



Provider of Choice: 2021 Calendar, High Water Marks and Tier 1 System Background

PPC Rates and Contracts
May 27, 2021

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Agenda

- Feedback from April 28 meeting
- 2021 Calendar – Meeting Approach and Schedule
- High Water Mark and Tier 1 System Background
- Tiered Rate Methodology, CHWMs, and RHWMs
- Next steps

Customer feedback from April 28 meeting

Feedback Summary	BPA response
<p>Support offered for the non-committal, pre-decisional nature of the sessions. That applies to ideas brought forward by both BPA and customers. It is essential that all participants commit to doing their homework and agree to not rehash previously addressed issues or topics that are out of scope.</p>	<p>BPA supports a non-committal, pre-decisional approach for both BPA and customer concepts and appreciates the interest that all participants come prepared and respect the scope of discussion topics.</p>
<p>Support a routine two-meeting per month cadence (though one customer notes “zoom fatigue”; asks that we reserve two meetings per month for only the topics that need it). Customers also note the importance of background sessions, and at least one suggestion to allow 4-6 weeks between the background and discussion of alternatives to allow time for customer ideation.</p>	<p>BPA will plan for a two-meeting per month cadence and will seek to provide at least 4-6 weeks between background sessions and discussion of issues. BPA also recognizes the interrelated nature of topics and supports the need to maintain scheduling flexibility.</p>
<p>Customers generally support the identified discussion topics, questions, and proposed sequencing, though maintaining scheduling flexibility will be important given the interrelated nature of topics. Some alternative sequencing proposed.</p>	<p>BPA thanks customers for the suggestions around discussion topics. BPA plans to add a background session on governing statutes and will incorporate scoping suggestions when framing the other issue-specific background and discussion sessions.</p>
<p>Customers also suggest some adjustments to the topic list, including the addition of a session on BPA Statutes. Others suggest that the scope of conversations include Demand Charge, NLSL resources, some 5b/9c policy considerations, some additional Energy Efficiency topics, and broad thinking around system size and allocation.</p>	



Based on customer input, the adjusted schedule allows for ~4-6 weeks between the background session and the follow-up discussion on each topic.



Schedule as proposed at 4/28/21 PPC session	
May	CHWM and RHWM approach
June	Application of non-federal resources
July	Capacity enhancement & Resource adequacy
Aug	Carbon
Sept	Contract term & cost control mechanisms
Oct	Transfer/Transmission and revisit interests
Nov	EE
Dec	REP

	Updated Schedule (subject to adjustment): 4-6 Weeks Between Background and Discussion
May 27, 10am-noon	HWM & Tier 1 System Background
June 8, 1-3pm	Non-Federal Resources Background
June 22, 1-3	BPA's Statutes, Capacity & Resource Adequacy Background
July 13, 1-3	HWM & Tier 1 System Discussion
July 27, 1-3	Non-Federal Resource Discussion
August 10, 1-3	Carbon Background, Term/Cost Control Background
August 24, 1-3	Capacity & Resource Adequacy Discussion
September 14, 1-3	Transfer & Transmission Background, EE Background
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Mid-November	REP Background
December 14	
Mid-December	



2021 Approach

Discussion approach

- We intend to follow the six step process listed below.
- BPA will attempt to present alternatives and leanings on topics when possible.
- BPA will address customer feedback during 2021 meetings, though we intend to present refined proposals in Concept Paper.

Background sessions

- May cover steps 1, 2, and 3 (5 from previous session)

Step 1:
Introduction & Education

Step 2:
Description of the Issue

Discussion sessions

- May cover steps 2, 3 and 4

Step 3:
Analyze the Issue

Step 4:
Discuss Alternatives

Feedback

- Will carve out time each session to address feedback (Step 5) from prior session.

Step 5:
Discuss Customer Feedback

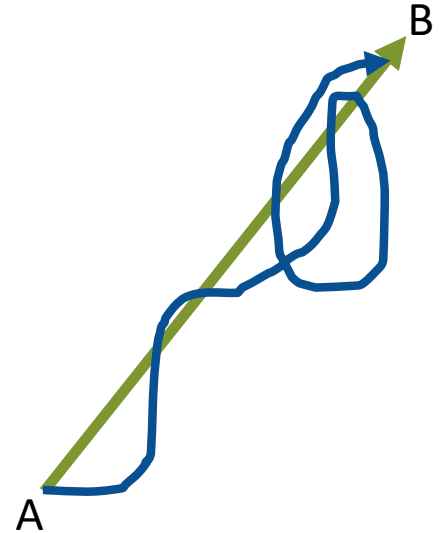
Step 6:
Staff Proposal – **Culminating in
Concept Paper**

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Expectations and commitments

- Schedule established for planning purposes, but maintain some flexibility and fluidity.
- BPA commitment to:
 - Be prepared.
 - Provide materials with as much advance notice as possible.
 - Have subject matter experts present and in attendance.
- BPA heard calls for customers to establish comparable engagement principles or commitments.
- For both BPA and customers, discussions in 2021 are non-committal, scoping, information gathering.



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High Water Mark and Tier 1 System Background

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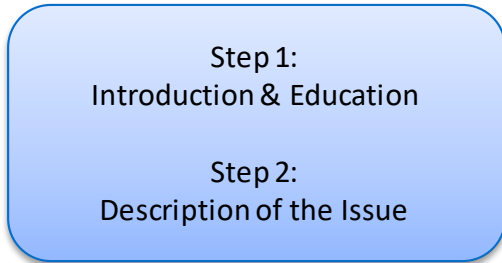


High Water Mark and Tier 1 System

Today’s Background session addresses the reason behind tiered rates, describes how CHWM/RHWMs are calculated, and addresses cost allocation under the Tiered Rate Methodology (TRM). It will also start to outline some of the related issues, as we’ve heard from customers, to be explored in future discussions.

Background sessions

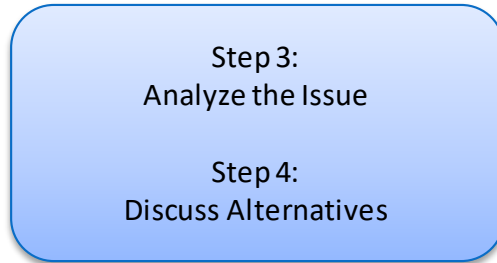
- Steps 1 and 2



Today’s
Session

Discussion sessions

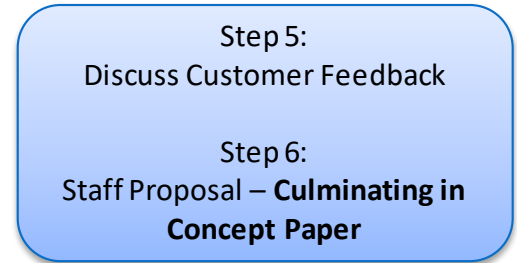
- Steps 3 and 4



July 13
Session

Feedback

- Will carve out time each session to address feedback (Step 5) from prior session.



Relevant statutory authority

Section 5(b)(1) of the Northwest Power Act

- “Whenever requested, the Administrator shall offer to sell to each requesting public body and cooperative entitled to preference and priority under the Bonneville Project Act of 1937 and to each requesting investor-owned utility electric power to meet the firm power load of such public body, cooperative or investor-owned utility in the Region...”
- For more information see Bonneville’s 5(b)/9(c) policy on determining Net Requirements.

Context leading up to RD

- **BPA was approximately in load/resource balance.** Regional load growth was expected to cause a need for new resources after 2011. This created an opportunity to assess how future load growth would fit in BPA's future rate approach.
- **Equity Concerns.** With new resource costs significantly higher than existing system costs, customers were concerned that melding augmentation costs would dilute the value of the system making everyone pay for the growth of the few.
- **Future Stability.** The West Coast power crisis of 2000-2001 was still fresh in the collective memory. The region recognized that uncertainty on who would serve future loads created enormous price and stability risks.
- **Customer Choice.** Customers wanted flexibility to be able to make resource decisions that met their specific needs.
- **Regional Values.** Given emergent renewable portfolio standards, the region believed increased customer participation in resources would continue investments in EE and renewables.

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The underlying reasons for tiered rates

- Prior to tiered rates and the Contract High Water Mark structure, BPA had a melded rate structure.
- Under melded rates, BPA would meld the costs together for all power needed to serve customers' load, including their load growth.
- Tiered rates, and using high water marks, was an allocation proposal that customers put forth to achieve the common goal of limiting the dilution of the value of the Federal Base System (FBS) by limiting access to power from the existing federal system at the lowest-cost-based rate.
- Tier 1: utilities lock in a set amount of power from the existing federal system at a cost-based rate, the Tier 1 rate.
- Each rate period, the amount of power BPA offers at Tier 1 rates is based on what the existing federal system can produce.

The underlying reasons for tiered rates

- Beyond power from the FCRPS sold at a Tier 1 rate, Tier 2 rates are for energy a utility obtains from BPA to serve its load above and beyond its contractual right to power at Tier 1 rates.
- Tier 2 rates are based on the actual or forecast price to acquire the additional power requested by customers in the Tier 2 cost pool.



Tiered Rate Methodology, CHWMs, and RHWMs

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The Tiered Rate Methodology (TRM)

The Tiered Rate Methodology (TRM)

- The TRM establishes a two-tiered rate design for sales of firm power at the Priority Firm (PF) rate under the Regional Dialogue (RD) power sales contracts.
- Tiering is a ratemaking construct implemented through an allocation of *costs* rather than an allocation of power.
- Tiered rates preserve the cost benefits of the existing system for established customers. At the same time, customers experiencing load growth beyond their Tier 1 PF rate purchases from BPA can choose to serve that growth by using nonfederal power, by relying on Bonneville or by using a combination of the two.

Determining the size of the Tier 1 System

Tier 1 System Firm Critical Output

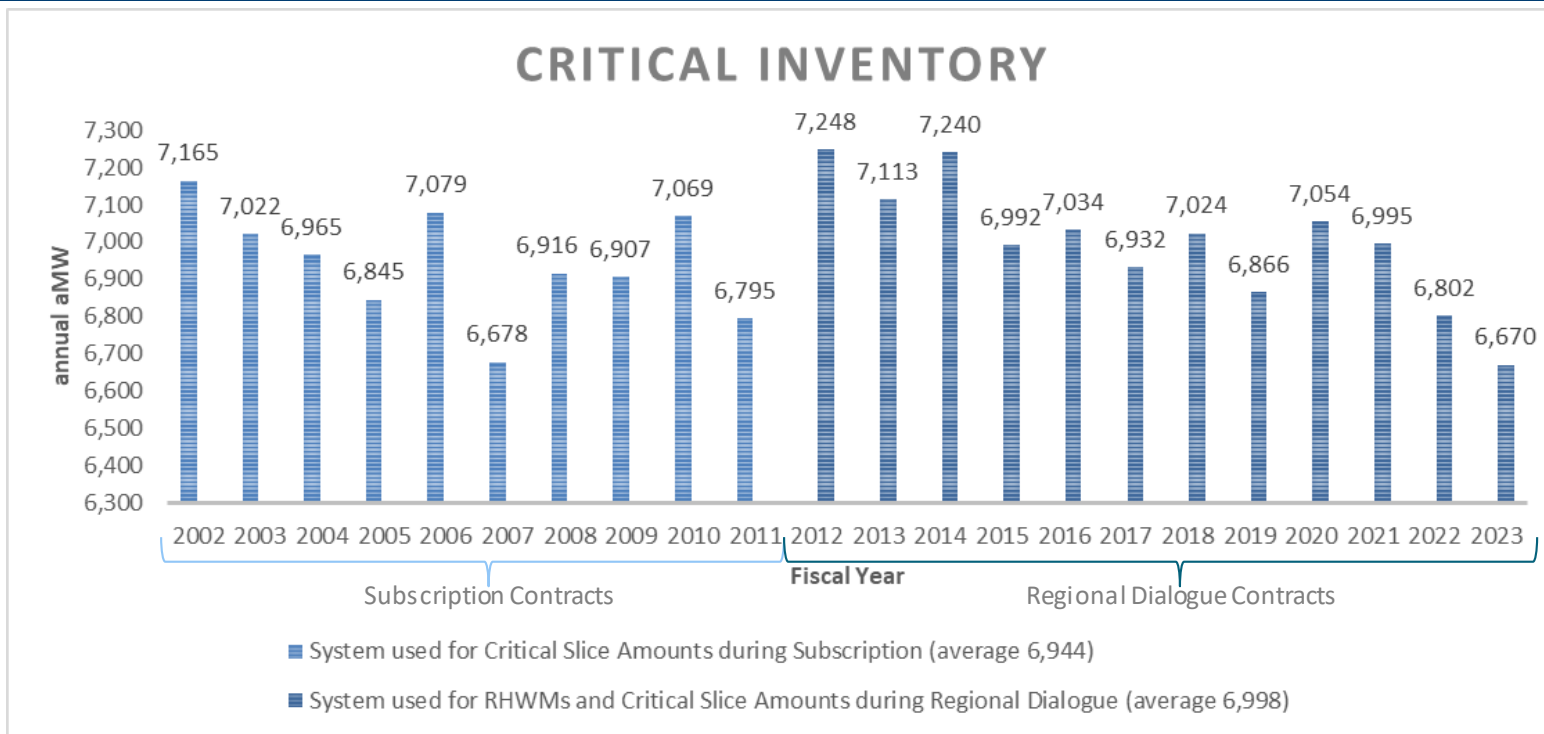
- For hydropower, BPA forecast the amount of firm power the FCRPS can be expected to produce based on the driest or worst water years on record. This is known as **critical water planning**.
- BPA uses conditions that occurred from October 1936 through September 1937 as a baseline and refers to it as 1937 historical critical water conditions.
- With 1937 critical water as the baseline for FCRPS hydro planning, BPA then overlays river operation demands including irrigation, fish passage, flood risk management and recreation. Planners refer to the resulting amount, or inventory, as **critical firm power**.

Defining Critical Firm Power

Critical Firm Power:

- Is the amount the FCRPS can be expected to produce on a continuous basis to supply the firm power used to satisfy the administrator's firm power supply obligations. It is also used to develop power rates and to determine the amount of firm requirements power BPA sells under Regional Dialogue contracts at the Priority Firm (PF) Tier 1 rate.

Critical Firm Power 2002 through 2023



The Contract High Water Mark (CHWM)

Contract High Water Marks (CHWM):

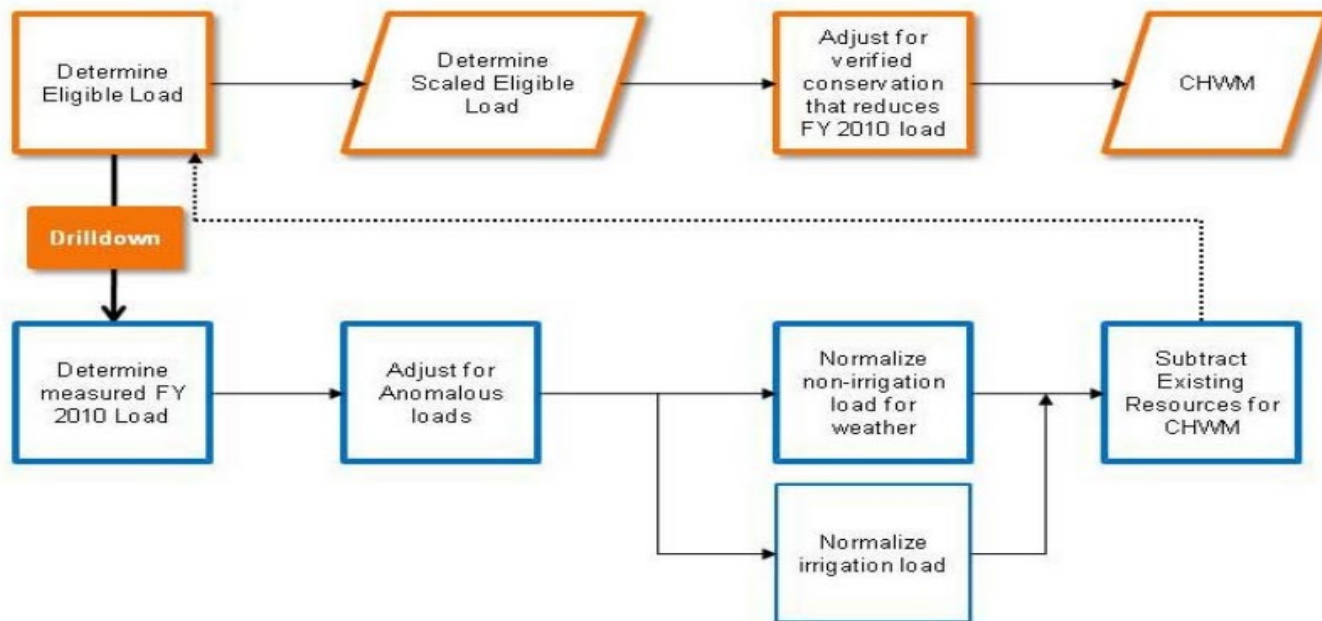
- The central feature of Regional Dialogue (RD) contracts and TRM is the CHWM. Each customer has a CHWM that determines its initial eligibility to purchase power under the RD contract at Tier 1 PF rates.
- The TRM directs how BPA will calculate a customer's CHWM.
- The CHWMs were largely based on customer net requirements loads in FY 2010 with adjustments for weather-normalization and conservation, and adjustments to account for the economic downturn experienced throughout the region in FY 2010.
- As part of the CHWM calculation and listed in the TRM, in Attachment C, BPA gathered information on all resources dedicated to customer load prior to September 30th, 2006. These resources became "existing" resources under the RD contract, and any resources dedicated after that time were/are "new" resources.
- CHWMs are fixed for the term of the RD contracts through 2028, with only minor exceptions such as annexations between customers, new utility formation, limited growth of tribal utilities, and DOE-Richland load growth to support vitrification.

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Calculating CHWMs

How CHWMs were calculated



The Rate Period High Water Mark (RHWM)

Rate Period High Water Mark (RHWM):

- Forecasting the expected production of power – especially the FCRPS – is complicated considering the many flexibilities and constraints, including seasonal and annual water variability, statutory, treaty, and other legal obligations, that can affect operations over time.
- The RD construct recognized these factors and established an approach, through the biennial Rate Period High Water Mark (RHWM) process, to measure system output over time and accommodate changes in system operations. In combination with corresponding customer resource elections, the RHWM process updates the Above RHWM amounts for RD utilities for the upcoming Rate Period.
- RHWMs reflect updates to the projected capability of the Tier 1 FCRPS resources for each two-year rate period and, in turn, determine the amount of firm power a customer can purchase during that rate period at the Tier 1 PF rate.

RHWM amounts under Regional Dialogue

Rate Case	RHWM Tier 1 System Capability (RT1SC) (aMW)	Used RHWM (aMW)	Unused RHWM (aMW)	Above RHWM Load (aMW)	Above RHWM Load Less than 1 aMW (aMW)	Above RHWM Load Served at a Tier 2 Rate (aMW)	Above RHWM Load Served by a Non-Federal Resource (aMW)
BP-12	7,135			130			
BP-14	7,116	7,035	106	133	13	17	103
BP-16	6,983	6,876	108	222	13	55	154
BP-18	6,945	6,768	177	276	10	101	165
BP-20	6,955	6,746	278	279	7	54	218
BP-22	6,736	6,457	279	443	9	157	277

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How “unused” RHEM amounts are treated

Unused RHEM:

- RHEMs set the maximum amount of energy available to a customer at Tier 1 Rates, but the total amount of power that a customer could purchase from BPA is limited by the customer’s Net Requirement. A customer cannot purchase power up to its full RHEM amount if Net Requirement is less than its RHEM.
- The value of this unused RHEM is credited back to all customers purchasing power at Tier 1 rates. Any generating capability in the Tier 1 System above the sum of customers’ Net Requirements and below the sum RHEM loads is remarketed as either surplus, including power sold at Tier 2 rates, or as secondary energy. The balance of costs and credits incurred through this remarketing is applied to the Composite Cost Pool and thus proportionally applies to both Slice and Non-Slice customers.

Framing the CHWM/system size discussion

At the July 13th meeting*, we would like to address the following questions/concepts BPA has received from utilities in our request for feedback on the current CHWM paradigm.

- Should existing RD CHWMs be reset for the Post -2028 Contract?
- How should the Tier 1 System be calculated? For example:
 - Should it be based on critical water? Average water?
 - Fix the system at a predetermined amount, and meld augmentation into existing system to account for variability?
- How should we treat unused CWHM and should we allow for CHWM augmentation for new publics/tribal load growth?
- Are there other changes that should be made to the CHWM/RHWM process?

*July 13 is currently reserved for the CHWM/Tier 1 System size discussion; subject to change.

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Looking forward 2029

annual aMW	FY 2029 (Spring 2021 Forecast Vintage)
Total Retail Load	10,089
NLSLs	1,764
Existing Resources*	1,216
TRL - NLSLs - Existing Resources	7,109
*FY 2029 values set equal to FY 2028 amounts from current contracts	

If you keep existing CHWMs...

- ...and the system remains around 7,000 aMW, then 2/3 of customers will have Above-RHWM Load and headroom will be almost as large as the sum of Above-RHWM Loads.
- ...and increase the system to 9,000 aMW, there will be 13 customers with a total of 133 aMW of Above-RHWM Load. Most customers would be below their RHWM.

If you reset CHWMs to something more like 2029 load forecasts...

- ...and the system remains around 7,000 aMW, then all customers will have a little Above-RHWM Load.
- ...and increase the system to 9,000 aMW, then there will be no Above-RHWM Load until customer loads grow.

If you use existing CHWMs and apply FY 2029 load forecasts, then...	Headroom (unused RHWM)		Above-RHWM Load	
	annual aMW	customer count	annual aMW	customer count
RHWM w/ system size of 7,000 aMW	459	46	569	88
RHWM w/ system size of 9,000 aMW	2,023	121	133	13

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Potential impacts & trade-offs to changing CHWMs

Please note that discussions on CHWM/RHWMs will have impact on other topics such as:

- **Rate stability and risk**
 - Tiering rates using CHWMs was done to preserve the value of the existing Federal Base System. If the size of the system used to set CHWMs is larger than the system under critical water, then it increases the likelihood of adding the costs of new resource acquisitions to Tier 1 rates, effectively shifting costs from individual customers with load growth to all customers (buy and meld).
- **Fuel mix/carbon content in BPA's system**
 - If BPA uses something other than critical water to forecast hydro, there is a greater risk for market/resource purchases need to fill customer needs. Additional purchases could adversely impact BPA's current fuel mix and carbon content.

Additional resources

- Your Power AEs! They are a wealth of knowledge and have a toolbox of educational PowerPoint presentations on a variety of topics including RD contracts, the TRM, and Above-RHWM Load and Tier 2.
- BPA's [5\(b\)/9\(c\) policy](#) and Record of Decision
- Provider of Choice [Fact Sheets](#) and BPA fact sheet search tool.
- Regional Dialogue [Concept Paper](#) and [Policy](#)—good resources for understanding how the conversation/elements evolved, and they provide bite-size explanations of the building blocks.
- [Tiered Rate Methodology](#) and TRM [2020 fact sheet](#) and TRM [2012 fact sheet](#)

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The next sessions...

Provide feedback by
June 10:

- post2028@bpa.gov
(copy your Power AE)
- Power AEs
- Trade Orgs, as applicable

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