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October 15, 2023

Seattle City Light Comments re: September 11, 2023 DAM Participation Evaluation Workshop

Seattle City Light (City Light) appreciates the opportunity to comment on BPA's second workshop in the public engagement process for establishing a policy direction on potential Day Ahead Market (DAM) participation. As both a BPA preference customer and an EIM participant, City Light supports and shares BPA's interest in DAM participation. City Light is evaluating its own DAM participation and actively monitoring CAISO's Extended Day Ahead Market (EDAM) Initiative and Phase 1 of SPP's Markets+ development.

As City Light considers its own DAM decision, participating in BPA's DAM Decisional Process workshops has been informative. It has helped us to evaluate and test the strength of our process and provided insight on potential areas of the analysis that we might want to revise. It is through this lens that we provide these comments, which incorporate elements of our analysis that we believe will be critical to DAM assessment and understanding. We encourage BPA to incorporate these points into its analysis and discussion, and ask that BPA explain if there are areas where it has a different perspective on the importance of those elements. The comments below are categorized into three areas: 1) feedback on the 9/11 workshop, 2) discussion of the upcoming workshop on the use of WMEG results, and 3) additional considerations City Light is weighing in our evaluation of DAM participation.

Feedback on 9/11/23 Workshop Materials

Draft DAM Principles

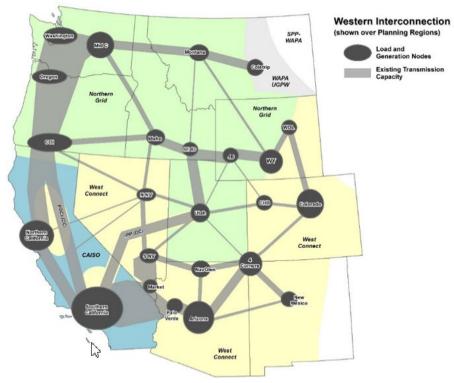
After soliciting feedback from stakeholders on potential evaluation principles for BPA's DAM decision process, BPA utilized the most recent workshop to share draft DAM decision principles. City Light believes that, at a high level, these proposed principles are largely satisfactory. What will matter more are the details around how the principles are interpreted and what elements define how a DAM is measured against those principles. Considering this, City Light asks that BPA provide a more explicit explanation of how the principles will be evaluated.

As a part of this, City Light requests that BPA incorporate the evaluation of market design, market footprint, and connectivity into the principle stating, "Bonneville's participation is supported by sound business rationale." City Light appreciates BPA staff's verbal commitment in the 9/11 workshop that these elements would be included as a part of its evaluation of business rationale. Considering the importance that these elements will carry in a potential future DAM, the impact those elements will have on BPA's customers and potential market participants in the region, we believe it is worthwhile for BPA to provide more detail about how those elements will be considered.

¹ City Light's August 18, 2023 comments suggested that, "Efficient market design, market footprint, and connectivity should serve as BPA's primary guiding principles in its decision to join a DAM."

We understand that the principles BPA proposed here borrow from the principles used for BPA's EIM analysis, which did not provide this level of detail. However, there are more unknowns related to the DAM decision than those that existed during the EIM decision. One major difference is that at the time of BPA's EIM consideration, the market footprint, market design, and connectivity to other market participants was largely known and the multiple markets were not under consideration. As we mentioned in prior comments, market footprint and the connectivity between market participants will be defining factors for a successful market; they will likely impact the market outcomes considerably more than any other specific market design element. Thus, we believe it appropriate for BPA to revise the business rationale principle to explicitly address these questions as a part BPA's evaluation.

Inclusion of these components is particularly important because BPA's market preference, and the related connectivity, will also have a significant impact on other Pacific Northwest utilities' consideration of a DAM. Specifically, BPA's DAM decision could affect the entire region by creating a seam between neighboring BAAs and important trading partners and by limiting the optimization of the transmission between them. This impact would be particularly acute if BPA elects not to join EDAM, as much of the transmission capacity of the West was developed to move energy in and out of California, as indicated in the graphic below, highlighting load and generation nodes and the existing transmission capacity connecting them.²



² This map was utilized by WECC in a presentation to the WEIM Governing Body in June 2023, on a slide titled, "Connectivity in the West is critical to both long-term planning and market opportunities. *Briefing on ISO West-wide transmission activities*, available at: https://www.westerneim.com/Documents/BriefingonISOWest-WideTransmissionActivities-Presentation-June2023.pdf



This connectivity with California represents decades of investment, including investment from City Light as Capacity Owners on the Northwest AC Intertie. Notably, BPA recognized the importance of this connectivity in its EIM Record of Decision (EIM ROD), which stated, "Bonneville is well positioned to facilitate solutions to manage the growing congestion in California because of its role as operator of the principal transmission lines connecting the Pacific Northwest with Northern and Southern California...In addition, Bonneville's merchant has a portfolio of firm rights on these paths that it could use for beneficial commercial solutions."³

A seamless market that maximizes the existing transfer capability of the entire Western Interconnection, east to west and north to south, will provide a cohesive approach to managing existing and emerging challenges by harnessing the benefits of greater load diversity and resource diversity. As previously noted by City Light, a compelling case would need to be made to support a decision to shift away from a market that would optimize the connectivity between the Pacific Northwest and California. Moreover, we have concerns that if two markets develop, the Pacific Northwest will at times become an island due to the limited connectivity with other regions. This islanding effect is demonstrated in the WMEG results, where the Pacific Northwest often saw price separation from the Desert Southwest due to lack of connectivity and significant congestion between the regions.

Finally, while connectivity and footprint are key elements of the assessment of a DAM, we reiterate that it will be important that BPA not utilize any single principle as a litmus test. Rather, any decision or "leaning" should be based on the totality of the assessment.

Tabletop Exercises

City Light appreciates the tabletop exercises covered in the first workshop and BPA's commitment to walk through additional tabletop exercises in subsequent meetings. This initial exercise made clear that stakeholders will have additional questions that need to be addressed and scenarios explained in order to better conceptualize what market participation might look like in the future in both EDAM and Markets+. City Light would appreciate that as a part of these future exercises BPA address how it anticipates transmission would be utilized in both markets. We would also benefit from a walkthrough of examples of price-taker exports at a point of interchange.

Additional Questions re: Process and Timeline

City Light asks that BPA provide clarity around its DAM decisional process, as well as additional discussion of how it will be utilized to make a funding decision for Phase 2 of Markets+. We understand that BPA is concerned about losing optionality in markets if it is not committed to the next phase of Markets+, and, as such, has indicated that this process might direct a "leaning" to support such a commitment. However, it is unclear that a "leaning" is a strong enough determination to commit to payments that could potentially amount to \$20-\$30M for Phase 2.4 Further, based on what is currently

³ Administrator's Record of Decision, Energy Imbalance Market Policy (EIM ROD), September 2019, p. 18.

⁴ By comparison, BPA's commitment to join EIM required a total payment of \$1.87M. EIM ROD, p. 30

known about the design and operation of Markets+, it will be difficult for BPA to have enough information to reasonably decide that such a commitment is prudent. While EDAM could potentially have an approved tariff as early as mid-December, Markets+ will not. Even with a completed and filed tariff at the time of a potential decision from BPA in February, there are many details that remain to be worked out in the Markets+ process. With all this in mind, we have several requests related to information regarding costs for both markets, what level of documentation that BPA will provide at the end of this process, and the remaining schedule.

First, BPA should provide an estimate of upfront and implementation costs for both Markets+ and EDAM, and the potential timing for both. While it is likely that BPA will address these costs as a part of its business analysis, we think that understanding the upfront and implementation costs associated with both markets, and the timing of when such costs would be incurred earlier in this process helps to frame the magnitude of the financial commitment and/or risk that could arise from a "leaning" toward EDAM or Markets+.⁵

Based on City Light's initial high-level assessment of potential DAM costs, we estimate that these early costs would vary considerably depending on which market we choose. This is driven in large part by the fact that Markets+ would have a higher upfront cost paid to the market operator to stand up a market that does not currently exist. Implementation costs would also vary because EDAM would allow us to build upon the existing systems we implemented for EIM participation. By comparison, we anticipate that joining Markets+ will require additional software, system, and business process changes, a Reliability Coordinator change, costs associated with exiting EIM but maintaining a parallel system for settlements for at least three years, and retraining of staff in order to successfully operate in a different market. We understand that implementation costs were also captured in the "Non-Production Cost Benefit" portion of the WMEG effort and are eager to see how BPA might expand on those findings given its existing participation in the EIM.

Second, BPA should provide additional detail on what the final document from this process will include. BPA's EIM Record of Decision included nearly 200 pages of detailed discussion of issues that BPA considered, responses to customer comments, and cost-benefit analysis. If BPA does not plan to provide that level of information, it should indicate why, and when more discussion and analysis might take place. BPA should also provide information about if, when, and/or how it will continue to assess market options, including any minimum threshold requirements (generation, load, transmission, etc.) related to feasibility of a proposed market. In its EIM ROD, BPA indicated it would not revisit its decision

⁵ As a part of this, it would be helpful to receive an update on what, if any, impact there will be to the Markets+ funding allocation following the announcement that some of the current Phase 1 participants are joining RTO West.



unless there was a significant or material change in the underlying facts or the way the market operated. City Light would appreciate an indication if BPA is treating this decisional process similarly.

Finally, City Light asks that BPA provide an updated meeting schedule including the topics that will be covered during each session. During the last stakeholder workshop in September, there was discussion of moving the November meeting date and the possibility of adding additional topics to be considered. BPA has also noted that it will set aside time to do a comparative analysis of both markets. Given that a draft of the Markets+ tariff will not be complete until December at the earliest, it is assumed that a meaningful discussion of both markets will need to wait until the Markets+ tariff is drafted. Additional clarity about what will be covered during upcoming meetings would be appreciated.

Upcoming Discussion of WMEG Results

At the previous meeting, BPA informed stakeholders that it will present its WMEG results at the upcoming October 23 workshop. BPA also indicated that the WMEG results will serve as an important component in its DAM consideration and that BPA will not be conducting a separate cost-benefit analysis. City Light was surprised to hear that BPA plans to utilize the WMEG results for this purpose. While we believe there are some useful high-level takeaways from our WMEG results, we do not believe the analysis is sufficient to properly inform our DAM decision. As such, we will be conducting a more granular and detailed cost-benefit analysis of market options. We are currently under contract with The Brattle Group to conduct a cost-benefit analysis of EDAM similar to what has been completed by PacifiCorp, and other regional utilities, and anticipate that analysis will be completed in early 2024. We believe that BPA should follow the approach of numerous other regional utilities and conduct a similar, more detailed study. We recognize that an additional study could potentially add time to the timeline for the announcement of BPA's leaning, but given the magnitude of this decision for BPA, its customers, and its neighbors, it is not reasonable to impose an artificial time restriction that would limit prudent analysis. BPA should develop a way to incorporate such a study into its DAM analysis.

As BPA currently plans to utilize WMEG as its primary cost-benefit analysis, it is particularly important that BPA provide the broader context for the results. Specifically, BPA's discussion of the WMEG study with customers and stakeholders should address: 1) what assumptions drive the results of the WMEG analysis, 2) what information BPA feels it can reliably derive from the WMEG study, and 3) what aspects remain uncertain, and why. Or, more simply—what can we understand from the results of this study, and what assumptions are unreasonable?

Based on our understanding of the WMEG results, it will be particularly important that BPA provide details on the assumptions and results related to footprint, connectivity between market participants, transmission, friction, hurdle rates, wheeling revenue, opportunity costs, and impacts of market design elements like fast start pricing. As a part of this discussion, it also would be useful for BPA to provide detail on which elements of the analysis it might be utilizing as high-level informative takeaways, and where BPA believes it can rely on the specific accounting to provide information that can support a DAM decision.

In thinking about how to incorporate the WMEG study as a component of our DAM decision, City Light has identified limitations in the following aspects of the WMEG study:

- The WMEG results lack like-for-like comparisons between scenarios (e.g., EDAM bookend scenario was only run for 2026 case, lacking other years studied in other scenarios).
- The magnitude and distribution of modeled revenues are very dependent on the location and transaction rules of market seams.
- Wheeling revenues can considerably impact the results for entities depending on their location. This outcome is notable because wheeling costs typically represent higher hurdle costs to transactions. While these revenues may show up as a market benefit for some entities, they are also a hinderance to economic transactions.
- The footprint/participants in each market in the WMEG analysis are not necessarily representative of what the actual footprint of any market will look like, which has the potential to skew results. Because of the importance of footprint, City Light believes our analysis should look at a probable footprint based on the most up-to-date information.

That said, City Light believes the following high-level takeaways from our WMEG results will provide useful context for our consideration of a DAM and how we interpret future cost-benefit analysis:

- Connections between the Pacific Northwest and Desert Southwest in a market that does not include California are of critical importance to market results and can result in an islanding of the Pacific Northwest.
 - For example, in many hours of the Markets+ and Main Split scenario, if there is congestion between the Pacific Northwest and the Desert Southwest during a time when fast-start pricing is triggered in the Desert Southwest, the price increases from fast start pricing do not apply to zones in the Pacific Northwest.
- The greatest overall benefits overwhelmingly arise from a single market. This is notable because at a high level, a market that creates the largest benefit is the best starting place for these discussions. City Light does not think that creating seams-related inefficiencies that can drastically and disproportionately increase costs for the WECC as a whole in order to maximize benefits for a smaller number of entities under certain scenarios is a good way to approach market development.

Finally, because questions about assumptions and modeling are quite complex, City Light requests that BPA invite staff from E3 who conducted the analysis to attend the October 23 meeting, so they can help provide answers to customer and stakeholder questions as needed.

Additional Considerations in DAM Analysis

Implications of Leaving EIM

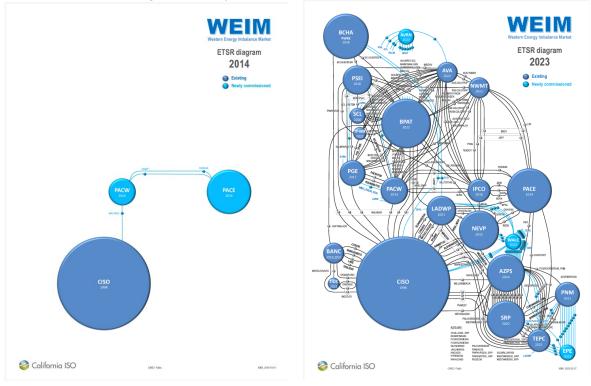
On a foundational level, as one of three public power entities in the Pacific Northwest that are scheduling coordinators and market participants in the EIM, City Light's assessment of DAM options is



grounded in our experience in the EIM, and the benefits and limitations of that market, as well as the significant implementation effort to integrate our resources into the markets.

EIM has provided operational and financial benefits for City Light and the region; as of July 2023, City Light has achieved an estimated \$45M of benefit since it joined the EIM in 2020, and the EIM as a whole has created \$4.19B of benefit since its inception. City Light is hesitant to adopt any market alternative that would undermine those benefits without evidence that doing so would produce better results for our customers and the region.

Further, we appreciate the considerable amount of work that has gone into creating the EIM—both at our utility and across the West—and the challenges that had to be overcome to achieve this momentous change. Thus, we are very concerned at the potential implications of unwinding the interconnectedness and benefits of the broad footprint market we leverage today. The graphics below illustrate how the interconnectedness of the EIM has expanded since it was launched in 2014.⁶ Based on what we have heard from outside experts, unwinding the EIM could be a massive problem for the West, and we are concerned that the implications of entities pulling out of EIM and attempting to create a separate market are not being adequately addressed in the consideration of market alternatives.



Another factor we are balancing is the prospect of making a change in markets so soon after joining EIM. The EIM implementation was a transformational project for City Light. It impacted and involved

⁶ Available at: https://www.caiso.com/Documents/EDAMForum-WEIMtransfers.pdf

nearly all areas of the business. While the project budget for implementation was significantly less than many of our capital projects, the effort expended by staff that made it successful was monumental. Asking staff to undergo a second market implementation on the heels of recently joining EIM is a big ask. If the decision is EDAM, business process changes, software changes, and training will be necessary, but the bulk of our existing systems and our experience in the market can be leveraged. If the decision is Markets+, the concepts of EIM operations can be leveraged, but the level of effort required again by staff to leave one market and learn a completely new one will be a magnitude more significant. Change fatigue and burnout are serious considerations. City Light is trying to capture the impact on staff of its market decisions and ensure that this factor is given appropriate weight in its DAM decision.

Benefits of Incremental Approach to Markets with EDAM

A related consideration for City Light is the benefit associated with building upon the existing CAISO DAM and EIM to create EDAM, rather than having to build a unique market from the ground up, with an unfamiliar entity. As noted by BPA in its EIM ROD, a benefit of the EIM was that it was unique from prior market attempts because it is simply an extension of an existing real time market, with detailed features that were vetted through multiple stakeholder processes and approved by FERC. While EDAM, and the accompanying Day Ahead Market Enhancements, will create some changes to CAISO's existing DAM, it is also extending a pre-existing, operational market to new participants. There are a number of added complications related to maintaining separate balancing area authorities that do not exist in the current DAM, but because we are already working with CAISO in the multi-BAA arrangement for EIM in the operational timeframe, City Light has greater comfort that this is something that CAISO has the experience and expertise to manage. Moving to a different market operator would mean adding an additional layer of risk to our operations in real time.

Another benefit of the incremental approach that occurred with EIM (and would extend to EDAM) is that because entities were able to join an existing market, the EIM unfolded in stages, as each market participant was ready to join. Conversely, developing an entirely new market will require multiple entities to enter an unknown market at once. In addition to losing the benefit of the stability of an existing market, we also lose the potential to benefit from the experience of entities that will join before us. City Light recognizes that we benefitted substantially from the experience of EIM entities that joined the market in the years prior to 2020, and the insight they were able to offer us in our implementation was a critical component of our successful integration. BPA had the additional benefit of a long experience with the EIM prior to joining as a market participant in 2022, as it worked closely with CAISO since the beginning of the EIM in 2014, facilitating EIM transfers on its transmission system through the Coordinated Transmission Agreement. City Light believes this type of incremental approach extending an existing market in phases decreases the risk of moving to a DAM.

Overall, City Light is comfortable with CAISO's incremental approach to transitioning to an organized DAM that builds upon the existing structure, knowledge, and benefits of the EIM and CAISO's DAM. An added benefit of EDAM is that it retains the wide-footprint benefits of EIM for entities that are not

⁷ EIM ROD, p. 16



ready to join a DAM. Additionally, City Light's experience with CAISO as we implemented and continue to participate in EIM has been positive and productive.

Decarbonization

Another consideration for City Light as it weighs the known benefits of EDAM is related to decarbonization. The existing CAISO market has grappled with the market design issues that are associated with a market that serves a deeply decarbonized grid. We believe that experience offers an important advantage as Washington and other states decarbonize. Further, a California-inclusive market creates greater opportunity for collaboration among western states implementing policies aimed at reducing carbon emissions. City Light supports linkage of Washington's Carbon Commitment Act (CCA) with California's Cap and Trade program. This linkage could potentially best serve our customers if City Light was in the same organized market as California. BPA customers in WA would likely benefit from a market that includes states who may be able to link programs.

Conclusion

City Light appreciates the opportunity to provide feedback on BPA's DAM decision process and to share what considerations we are weighing in our own DAM determination. We look forward to continued discussion at the upcoming workshops as BPA and the region continue to set a strategic course that will best leverage our resources and continue to benefit the West.