

Provider of Choice: Educational Session on the Residential Exchange Program (REP) and Mechanics



December 1, 2021



Agenda for REP Educational Session

- Introduction
- REP Background
- REP Mechanics and Average System Costs (ASCs)
- Mechanics of the 7(b)(2) Rate Test and PF Exchange Rate
- In-Lieu Background
- History and the 2012 REP Settlement
- Next Steps



Objective

- Provide a baseline understanding of the history and mechanics of the Residential Exchange Program (REP).
- Today's session is *educational only, and not meant for deliberative discussion*. However, BPA staff encourages questions and comments, and seek specific input on the REP Timeline.
- Please send feedback to: **BPAAverageSystemCost@bpa.gov**.



Presenters and Core Team

- Stephanie Adams, Rates and 7(b)(2) Lead (PSR)
- Paulina Cornejo, REP Lead (PSRF)
- Brian Dombeck, Economist (PSRF)
- Daniel Fisher, PSR Supervisor
- Rich Greene and Neal Gschwend, Legal Counsel
- Jonathan Ramse, Economist (PSR)
- John Stalnaker, REP Lead (PSRF)
- Peter Stiffler, PSRF Supervisor



Residential Exchange Program Background





What is the Residential Exchange Program?

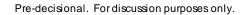
- Enacted by Congress under Section 5(c) of the 1980 Northwest Power Act to address wholesale rate disparity between Investor Owned Utilities (IOUs) and PF customers (COUs) in the Pacific Northwest:
- In simple terms: the REP is a federal program that provides economic benefits of federal system to residential and farm customers of participating utilities.

Details of this month's charges	
Meter # 32631301IN, Schedule 07	
Basic Charge	11.00
Energy Use Charge (966.000 kWh x \$0.06329)	61.14
Transmission Charge (966.000 kWh x \$0.00243)	2.35
Distribution Charge (966.000 kWh x \$0.04657)	44.99
Subtotal - Energy Charges	119.48
102 RPA Exchange Credit (966.000 kWh x \$-0.00768)	7.42 CR
105 Regulatory Adjustments (966.000 kWh x \$-0.00055)	0.53 CR
109 Energy Efficiency Funding Adj (966.000 kWh x \$0.00383)	3.70
110 Energy Efficiency Customer Svc (966.000 kWh x \$0.00008)	0.08
112 Customer Engagement Transformation Adjustment (966.000 kWh x \$0.0003)	0.29
122 Renewable Resource Adjustment (966.000 kWh x \$0.00143)	1.38
123 Decoupling Adjustment (966.000 kWh x \$0.00178)	1.72
125 Annual Power Cost Update (966.000 kWh x \$0.00585)	5.65
135 Demand Response (966.000 kWh x \$0.00082)	0.79
136 Community Solar Cost Recovery (966.000 kWh x \$0.00006)	0.06
137 Solar Payment Option Cost Recov (966.000 kWh x \$0.00047)	0.45
145 Boardman Decommissioning Adj (966.000 kWh x \$0.00012)	0.12
Subtotal - Adjusting Schedules	6.29
	125.77
Oregon Commercial Activities Tax Recovery (0.436%)	0.56
Metro Supportive Housing Services Tax Recovery (0.153%)	0.19
Subtotal - Other Charges/Credits	0.75
Low Income Assistance	0.69
Public Purpose Charge (3%)	3.68
Subtotal - Taxes and Fees	4.37
Current Energy Charges	130.89

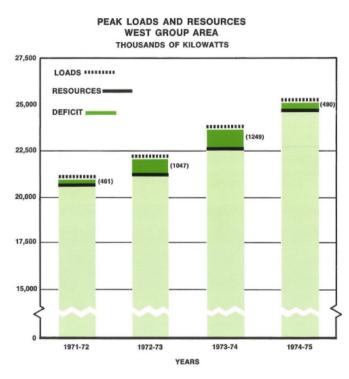


History: The View from Circa 1960s & 1970s

- "The forecast indicates that Northwest electric energy requirements <u>will</u> <u>triple in the next 20 years</u> and that within a few years . . ." (BPA's Annual Report, December 31, 1970.)
- 7% load growth across the region
- In 1973:
 - BPA stopped selling to IOUs
 - BPA periodically reduced sales to DSIs, and would not renew contracts post expiration.
- In 1976 BPA issued a "notice of insufficiency" to its preference customers
 - Notified preference customers that BPA would be short on power by 1983.
 - BPA would have to allocate Federal power among preference customers.







The Hydro-Thermal Power Program & Issues





- In 1968, BPA and over 100 utilities outlined the Hydro-Thermal Power Program (HTPP) to supply the region through 1981.
- Federal, private and public utilities collaborated to build generation and transmission.
- HTPP proposed developing 20 nuclear plants and 2 coal, and projected to cost \$17.9 billion (~\$141 billion today).



Problems with the HTPP

- Reduced forecast for power
- Cost overruns
- **Construction delays**
- Community opposition
- Environmental opposition
- Court injunction. BPA's participation in Phase 2 • paused until BPA completed an EIS

Rate Disparity: Publics and Private

- HTPP costs included in rates meant costs of serving customers of IOUs and COUs rapidly increased.
- IOUs' consumers were hit harder. Paying 3x what public consumers paid.
- BPA required by federal law to serve COUs' needs first (preference).
 - Only sell to IOUs if surplus available.
- As rates between private and public utilities diverge, political pressure builds to provide consumers of IOUs with a share of low-cost federal power.



WEDNESDAY, APRIL 12, 1978

Governors split over power plan

By ED MOSEY	Gov. John Evans of Idaho joined
of The Oregonian staff	Straub in supporting a larger share of
BOISE — Gov. Bob Straub demand- ed principles; Gov. Dixy Lee Ray of Washington insisted on specifics, and	hydroelectric power for residents o other states that now are served by private utilities.

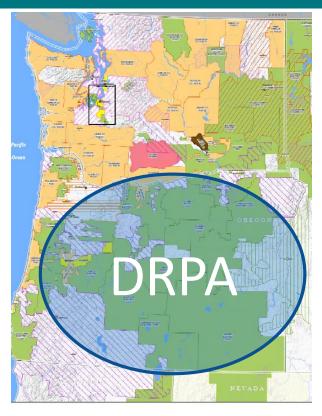
Straub said the governors should agree in principle that customers of private utilities in the Northwest should get an "equitable" share of the electricity generated by dams on the Columbia River system.

"People in Portland are paying \$27 for electricity people in Vancouver are paying \$11 for," he said. "The general public should have equal access."

Customers of public utilities now are guaranteed preferential treatment in the allocation of power generated by federal projects on the Columbia River system.

Preference and Regional Division

- Washington is primarily served by COUs.
- Oregon is served primarily by IOUs.
- Turning Point: In an effort to gain access to a share of cheaper BPA power, Oregon prepared legislation creating "Domestic and Rural Power Authorities" (DRPA).
 - DRPA would have asserted rights as a BPA preference customer.
- DRPA would sell power to IOUs' consumers. Other states considered proposing the same type of legislation. This opened the door to a regional fight over BPA's allocation of power.





The Northwest Power Act (NWPA) and REP

- To avert conflict, Congress passed the NWPA in 1980.
- One aspect of the NWPA was the REP, which was designed to help address the wholesale rate disparity between residential and farm customers in IOU vs. COU territories.
- NWPA created an "exchange" between IOUs and BPA to give residential and farm customers access to low-cost federal power.



- Preference battle avoided.
 - IOUs' consumers received some economic value from Federal projects. COUs received no diminishment in the amount of power sold to them, and "rate protection" through section 7(b)(2) of the NWPA.
- The first 5 years of REP implementation was paid exclusively by DSIs. 7(b)(2) rate protection did not kick in until 1985.

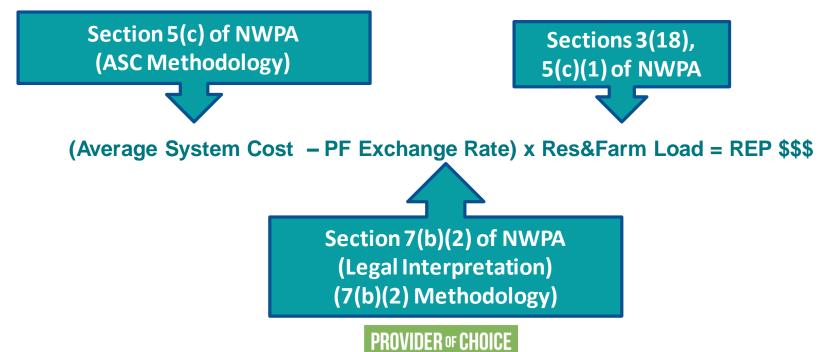


REP Mechanics and Average System Costs (ASCs) Background





REP Program: Calculating REP Benefits per Statute



POST-2028

Calculating the REP Payment



- (ASC PF Exchange Rate) x Residential and Farm Load = REP \$\$\$
- (\$70 MWh \$50 MWh) x 100 MWh = \$2000
- No actual power exchanged. Just a "paper transaction." (One exception, though, for "in lieu" transactions).



BONNEVILLE POWER ADMINISTRATION

Section 5(c) of the NWPA





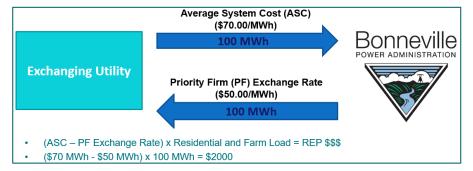
What is an ASC?

• Section 5(c)(1) of the NWPA

 Whenever a Pacific Northwest electric utility offers to sell electric power to the Administrator at the *average system cost (ASC)* of that *utility's resources* in each year, the Administrator shall acquire by purchase such power and shall offer, in exchange, to sell an equivalent amount of electric power to such utility for resale to that utility's residential users within the region.

• An ASC is:

- The sum of a utility's resources costs, required to produce and deliver energy,
- expressed as a \$/MWh rate, and
- used to calculate an exchanging utility's REP benefits.





Section 5(c) and the ASC Methodology

- Section 5(c)(7) of the NWPA directs BPA to determine a methodology to calculate exchanging utilities' ASCs. The ASCM is that methodology.
 - In consultation with the Council, BPA's customers, and State regulatory bodies.
 - Subject to FERC review and approval.
- BPA has had three ASC methodologies.
 - 1981 and 1984 ASC Methodologies were cumbersome, requiring 50+ staff to implement.
 - 2008 ASC Methodology streamlined the ASC process.
- NWPA only stipulates the methodology must exclude the following costs:
 - the cost of additional resources in an amount sufficient to serve any new large single load (NLSL) of the utility,
 - the cost of additional resources in an amount sufficient to meet any additional load outside the region occurring after December 5, 1980, and
 - any costs of any generating facility which is terminated prior to initial commercial operation.
- Determining a methodology has been contentious. More than 60 issues addressed in 2008 ASCM Record of Decision (ROD).



Current ASC Methodology

• Calculating REP-Utilities' ASCs (\$/MWh)

- Contract System Costs (CSC)
 - ROR Portion of P &T Rate Base
 - Production and Transmission Expense
 - Administrative and General Expenses
 - Conservation Expenses
 - Labor and State Property Taxes
 - Offset:
 - Sales for Resales
 - Other Revenues and Other Offset
 - Costs to serve NLSLs and Above-RHWHM Load
- Contract System Load (CSL)
 - Total "regional" retail load
 - Distribution Losses
 - LESS:
 - NLSLs and Above-RHWM Load



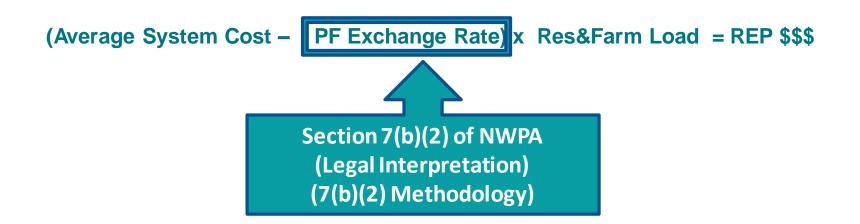
$$ASC = \frac{\text{Contract System Cost (CSC)}}{\text{Contract System Load (CSL)}}$$

Mechanics of the 7(b)(2) Rate Test and PF Exchange Rate





BONNEVILLE POWER ADMINISTRATION Section 7(b)(2) of the NWPA

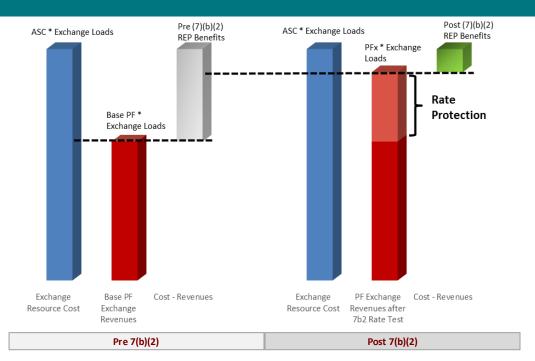




Nuts and Bolts

Pre and Post 7(b)(2) REP Benefits

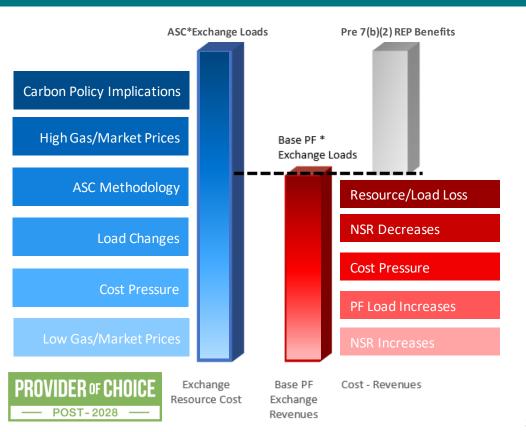
- REP benefits pre 7(b)(2) rate test sets the maximum amount of benefits possible.
- The 7(b)(2) rate test limits the amount of REP benefits that will flow to IOUs due to rate protection allocations.





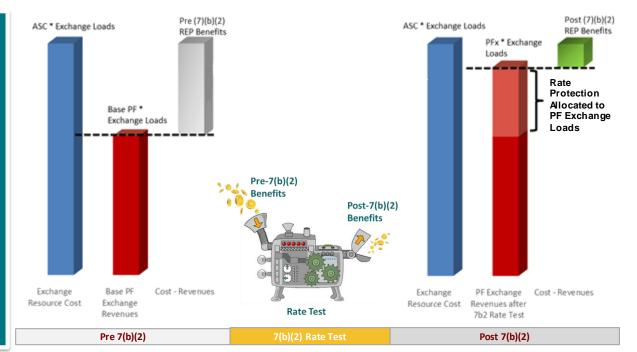
Pre-7(b)(2) REP Benefits

- Pre-7(b)(2) REP benefits represent the level of benefits that would be in place if there were no 7(b)(2) rate protection for Preference Customers (or if the rate test did not trigger).
- Pre-7(b)(2) REP benefits are driven by the interplay between ASCs and the PF Rate
- These columns fluctuate year-to-year.
 - Resource choices informed by state policies will affect ASCs.
 - The value of Net Secondary Revenue (NSR) and FCRPS resource generation will affect PF rates.



Post-7(b)(2) REP Benefits

- Post 7(b)(2) REP benefits represent the level of benefits that remain after performing the rate test.
- The rate test calculates the amount of rate protection.
- Rate protection is allocated away from preference loads and assigned to all other loads including Exchange loads.
- The PFx Rate rises with the allocation of rate protection, this reduces the gap with ASCs and decreases net REP benefits.





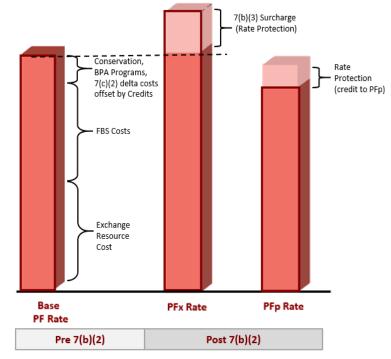
7(b)(2) Rate Test: What is it?

- The Rate Test can be considered as an ongoing cost/benefit analysis.
 - It compares projected rates set to recover certain power costs included in the NWPA (Program Case) to a hypothetical rate set to recover power costs assuming certain features of the NWPA were not in place (7b2 Case).
 - The Rate Test is intended "to assure that the financial benefits of the preference clause in the Bonneville Act will continue to accrue to BPA preference customers." Sen. Rep., Appendix B, at 61.
- Functionally, the Rate Test limits the amount of REP costs that may be recovered in the PF rate.
 - If the <u>Program Case rate is higher than the 7(b)(2) Case rate</u>, then the Rate Test is said to "trigger" and the difference between the \$/MWh is multiplied by PF customer load to establish a rate protection amount.
 - The rate protection amount is then allocated away from PF customer loads to all other power sold as a supplemental rate charge.
 - The difference is referred to as "rate protection" and reduces the amount of REP costs collected in the PF rate.



PF Exchange Rate (PFx)

- The base PF rate is a melded rate for exchange and preference customer loads.
 - Before the rate test, the difference between ASCs and this base PF rate establishes pre 7(b)(2) REP benefits.
 - After the 7(b)(2) rate test the *base* PF rate is bifurcated into the PF Public Rate (PFp) and PF Exchange rate (PFx).
- If the 7(b)(2) rate test *triggers* it obligates rate protection dollars be taken away from preference customer loads.
- The rate protection is allocated to all other loads, including Exchange loads via a 7(b)(3) surcharge.
 - This raises the PFx rate, and lowers the difference between ASCs and the post-surcharge PFx rate, lowering the lawful REP benefit payments to exchanging utilities.





Section 7(b)(2) of the Northwest Power Act

After July 1, 1985, the projected amounts to be charged for firm power for the combined general requirements of public body, cooperative and Federal agency customers, exclusive of amounts charged such customers under subsection (g) of this section for the costs of conservation, resource and conservation credits, experimental resources and uncontrollable events, may not exceed in total, as determined by the Administrator, during any year after July 1, 1985, plus the ensuing four years, an amount equal to the power costs for general requirements of such customers if, the Administrator assumes that-(A) the public body and cooperative customers' general requirements had included during such five-year period the direct service industrial customer loads which are—(i) served by the Administrator, and (ii) located within or adjacent to the geographic service boundaries of such public bodies and cooperatives; (B) public body, cooperative, and Federal agency customers were served, during such five-year period, with Federal base system resources not obligated to other entities under contracts existing as of December 5, 1980, (during the remaining term of such contracts) excluding obligations to direct service industrial customer loads included in subparagraph (A) of this paragraph; (C) no purchases or sales by the Administrator as provided in section 839c(c) of this title were made during such five-year period; (D) all resources that would have been required, during such five-year period, to meet remaining general requirements of the public body, cooperative and Federal agency customers (other than requirements met by the available Federal base system resources determined under subparagraph (B) of this paragraph) were—(i) purchased from such customers by the Administrator pursuant to section 839d of this title, or (ii) not committed to load pursuant to section 839c(b) of this title, and were the least expensive resources owned or purchased by public bodies or cooperatives; and any additional needed resources were obtained at the average cost of all other new resources acquired by the Administrator; and (E) the quantifiable monetary savings, during such five-year period, to public body, cooperative and Federal agency customers resulting from-(i) reduced public body and cooperative financing costs as applied to the total amount of resources, other than Federal base system resources, identified under subparagraph (D) of this paragraph, and (ii) reserve benefits as a result of the Administrator's actions under this chapter were not achieved.

"...a Byzantine sentence that nearly fills a page and that is, in my view, the most complicated section in the Act." – Steve Wright, WP-07 Supplemental ROD



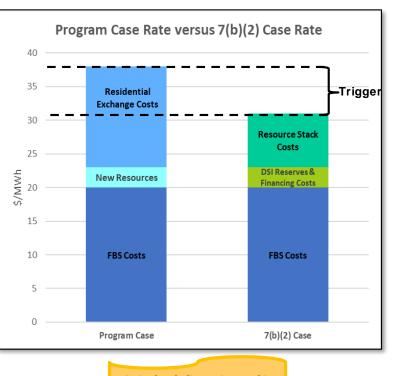
BONNEVILLE POWER ADMINISTRATION

PROVIDER OF CHOICE

POST-2028

7(b)(2) Rate Test Steps

Step 1	Exclude specific Section 7(g) Costs from Program Case	Conservation costs, experimental resource costs, billing credits costs, and "uncontrollable events" costs
Step 2	Run the five assumptions of the 7(b)(2) rate test (Hypotheticalcase)	 (A) DSIs are served by their local utility instead of BPA (B) Federal base system resources are used for publics first (C) no REP purchases and sales (D) after the FBS is exhausted, other resources owned by publics are applied in least cost order (E) power reserve benefits and reduced financing costs available under the Act are not achieved, run both rates for a projected four years past the rate period and discount back to the rate period
Step 3	Compare the rates produced by Program Case with the 7(b)(2) Case	If Program Case rate is lower, do nothing; if 7(b)(2) Case rate is lower, rate test triggers. The \$/MWh difference between the two rates is multiplied by the PF customer load to determine a rate protection amount.
Step 4	Allocate difference from Step 3 to other rates	The rate protection amount from Step 3 must be allocated to other non-PF power sold per 7(b)(3).



An in depth discussion on this topic will occur at a later date

Rate Protection, the Rate Test and REP Benefits

Rate Protection is a function of the 7(b)(2) rate test which is informed by a myriad of variables such as:

- Methodological implementation of 7(b)(2)
- Legal Interpretation of statute
- Exchanging customer ASCs
- Bonneville's cost structure

- PF Exchange loads
- PF Preference loads
- Bonneville's forecasted resources

Stakeholders have disagreed regarding how to interpret and implement directives. The 2012 REP Settlement directs BPA to revisit its 7(b)(2) interpretation prior to 2028.

Example, just because ASCs increase does not mean net REP benefits will increase, because under certain circumstances, rate protection could increase one-for-one with the ASC increase to offset each other.



An in depth discussion on this

topic will occur at a later date

In-Lieu Background





What is In-Lieu?

• Section 5(c)(5) of the NWPA

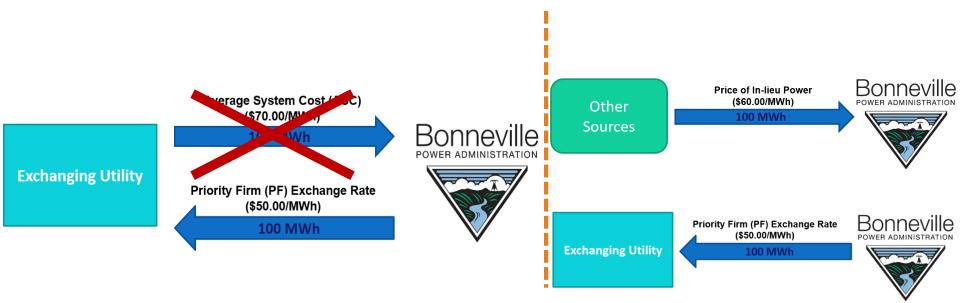
 "Subject to the provisions of sections 4 and 6, in lieu of purchasing any amount of electric power offered by a utility under paragraph (1) of this subsection, the Administrator **may acquire** an equivalent amount of electric power from other sources to replace power sold to such utility as part of an exchange sale if the cost of such acquisition is less than the cost of purchasing the electric power offered by such utility."

In other words:

- In lieu of purchasing any amount of power offered by a utility, BPA, *at its discretion*, may acquire an equivalent amount of power from other sources instead of exchanging, if the cost of such power is less than the utility's ASC.
- This lower physical power cost would be included in ratemaking under section 7 of the NWPA in lieu of exchange purchases at the customers' ASCs.



In-Lieu Visual



- (ASC PF Exchange Rate) x Residential and Farm Load = REP \$\$\$
- (\$60 MWh \$50 MWh) x 100 MWh = \$1000
- REP Savings: \$1000



History and the 2012 REP Settlement





1980-2000 REP Implementation History

- 1981 ASC Methodology
- 1980-1985 DSIs paid for net cost of REP through IP rate.
- 1984 prepare to implement section 7(b)(2) and other adjustments
 - 7(b)(2) Legal Interpretation
 - 7(b)(2) Implementation Methodology
 - 1984 ASC Methodology
- 1985 WP-85 rate case 7(b)(2) implemented for first time. No trigger.
- 1987 1998
 - Combination of 7(b)(2) implementation and increasing ASC reduced REP benefits.
 - Complexity of implementing ASCs and 7(b)(2) led to many settlements with IOUs and Public REP participants.
 - Late 1990s REP benefits declined to roughly \$65M per year, which led to...
- 1995 Congress stepped in and **required** BPA to pay \$145 million in REP benefits for 1997.



2000-2008: Settlement and Litigation

Context

• Implementing REP complex. BPA REP staff included 50+ analysts, lawyers, and others. Reviewing ASC filing and state PUC filings to check IOU costs.

2000 REP Settlement

- To simplify and spread benefits of region more broadly developed "new" methodology to calculate benefits. No 7(b)(2) and no ASC.
- BPA set rates for WP-02 (2002-2006) using 2000 REP Settlement REP costs. Costs of REP increased substantially during energy crisis. REP Settlement was challenged by public customers.

2007 REP Settlement held invalid

- In May 2007, the Ninth Circuit held that 2000 REP Settlement Agreement unlawful. *Portland Gen. Elec. v. BPA*, 501 F.3d 1009 (9th Cir. 2007).
- Court remanded WP-02 rates. Golden NW Alum. v. BPA, 501 F.3d 1037 (9th Cir. 2007).

2008 BPA's Response – Revise Rate and Calculate Refunds

- BPA restarted traditional REP. (ASC and 7(b)(2)). Massive ROD: 729 pages, addressing hundreds of issues.
- Section 7(b)(2) Implementation Methodology; 7(b)(2) Legal Interpretation. Very controversial 274 pages of ROD dedicated to issues relating to interpretation and implementation of 7(b)(2).
- Set rates for FY 2009. Calculated refunds for public customers (\$1.2 billion)- paid by IOUs' through future REP benefits.
- Developed 2008 ASC Methodology



2008-2010: More REP Litigation

2008-2009

- Regional parties filed 56 petitions with Court consolidated into four cases...
- Many challenges to 7(b)(2) and BPA's refund decisions.

2009-2010

- BPA completes power rate case for FY 2010-2011
- More lawsuits... 7(b)(2)...BPA's refund decisions



Context for 2012 REP Settlement

• 2010-2011

- Regional parties held mediation on resolving REP issues.
- IOUs and public customers reached resolution on a NPV for REP benefits until 2028.
- BPA, IOUs, Public customers craft REP Settlement terms.

• 2011

- BPA conducts the REP-12 Settlement proceeding.
- Tests the NPV of REP Settlement for compliance with law.
- REP-12 ROD finds 2012 REP Settlement lawful.

"The disruption that the pending litigation poses to BPA and the region is substantial. As things stand now, not a single COU or IOU ratepayer of BPA knows whether or not the rates it has paid, the REP benefits it has distributed to its consumers, or the refunds it has received over the past 10 years are lawful.... Furthermore, as noted by Staff, "the problem only grows with time." ... With each new attempt by BPA to "fix" the latest set of problems with its implementation of the REP, a new wave of litigation will likely be filed. The end result is that, until the Court finally rules on almost every issue in contention among the many parties, the region will face continuing uncertainty in both the level of the PF rate and the amount of REP benefits payable to the IOUs."

REP-12 Administrator's Record of Decision, REP-12-A-02, at 13-14 (2011).



Current 2012 REP Settlement (REP-12)

- BPA withdrew WP-07 Supplemental / RPSA RODs
- Current REP Benefits set By REP-12
 - REP Settlement established a set "schedule" of REP payments from FY 2012-2028 to the IOUs.
 - COU benefit amounts were not set in the Settlement, but were a function of the Settlement.

Litigation over REP Settlement

- REP Settlement was challenged and upheld (Oct. 2013). APAC v. BPA, 733 F.3d 939 (9th Cir. 2013).
- Settlement expires in 2028; BPA is required to issue 7(b)(2) implementation and legal interpretation prior to FY 2028.



REP Payments

included in rates (\$ millions)

\$182.1

\$182.1

\$197.5

\$197.5

\$214.1

\$214.1

\$232.2

\$232.2

\$245.2

\$245.2

\$259.0

\$259.0

\$273.6

\$273.6

\$286.1 \$286.1

\$286.1

Fiscal Year

2012

2013

2014

2015

2016

2017

2018

2019

2020 2021

2022

2023

2024

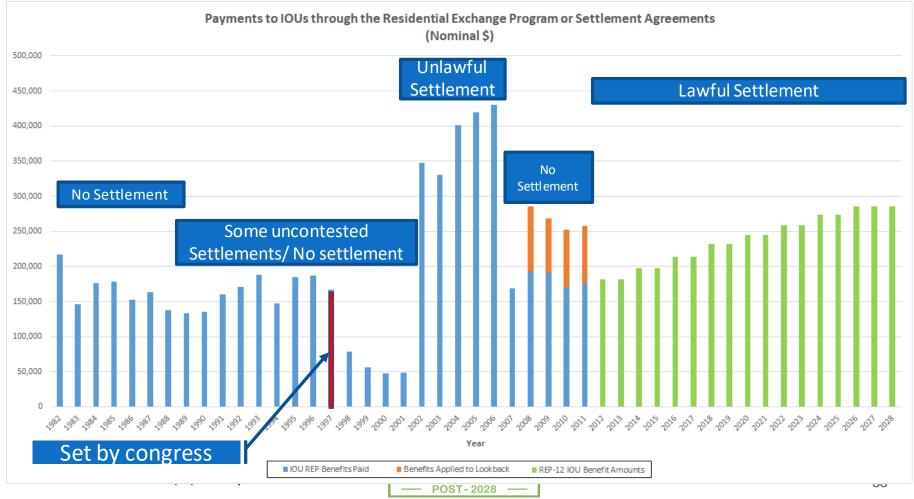
2025

2026

2027

2028

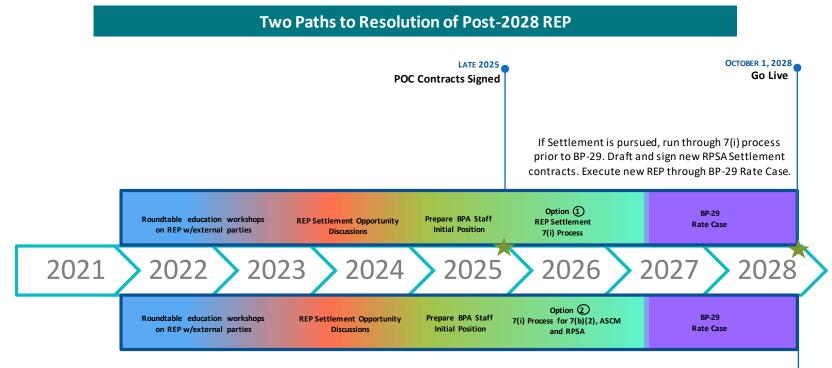




Next Steps







If Settlement is **not** pursued, run new 7(b)(2) Implementation, ASCM, In-Lieu and RPSAs through 7(i) process. Draft and sign new RPSAs contracts. Execute new REP though BP-29 Rate Case.

POC Contract Delivery Readiness



APPENDIX





Informational Sources on REP

- History of REP
- <u>REP External Webpage</u>
- Final ASC Methodology ROD and Endnote
- <u>2012 REP Settlement Final ROD and Agreement</u>
- <u>REP Fact Sheet on Provider of Choice Site</u>
- Final 2012 REP Settlement Evaluation and Analysis Study

