



December 23, 2024

VIA ELECTRONIC FILING

Libby Kirby
Market Initiatives Policy Lead
Bonneville Power Administration

Andy Meyers
Market Initiatives Policy Lead
Bonneville Power Administration

Re: State Agency Comments on Bonneville Power Administration’s Day-Ahead Market November 2024 Workshop

Dear Ms. Kirby and Mr. Meyers,

The Oregon Public Utility Commission, Oregon Department of Energy, Oregon Department of Environmental Quality, Washington Utilities and Transportation Commission, Washington State Department of Ecology, and Washington Energy Office at the Washington State Department of Commerce (State Agencies) appreciate the opportunity to comment on the Bonneville Power Administration’s (BPA) day-ahead market (DAM) evaluation.

BPA’s pivotal role in the regional power supply and transmission infrastructure makes its DAM decision one of the most significant energy decisions the region has faced, and a consequential choice for the economies and residents of our states. BPA’s decision should not be taken lightly and a thorough review of the economic impacts of BPA joining either SPP’s Markets+ (Markets+) or CAISO’s Extended Day Ahead Market (EDAM), or delaying a decision and staying in the Energy Imbalance Market (EIM), should be supported by data and carefully considered by decision-makers.

The State Agencies acknowledge that there is a diversity of views on market choice among BPA customers in our states, including the investor- and consumer- owned utilities. The intent of our comments is to encourage BPA to critically consider the effects to all ratepayers in the Pacific Northwest of its decision whether and when to join Markets+ or EDAM, recognizing the long-term importance of this decision on reliability, costs, and market governance, as well as on meeting our states’ statutory climate and energy goals.

The comments in this letter reflect the observations of the State Agencies based on the materials shared by BPA and E3 at the November 4, 2024, DAM workshop. The State Agencies appreciate the additional scenario analysis, particularly incorporating items we had previously suggested – EDAM Bookend scenarios for 2030 and 2035, sensitivities around hydro variability, and updated footprints incorporating

the latest utility announcements regarding market leanings.¹ Appendix A of our comments includes E3's graphic representation of the market footprints studied and Appendices B and C include summaries of the results. While we would have preferred an opportunity for public input on the details of the additional scenario analyses before the scenarios were run, as the State Agencies had requested, we greatly appreciate BPA conducting this analysis and for sharing the Supplemental Study Results Excel file.

The State Agencies had previously requested a meaningful opportunity for discussion of the additional scenario analysis results to help inform BPA's decision. Instead, BPA's presentation and discussion of the additional scenario results focused on the limits of production cost modeling and set aside the economic results in favor of harder to quantify qualitative factors. While economic modeling has its limits, utilities and regulators regularly use modeled data to inform decisions, particularly to understand the range of potential outcomes of a decision. For the 25 Western Markets Exploratory Group (WMEG) members, including BPA, who came together in 2022-2023 to work on a study of this kind, it was a methodology and study worth pursuing. Other utilities have relied on similar economic analysis to inform their choice of market and it has been the industry standard to commission and use this type of analysis to inform those decisions. It should not be any different for BPA; scenario results are an essential input to decision-making.

The State Agencies appreciate E3 and BPA presenting selected modeled scenarios data at the public workshop, centered on the costs and benefits to BPA. Neither E3 nor BPA presented an analysis of the costs and benefits for the Pacific Northwest region as a whole – which the additional scenario analysis also studied. We appreciate that BPA included the regional cost and benefit data in the Supplemental Study Results Excel file posted under the November 4 workshop meeting materials.

The State Agencies analyzed this regional data and found **significant differences in economic outcomes for the Pacific Northwest depending on BPA's decision to join a regional day-ahead market modeled under normal market conditions.** According to the data:

- **There are significant annual regional cost savings quickly reaching billions of dollars if BPA participates in EDAM as compared to Markets+.** Comparing the most realistic market footprints studying BPA in EDAM or Markets+, there are annual regional savings of \$400 million in the near-term, growing to almost \$550 million per year in the long-term when BPA participates in EDAM compared to participation in Markets+. Assuming these benefits accrue annually as estimated through 2035, there are lost cumulative cost savings to the region of approximately \$4.4 billion if BPA selects Markets+.
- **There are also annual regional cost savings if BPA stays in the EIM and chooses not to participate in a day-ahead market.** That is, selecting Markets+ appears to cost the region more than the benefits that would accrue, which would translate into higher customer bills than experienced today.

BPA staff continue to recommend the agency join Markets+; however, as noted above and discussed further in our comments, the E3 scenario analysis commissioned by BPA appears to show Markets+ is significantly more costly for BPA and the Pacific Northwest region than joining EDAM or making no decision to join a DAM at this time. In several scenarios, BPA joining Markets+ delivers more costs than benefits. Given the results, and the fact that the regional results were not presented or discussed at the November 4 workshop, it is important that BPA revisit and provide a fuller discussion of these results at the next workshop.

¹ See Page 2 of State Agencies' comments dated July 3, 2024.

From the scenario results, the State Agencies understand that additional information is still required to make a complete decision. This includes the impact of market seams on reliability and cost to customers. Further, the total implementation costs of participating in each market are also unclear and not captured in the scenario analysis.

The State Agencies request that BPA provide a transparent accounting and discussion of these additional costs and issues prior to the draft decision, as they are essential to a fulsome cost-benefit analysis.

Finally, we continue to request that prior to issuing the draft decision, BPA clarify what weight it is assigning its decision criteria and explain what further quantification, if any, will occur to inform its decision.

We provide more information on our recommendations and requests below.

1. BPA should revisit its analysis of the additional scenario results at the next DAM workshop, taking into consideration not only the BPA-specific results, but also the regional results.

BPA has statutory obligations to make businesslike decisions that benefit BPA and the Pacific Northwest region as a whole.² BPA has reiterated these obligations throughout the DAM decision process and included decision criteria that address these obligations.³ These obligations necessitate a close look at the costs and benefits of BPA's DAM participation. The scenario analysis results are the best cost and benefit data available – even as they present a range of possible futures and, of course, incorporate some uncertainty.

Given that BPA invested in producing additional scenario modeling that includes BPA-specific and regional results, the State Agencies request that BPA revisit its analysis of the results with a focused exploration of the regional results at the next DAM workshop. Neither E3 nor BPA presented the regional costs and benefits data associated with the additional scenario analysis at the November 4 workshop. That data is key in understanding the implications of BPA's potential decision to all customers in the Pacific Northwest.

To further this conversation and better understand the costs and benefits of BPA's potential decision, the State Agencies reviewed both the BPA-specific and regional results BPA posted. The State Agencies summarized those results in a set of tables in Appendices B and C of these comments which the State Agencies used to inform our discussion of key results below.

First, the State Agencies note that BPA summarized the results as showing more cost savings (benefits) for BPA customers in EDAM. BPA summarized the BPA-specific results at the November 4 workshop using a comparison of the "Alt Split 4A" scenario and the "Westwide Market" scenario. The former is a two-market scenario with entities split between Markets+ and EDAM and BPA in Markets+, while the latter is a single-market scenario with all entities in EDAM, including BPA

² Bonneville Power Administration. *Day-Ahead Market Policy Paper Attachment 2: Preliminary Legal Assessment of Day-Ahead Market Participation*. April 2024. Pages 2-4. <https://www.bpa.gov/-/media/Aep/projects/day-ahead-market/2024/03-dam-march-policy-paper-attachment-2-preliminary-legal-assessment.pdf>

³ See BPA's November 4, 2024, DAM workshop presentation, slide 16: <https://www.bpa.gov/-/media/Aep/projects/day-ahead-market/2024/dam-workshop-9-presentation-110424.pdf>

(referred to as the “EDAM Bookend” in BPA’s earlier scenario analysis).⁴ Using this comparison, **BPA summarized the additional scenario results as showing greater benefits (\$65 to \$221 million per year) to BPA customers when the agency joins EDAM.**⁵ This benefit range reflects both regular market conditions as well as low hydro (i.e., dry) and dry stressed load market conditions. These numbers are just for 2026 – BPA did not provide a similar summary statement for the 2030 and 2035 data.

While BPA did not summarize the scenario comparison above out to 2030 and 2035, the State Agencies have done so utilizing BPA’s posted modeling results. The State Agencies previously have noted how important it is to consider long-term outcomes in this decision-making process, and because of that, had asked for certain scenarios to be run for 2030 and 2035.⁶ Extending the comparison that BPA started above out to 2030 and 2035, the data show continued benefits to BPA customers when BPA joins EDAM.⁷ In 2030 and 2035, the annual benefits favor BPA joining EDAM by \$215 million and \$175 million, respectively.⁸ Employing the same comparison for the regional data,⁹ the Pacific Northwest would see between \$232 to \$360 million greater benefits in 2026 if BPA were to join EDAM compared to Markets+ in 2026. In 2030 and 2035, the regional results show annual benefits to the region of \$296 million and \$151 million, respectively.

Second, specific comparisons of the most likely market footprints and the counterfactual of BPA not joining a DAM provide additional insight. The State Agencies appreciate the effort in the additional scenario analysis to study realistic market footprints based on current utility announcements, and to review counterfactuals – particularly, the option where BPA does not join a DAM and remains in the EIM. Given the nature of these scenarios, they provide important information on the costs and benefits of BPA’s decision. This is where the State Agencies focused our analysis. The naming nomenclature of differing market footprints in the scenario analysis is technical, so to improve the accessibility of these comments, we renamed them with more straightforward labels as noted below.

- *Two day-ahead markets with BPA in Markets+ or BPA in EDAM:* The State Agencies focused in on understanding a direct comparison of Alt Split 4A to “Alt Split 2NV” – the two most realistic market footprints studied based on current utility announcements. Like Alt Split 4A described above, Alt Split 2NV is a two-market scenario with entities in Markets+ and EDAM, but with BPA in EDAM instead of Markets+. To help facilitate discussion of this comparison, we shorthand the two scenarios to “BPA-in-M+” and “BPA-in-EDAM”, respectively. In addition, the two scenarios also differ on whether other Pacific Northwest utilities that have yet to announce market decisions or leanings, participate in Markets+ or EDAM, essentially studying whether the Pacific Northwest joins one market or is split between markets.¹⁰

⁴ Details of these and other market footprints studied can be found at the end of these comments in Appendix A, Figure A1.

⁵ BPA’s November 4, 2024, DAM workshop presentation, slide 30: <https://www.bpa.gov/-/media/Aep/projects/day-ahead-market/2024/dam-workshop-9-presentation-110424.pdf>

⁶ See recommendation #4 of State Agencies’ comments dated March 1, 2024.

⁷ See Tables B4 and B5 in Appendix B for the net costs of each of the scenarios in 2030 and 2035.

⁸ The 2030 and 2035 data are not presented as a range because BPA did not conduct as many scenarios and sensitivities as they did for 2026.

⁹ See Tables C1-C5 in Appendix C for the net costs of the scenarios in 2026, 2030, and 2035.

¹⁰ See market footprint details in Appendix A, Figure A1.

Comparison of these two scenarios provides the most probable difference in cost and benefits to BPA and the region of BPA's decision.

- *BPA stays in the EIM instead of joining Markets+*: The State Agencies also focused on understanding the scenario where BPA does not join either DAM and instead stays in the EIM in the near-term. BPA only considered two market footprints in this specific analysis – Alt Split 4A (BPA-in-M+ as shorthanded above) and Westwide Market where all the entities are in a single EDAM market. We refer to the latter as “Full EDAM.” While BPA did not also study remaining only in the EIM for the BPA-in-EDAM footprint (the more likely EDAM-focused footprint noted above), it is likely based on footprint participation that the results for an EIM-only analysis of the BPA-in-EDAM market footprint would fall somewhere between the two footprints studied.¹¹ As a result, some relevant observations can still be made. In addition, only 2026 was studied, limiting the visibility into how the results of this decision would evolve over time. Regardless, it remains an important counterfactual analysis for informing BPA's decision. Doing nothing is always an option that should be reviewed.

The State Agencies take these two comparisons in turn below, discussing the BPA-specific and regional results for each. The comparisons focus on net costs (excluding wheeling revenue).¹² For many scenarios and sensitivities, the net costs are negative – meaning more benefit than cost. The larger the negative net cost numbers are, the better for BPA customers. When comparing the scenarios, whether they individually are a net cost or a negative net cost, the difference between the lower net cost scenario and the higher net cost scenario is a cost savings for customers. It is important to keep this in mind in reviewing the results.

Ultimately, the data indicate further discussion and consideration of the implications of these results for BPA's DAM decision is needed. The State Agencies look forward to continued discussion and analysis of these and other results.

A. Two day-ahead markets with BPA in Markets+ or BPA in EDAM

The scenario analysis results show greater cost savings for BPA and the region with BPA joining EDAM when comparing the most probable modeling scenario footprints.

For BPA, both in the near and long-term, BPA customers experience significantly more cost savings when BPA is in EDAM compared to Markets+. Both BPA-in-M+ and BPA-in-EDAM produce more benefits than costs for BPA in 2026. As shown in Figure 1, in these two particular cases, BPA-in-M+ and BPA-in-EDAM are negative net costs (i.e., a benefit) for BPA of -\$30 million and -\$196 million in 2026, respectively. Given BPA-in-EDAM's lower net cost, BPA-in-EDAM provides significantly more benefit than BPA-in-M+ in 2026; \$165 million more.^{13, 14}

¹¹ The BPA-in-EDAM footprint has more entities in EDAM than the BPA-in-M+ footprint, but less entities in EDAM than the Full-EDAM footprint.

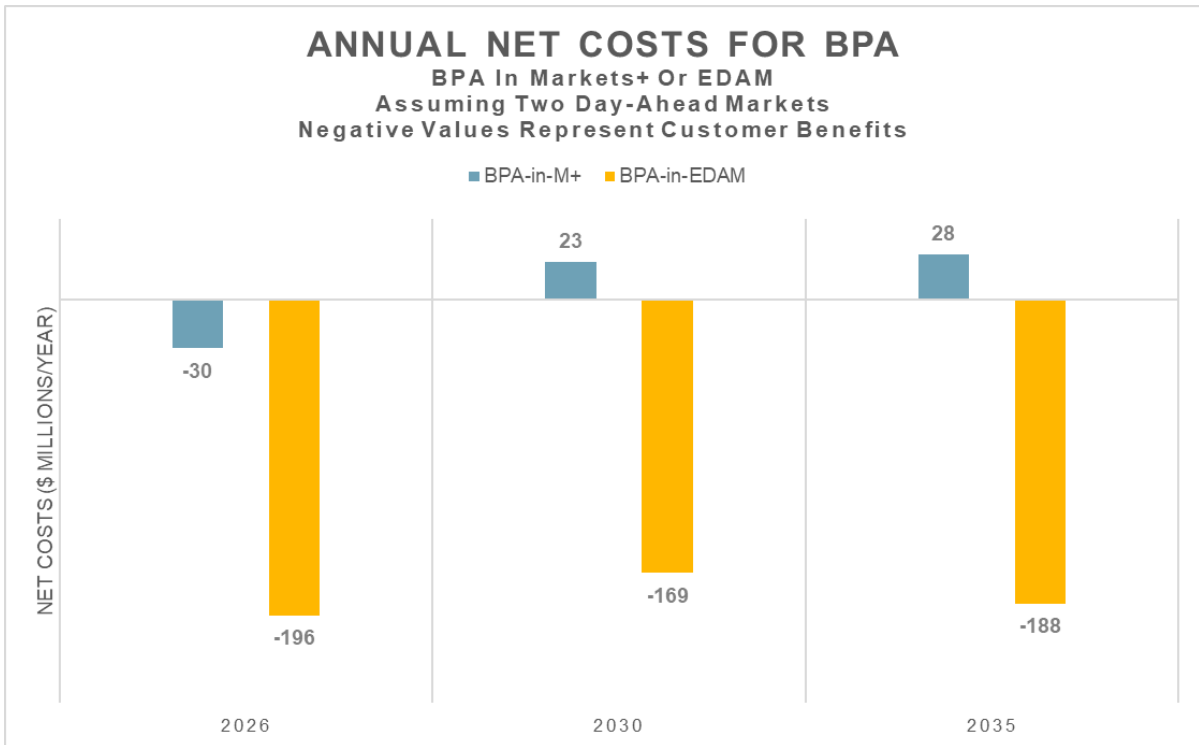
¹² BPA reported net costs with and without wheeling revenue, but used the latter (net costs excluding wheeling revenue) when discussing the results and making scenario comparisons. The State Agencies similarly use the net costs excluding wheeling revenue data for the BPA-specific results – and for consistency, the regional results.

¹³ The difference between the reported numbers is due to rounding.

¹⁴ Some of the difference in benefit might be mitigated by market-to-market coordination or other options to smooth market seams issues. But given that these are both split market footprints, those improvements (which

However, by 2030, BPA-in-M+ is no longer a benefit to BPA and instead imposes a cost that outstrips the benefits to BPA customers, whereas BPA-in-EDAM remains a benefit. The difference (or net cost savings to customers) between the two grows in 2030 to \$193 million. In 2035, BPA-in-M+ continues to be an overall cost to BPA customers, and BPA-in-EDAM remains a benefit, with the difference between the two growing to \$216 million.

Figure 1. Net Costs for BPA of BPA-in-M+ and BPA-in-EDAM



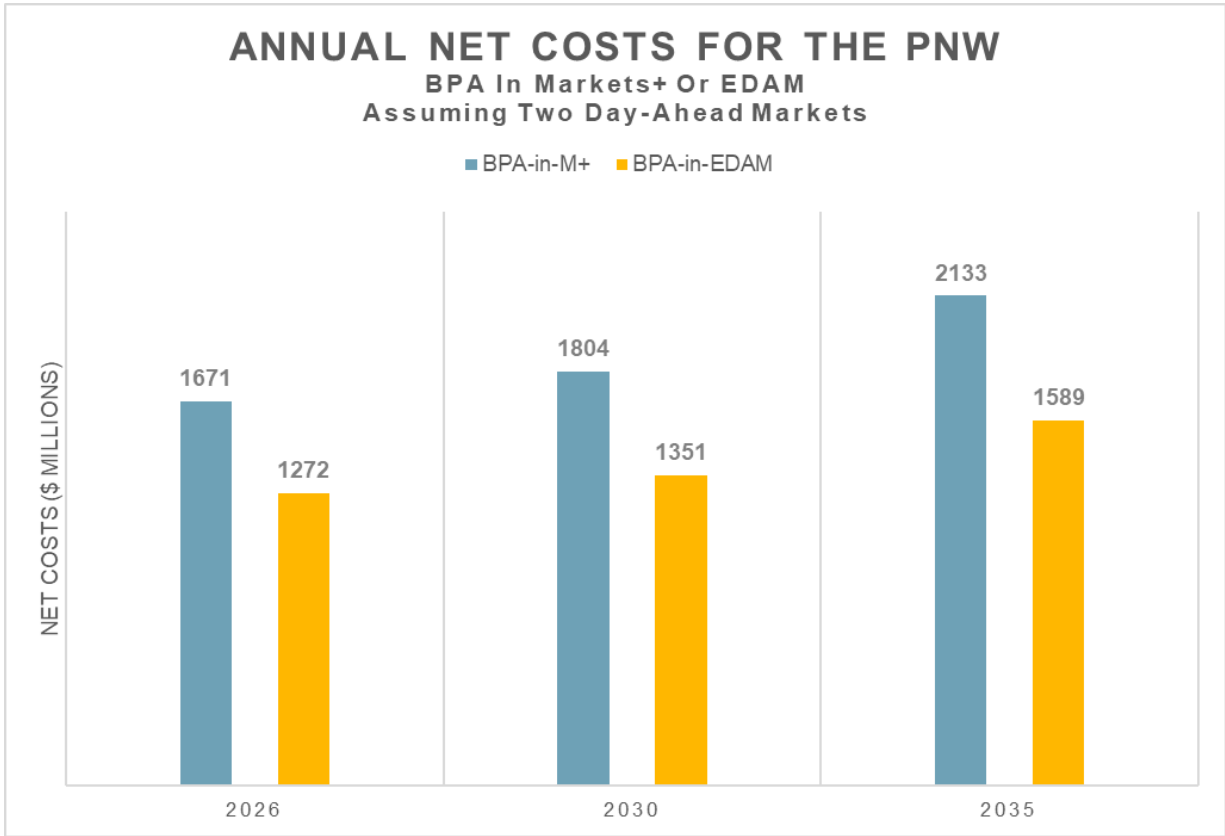
Note: A negative number means more savings for customers than costs – that is, customer costs are reduced by the size of the negative number. Alternatively, a positive number means more costs than benefits and customer costs are increased by the size of the positive number.

For the Pacific Northwest region, both in the near and long-term, the region also experiences significantly more cost savings when BPA is in EDAM as compared to Markets+. In the regional data, all scenarios are reported in total net costs for the region, where the BPA specific results show years BPA has more revenue than expenses (expressed as negative net costs). Our analysis centers on comparing which scenarios deliver more cost or less cost to customers across the region. As can be seen in Figure 2 below, for all three years studied – 2026, 2030, and 2035 – BPA-in-EDAM produces significantly less cost for customers. Comparing these two footprints, **if BPA was in EDAM instead of**

BPA only tested on BPA-in-M+) would likely improve benefits for each footprint, so it is unclear how those improvements would change the relative picture. Further, the data shows that even with all the improvements in transmission or market-to-market hurdle rates tested for BPA-in-M+, there still would not be as much benefit as BPA-in-EDAM provides. BPA-in-M+ only comes close to BPA-in-EDAM benefits with the highest level of market coordination tested (lowest level of hurdle rates) – M2M3. See slide 13 in E3’s November 4, 2024, BPA DAM workshop presentation.

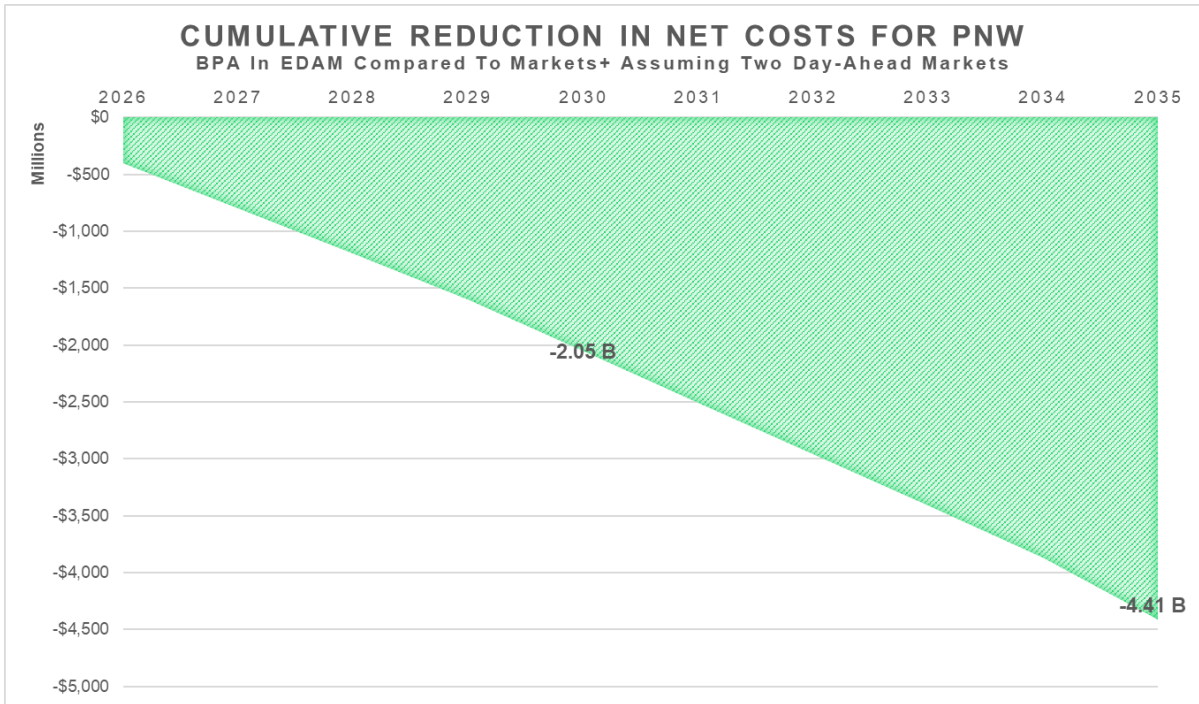
pursuing Markets+, the region would see annual savings of \$400 million per year in 2026, increasing to \$454 million in 2030, and further increasing to \$545 million in 2035.

Figure 2. Net Costs for the Pacific Northwest of BPA-in-M+ and BPA-in-EDAM



Assuming these regional savings accrue annually through 2035, the region would forego a cumulative benefit of approximately \$4.4 billion if BPA were in Markets+ compared to EDAM (see Figure 3 below). Assuming the estimated annual savings in 2035 continued, the region would lose approximately \$1 billion more every two years.

Figure 3. Cumulative Reduction in Net Costs (i.e. savings) for Pacific Northwest of BPA-in-EDAM Compared to BPA-in-M+



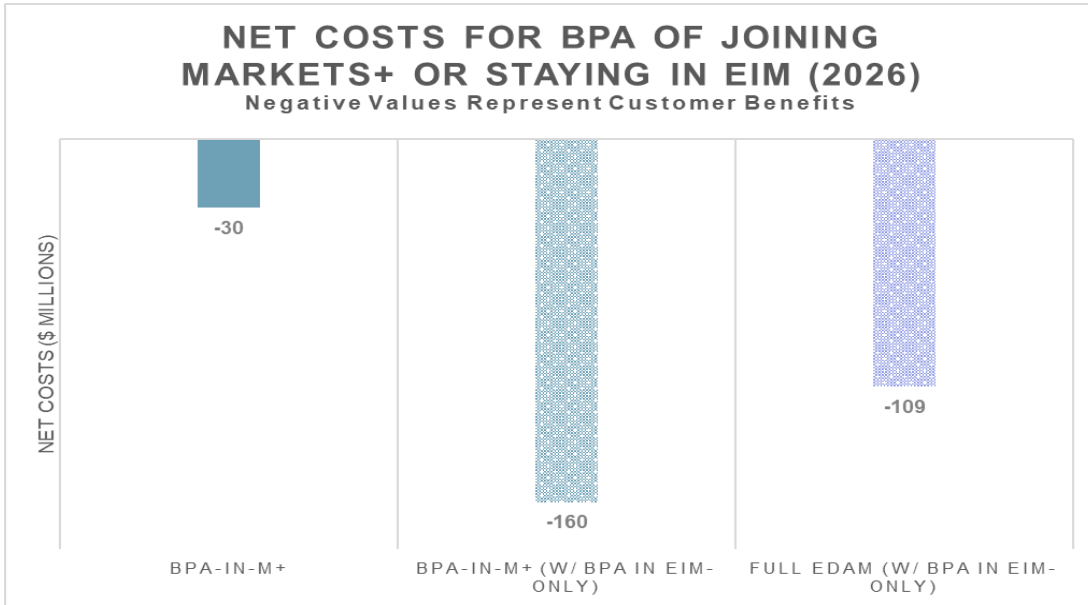
In summary, BPA’s modeling appears to demonstrate that BPA and the region see significantly lower costs when BPA participates in EDAM compared to participation in Markets+ in the near- and long-term. The State Agencies reiterate that it is important that BPA discuss these results at the next workshop.

B. BPA stays in the EIM instead of joining Markets+

The scenario results indicate that BPA and the region see continued benefits by BPA simply staying in the EIM under normal market conditions. Joining Markets+ increases customer costs over this ‘do nothing’ strategy.

According to the BPA-specific results, joining Markets+ provides less benefit (more costs) to BPA customers compared to the status quo of staying in the EIM even while its peers join day-ahead markets. As can be seen in Figure 4 below, comparing the two-market scenario where BPA joins Markets+ (BPA-in-M+) and the scenario where the same footprint develops, but BPA stays in EIM, **BPA customers see more than fivefold benefits with BPA staying in the EIM rather than joining Markets+.** If more Pacific Northwest utilities end up joining EDAM, BPA would still likely see a substantial savings by staying in the EIM given that the Full-EDAM footprint with BPA in EIM-only also shows savings over joining Markets+.

Figure 4. Net Costs for BPA of Joining Markets+ or Staying in EIM (2026)

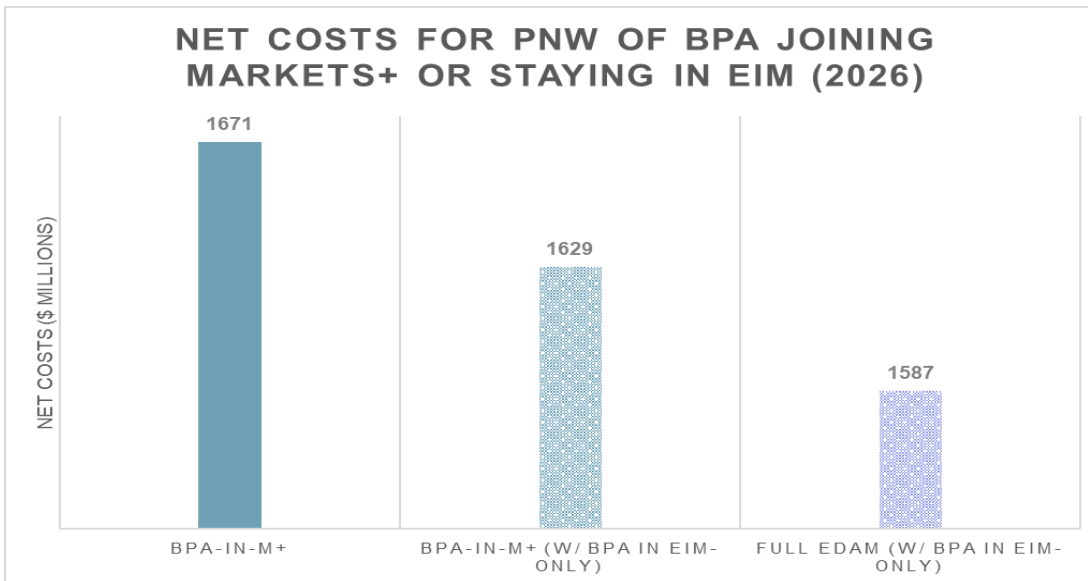


Note: BPA does not join a DAM in the footprints labeled “(w/BPA in EIM-only)” in the Figure above.

BPA not only sees savings in the regular market conditions depicted above, but also in dry stressed load conditions (see data in Tables B2 and B3 in Appendix B).

For the Pacific Northwest, BPA staying in the EIM in the near-term also provides savings. As can be seen in Figure 5 below, the **region would save \$42 million annually if BPA simply stays in the EIM compared to joining the Markets+ DAM**. If more utilities end up joining EDAM, the region would likely see further savings given that the Full-EDAM footprint provides additional savings.

Figure 5. Net Costs for the Pacific Northwest of BPA Joining Markets+ or Staying in EIM (2026)



Note: BPA does not join a DAM in the footprints labeled “(w/BPA in EIM-only)” in the Figure above.

The benefit for the region of BPA staying in the EIM as opposed to joining the Markets+ DAM is more complicated in dry stressed load conditions as opposed to the normal conditions depicted in Figure 5 above. In a BPA-in-M+ footprint where BPA stayed in EIM-only, it would cost the region \$40 million per year compared to BPA joining the Markets+ DAM. On the other hand, it is possible the region would save money if a footprint with more utilities joining EDAM emerged, based on the Full EDAM footprint showing a substantial savings. (See data in Tables C2 and C3 in Appendix C).

Given that the results indicate there is a benefit to BPA staying in the EIM rather than joining Markets+ in most scenarios, this option should be discussed further. To fully evaluate this option, it would be important to consider the potential opportunity cost of not choosing to join EDAM as many of the scenarios with BPA in EDAM provide even more benefits than BPA staying in the EIM.

2. BPA should provide further detail on the likely market “seams” if it were to pursue participation in Markets+, including the possible reliability risks and differential impacts on BPA customers, as well as potential solutions.

The State Agencies continue to request that BPA provide as much detail as possible about the likely market “seams” and to do so as soon as possible prior to issuing the draft decision. The State Agencies raised several questions for BPA in our July comments, which have yet to be answered.¹⁵ The additional scenario analysis results appear to underscore the potential issues around transmission and reliability with market seams.

Both the additional transmission scenarios (Task 5) and market-to-market coordination scenarios (Task 2) show more benefits with increasing levels of transmission or market-to-market coordination.¹⁶ The BPA-in-M+ scenario sees significant reduction in net costs for BPA and the region with these improvements. For example, with the highest level of market-to-market coordination, it would actually be more costly for BPA to stay in the EIM than to join Markets+ (opposite of what was discussed in Section 1B above).¹⁷ The region would see this shift in the cost benefit equation at lower levels of market coordination or with new transmission.¹⁸ This demonstrates how critical investment in improved operation across seams is to the realization of customer benefits. It is not clear how the improvements studied would materialize or how costly they would be (e.g., contracting for new transmission or building a new transmission line by 2026). These are exactly the seams questions the State Agencies are asking BPA to address and weigh as part of its DAM decision process. Similarly, it is important to consider whether there would be a reliability benefit to the choice of DAM, or staying in the EIM, given potential market seams.

Specifically with regard to market-to-market coordination efforts, BPA should explain, at least at a high level, which FERC-approved market-to-market coordination methods will be required to achieve the potential lowered costs for each scenario analyzed in the Task 2 market-to-market coordination

¹⁵ See recommendation #3 in State Agencies’ comments dated July 3, 2024.

¹⁶ E3 summarizes these results in slides 25-29 in its November 4 DAM workshop presentation: <https://www.bpa.gov/-/media/Aep/projects/day-ahead-market/2024/E3Presentation-bpa-stakeholder-meetingnov4-2024.pdf>

¹⁷ See comparison of Alt Split 4A BPA EIM-Only to Alt Split 4A M2M3 in Table B1 of Appendix B.

¹⁸ See, e.g., comparison of Alt Split 4A BPA EIM-Only to Alt Split 4A New Tx (Contract) in Table C1 of Appendix C.

scenarios and what the timeline of utilization of those methods must be to achieve those cost savings. If BPA anticipates that novel market-to-market coordination methods will need to be developed in order to address the unique challenges of competing day-ahead markets in the West, it should state how it anticipates those novel coordination methods can be developed within a timeline that would achieve the potential cost savings stated in the E3 analysis. Given that market-to-market coordination protocols have historically taken many years to negotiate and implement, BPA must explain how it can achieve the market-to-market coordination-driven lowered costs in the E3 analysis within the analysis timeline.

It is also important to note that there are more customer benefits for BPA and the region in the BPA-in-EDAM footprint before new transmission or market-to-market coordination investments are made than the BPA-in-M+ footprint appears to generate with the highest level of market-to-market coordination or transmission investment studied.¹⁹

Not all seams will be in BPA's sphere of influence, but for those that are, BPA should be able to articulate the impact of those seams and how those impacts will be minimized to reduce the differential in benefits. As the State Agencies have noted in prior comments, any decision that would result in creating a seam should articulate what the benefits are to the region that warrant the seam and the costs and risks it creates.

3. BPA should provide a transparent accounting of day-ahead market implementation costs, the timing of those costs, and to the extent possible, who is likely to pay those costs.

BPA confirmed at the November 4 workshop that it intends to commit \$25 million to Markets+ implementation costs by the end of the calendar year – prior to its draft DAM decision next March. BPA indicated that those costs would likely be borne by public power customers and that some public power customers were supportive of BPA incurring those costs. Given the dollar amount and timing of this decision prior to BPA making a formal decision on which market to pursue, and in light of the modeling provided to-date, the State Agencies are concerned about who will bear the costs and how they will be spread across customers and the region.

In addition, at the November 4 workshop, BPA mentioned but did not delineate additional implementation costs beyond the \$25 million. At the same time, BPA has not provided an accounting of what the EDAM implementation costs would be, though it mentioned at the workshop a range of additional costs from anywhere from \$1 million to \$9 million. BPA noted that it intends to discuss implementation costs further at the January 2025 DAM workshop. The State Agencies urge BPA to make the full implementation costs for joining either market transparent prior to a draft decision and incurring the costs. Those costs likely will be borne by customers and should also be factored into BPA's DAM decision.

¹⁹ See Tables B1 and C1 in Appendices B and C, respectively.

4. BPA should explain how it intends to weight its decision criteria prior to issuing the draft decision, and what role, if any, further economic analysis or quantification will play.

At the June workshop, BPA acknowledged that the weight it is assigning its decision criteria is not clear. BPA had previously said that it would attempt to clarify how it is weighing the criteria. Attendees at the November 4 workshop expressed interest in the weight BPA is assigning its decision criteria. Based on the discussion at the workshop, it appears that BPA is assigning more weight to qualitative factors such as independent governance than to economic results. At the very least, BPA should explain how the weight given independent governance – a factor that BPA appears to weigh as a complete offset to customer benefits – would cost out differently assuming the implementation of Pathways Step Two. As the State Agencies noted in our July comments, the State Agencies look forward to clarification from BPA as it is critical to understanding and assessing BPA's DAM decision analysis.²⁰ BPA has identified eight criteria for its decision.²¹ Once BPA provides more clarity on the weight it is assigning its decision criteria, BPA should also provide an opportunity for stakeholders to comment, as stakeholders may have a different perspective on how the decision criteria should be weighted.

Further, it is not clear if there will be any additional quantification efforts to support the decision criteria beyond the additional scenario results provided at the November 4 workshop. E3 noted that it still intends to conduct a "GHG Regulation Investigation" (Task 8) and a "Market comparison in interaction with WRAP" (Task 7) for BPA. E3 provided a few-word descriptor of each of these Tasks, but it is unclear what the details of these analyses will entail and the extent of quantification these analyses will provide.²² Further, no suggestions for additional quantitative analysis were offered by E3 or BPA. The State Agencies are requesting greater clarity on BPA's understanding and consideration of these impactful aspects of market design in the decision criteria. Regarding GHG considerations, the EDAM and Markets+ designs differ significantly in the approach to accounting for GHG pricing policies. Differences in the market mechanisms and constraints may yield different outcomes in the specific resources that are deemed to serve load in GHG pricing states and may have different risk of emissions leakage.

In July (and since March), the State Agencies have asked for BPA to provide an opportunity for meaningful input on the details of the scenarios if additional analysis was going to be conducted beyond the original WMEG study.²³ There was no opportunity for public input into the additional scenario analyses prior to the November 4 workshop – even after BPA delayed its anticipated August draft decision and extended the timeline. During the November 4 workshop, BPA said cost and time constraints drove some of their decisions on which scenarios and sensitivities were ultimately conducted. The State Agencies believe they and other stakeholders should have had an opportunity to provide input to help inform those decisions. In addition, at the July workshop, BPA suggested that it might consider conducting additional analysis beyond what it was already planning after the draft decision in response to questions raised about it not taking comments on the details of the additional scenarios. There was no mention of that possibility at the November 4 workshop.

²⁰ See recommendation #4 in State Agencies' comments dated July 3, 2024.

²¹ See BPA's November 4, 2024, workshop presentation, slide 16: <https://www.bpa.gov/-/media/Aep/projects/day-ahead-market/2024/dam-workshop-9-presentation-110424.pdf>

²² See slide 4 of E3's November 4 DAM workshop presentation: <https://www.bpa.gov/-/media/Aep/projects/day-ahead-market/2024/E3Presentation-bpa-stakeholder-meetingnov4-2024.pdf>

²³ See recommendation #1 in State Agencies' comments dated July 3, 2024.

Similarly, the State Agencies also requested that there be a meaningful opportunity for discussion of the additional scenario analysis results to help inform BPA's decision.²⁴ But BPA's message since releasing the additional scenario analysis results has been one of focusing on the limits of production cost modeling and setting aside the economic results in favor of harder-to-quantify qualitative factors. The State Agencies continue to hold that BPA's decision will be stronger if it reflects stakeholder feedback from across the BPA region.

While qualitative factors are, by definition, harder to quantify, BPA should strive to provide the best relative comparisons and analysis possible – especially in light of the magnitude of the quantified economic benefits identified in the scenario results discussed in Section 1 above. For example, is the expected value of one market design element or qualitative factor the same as \$100 million or more in potential lost economic benefit to the region? Similarly, does a qualitative factor outweigh all or some of the modeled savings of BPA simply remaining in the EIM instead of joining a DAM in the near-term? How is BPA accounting for other assessments of market design elements/qualitative factors?²⁵

At the very least, as noted in the State Agencies' July comments, if BPA determines that qualitative factors require selecting an option that produces fewer customer net benefits than an alternative, it will be essential to transparently quantify the increased costs of that decision for all customers.²⁶ A benchmark for such quantification could use the Pacific Northwest results the State Agencies detailed from the November 4 modelling results.

Finally, BPA should consider other analyses by individual utilities and regional stakeholders. For example, a number of stakeholder groups recently commissioned a new Brattle study looking at BPA DAM Participation resulting in similar directional findings to BPA's scenario analysis both for BPA and the region.²⁷ Considering the results of other studies in this space could also help further corroborate or illuminate BPA's decision.

Again, the State Agencies appreciate the additional scenario analysis results, the discussion in the November workshop, and the opportunity to provide comments. We look forward to BPA responding in the January workshop to the issues we raise in this letter.

²⁴ See recommendation #1 in State Agencies' comments dated July 3, 2024.

²⁵ See, e.g., Brattle Group. The Proposed Day Ahead Markets in the WECC: A Comparative Assessment of EDAM and Markets+ Design Features. <https://www.brattle.com/wp-content/uploads/2024/10/The-Proposed-DAM-in-the-WECC-A-Comparative-Assessment-of-EDAM-and-M-Design-Features.pdf>; Southwest Power Pool response to the Brattle white paper. <https://southwestpowerpool.s3.amazonaws.com/Brattle-white-paper-statement-20241010.pdf>; Powerex response to the Brattle white paper <https://powerex.com/sites/default/files/2024-10/2024-10-07%20Powerex%20Response%20to%20Brattle%20Paper%20On%20Day-Ahead%20Markets.pdf>

²⁶ See recommendation #4 in State Agencies' comments dated July 3, 2024

²⁷ BPA Day-Ahead Market Participation Benefits Study. October 2024. <https://www.brattle.com/wp-content/uploads/2024/10/BPA-Day-Ahead-Market-Participation-Benefits-Study.pdf>


Respectfully submitted,



Megan Decker
Chair, Oregon Public Utility Commission



David W. Danner
Chair, Washington State Utilities and
Transportation Commission



Janine Benner
Director, Oregon Department of Energy



Michael Furze
Assistant Director, Energy Division, Washington
State Department of Commerce



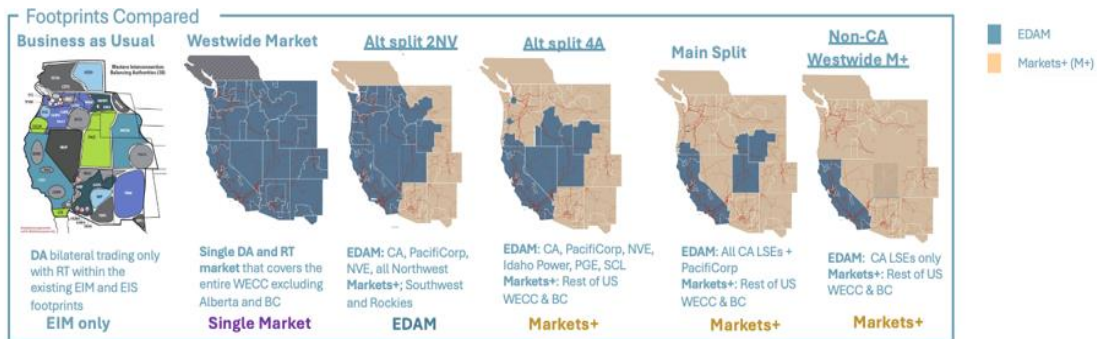
Colin McConnaha
Manager, Office of Greenhouse Gas Programs,
Oregon Department of Environmental Quality



Joel Creswell
Climate Pollution Reduction Program Manager,
Washington State Department of Ecology

Appendix A – Market Footprints

Figure A1. Market Footprints Studied in the E3/BPA Additional Scenario Analysis²⁸



Short Market Footprint Description:

BAU (Business as Usual)

EDAM Bookend (Westwide Market)

Alt Split 2NV

Alt Split 4A

Main Split

Non-CA Westwide M+

Bilateral trading (no centralized market) in DA; EIM & EIS cover most of WECC in RT stage

All US WECC in EDAM; BC only in M+

PAC + California (including WAPA SNR) + NW (WA, OR, ID, NWMT) + NV in EDAM; rest of WECC in M+

PAC + California (excluding WAPA SNR) + ID + NV + SCL + PGE in EDAM; rest of WECC in M+ [Same as M+ Bookend, but NV & ID move to EDAM]

PAC + all of California (including WAPA SNR) in EDAM; rest of WECC in M+

Only California in EDAM, rest of WECC in M+

²⁸ Cover page of the Supplemental Study Results Excel File posted under the November 4, 2024, BPA DAM workshop meeting materials.

Appendix B: BPA-Specific Results

E3 provided a graphical representation of BPA-specific results in its November 4 DAM Workshop presentation – see Figure B1 at the end of this Appendix.²⁹ The State Agencies also created the following set of tables to briefly summarize the BPA-specific additional scenario analysis results that were provided by BPA and E3 in the Supplemental Study Results Excel File under the November 4 day-ahead market workshop materials. *(The State Agencies created the same set of tables for the Pacific Northwest regional results – see Appendix C of these comments).*

The State Agencies focused in on the net costs for each of the scenarios. BPA reported net costs with and without wheeling revenue, but used the latter when discussing the results and making scenario comparisons at the workshop. For consistency, the State Agencies similarly report and discuss here the net costs excluding wheeling revenue.

In addition to net costs for each of the sensitivities and scenarios, the State Agencies included a comparison in each table to the net costs of “Alt Split 4A” – the most likely footprint based on current utility announcements and leanings which included BPA in Markets+. For the dry and dry stressed load market condition scenarios, the State Agencies compared those to the respective Alt Split 4A Dry and Alt Split 4A Dry Stress Load results. The State Agencies shorthanded the “Alt Split 4A” scenario to “BPA-in-M+” in its comment discussion but stick with the original name here as it appears in the Excel file. Similarly, per the Excel file, the State Agencies use the “EDAM Bookend” naming convention from the Excel file – which BPA and E3 renamed to Westwide Market in their slides and the State Agencies shorthanded to “Full-EDAM” in its comment discussion.

Tables B1-B3 summarize the 2026 results spanning normal, dry, and dry stressed load market conditions. The extent of scenarios and sensitivities conducted were more limited for 2030 and 2035, and those are summarized in Tables B4 and B5, respectively.

For many scenarios and sensitivities, the net costs are negative – meaning more benefit than cost. In this case, benefits are more revenue to BPA that can be used to reduce costs for customers. The larger the negative net cost numbers are, the better for BPA customers. When comparing the scenarios, whether they individually are a net cost or a negative net cost, the difference between the lower net cost scenario and the higher net cost scenario is a cost savings for customers.

²⁹ E3 Presentation at the November 4, 2024, BPA DAM Workshop, slide 30: <https://www.bpa.gov/-/media/Aep/projects/day-ahead-market/2024/E3Presentation-bpa-stakeholder-meetingnov4-2024.pdf>

2026 BPA-Specific Results

Table B1. 2026 Net Costs (\$ Millions) of Normal Market Condition Scenarios and Net Cost Differential Compared to Alt Split 4A (BPA-in-M+ in State Agencies' comments).

Scenario	Net Costs (Excluding Wheeling)	Net Costs Compared to Alt Split 4A (BPA-in-M+)
Alt Split 4A (2026)	(30)	0
Alt Split 4A M2M (2026)	(97)	(67)
EDAM Bookend BPA EIM-Only (2026)	(109)	(79)
Alt Split 4A NW-SW New Tx (2026)	(122)	(92)
Alt Split 4A NW-SW TX (Contract) (2026)	(122)	(92)
BAU (2026)	(138)	(108)
Alt Split 4A M2M2 (2026)	(148)	(118)
Alt Split 4A BPA EIM-Only (2026)	(160)	(129)
Main Split (2026)	(163)	(133)
Alt Split 4A M2M3 (2026)	(182)	(152)
Main Split M2M (2026)	(192)	(161)
Alt Split 2NV (2026)	(196)	(165)
Main Split M2M2 (2026)	(207)	(177)
Non-CA Westwide M+ (2026)	(207)	(177)
Main Split M2M3 (2026)	(222)	(192)
EDAM Bookend (2026)	(251)	(221)

Table B2. 2026 Net Costs (\$ Millions) of Dry Market Condition Scenarios and Net Cost Differential Compared to Alt Split 4A (BPA-in-M+ in State Agencies' comments)

Scenario	Net Costs (Excluding Wheeling)	Net Costs Compared to Alt Split 4A (BPA-in-M+) Dry
Alt Split 4A Dry (2026)	16	0
BAU Dry (2026)	4	(12)
Main Split Dry (2026)	(27)	(44)
EDAM Bookend Dry (2026)	(49)	(66)

Table B3. 2026 Net Costs (\$ Millions) of Dry Stressed Load Market Condition Scenarios and Net Costs Differential Compared to Alt Split 4A (BPA-in-M+ in State Agencies' comments)

Scenario	Net Costs (Excluding Wheeling)	Net Costs Compared to Alt Split 4A (BPA-in-M+) Dry Stress Load
Alt Split 4A Dry Stress Load (2026)	26	0
BAU Dry Stress Load (2026)	15	(11)
EDAM Bookend BPA EIM-Only Dry Stress Load (2026)	14	(12)
Alt Split 4A BPA EIM-Only Dry Stress Load (2026)	5	(20)
EDAM Bookend Dry Stress Load (2026)	(42)	(68)

2030 BPA-Specific Results

Table B4: 2030 Net Costs (\$ Millions) of Scenarios and Net Costs Differential Compared to Alt Split 4A (BPA-in-M+ in State Agencies' comments)

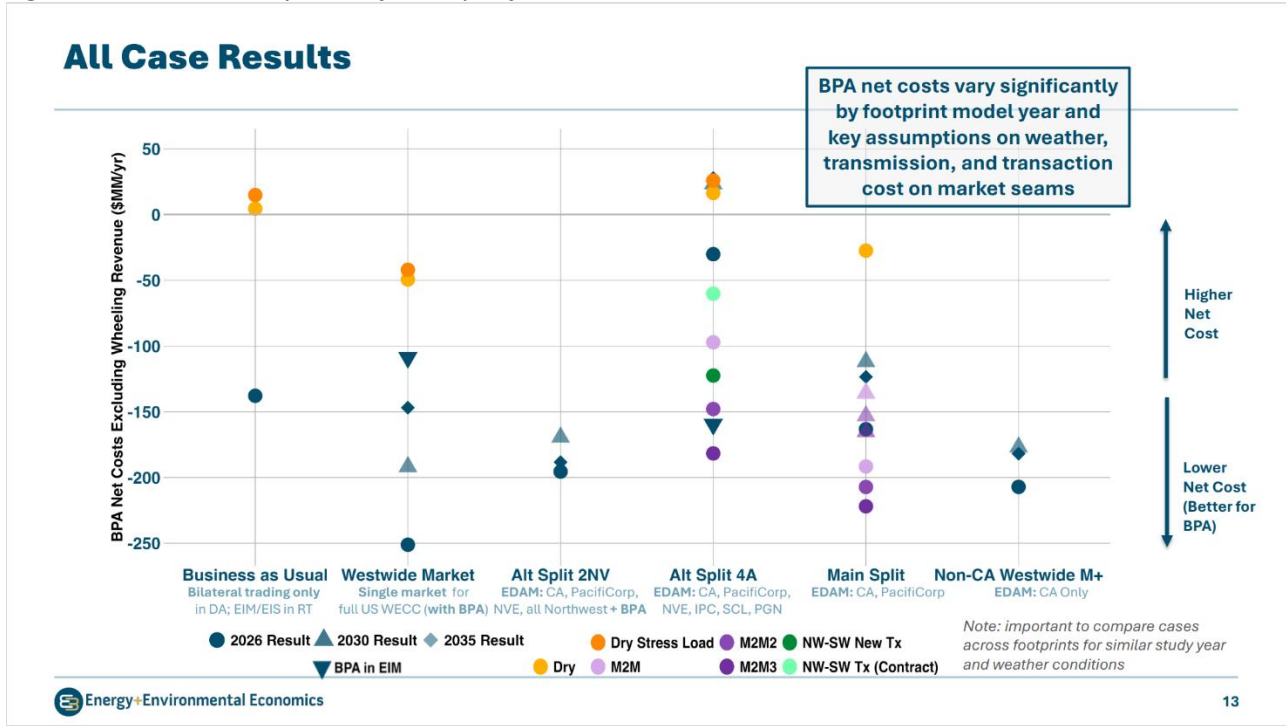
Scenario	Net Costs (Excluding Wheeling)	Net Costs Compared to Alt Split 4A (BPA-in-M+)
Alt Split 4A (2030)	23	0
Main Split (2030)	(112)	(135)
Main Split M2M (2030)	(135)	(159)
Main Split M2M2 (2030)	(153)	(176)
Main Split M2M3 (2030)	(165)	(188)
Alt Split 2NV (2030)	(169)	(193)
Non-CA Westwide M+ (2030)	(177)	(200)
EDAM Bookend (2030)	(192)	(215)

2035 BPA-Specific Results

Table B5: 2035 Net Costs (\$ Millions) of Scenarios and Net Costs Differential Compared to Alt Split 4A (BPA-in-M+ in State Agencies' comments)

Scenario	Net Costs (Excluding Wheeling)	Net Costs Compared to Alt Split 4A (BPA-in-M+)
Alt Split 4A (2035)	28	0
Main Split (2035)	(123)	(151)
EDAM Bookend (2035)	(147)	(175)
Non-CA Westwide M+ (2035)	(182)	(210)
Alt Split 2NV (2035)	(188)	(216)

Figure B1: E3's Summary Slide of BPA-specific Results



Appendix C: Pacific Northwest Region Results

Neither E3 nor BPA presented the regional results of the additional scenario analysis at the November 4 DAM Workshop. The State Agencies created the following set of tables to briefly summarize the Pacific Northwest regional results of the additional scenario analysis that were provided by BPA and E3 in the Supplemental Study Results Excel File under the November 4 day-ahead market workshop materials. *(The State Agencies created the same set of tables for the BPA-specific results – see Appendix B of these comments).*

The State Agencies focused in on the net costs for each of the scenarios. BPA reported net costs with and without wheeling revenue, but used the latter when discussing the BPA-specific results and making scenario comparisons at the workshop. For consistency, the State Agencies similarly report and discuss here the net costs excluding wheeling revenue for the regional results.

In addition to net costs for each of the sensitivities and scenarios, the State Agencies included a comparison in each table to the net costs of “Alt Split 4A” – the most likely footprint based on current utility announcements and leanings which included BPA in Markets+. For the dry and dry stressed load market condition scenarios, the State Agencies compared those to the respective Alt Split 4A Dry and Alt Split 4A Dry Stress Load results. The State Agencies shorthanded the “Alt Split 4A” scenario to “BPA-in-M+” in its comment discussion but stick with the original name here as it appears in the Excel file. Similarly, per the Excel file, the State Agencies use the “EDAM Bookend” naming convention from the Excel file – which BPA and E3 renamed to Westwide Market in their slides and the State Agencies shorthanded to “Full-EDAM” in its comment discussion.

Tables C1-C3 summarize the 2026 results spanning normal, dry, and dry stressed load market conditions. The extent of scenarios and sensitivities conducted were more limited for 2030 and 2035, and those are summarized in Tables C4 and C5, respectively.

In the regional data, all scenarios are reported in total net costs for the region, where the BPA specific results show years BPA has more revenue than expenses (expressed as negative net costs). Our analysis centers on comparing which scenarios deliver more cost or less cost to customers. When comparing the scenarios, the difference between the lower net cost scenario and the higher net cost scenario is a cost savings for customers.

2026 PNW Region Results

Table C1. 2026 Net Costs (\$ Millions) of Normal Market Condition Scenarios and Net Cost Differential Compared to Alt Split 4A (BPA-in-M+ in State Agencies' comments).

Scenario	Net Costs (Excluding Wheeling)	Net Costs Compared to Alt Split 4A (BPA-in-M+)
Alt Split 4A (2026)	1,671	0
Alt Split 4A NW-SW Tx (Contract) (2026)	1,663	(8)
Alt Split 4A BPA EIM-Only (2026)	1,629	(42)
Alt Split 4A M2M (2026)	1,620	(51)
BAU (2026)	1,615	(57)
Alt Split 4A NW-SW New Tx (2026)	1,602	(69)
EDAM Bookend BPA EIM-Only (2026)	1,587	(84)
Alt Split 4A M2M2 (2026)	1,554	(117)
Alt Split 4A M2M3 (2026)	1,497	(175)
Main Split M2M (2026)	1,432	(239)
Main Split M2M2 (2026)	1,427	(245)
Main Split M2M3 (2026)	1,410	(262)
Main Split (2026)	1,405	(266)
EDAM Bookend (2026)	1,311	(360)
Non-CA Westwide M+ (2026)	1,273	(398)
Alt Split 2NV (2026)	1,272	(400)

Table C2. 2026 Net Costs (\$ Millions) of Dry Market Condition Scenarios and Net Cost Differential Compared to Alt Split 4A (BPA-in-M+ in State Agencies' comments)

Scenario	Net Costs (Excluding Wheeling)	Net Costs Compared to Alt Split 4A (BPA-in-M+) Dry
BAU Dry (2026)	2,080	44
Alt Split 4A Dry (2026)	2,036	0
Main Split Dry (2026)	1,904	(132)
EDAM Bookend Dry (2026)	1,804	(232)

Table C3. 2026 Net Costs (\$ Millions) of Dry Stressed Load Market Condition Scenarios and Net Costs Differential Compared to Alt Split 4A (BPA-in-M+ in State Agencies' comments)

Scenario	Net Costs (Excluding Wheeling)	Net Costs Compared to Alt Split 4A (BPA-in-M+) Dry Stress Load
Alt Split 4A BPA EIM-Only Dry Stress Load (2026)	2,144	40
BAU Dry Stress Load (2026)	2,137	33
Alt Split 4A Dry Stress Load (2026)	2,104	0
EDAM Bookend BPA EIM-Only Dry Stress Load (2026)	2,034	(69)
EDAM Bookend Dry Stress Load (2026)	1,852	(251)

2030 PNW Region Results

Table C4: 2030 Net Costs (\$ Millions) of Scenarios and Net Costs Differential Compared to Alt Split 4A (BPA-in-M+ in State Agencies' comments)

Scenario	Net Costs (Excluding Wheeling)	Net Costs Compared to Alt Split 4A (BPA-in-M+)
Alt Split 4A (2030)	1,804	0
Main Split M2M (2030)	1,571	(234)
Main Split M2M2 (2030)	1,558	(246)
Main Split M2M3 (2030)	1,553	(252)
Main Split (2030)	1,526	(279)
EDAM Bookend (2030)	1,509	(296)
Non-CA Westwide M+ (2030)	1,374	(430)
Alt Split 2NV (2030)	1,351	(454)

2035 PNW Region Results

Table C5: 2035 Net Costs (\$ Millions) of Scenarios and Net Costs Differential Compared to Alt Split 4A (BPA-in-M+ in State Agencies' comments)

Scenario	Net Costs (Excluding Wheeling)	Net Costs Compared to Alt Split 4A (BPA-in-M+)
Alt Split 4A (2035)	2,133	0
EDAM Bookend (2035)	1,982	(151)
Main Split (2035)	1,871	(262)
Non-CA Westwide M+ (2035)	1,721	(413)
Alt Split 2NV (2035)	1,589	(545)