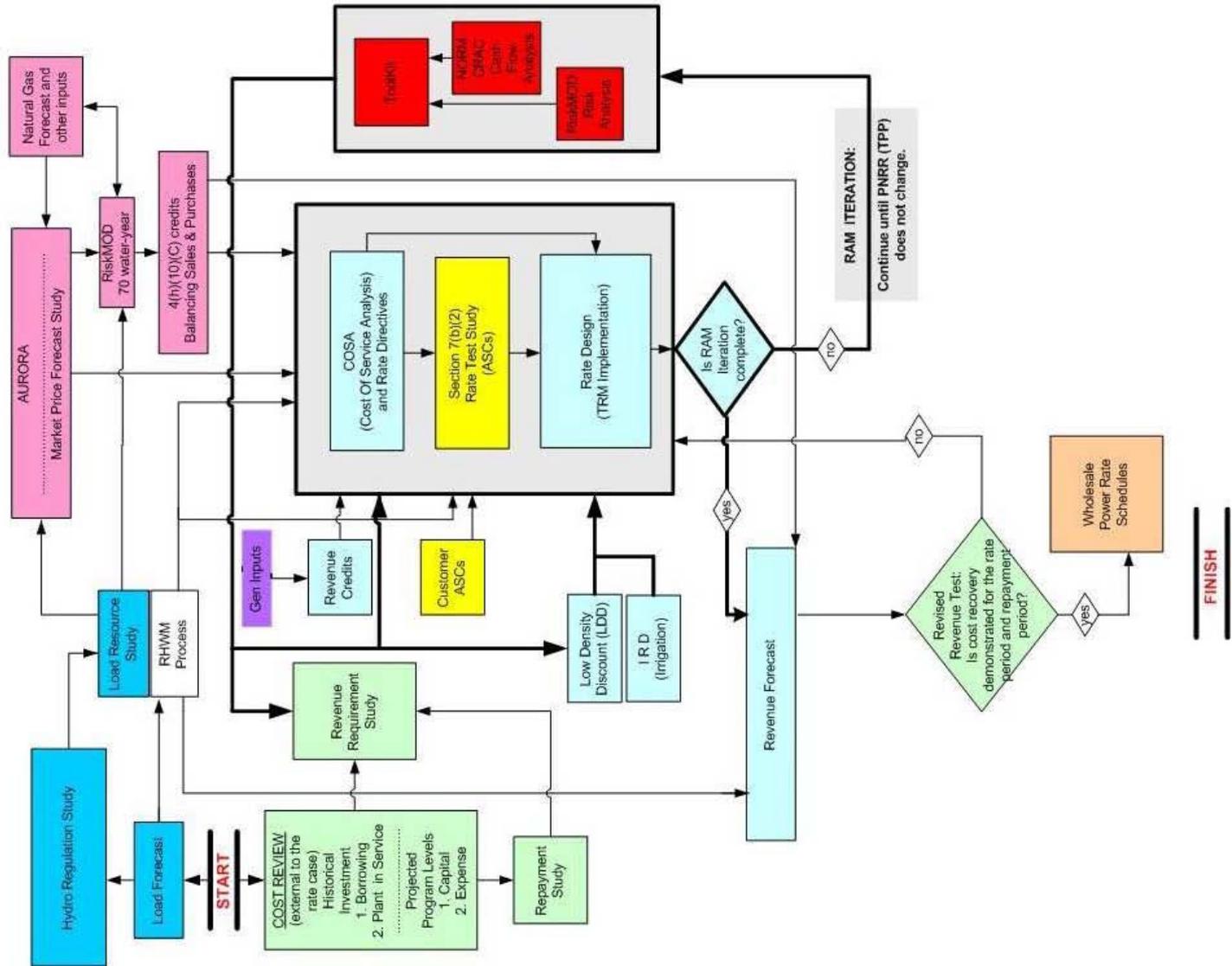


Deflators for 1980-2009 from Bureau of Economic Analysis - Table 1.1.9. Implicit Price Deflators for Gross Domestic Product; 2010-11 estimated with 5-year average

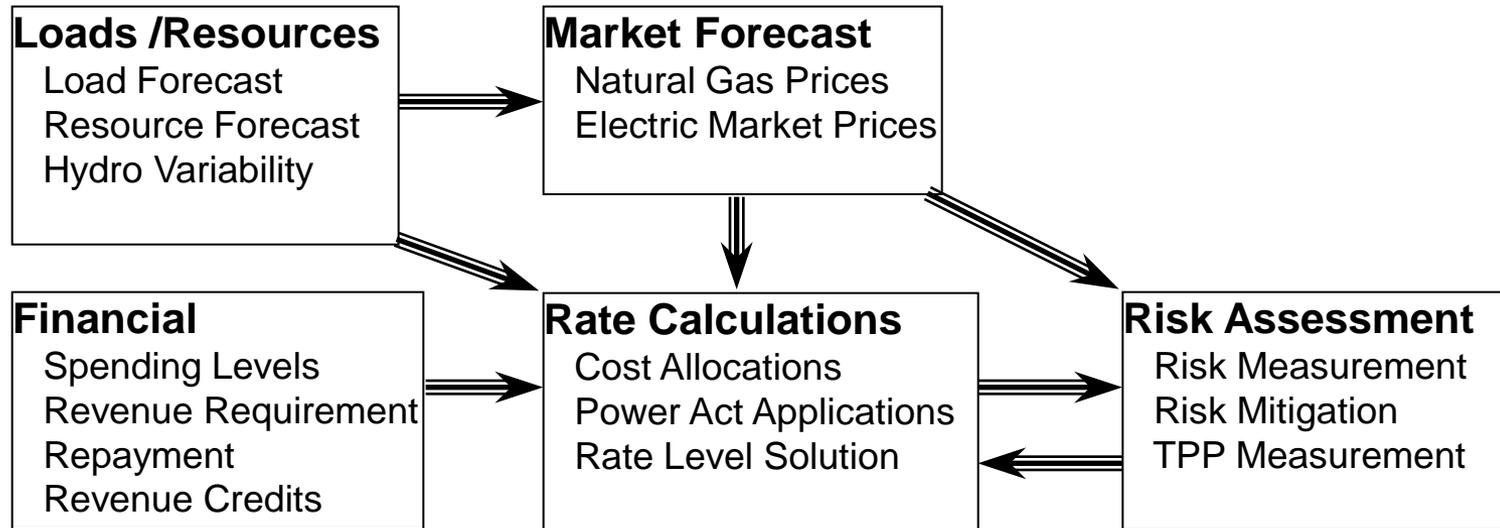
Note: From 2006+ Nominal Transmission Rates Are Level



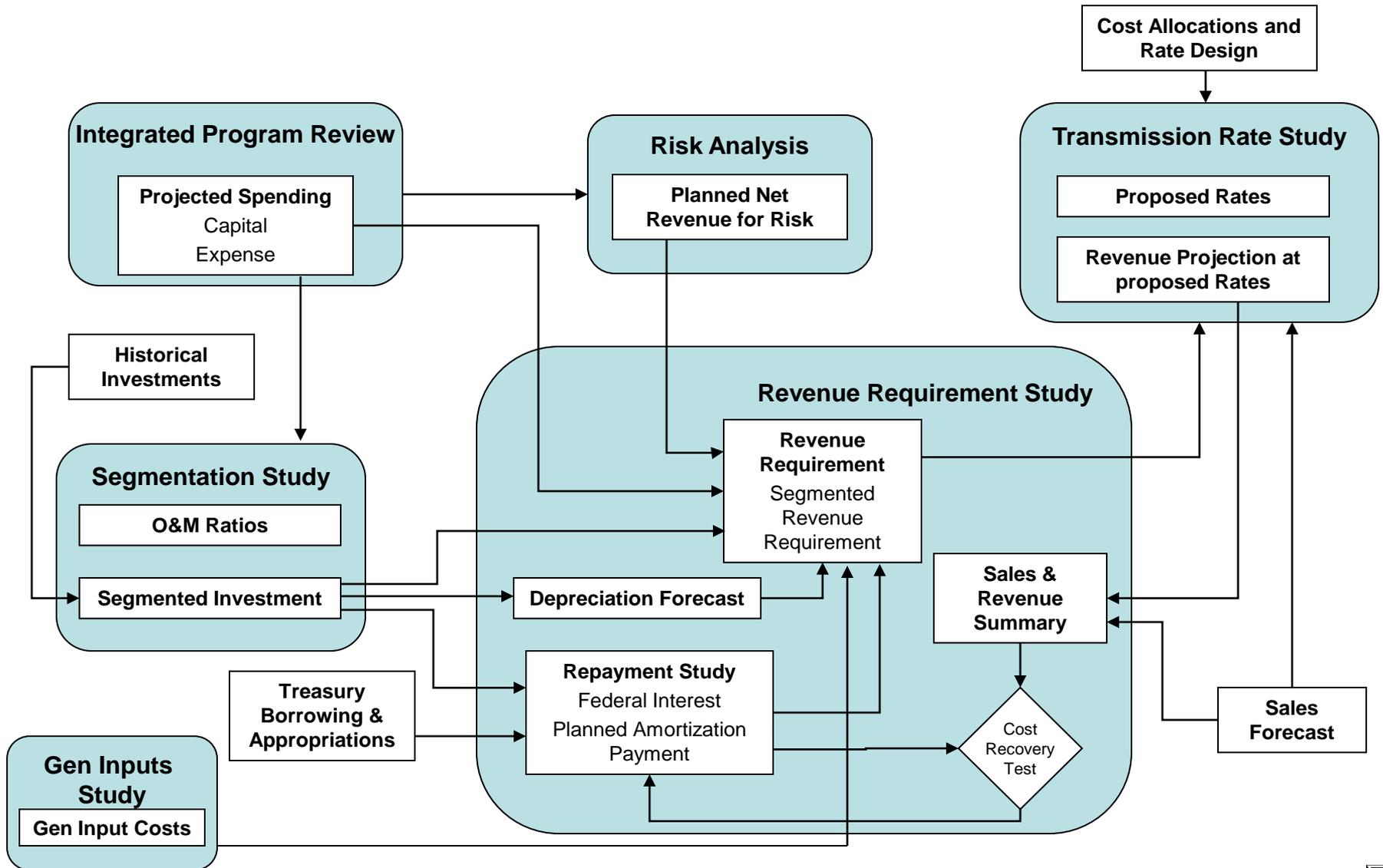
RATE DEVELOPMENT PROCESS FLOWCHART



Simplified Power Rate Process Chart



Transmission Rate Case Process Chart



BPA Rates Statutory History

- BPA was established in 1937 by the passage of the Bonneville Project Act
- Reaffirmed by the 1944 Flood Control Act
- Modified by the 1974 Federal Columbia River Transmission System Act
 - BPA a self-financed agency.
- Overhauled in 1980 by the Pacific Northwest Electric Power Planning and Conservation Act (Northwest Power Act)
 - Before the Northwest Power Act, BPA had about 1,000 words in statutes governing ratemaking.
 - After the Northwest Power Act, BPA has over 4,000 words in statutes governing ratemaking.



What Does Section 7 of the Northwest Power Act Direct

- Cost Recovery – Section 7(a)(1)
- Through its rates, BPA must recover the costs of:
 - Acquisition of power
 - Conservation
 - Transmission of electric power
 - Amortization of the Federal investment (including irrigation)
 - Other costs and expenses incurred pursuant to the Act



Revenue Requirement Determination

- Financial (Cost of Production) [determined outside of rate case]
 - Establish BPA spending levels
 - BPA costs
 - Transmission
 - Conservation
 - Renewables
 - Internal operations
 - Fish and Wildlife
 - Residential Exchange Program settlement
 - Direct Service Industries financial benefits
 - Debt management
 - Risk
 - Energy Northwest
 - Corps of Engineers O&M and Capital
 - Bureau of Reclamation O&M and Capital
 - Northwest Power and Conservation Council
 - U.S. Fish and Wildlife Service



Revenue Requirement Determination (continued)

- Financial (Cost of Production) (cont.)
 - Repayment Study
 - Debt Repayment Schedule determined
 - Separate Power and Transmission Repayment studies
 - Revenue Requirement
 - Expenses
 - Depreciation or Amortization
 - Net Interest Expense



Additional Steps for Transmission Revenue Requirement

Future Plant in Service Study

- The study begins with capital decisions from IPR.
- Output is plant in service thru the rate period.

Segmentation Study

- The study provides information used to calculate segmented revenue requirement based on the latest year of actual data.
- It places existing and future plants into segments.
- It provides historical O&M (average of last 3 years) for segments.
- Plant associated with transmission segments and ancillary services are identified.



What Does Section 7 Direct

- FERC Approval – Section 7(a)(2)
 - Become effective upon confirmation and approval by the FERC
 - FERC jurisdiction limited to
 - Sufficient to assure repayment of the Federal investment
 - Based upon the Administrator's total system costs
 - Equitably allocate transmission costs between Federal and non-Federal power



What Does Section 7 Direct (continued)

- Purpose of Power Rates – Section 7(b)(1)
 - Meet the general requirements of public customers
 - Loads of electric utilities participating in the Residential Exchange
 - Recover the costs of that portion of the Federal base system resources
 - Cost of additional electric power as needed



Loads - Customer Groups

- 135 Public Utilities
 - ⇒ 57 Cooperatives
 - ⇒ 29 Public Utility Districts
 - ⇒ 42 Municipalities
 - ⇒ 2 Tribal Utilities
 - ⇒ 7 Federal Agencies
 - ⇒ 1 Joint Operating Entity (members included in cooperatives)
 - ⇒ 1 Other (Port District)
- 5-6 Investor-Owned Utilities
 - ⇒ Residential and Small Farms
 - ⇒ Commercial and Industrial growth
- 2-3 Direct Service Industries
- Surplus Sales, some of the above plus 168 power marketers
- 385 Transmission (in 2009)



Power Resource Pools

- Federal Base System (FBS)
 - *Including FBS Replacements (augmentation, balancing, Tier 2)*
- Exchange Resources (equal to Exchange Load)
- New Resources
- *Conservation Resources*
 - *Act specifies conservation as a resource*
 - *Energy realized through lower loads*



Power Rate Pools

- PF Priority Firm
 - *PFp* Priority Firm Preference
 - *PFx* Priority Firm Exchange
- NR New Resource
- FPS Firm Power Products and Services
- IP Industrial Firm

Transmission Rates

- Network
 - ⇒ *PTP* Point-to-Point
 - ⇒ *NT* Network Transmission
 - ⇒ *FPT* Formula Power Transmission (grandfathered)
 - ⇒ *IR* Integration of Resources (grandfathered)
- Intertie
 - ⇒ *IS* Southern Intertie
 - ⇒ *IM* Montana Intertie
 - ⇒ *IE* Eastern Intertie
- Utility Delivery
- Ancillary Services



Process of Setting Rates

- Loads and Resources
 - Load Forecasts
 - Hydro Regulation Studies
 - Other loads and resources
 - Transmission Sales
- Market Studies
 - Market Price Forecasts
- Risk Analysis
 - Assesses variable hydro production and marketing risk
 - Assesses load variation risk
 - Assesses CGS performance risk
 - Assesses natural gas price risk
 - Assesses wind generation risk



Process of Setting Rates (cont.)

- Allocation of Costs to Sales
 - Power: cost pools (resources) are matched to rate pools (loads)
 - Costs of resources are assigned to rate pools
 - Other costs are allocated using section 7(g) – discussion later
 - Transmission: Segmented costs are assigned to rate pools
- Power: Adjustments pursuant to section 7 are made
- Divide allocated costs by sales
 - Risk mitigation is included – discussion later



What Does Section 7 Direct

- The Rate Test – Section 7(b)(2)
 - Amounts to be charged for firm power for public customers exclusive of certain amounts charged under 7(g)
 - May not exceed in total an amount equal to the power costs assuming the five assumptions listed in section 7(b)(2) – next page
- Allocation of Rate Protection – Section 7(b)(3)
 - Amounts not charged to public customers by reason of 7(b)(2) test
 - Reduces rate to public customers
 - Recovered through supplemental rate charges for all other power sold



Process of Setting Rates

- 7(b)(2) Rate Test
 - Calculate Two PF Rates
 - The Program Case: the regular PF rate
 - The 7(b)(2) Case: the PF rate assuming five specific differences
 - DSIs served by their local utility and no reserves available
 - FBS reserved to serve all public utility load first
 - no Residential Exchange Program
 - certain regional resources are available to BPA
 - financing benefits from tax exempt bonds are not achieved
 - If the Program rate exceeds the 7(b)(2) rate, rate protection is triggered
 - PF Preference rate is decreased, other rates are increased



What Does Section 7 Direct

■ DSI Rates – Section 7(c)

- At a level equitable to the retail rates charged by the public customers to their industrial consumers
- The typical margins included by such public customers in their retail industrial rates
 - The comparative size and character of the loads served,
 - The relative costs of capacity, energy, transmission, and delivery
 - Direct and indirect overhead costs
- In no event be less than the rates in effect for the year ending on June 30, 1985
- Adjust for the value of power system reserves through rights to interrupt or curtail service



What Does Section 7 Direct (continued)

- Discounted and Special Rates – Section 7(d)
 - To avoid adverse impacts on customers with low system densities, eligible for discounts – the Low Density Discount
 - To avoid adverse impacts on any DSI using raw minerals indigenous to the region, a special rate no longer in use



What Does Section 7 Direct (continued)

- Rate Design Discretion – Section 7(e)
 - Allows for rates for sale of peaking capacity or
 - Time-of-day,
 - Seasonal rates,
 - Or other rate forms (tiered rates).
- Other Firm Power Rates – Section 7(f)
 - Rates for all other firm power based upon the cost of the resources applicable to such sales – new resource costs



What Does Section 7 Direct (continued)

- Disposition of Other Costs – Section 7(g)
 - Equitably allocate to power rates all costs and benefits not otherwise allocated, including
 - Conservation
 - Fish and wildlife measures
 - Uncontrollable events
 - Reserves
 - Excess costs of experimental resources
 - Cost of billing credits
 - Operating services
 - The sale of or inability to sell excess electric power

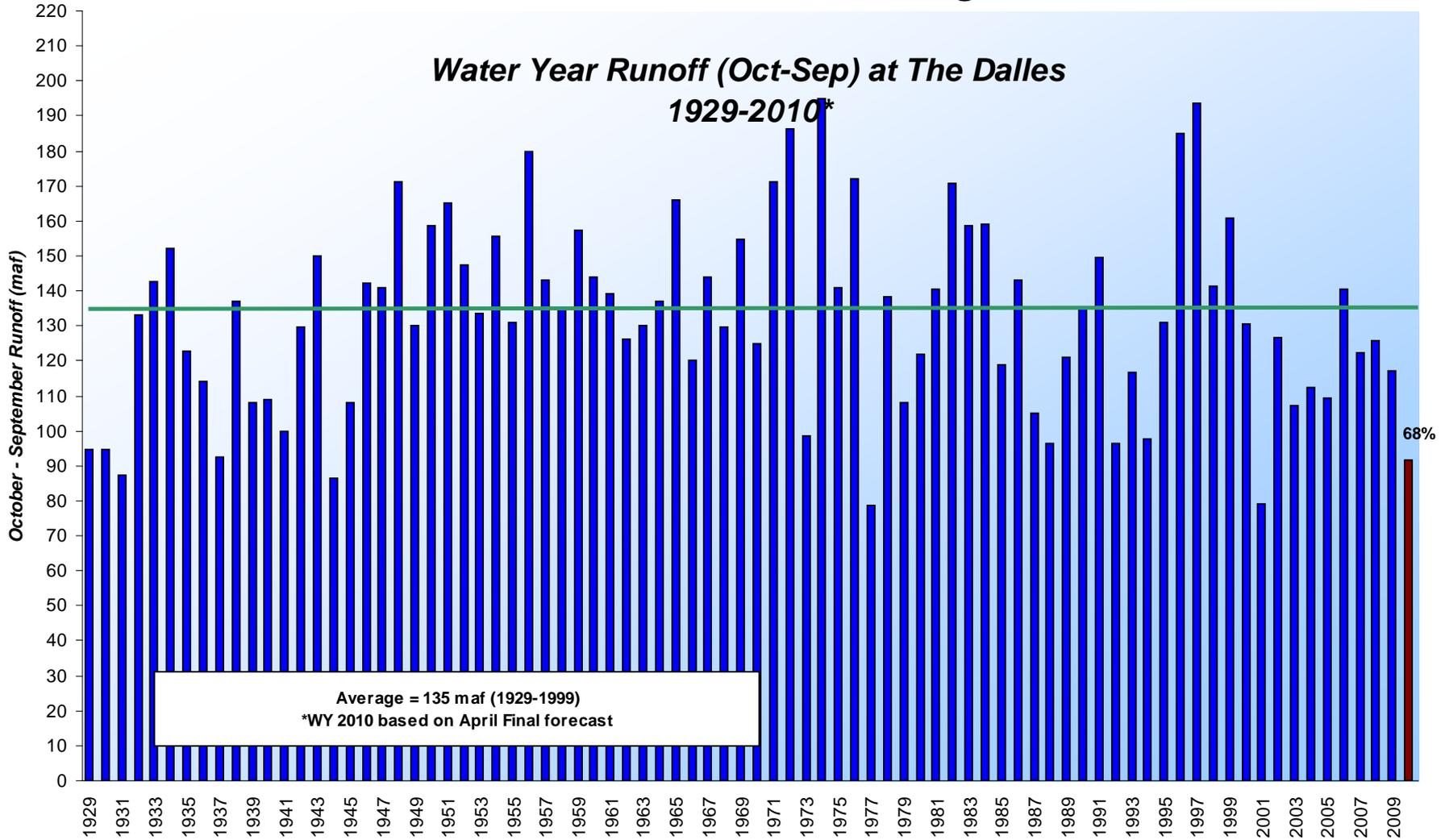


Process of Setting Rates

- Risk Analysis and Mitigation
 - Assess BPA's Risks
 - Power: operating and non-operating risks
 - Transmission: revenue and non-operating risks
 - Non-Operating Risks: program levels
 - Measure BPA's Treasury Payment Probability (TPP)
 - Standard is 95% probability on-time and in-full over 2 year rate period
 - If inadequate, Implement Risk Mitigation
 - Planned Net Revenues for Risk (PNRR)
 - Cost Recovery Adjustment Clause (CRAC)
 - Other sources of liquidity (prepayments or short-term borrowing)



Water Year Runoff – Chronological Order



What Does Section 7 Direct

- Surcharge – Section 7(h)
 - Include any surcharges for customers not implementing conservation measures
 - Revenues from such charges used to achieve the conservation purposes



What Does Section 7 Direct (continued)

- Rate Case Process – Section 7(i)
 - Notice of the proposed rates shall be published in the Federal Register
 - One or more hearings shall be conducted expeditiously
 - Develop a full and complete record
 - Receive public comment in the form of written and oral presentation
 - Opportunity to offer refutation or rebuttal
 - Reasonable opportunity for cross examination
 - Submit oral and written material at the hearings
 - After hearing, may propose revised rates with additional hearings
 - Final decisions based on the record, including a full and complete justification
 - Effective on confirmation and approval by the FERC



Rate Case Elements

Informal Pre-Rate Case Process

- Spending levels determined
- Decide issues and crunch preliminary numbers
- Pre-Rate Case workshops with interested parties
- Finalize decisions and numbers for Initial Proposal

Formal Rate Case Process

- Publish Federal Register Notice
- Start of *Ex Parte*
- Hold Pre-Hearing Conference to establish rate case parties
 - those not designated as parties can be participants
- Publish Initial Proposal studies and testimony + discovery
- Parties file Direct Case + discovery

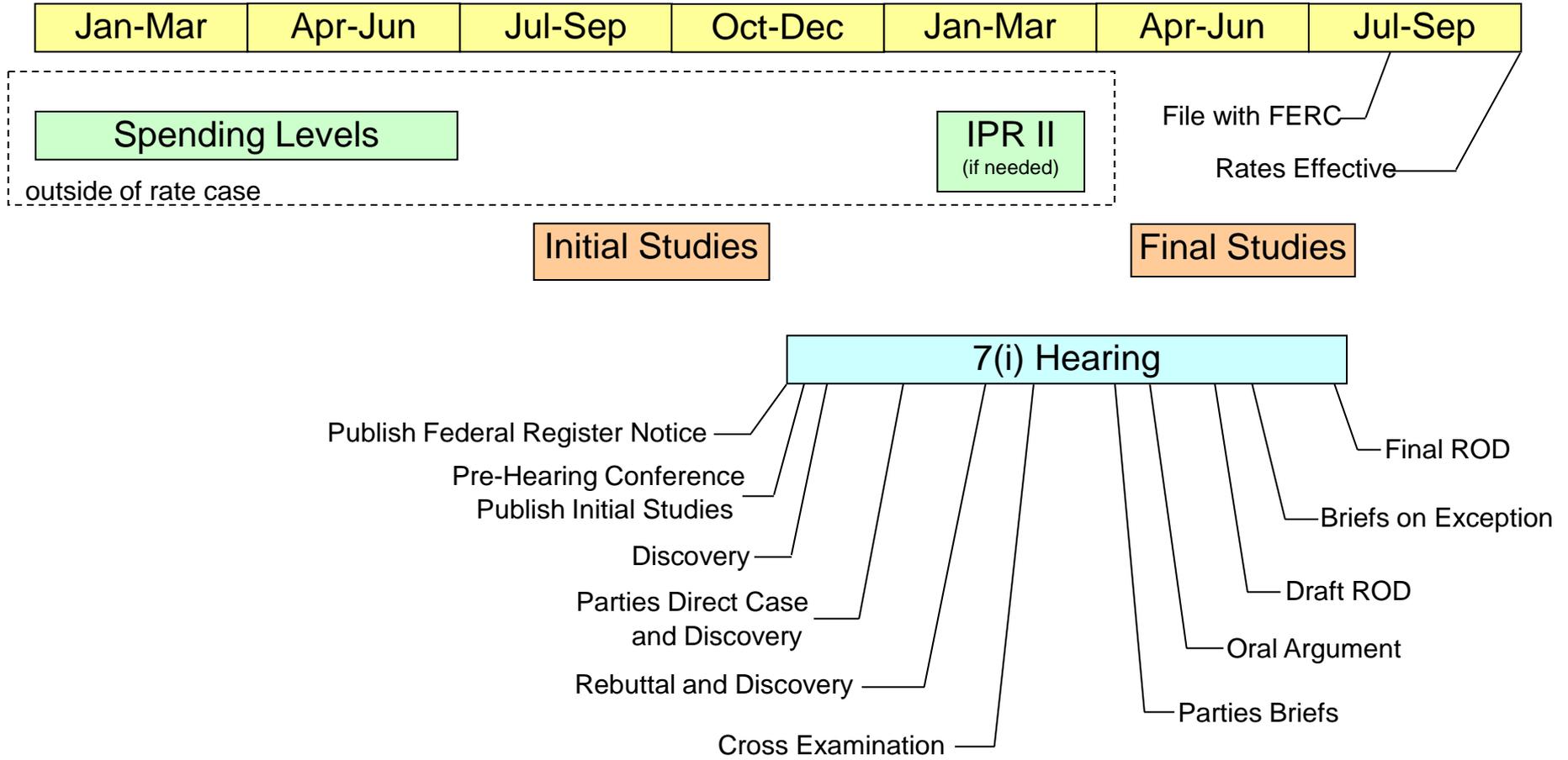


Rate Case Elements (continued)

- Rebuttal and Discovery
- Cross Examination
- Parties Briefs
- Oral Argument
- Draft Record of Decision
- Briefs on Exceptions
- Final Studies and Record of Decision
- File Rates with FERC
- Rates go into effect with Interim Approval
- Final Approval by FERC



Typical Rate Case Timeline



What Does Section 7 Direct

- Requirements for Rate Schedules – Section 7(j)
 - Power billings shall indicate cost contribution of different resource categories and cost of resources acquired to meet load growth.
- Rates Outside the Region – Section 7(k)
 - Established in accordance with the procedures of Section 7(i)
 - Effective after review by the FERC
 - Based on the record of proceedings established under Section 7(i)



What Does Section 7 Direct (continued)

- Rates Outside the United States – Section 7(l)
 - May negotiate or establish rates for power sold to any entity not located in the United States
 - Shall be equitable in relation to rates for all power purchased outside the United States
 - Negotiated rates shall be not less than rates for nonfirm power sold within the United States
- Impact Aid Payments – Section 7(m)
 - May make annual impact aid payments for major transmission facilities meeting conditions



What Does Section 7 Direct (continued)

- Recovery of Fish & Wildlife Costs in 2002-2006 – Section 7(n)
 - Limiting the inclusion of costs of fish and wildlife to the rate period in which the costs are incurred.
 - Rates shall recover costs for protection, mitigation, and enhancement of fish and wildlife.
 - Estimates of fish and wildlife expenses determined in pre-rate case process and results used in the rate case. Fish and wildlife expense estimates are not issues in the rate case.



Additional Material



BPA Rates Statutory History

- **BPA established in 1937 by the passage of the Bonneville Project Act**
 - Shall be fixed and established with a view to encouraging the widest possible diversified use of electric energy.
 - May provide for uniform rates or rates uniform throughout prescribed areas in order to encourage the equitable distribution of the electric energy developed at the Bonneville project.
 - Shall be drawn having regard to the recovery of the cost of producing and transmitting such electric energy, including the amortization of the capital investment over a reasonable period of years.



BPA Rates Statutory History (continued)

- **Reaffirmed by the 1944 Flood Control Act**
 - To encourage the most widespread use thereof at the lowest possible rates to consumers consistent with sound business principles
 - Having regard to the recovery of the cost of producing and transmitting such electric energy, including the amortization of the capital investment allocated to power over a reasonable period of years.



BPA Rates Statutory History (continued)

- **Modified by the 1974 Federal Columbia River Transmission System Act**
 - Shall be fixed and established
 - (1) With a view to encouraging the widest possible diversified use of electric power at the lowest possible rates to consumers consistent with sound business principles,
 - (2) Having regard to the recovery of the cost of producing and transmitting such electric power, including the amortization of the capital investment allocated to power over a reasonable period of years,
 - (3) At levels to produce such additional revenues as may be required to pay when due the principal of, premiums, discounts, and expenses in connection with all bonds issued and outstanding, and amounts required to establish and maintain reserve funds.
 - May provide for uniform rates or rates uniform throughout prescribed transmission areas.



BPA Rates Statutory History (continued)

- **Overhauled in 1980 by the Pacific Northwest Electric Power Planning and Conservation Act**
 - Shall be established and revised to recover, in accordance with sound business principles, the cost associated with the acquisition, conservation, and transmission of electric power, including the amortization of the Federal investment over a reasonable period of years and the other costs and expenses incurred by the Administrator.



Example Load to Resource Cost Allocation

