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PPC Perspectives on a Day Ahead Market

Value Proposition for PPC Members

PPC is optimistic about developing a day ahead market that creates benefits for end use customers across the West. In order for the market to do so, it must be well designed and broadly supported by stakeholders. PPC members are seeking a market which will allow them to enhance the service they provide their customers through increased economic benefits (both through allowing utilities access to lower cost power supply and by providing an opportunity to capture additional value of existing assets), integration of additional carbon free resources, and more efficient use of the region's transmission grid. In seeking these opportunities, PPC members also acknowledge that there are certain parameters which must be met by any organized market. It will be critical that any potential integrated market maintains reliability, is compatible with BPA continuing to meet its statutory obligations and is administered by a governance structure designed to treat all participants equitably.

As PPC and our members evaluate potential options for pursuing integrated market opportunities, we will be evaluating such markets as a package. This includes market design, market oversight and market governance. The EDAM straw proposal authored by CAISO is just one piece of this larger package, with EDAM governance, the Day Ahead Market Enhancements (DAME) and price formation initiatives all among those which will shape the overall value proposition of this market for PPC members.

PPC's membership¹, will be evaluating the impacts of a potential day ahead market through several lenses. Some PPC members will consider becoming EDAM entities, some members have generating resources and they must evaluate how participation (either at their own discretion or as the result of a decision made by the BAA in which they reside) will impact them, and all of our members are load serving entities who must evaluate the implications of having load served through a proposed day ahead market. Additionally, all of our members are preference customers of the Bonneville Power Administration. PPC's members pay seventy percent of BPA's annual operating costs and will therefore experience considerable impacts based on the Agency's decisions regarding market participation and how that participation impacts the value of BPA's Regional Dialogue Contracts. We will continue to work closely with BPA as integrated market options are developed to ensure those options meet BPA's needs and the needs of its preference customers.

¹ PPC, established in 1966, is an association that represents over 100 consumer-owned electric utilities in the Pacific Northwest. PPC's mission is to preserve and protect the benefits of the Federal Columbia River Power System for consumer-owned utilities.

Facilitating BPA's participation in an integrated Day Ahead Market

PPC appreciates the opportunity to raise additional issues for discussion as the EDAM market offering is developed. As a matter of context, PPC believes that a well-functioning market could deliver many benefits to the region and has long urged BPA to explore leveraging new markets as a critical tool in ensuring that the agency remains a competitive power provider for its preference customers. The Northwest energy landscape continues to evolve as entities look to organized markets to dispatch resources more efficiently, which can create savings and facilitate higher levels of renewable resource integration. PPC believes that this evolution provides BPA with a unique opportunity to not only explore potential participation in new markets, but to help design them in ways that ensure these markets can become part of a sustainable future for BPA and its preference customers. While BPA is a creature of statute and has unique obligations to its preference customers, PPC is focused on developing a market design that harmonizes with those statutory obligations and enables BPA's participation.

Specifically, for PPC members, who are preference customers of BPA, it will be critical that any organized market in which BPA participates allows the agency to continue to meet its statutory obligation to deliver power from the federal system to its preference customers. In disposing of the Federal power, BPA shall "at all times" give preference and priority to public bodies and cooperatives². In other words, if the energy generated by the Federal projects is delivered to other market participants while the preference customers have a competing need for that power, it may impair BPA's ability to comply with its statutory obligations at all times. Furthermore, with funding recovered from the preference customers' rates, BPA has already made the investments necessary to effectuate these statutory obligations through procuring the generation and transmission required to reliably serve its preference customers.

The current EDAM straw proposal does not appear to have a mechanism which would allow BPA customers with long term power contracts to have priority access to Federal power "at all times." As described in the proposal, in a situation where demand cannot be met and there is a risk of load shed in a BAA, export EDAM transfers would be afforded equal priority to load. PPC is concerned about a scenario where extreme demand conditions create a risk of load shed such as a west-wide heat wave. Today in such a scenario, BPA's generation is scheduled to its preference load assuring that those customers receive priority access to that generation (subject to any transmission curtailments which would occur consistent with OATT priority).

Our concern is that in this scenario where demand exceeds available supply in the market footprint, Federal generation may be exported to EDAM entities while there is a competing need for that generation by BPA's preference customers, thereby violating BPA's obligations to its preference customers. Stated differently, this creates a situation where Federal generation is serving load of other EDAM participants, while the BPA preference customers are forced to shed load because they cannot access the Federal generation to which they have statutorily-defined priority rights and for which they have contracted under that BPA statutory framework. PPC believes there are approaches to address these concerns and facilitate BPA's participation in an organized day-ahead market. We would like to work with the CAISO to explore options which would address our concerns while having minimal impact on market optimization.

² Bonneville Project Act, § 4, 16 USC § 832c(a) (1937).

While this request is specific to facilitating the participation of BPA and enabling it to meet its existing contractual obligations, other entities have raised similar concerns with respect to other existing contractual arrangements, such as resource adequacy obligations. We are hopeful that a potential solution could address these concerns and more generally ensure bilateral arrangements made outside of EDAM are respected. One potential concept for consideration is the “base scheduling” concept being discussed in the SPP Markets+ initiative. Under this approach, market participants could submit a pre-market schedule that communicates generation to load relationships and transmission priorities to the market operator. It is different than “base scheduling” in the CAISO EIM in that, except in very limited circumstances, it would not impact the market dispatch, which would still be a flow-based dispatch resulting from economic bids. However, under extreme conditions the information associated with the base schedules could communicate different priorities so bilateral arrangements such as BPA long term power contracts or resource adequacy deliveries were not inappropriately shared with other entities.

This is just one example of a potential solution. We look forward to discussing whether this, or other alternatives, may be viable additions to the EDAM proposal.

Challenges of a footprint with two inconsistent Resource Adequacy planning standards

Before offering comments on specific elements of CAISO’s straw proposal, PPC wants to acknowledge that there are significant challenges to operating in a footprint with multiple (or no) RA planning standards. Nearly all other organized markets rely on a common RA program or standard to avoid individual participants leaning on the market for capacity or flexibility; as a result, there is minimal need for other interventions, such as the RSE, in the operational timeframe (when it is very difficult to cure insufficiencies due to tail events outside of the market).

This challenge is not insurmountable but leads to the need for additional discussion and evaluation of prioritized uses of the system and the need to prevent “leaning” between market participants. In many instances, these concerns are at the heart of some of our recommendations regarding CAISO’s straw proposal and other parties (both those participating in the Western Resource Adequacy Program and California’s Resource Adequacy Program) have raised similar concerns in previous discussions.

Early in the current EDAM initiative CAISO staff discussed “harmonizing” EDAM and the RA programs in the footprint. While not explicitly describing what that means, we understood the need for this harmonization to be driven by the exact challenges we lay out above. PPC would like CAISO to consider whether there would be any benefit from having a broader discussion on the challenges posed by having multiple RA programs in the footprint and exploring whether there is any potential for bringing additional alignment or ensuring compatibility between programs in the footprint. Such an effort would more directly address issues around equity that are currently being addressed imperfectly through a variety of mechanisms in the proposal. It could also avoid relying on “fixes” in the operational timeframe when options to address resource shortfalls are more limited. We would be very interested in hearing any ideas the CAISO or other stakeholders have on whether such an approach could be useful.

Roles and responsibilities of CAISO and participants should be further clarified

The effort to develop a stand-alone integrated market is novel and it will be critical that it is clear what responsibilities belong to the market operator and what are the responsibilities of the participating EDAM entities. PPC would also appreciate additional discussion about what distinct actions CAISO will

take as a market operator, a reliability coordinator, as well as a BAA, and how CAISO will implement these roles without any conflicts of interest and how it will be communicated to participants about which role the organization is functioning in when it takes specific actions.

Aside from this broader context, it will also be important to work through additional details on how the market operator will communicate directives to participating BAAs, including a timeline for those communications. For example, if the power balance constraint cannot be solved due to limited supply how will this be communicated to EDAM BAAs? In such a scenario what actions will be at the EDAM BAA's discretion and what actions will be determined by CAISO as the market operator? As discussed in the "Market Transfers" section below, what is the process for ensuring the actions taken by the market operator in emergency conditions are compatible with the responsibilities of the transmission service provider (TSP)/BAA and how will it be ensured that the TSP/BAA is able to take needed actions as needed to maintain reliability without broader disruption to the market?

Responses to Specific Concepts in the Straw Proposal

Voluntary nature of EDAM

Maintaining voluntary participation in the day-ahead context is crucial for PPC members. It is worth noting that in CAISO's EDAM straw proposal there is a significant shift in the manner in which the market is voluntary when compared to the EIM and earlier proposals related to the EDAM. This shift limits the flexibility that EDAM participants have in making short term decisions about whether they will participate in the market. It also eliminates the concept of non-participating resources by requiring all generation within participating BAAs to be dispatched based on their economic bids (as opposed to having an option of how much of a resource is bid into the market for optimization). While the proposed approach to voluntary participation limits participants' flexibility, it also helps provide some assurance to other participants that resources will be made available in the market and likely increases confidence in the EDAM market outcomes.

At the same time, these changes may have other effects and will cause stakeholders to think differently about some market components in an EDAM context compared to the EIM. For instance, this "all in" approach in the day ahead time frame is much more likely to eliminate significant portions of bilateral market trading. Additionally, this all-in approach heightens concerns of market power mitigation proposals included in DAME such as mitigating RUC bids and capping energy offer prices for these mitigated RUC awards as this creates risk for hydro operators. It also creates the need for a mechanism to facilitate BPA continuing to meet its statutory obligations as discussed above.

It is also certainly relevant in the governance context. The need for an inclusive governance which considers the interest of all market participants equally becomes all the more important when entities do not have the option of pausing market participation in the short term if they are harmed by market activity. While entities do retain the ability to remove themselves from the market in the longer-term if they determine they are being harmed by market outcomes, it is unclear what options would be available to them upon exiting the market to if the majority of trading is occurring through the EDAM.

These comments are offered, to provide additional context as to how this framework impacts how we are viewing other parts of the straw proposal and how we will evaluate the proposal as a whole.

Market Transfers – confidence, priority and equitable treatment

There has been considerable dialogue on ensuring the EDAM design results in highly reliable market transfers. PPC agrees reliable market transfers are critical to maximizing the benefits of the market. EDAM participants need high confidence in their ability to rely on EDAM market transfers to be willing to decommit their resources and maximize the regional benefits the market can provide. However, under the straw proposal, it appears this high confidence comes by prioritizing EDAM transactions over other existing contractual arrangements. The EDAM proposal, which utilizes an incremental approach towards an integrated market, will include multiple RA programs with inconsistent standards, multiple transmission providers operating under separate OATTs, and continued BAA autonomy. This framework requires that the market include the functionality to respect multiple uses of the system. This includes:

- BPA’s customers having priority access to federal generation under extreme conditions, prior to that generation serving the broader EDAM footprint (as discussed above).
- Entities that pay for resource adequacy capacity, under WRAP or California RA, should maintain priority access to that capacity should it be needed during emergency situations. This is true for WRAP participants whether or not they participate in EDAM.
- Non-participating entities that have firm transmission across the EDAM footprint need to have the priority of that transmission respected.

These uses of the system often involve significant forward investment, and it is critical that entities can continue to rely on them. Pooling resources during a shortfall by equally prioritizing load and EDAM exports may result in “leaning” on these investments. Ensuring that the entities participating in a resource adequacy program or other long-term contractual agreements can call upon that committed capacity, and have the EDAM facilitate its delivery with a high degree of confidence will maximize participation in the market. This approach may also encourage each entity to contribute its fair share of resources to regional reliability, as opposed to assuming that EDAM and WEIM are a regular tool for meeting supply shortfalls.

This is an area where additional discussions during the technical workshops would be very helpful. The example provided in the May workshops was helpful and we would appreciate additional opportunities to ask questions about this example, and to build onto that example to better understand the impacts to neighboring BAAs who are not in EDAM.

In follow on technical discussions, we request additional discussions focusing on how participation in California’s RA program or the WRAP interacts with the EDAM market design. This discussion will help inform the appropriate failure consequences of resource sufficiency test. It may be appropriate to use the resource sufficiency test to assign varying levels of market transfer priority depending on an entity’s failure or participation in one of these programs. We also request additional information on how the CAISO proposal interacts with TSP/BAA prioritization responsibilities and procedures during emergency conditions. More discussion on this topic is needed.

Transmission availability and compensation

PPC supports a transmission framework that maximizes the amount of highly reliable transmission available to the market and maintains the incentives for continued investment in long-term OATT transmission. Third party use represents a large portion of BPA’s transmission use and BPA OATT sales

to third parties recover a significant portion of the BPA transmission revenue requirement. These sales, which total in the hundreds of millions of dollars, ensure those that the Bonneville transmission system costs are equitably recovered from those that benefit from the use of BPA's transmission system and protect native load from significant cost shifts.

PPC does not support the proposal to allocate 100% of Intertie Constraint congestion to the CAISO BAA and EDAM transfer congestion based on the location of the congestion. PPC has significant concerns about the potential impacts of this proposal and believes CAISO has not laid out a sufficient rationale for why this is appropriate and why the CAISO BAA is treated differently than other EDAM entities. Both California and the Pacific Northwest have invested in the transmission facilities that enable regional transfers and derive significant benefits from this trade. Any future market design needs to ensure these benefits are maintained and are fairly distributed between the two regions.

This proposal in conjunction with several other EDAM design elements raise concerns that the proposed allocation of transfer revenue will not be equitable or durable. PPC believes a higher-level discussion on the principles and general outcomes of congestion rent allocation is still needed. We would like to further analyze the impacts of adopting a 50/50 split which would be more equitable and more consistent with the congestion rent policies adopted for other BAAs in the market. It would also be helpful to understand why congestion revenue rights rules should or could not be changed. EDAM may require changes to many aspects of CAISO's market elements, and it is not clear why changes that impact congestion revenue rules could not be altered as well.

PPC believes additional discussion is needed on allowing the use of unscheduled bucket 2 transmission. As raised in the working group meetings, this topic may be better addressed after EDAM has been implemented and transmission providers have more time to understand the potential implications. If unused bucket 2 is optimized within the market and transmission rights holder retains the right to schedule those rights through the operating day, this transmission is non-firm. While potentially increasing the transmission available to the market, awarding day-ahead transfers on non-firm transmission may not align with the market participants' desire for day-ahead awards to be highly reliable. A customer that chooses to schedule on their firm rights that have been used by the market could lead to costly redispatch and possibly market awards that are unfeasible. Using a transmission customer's unused firm rights also raises equity considerations around how that customer is compensated. In the OATT context, use of otherwise unused capacity would result in a payment to either the transmission service provider or the transmission rights holder. In either case there are benefits to the initial rights holder (either in reduced costs or additional revenues) for those rights being used. CAISO should further consider providing financial incentives to transmission rights holders for making their unused transmission capacity available to the market. Additional discussion on how congestion rents and potential redispatch costs of relying on this unused bucket 2 transmission need additional discussion.

PPC is supportive of continuing to explore additional approaches to develop mechanisms for transmission providers to recover the cost of bucket 3 transmission. While keeping transmission providers whole is the most critical element, PPC is encouraged there may be a way to do so while minimizing unnecessary loss of efficiency in the market.

Currently the majority of CAISO's straw proposal focuses on transmission use between BAAs. Additional discussion is needed on transmission within participating BAAs. In technical workshops we request that CAISO specifically address:

- Can transmission rights holder make internal transmission available to the market in exchange for congestion rent allocation (similar to bucket 2 proposal)?
- How will internal congestion rent be allocated?

Participant resource contributions and the Resource Sufficiency test

PPC appreciates the work that CAISO has done to provide an initial framing of the Resource Sufficiency test. We look forward to further discussing the proposal in a technical workshop as we still have questions on details regarding CAISO's proposal. Based on our current understanding of the proposal, we are concerned that the current framework may not ensure equity among market participants.

The RS test is intended to be robust enough to deter participants from regularly relying on the short-term market to provide capacity to cover resource shortfalls. We are concerned that the proposed failure consequences are not sufficient to deter leaning. This concern comes from the combination applying a financial penalty, but only in hours of "stressed" conditions. We acknowledge that RA programs are not designed to meet forecast needs in 100% of hours and often focus on congested hours; however, in principle only looking at stressed conditions in certain hours could allow entities to rely on capacity provided by other entities in many hours without specific compensation and without facing penalties. This is specifically at odds with the stated intention of the resource sufficiency test. The equity concern is potentially exacerbated due to the use of a financial penalty. Essentially, entities that fail the RS test would be charged a high cost for continued access to EDAM capacity. Being that entities would have been exposed to high energy prices regardless of the RS test, PPC would like to better understand the interplay between the penalty rate and other scarcity pricing mechanisms to understand if the "penalty" would even be a sufficient deterrent in such a scenario.

PPC requests additional discussion on the proposed failure consequences in the interest of finding a solution which could potentially be applied in all hours to ensure that the RS test is robust and provides confidence that there is an incentive for all participants to equitably contribute towards the reliability of the market footprint. One potential option discussed in the "market transfers" sections of these comments is treating transfers to an entity that has failed the RS test as lower priority compared to transfers to other EDAM participants.

As part of the discussion on failure consequences we would like to explore whether there is the potential for an option that could allow entities to freeze transfers or pay the financial penalty. We would also appreciate discussion on how the financial penalty could be better informed by other price formation changes, such as scarcity pricing.

In general, we agree with the concept of sharing diversity benefits between EDAM entities that pass the day ahead RSE for the purposes of assessing the real-time RSE. It would be unfair to penalize entities who have passed the day ahead resource sufficiency test and then decommitted units based on day-ahead awards and pooling the EDAM entities appears to potentially prevent that outcome. To help further inform our perspective PPC would appreciate additional discussion on:

- How changes after the day ahead RSE will be tracked and applied?

- How the diversity benefit is calculated. Given the expanded size of EDAM relative to the EIM, it may be worthwhile to contemplate additional methods of allocating the credit?

In order to ensure that the resource sufficiency evaluation is meaningful and robust, only reliable resources should be included in the RSE. This could potentially include WSPP Schedule C resources with a few additional requirements. It may be necessary for WSPP C contracts to demonstrate transmission and resource specifics to ensure that capacity is real and reliable. In any case, if this capacity is included in the RSE its performance should be evaluated.

In addition to the areas identified above, PPC requests for discussion at technical workshops:

- Examples of how the day ahead RSE would be applied to EDAM Entity BAAs and the CAISO BAA (to the extent there are any differences)
- Examples of how changes between day ahead and real time would be captured in the real-time RSE.
 - Within this example, specifically how would changes impact an entity's ability to receive EDAM diversity benefits?

External resource participation

External resources could create additional benefits for all market benefits by increasing market liquidity and we encourage CAISO and other stakeholders to explore approaches to make participation of external resources tenable to market participants. PPC requests additional discussion on external resource participation, specifically whether specific measures may be taken to address concerns with participation of external resources. In discussions stakeholders have identified two areas of potential concern: 1) reliability concerns resulting from managing bids from external resources at their interties, particularly when the source of the bid is unknown, and 2) "free ridership" where external resources are able to benefit from the organized market without bearing the obligations and administrative costs associated with participating in EDAM.

PPC is hopeful that these concerns could be mitigated and would like to explore that potential with other stakeholders. Reliability concerns could potentially be alleviated by requiring entities to specify the resource associated with economic bidding at the intertie. Likewise, charging an administrative fee to external resources receiving awards in the day ahead market could potentially address concerns about potential "free- riders."

As part of any follow-on discussion, PPC requests that CAISO and stakeholder specifically consider the impacts on entities who may not be able to participate in early stages of EDAM. Also, how would external resource participation rules be applied to entities who are not EDAM entities, but who are participating in the EIM?

Greenhouse gas accounting

PPC continues to have concerns about the current resource specific or "deeming" approach to GHG accounting used by the CAISO and is not convinced that the improvements proposed by CAISO will sufficiently address the "leakage" which can occur under the current methodology. Additional information would be helpful to further inform our perspective including:

- More details on the implementation challenges that CAISO is anticipating in pursuing the zonal model, including estimates of how long it would take to complete that implementation.
- Additional analysis on how the changes performed by CAISO would impact “deemed” amounts, using historical data as a proxy. Publicly available information on resources currently “deemed” to deliver resources into California is not available to entities who are not participating in the EIM. We request that CAISO provide analysis or make available information that would allow entities to perform their own analysis on the performance of CAISO’s current resource specific GHG accounting methods.

While we understand that there may be implementation challenges associated with pursuing a new methodology such as the proposal zonal approach, this is our opportunity to not only establish the GHG accounting methodology for EDAM, but also to improve the methodology used in EIM, which has been knowingly flawed for quite some. Additional conversations will help ensure that the opportunity to adopt the “right” methodology is not missed, and a flawed methodology perpetuated as a basis for another market.

Comments on other issues

Settlements

PPC would like to further explore with the CAISO what additional tools may be available to help BAAs suballocate costs to the extent that charges and credits are assigned to the BAA directly. Our understanding is that in the EIM the information received by BAAs can make it difficult to accurately suballocate charges and credits – particularly those related to congestion. At a minimum, sufficiently granular information should be made available for BAAs to accurately suballocate transfer revenues associated with Bucket 2 transmission (as well as any internal congestion rent) to those rights holders who donate or provide the transmission to the market. CAISO should further consider whether it as the market operator would be better suited to accurately and efficiently allocate transfer revenues directly to transmission rights holders that donate bucket 2 transmission.

EDAM Fees

PPC is still considering the application of the EDAM fee within the larger construct of the proposed EDAM model. It would be helpful to get an estimate of the operating costs anticipated to be associated with EDAM and a range of what that fee may be based on the EDAM footprint. A short review of the methodology used to assign costs to CAISO’s various activities as part of the upcoming planned technical workshops would be helpful.

Conclusion

PPC appreciates the opportunity to provide feedback on CAISO’s straw proposal for EDAM. We appreciate all the efforts of CAISO staff to provide forums to discuss and vet these issues. As stated in the sections above, PPC still has significant questions about CAISO’s proposal and is very supportive of additional discussion in technical workshops. We look forward to those engagements and appreciate the work of CAISO staff and other stakeholders to develop a day ahead market that will work for the broader West.