

Provider of Choice Discussion: Carbon and Environmental Attribute Options

PPC Rates and Contracts Forum
September 28, 2021

PROVIDER OF CHOICE

— POST-2028 —



Agenda

- Customer feedback from August 24th capacity discussion
- Overview, key considerations, desired outcomes
- REC Options
- Carbon Options



Topic	Summary of Comments from Aug. 24 th Capacity Discussion Session	BPA Response
Slice Customer Presentation	<ul style="list-style-type: none"> • Emphasize the importance of the Slice Group’s principle that any suggested Slice product enhancement/revisions are “beneficial or neutral” for all BPA preference customers. • Support the Slice customer group’s general theme of additional flexibility. For example, believe the “exchange” has merit and would also meet the beneficial/neutral standard noted above. Also believe there are comparable “exchange” options in the Load Following contract that align well with this proposal. • Nearly impossible to fully gauge the potentially wide range of risks and cost shifts that may result. Strongly urge BPA to provide an objective analysis that calculates the potential cost shifts for each Slice customer proposal as well as any forecasted impacts to BPA’s fuel mix. 	<ul style="list-style-type: none"> • BPA hears support for evaluating the Slice Group’s proposal and agrees that it is important to do a full analysis of potential cost shifts and risks. • BPA acknowledges that any product modifications will need to be priced appropriately.

- BPA appreciates the efforts of the Slice Group to propose Slice product modifications.
- BPA will need to evaluate how any such modifications would align with the Provider of Choice foundational principles or interests as they become more fully formulated. (Discussion session on interests is Oct. 26.)
- The principles suggested by the Slice Group will be considered as part of those conversations.
- BPA looks forward to exploring ideas of flexibilities that create value for all customers within the statutory framework of Net Requirements.

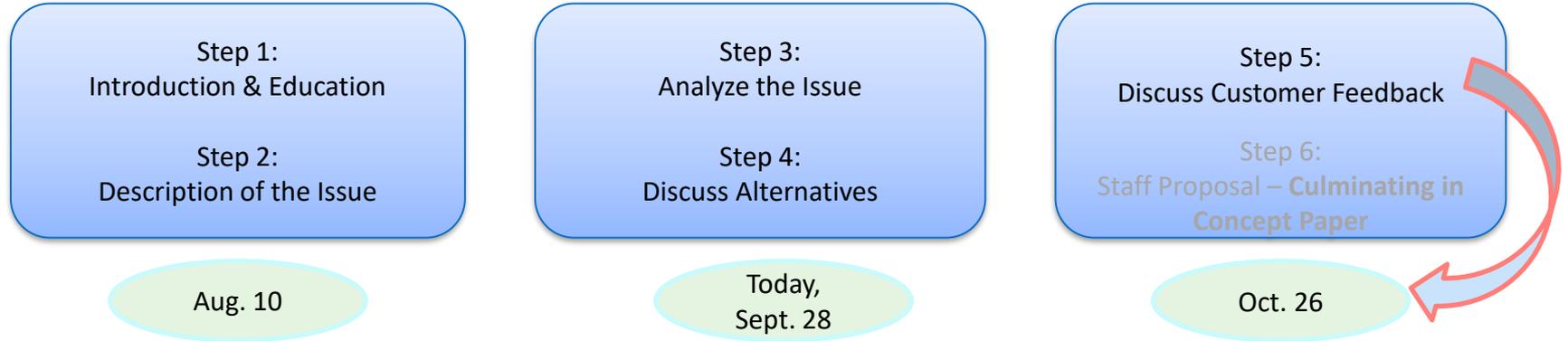


Renewable Energy Credit (REC) and Carbon Options



Today's carbon discussion & the 6 steps

Today's session is intended to be a conversation *starter*—the first of many related discussions in the coming months and years—whereby BPA will share its initial concepts and ideas for addressing environmental attributes and carbon. BPA offers these potential approaches and analysis in the spirit of brainstorming. We will also explore options that, from BPA's perspective, either are not feasible or we're not quite sure how they could work.



Overview and Disclaimers

- The following slides present ideas BPA staff have identified as potential options for addressing RECs and carbon content post-2028. Not all of the options are feasible.
- There is room to explore variations on all of these and many can be paired/combined with other ideas.
- The REC and carbon ideas are shared independently from one another to foster discussion, but they would need to be paired together for a final product. As we discuss these, we may refer back to ideas that may or may not work well with other ideas.
- There are interdependencies between this topic and other post-2028 topics. We do not tackle these complexities today but acknowledge that we, collectively, will need to think through the interrelations as we contemplate the overall post-2028 policy.



Key considerations

BPA considered each option as it relates to several key considerations, in no particular order:

- Is the option consistent with BPA's statutory direction that it sells power from a single system of resources?
- How would the option impact Washington customers' ability to meet Clean Energy Transformation Act (CETA) mandates?
- How would the option impact BPA's Asset Controlling Supplier (ACS) emissions factor and BPA/customer compliance with cap-and-trade programs (both California and Washington)?
- Would the option result in cost shifts between customers?
- Does the option afford flexibility to adapt to the evolution of state and national programs over the timeframe of the contracts?
- Are there other considerations, such as legal perspective or public perception, that should be considered as well?
- What is the overall feasibility of this option based on BPA staff's preliminary assessment?

Desired outcomes

- We'd like today's meeting to be conversational.
- We want to hear from you today and in follow up:
 - What is your perspective on any given option and how it aligns with the key considerations?
 - Are there additional key considerations that should be evaluated?
 - What specific ideas do you have for product options? If the options discussed today don't meet your needs, what option would? We are looking for specificity on how the option would work in practice.

REC Options



Considerations for RECs...

- By 2030, under Washington state law, all hydropower RECs will have some value. BPA is likely to create RECs for the entire federal hydro system. However, other states define “RECs” differently. Only certain RECs are eligible for compliance with state laws.
- California
 - Cap-and-trade: only fuel type matters, not disposition of RECs
 - Clean energy standard: not yet determined
- Oregon
 - Renewable Portfolio Standard (RPS): COUs can use “Oregon’s share” of RECs created by efficiency improvements in the federal hydropower system. Currently, Oregon deems the Regional Dialogue (RD) contract to be bundled.
 - Clean energy standard (IOUs only): only fuel type and greenhouse gas (GHG) emissions matter, not disposition of RECs

Considerations for REC allocation...

Washington

- Clean Energy Transformation Act (CETA): utilities must retire RECs to demonstrate compliance with the 80% non-emitting target. Unbundled RECs (including RECs from the entire federal hydro system) can be used to mitigate for fossil fuel use to serve the last 20% of loads as long as there is no double counting.
 - Double counting – still in rulemaking. WA regulators are considering whether a REC can be used for the 20% mitigation if the emissions attributes of the underlying power are also claimed in another state program (e.g. California cap and trade).
- Cap-and-trade – not yet determined.

These laws will continue to evolve in the coming years.

REC Option 1: Status Quo: Allocated pro rata based on RHMWs

- BPA continues pro-rata allocation of Tier 1 RECs to customers based on RHMWs.
 - This is *not* actual power purchased; some customers get more than their share when compared to actual power purchases, some get less.
- RECs could be allocated to customers purchasing at a Tier 2 rate if the power is based on a renewable resource.
- Customers determine whether BPA transfers the RECs to them, retires, or sells the RECs on their behalf.
- All of the RECs created by the FCRPS are distributed to RD customers and IOUs through the Residential Exchange Settlement.

REC Option 1: Status Quo: Allocated pro rata based on RHMWs

Evaluation of Key Considerations

<p>Would this help Washington customers comply with CETA?</p>	<p>Yes, this likely will work for the 80% target. However, it appears a small portion of RECs allocated to customers may not be eligible for CETA compliance because the RECs are associated with surplus sales into states like California (Washington?) where the emissions attributes are accounted for under cap-and-trade. Thus, some proportional number of RECs may not be eligible if Washington applies this principle to ACS sales.</p>
<p>Are there implications for Cap-and-Trade programs?</p>	<p>California – BPA sales into California are at an ACS emissions factor. While California doesn’t make any claim on the RECs, under CETA Washington regulators may view any RECs associated with the power sale as ineligible to be used for CETA in Washington. (See above.)</p>
<p>Are there cost shifts/implications?</p>	<p>All customers would receive RECs. Those needing them for compliance with state programs can use them. Others may be able to sell them to Washington utilities for mitigation, etc.</p>
<p>Does this offer flexibility for future evolution of state/national programs?</p>	<p>To BPA, this approach has limited flexibility because it allocates all RECs to customers, limiting BPA’s marketing opportunity for unbundled RECs (limited value today, could expand in the future). This option may give customers flexibility in how to use RECs.</p>
<p>Other? (legal, external perceptions, etc.)</p>	
<p>Overall Feasibility?</p>	<p>Staff believe this is a feasible option, but there may be a better approach for allocating RECs post-2028.</p>

REC Option 2: Bundled PF sales: Allocate based on MWhs of hydro/ renewables purchased

- RECs are allocated to customers based on the MWhs of hydro and other renewables used to supply customers as determined by applying BPA's fuel mix to total purchases.
 - Main difference between this and status quo is that this aligns RECs with *actual* MWh purchases.
- BPA would reserve the remaining RECs, for example those associated with surplus sales, losses, reserves, Canadian Entitlement (?), EIM (?), etc., to market or retire.
- This option could be expanded/modified such that customers could pay a premium if they wanted the RECs allocated under this methodology with BPA retaining all remaining RECs.

REC Option 2: Bundled PF sales: Allocate based on MWhs of hydro/ renewables purchased

Evaluation of Key Considerations

Would this help Washington customers comply with CETA?	Yes, this will work for the 80%. There is a direct correlation between power purchased from BPA and RECs.
Are there implications for Cap-and-Trade programs?	California – No implications. Washington – It is not clear yet how cap-and-trade and CETA accounting will work.
Are there cost shifts/implications?	No. However, a variation on this is that customers could pay a premium if they wanted the RECs allocated under this methodology with BPA retaining all remaining RECs.
Does this offer flexibility for future evolution of state/national programs?	Provides flexibility. The RECs not bundled with PF sales could be retired or marketed by BPA based on future market for RECs and state rules (limited value today, could expand in the future).
Other? (legal, external perceptions, etc.)	Transparent method of allocating RECs with clear ties to power purchased from BPA.
Overall Feasibility?	Staff believe this is a feasible option for allocating RECs that meets known policy needs today and affords future flexibility.

REC Option 3: Sell RECs as a Separate Product

- RECs are sold as a separate product in the long-term contracts or off the trading floor.
- Customers could purchase the RECs they need for compliance at a premium.

Evaluation of Key Considerations

Would this help Washington customers comply with CETA?

May not work for the 80% compliance. Doesn't appear to meet the definition of serving 80% of load with bundled power with RECs. Would need to confirm with state regulators. Utilities could use these separate RECs for the 20% compliance through mitigation. A small number of RECs may not be eligible for CETA compliance if WA applies "double counting" principles to ACS sales (see discussion under REC option #1).

Are there implications for Cap-and-Trade programs?

California – No implications.
Washington – It is not clear yet how cap-and-trade and CETA accounting will work.

REC Option 3: Sell RECs as a Separate Product

Evaluation of Key Considerations

Are there cost shifts/implications?	Customers desiring RECs would pay a premium for them, crediting back to other cost pools.
Does this offer flexibility for future evolution of state/national programs?	Provides options for customers to “green up” their purchases from BPA. If all RECs are subscribed to, there may not be flexibility for BPA if there is desire for a surplus sale paired with RECs.
Other? (legal, external perceptions, etc.)	Oregon - customers would need to demonstrate what RECs were “Oregon’s share” to be eligible for the Oregon RPS. State may not deem this product to be bundled.
Overall feasibility?	Some form of this method of allocating RECs may be necessary to make certain carbon options work (like deeming options). However, as a stand alone REC option, staff do not believe it is a good approach.

Carbon Product/Rate Options



Carbon Content Considerations...

- BPA's system today is 95% carbon-free on average.
- In terms of establishing the carbon intensity of BPA's power sales, the Asset Controlling Supplier (ACS) concept is widely used in the region to recognize that BPA sells from a single system of resources. California, Oregon, and Washington (beginning in 2023) apply an ACS emissions factor to BPA sales into these states.
 - Both California and Washington's cap-and-trade programs, as well as Oregon's GHG accounting program and Clean Energy Standard, recognize ACS power sales as specified.
 - BPA has historically sold power at a premium into California because of the low carbon content of the system, with the revenues from these surplus sales helping to keep PF rates low.
- In contrast, CETA is based on resource type (emitting or non-emitting) paired with retirement of RECs.

Carbon Content Considerations...

- BPA believes regional markets and state accounting practices will continue to evolve in the coming decade(s), but there is considerable uncertainty about what types of changes in practices may emerge.
- For example...
 - States may reevaluate unspecified emissions factors and whether it should be more reflective of the future fuel mix on the grid;
 - Trading platforms may enable specifying carbon content or resource type in transactions; and/or
 - States may agree on standardized, implementable accounting practices for organized markets and coordinate more on carbon and RPS policies.
 - Federal policy may provide direction on all of this.
- These changes may impact the carbon content in BPA's system, but are outside of BPA's control.

Carbon Option 1: Sales from individual generators to customers

BPA is not authorized to sell from individual projects to individual customers.

- In order to maximize the production of useful energy across the system (and to meet all other operational considerations on a system-wide basis), BPA must operate the system as a whole unit—this is a physical reality given the interdependent and interconnected nature of projects on the same basin.
- BPA must use Federal Base System Resources (plural, not one resource) to meet customer needs.
 - If Bonneville were to sell from individual generators, customers would no longer benefit from the reliability of the entire system—they could lose service if “their resource” goes down.
- BPA must recover “total system costs” in rates—selling from one project to one customer would not recover that customer’s share of the total system costs.
- For all these reasons, this concept violates the legal principle that BPA must make “system sales” (aka single system mix).

This is not a feasible option.



Carbon Option 2: System becomes 100% carbon-free

- In this option, at some point during the next contract period, there would no longer be any emitting (or unspecified) resources in the federal system.
- BPA does not believe this option is feasible at this time because:
 - BPA, like any other utility, still needs to make balancing purchases. Per the NW Power Act, BPA must serve loads throughout its multi-state service territory.
 - Today's power product markets and accounting practices do not yet facilitate this occurring in an efficient and cost-effective manner. Perhaps markets will evolve over time, but this is uncertain and outside of BPA's control.

Carbon option 3: Status Quo: All products are the same

- All BPA power sales – firm and surplus – are attributed the same “system” fuel mix.

Evaluation of Key Considerations

Does this work with BPA's single system mix?	Yes.
Would this help Washington customers comply with CETA?	BPA's fuel mix meets CETA's 80% standard today. However, when paired with the current method of allocating RECs, BPA is not sure if the RECs are adequate to meet the 80% standard (i.e. this option might need to be paired with the option of conveying RECs based on actual purchases). Each Washington utility would need some level of mitigation. This would not help Washington customers demonstrate they are making progress towards the 2045 standard (unless paired with BPA making cleaner purchases, see option 4).
Are there implications for Cap-and-Trade programs?	No. However, as cap-and-trade allowance prices increase in the future, costs will go up unless BPA's system also gets cleaner.

Carbon Option 3: Status Quo: All products are the same

Evaluation of Key Considerations, Continued...

Are there cost shifts/implications?	There are no direct cost shifts. Though customers' elections of products to serve load growth at Tier 2 rates impact the emissions that are attributed to the entire system.
Does this offer flexibility for future evolution of state/national programs?	Not flexible. It does not offer to lower the emissions factor of the system thus providing customers options towards meeting national or state clean energy goals and policies.
Other? (legal, external perceptions, etc.)	BPA would not be contributing to additional GHG emission reductions with this option (unless this is paired with BPA making cleaner purchases).
Overall feasibility?	This is a feasible option. However, staff recognize there may be a better approach for post-2028.

Carbon Option 4: “Greener” Firm Power Acquisitions; Conveying Attributes to Tier 1 and Tier 2 Rates.

- The Tier 1 firm power product is similar to today, but BPA commits to making it “greener” over the timeframe of post-2028 contracts.
 - Determine and convey the carbon content of the Tier 1 system to customers purchasing at Tier 1 rates.
 - This could be accomplished through a variety of to-be-determined measures within BPA’s internal control like assigning costs of carbon to purchasing practices or through carbon-free augmentation, as well as through external factors like evolution of markets and state accounting practices.
- BPA would offer green options and green market purchase options at the Tier 2 rate. Determine and convey the attributes of those acquisitions to customers purchasing at such Tier 2 rates. (This could be paired with other options as well.)
- The NR rate would likewise convey carbon content and resource attributes according to customer rate.
- Surplus sales would be reflective of the carbon content and resource attributes in the Tier 1 resource pool (Tier 2 and NR attributes are allocated to specific customer purchases).

Carbon Option 4: “Greener” Firm Power Acquisitions; Conveying Attributes to Tier 1 and Tier 2 Rates.

Evaluation of Key Considerations

Does this work with BPA’s single system mix?	Yes.
Would this help Washington customers comply with CETA?	Potentially. The system meets the 80% standard today and would be demonstrating progress towards meeting the 2045 standard. It is unclear whether a rate construct would satisfy Washington’s interpretation of how carbon attributes can be conveyed. The overall effectiveness in meeting CETA standards will depend on the timeframe for demonstrating compliance under CETA and how BPA operationalizes actions to green up the system. (i.e. is it an hourly, monthly, or annual demonstration?)
Are there implications for Cap-and-Trade programs?	The Tier 1 system would be used to calculate the ACS emissions factor. BPA would likely need CARB and Washington Department of Ecology to recognize this slight modification to methodology.
Are there cost shifts/implications?	Related to greening up the system: Likely, assuming making carbon-free purchases or resource acquisitions is more expensive. The costs of greening up the Tier 1 system would be spread among all customers due to both costs of clean purchases and reduced surplus revenues. The level of costs would depend in part on how BPA would need to operationalize this to meet customer expectations (see CETA discussion). However, an option to potentially offset some of these costs is that customers that want RECs paired with the Tier 1 system could potentially pay a premium for it. Related to allocating carbon content to customers electing at Tier 1/Tier 2 rates: Eliminate cost shifts related to carbon compliance obligations resulting from customer Tier 2 elections.

Carbon Option 4: “Greener” Firm Power Acquisitions; Conveying Attributes to Tier 1 and Tier 2 Rates

Evaluation of Key Considerations	
Does this offer flexibility for future evolution of state/national programs?	Yes, the entire system would become cleaner over time. BPA would have the discretion to figure out how to do this in the most cost-effective and efficient manner.
Other? (legal, external perceptions, etc.)	Operational steps BPA takes to meet targets or expectations would need to be balanced with reliability, cost, and other considerations.
Overall feasibility?	This is a feasible option, but any targets or goals for greening up the system would need to be weighed against other considerations. The ability to convey attributes to customers electing to purchase at Tier 2 rates is feasible and can be paired with other options.

 See slides 39-40 in Appendix for a variation of this option. Carbon option 4a contemplates greening the system through long-term purchases from specific generating resources.



Carbon Option 5: “Deeming” resource attributes for a premium

- This option considers carbon product and REC allocation jointly.
- Interested customers would pay a premium to claim they are procuring a non-emitting product paired with a REC. In other words, BPA would “deem” a customer is using the resource.
 - The system itself is not 100% clean. In fact, unless paired with BPA pursuing a “greener” system, there would be no change in carbon content or resource attributes.
 - Likewise, BPA would offer a clean option for Tier 2 products.
- Everyone pays for the entire system (including balancing purchases) because all of these resources are needed to meet load in any given hour or sub-hourly timeframe. The premium paid by customers for the “deemed” resource + RECs is included in rates as a revenue credit.
 - Customers that do not pay the premium do not get the RECs.
- BPA believes there would be enough RECs + non-emitting resources to “deem” to those that are interested based on state policies we know of today.

Carbon Option 5: “Deeming” resource attributes for a premium

Evaluation of Key Considerations

Does this work with BPA’s single system mix?	This is problematic from the system sales perspective.
Would this help Washington customers comply with CETA?	Doubtful. Whether this is a viable option to meet the 80% depends on how Washington regulators interpret use. (Note, a small portion of RECs may not be eligible for CETA compliance because they are associated with surplus sales into states like California.)
Are there implications for Cap-and-Trade programs?	Probably. In theory, an ACS emissions factor would still apply, which would be reflective of the entire system as this includes all purchases that were necessary for meeting load demands in any given timeframe. BPA would sell ACS to WA utilities for cap and trade, but would ‘deem’ a carbon-free product for CETA. This would need to be confirmed with the states, who may not accept this construct.
Are there cost shifts/implications?	No. A premium would be charged for this product.

Carbon Option 5: “Deeming” resource attributes for a premium

Evaluation of Key Considerations

Does this offer flexibility for future evolution of state/national programs?	Not necessarily. Customers would need to elect into this option. If other states later pass standards, or there is a national standard, there might not be sufficient non-emitting resources + RECs to offer the product to additional customers.
Other? (legal, external perceptions, etc.)	This option is highly dependent on state regulators affirming this product would meet state clean energy policies. This construct is inconsistent with previous BPA statements on selling from a single system and would be controversial with state regulators and other stakeholders (BPA would be criticized for “shuffling” resources around).
Overall feasibility?	This option does not appear to be feasible from a system sales perspective and it is not clear if it would meet state clean energy policy requirements.

Carbon Option 6: “Deeming” the Slice Product to be Non-Emitting (hydro + CGS)

- The Slice product could theoretically be modeled as hydro and CGS only (similar to deeming the slice product is carbon-free).
- This would likely decrease the amount of power that customers received under the Slice product.
- Operations would not be changing. BPA would still be making balancing purchases.

Carbon Option 6: “Deeming” the Slice Product to be Non-Emitting (hydro + CGS)

Evaluation of Key Considerations

Does this work with BPA’s single system mix?

This does not appear to be consistent with BPA’s single system mix. While BPA could model this, it is not really the product customers are receiving. For example, the balancing purchases BPA makes impact the shape of the system.

This is distinguishable from the Tier 1 and Tier 2 rate mechanisms discussed in other options where attributes and carbon content could be assigned to those customers purchasing at those rates.

Would this help Washington customers comply with CETA?

Doubtful. For slice customers, Washington regulators would need to affirm this meets CETA. If they did, then customers’ slice purchases from BPA would be non-emitting and count towards the 80% target. However, it is unclear how it would affect the rest of the customer’s portfolio: 1) customers may not be able to use surplus slice to meet CETA mandates (depending on WA regulators interpretation of CETA); 2) emissions associated with Block purchases would likely increase; 3) With slice power deliveries likely decreasing, this could impact customers’ non-federal purchases.

For load following and block customers, this would likely make it more difficult to meet CETA mandates because emissions associated with balancing purchases would be accounted for by these customers.

Are there implications for Cap-and-Trade programs?

Probably. The ACS emissions factor would increase if the carbon-free generation accounted for by slice customers needed to be removed from ACS reporting to CA and WA. This reporting construct would need to be confirmed with the states.

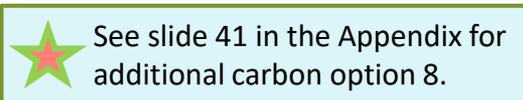
Carbon Option 6: “Deeming” the Slice Product to be Non-Emitting (hydro + CGS)

Evaluation of Key Considerations

Are there cost shifts/implications?	Yes. Because balancing purchases would be accounted for by the Block and Load Following product only, this would shift costs of compliance with state programs to those customers.
Does this offer flexibility for future evolution of state/national programs?	BPA has a limited amount of non-emitting power it could provide under this option. This does not appear to be viable as a long-term option.
Other? (legal, external perceptions, etc.)	This option is highly dependent on state regulators affirming this product would meet state clean energy policies. This construct is inconsistent with previous BPA statements on selling from a single system and would be controversial with state regulators and other stakeholders (BPA would be criticized for “shuffling” resources around).
Overall feasibility?	This option does not appear to be feasible from a system sales perspective and it is not clear if it would meet state clean energy policy requirements.

Carbon Option 7: Carbon-Mitigated (Neutral) Product

- BPA offers an option for customers to elect to have BPA mitigate for any emitting resources in its system.
 - BPA could purchase unbundled RECs to mitigate for any unspecified purchases.
 - Could be useful to customers in meeting CETA's 20% that can be mitigated for with unbundled RECs.
 - BPA (if it is not the entity with the compliance obligation) could purchase allowances for cap and trade compliance and transfer to customers.
 - Could be useful to customers with a cap-and-trade compliance obligation.
- Customers that want this option would pay for the costs.
- This option could be paired with many of the other product options discussed.
- This is an additional service that BPA believes is feasible if customers are interested in it.



Summary of Feasibility of Options

REC Options:

All options are feasible.

- 1) Bundled PF product (conveying based on actual purchases);
- 2) Status quo (allocating based on RHWMs). Staff acknowledge there may be a better approach.
- 3) Selling RECs as a separate product. Staff acknowledge this is likely not a good stand-alone option but may be necessary to make certain carbon options work.



Summary of Feasibility of Options

Carbon Options:

Feasible

- 1) Status quo (all products are the same). Staff acknowledge there may be a better approach.
- 2) Greening up the system and conveying attributes to purchases at Tier 1 and Tier 2 rates
- 3) Offering a carbon-mitigated product

Concerns with Feasibility. These options appear inconsistent with system sales and it is not clear if they would meet state clean energy policies.

- 1) Deeming resource attributes at a premium
- 2) Deeming the slice product

Not Feasible Options

- 1) selling from individual generators to customers
- 2) 100% carbon-free system (not feasible at this time)



Feedback and Upcoming Sessions

Provide feedback by October 12:

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

May 27: 10am-noon	HWM & Tier 1 System Background
June 8: 1-3pm	Non-Federal Resources Background
June 22: 1-3pm	BPA's Statutes, Capacity & Resource Adequacy Background
July 13: 1-3pm	HWM & Tier 1 System Discussion
July 27: 1-3pm	Non-Federal Resources Discussion
August 10: 1-3pm	Carbon Background, Term/Cost Control Background
August 24: 1-3pm	Capacity & Resource Adequacy Discussion
September 14: 1-3pm	Transfer & Transmission Background, EE Background
September 28: 1-4pm	Carbon Discussion
October 12: 1-3pm	Transfer & Transmission Discussion
October 26: 1-3pm	Term/Cost Control Discussion and revisit Interests
November 9: 1-3pm	EE Discussion
Mid-November: 1-3pm	REP Background
December 14: 1-3pm	

Thank you for your time today and your ongoing engagement in post-2028 conversations.



Appendix of Additional Options Not Presented Today



Carbon Option 4a: Add Clean Generating Resources to System

One way to “green” up the system would be to purchase energy output instead of market purchases with embedded carbon content.

- Loads are going to grow with electrification, more customer needs.
- BPA could invest in solar and battery storage to accompany the solar investment.

Acquiring resources is based on “need.” BPA currently assesses resource need through the Resource Program.

- A 6(c) process is required if acquiring a “major resource” (over 50 aMW and greater than 5 years).
- BPA forecasts loads and resources in the Whitebook and Needs Assessment. If then advocated for in the Resource Program, the Administrator could acquire a resource to meet this need.
- 1993 6(c) Policy forestalled the need to redo policy every five years (delayed by agreement with Council).
- If interested in a major acquisition, re-engaging with Council would be recommended.

Carbon Option 4a: Add Clean Generating Resources to System

There would be challenges and considerations if BPA were to consider acquiring a major resource under 6(c) rather than acquiring a non-major resource or bilateral transactions for balancing purchases.

- May need to justify needs based on balancing, shaping and reserve needs. Currently, the business plan identifies spot market as the preferred least cost resource.
- Could be feedback effects with CHWM process, since how we compute CHWMs could affect the level of acquisition need.
- Very real stranded cost issues, therefore discussion alongside off-ramp eligibility in the new contracts will be important.

Carbon Option 8: “CHWM” Based on Carbon Content

- The premise of this concept is that the Tier 1 system would be carbon-free. Additional power needs beyond that Tier 1 base would be subject to Tier 2 rates and convey the carbon content of customers Tier 2 elections (e.g. with carbon-free resources or market purchases).
- BPA would still need to make balancing purchases. Power product markets and accounting practices do not yet facilitate purchasing carbon-free resources to meet the entirety of balancing needs.
- BPA cannot figure out how to make this work. BPA is not sure how to assign balancing purchases (which we need to make) if not assigned to the Tier 1 system and is open to suggestions.