

# Comments of Seattle City Light on Local Market Power Mitigation Enhancements Revised Straw Proposal

Submitted by	Company	Date Submitted
Robert Cromwell, Jr., Regional Affairs, Contracts & Strategic Planning Director <a href="mailto:robert.cromwell@seattle.gov">robert.cromwell@seattle.gov</a> (206) 684-3856	Seattle City Light	December 7, 2018

Seattle City Light (Seattle) is the tenth-largest consumer owned electric utility in the nation, providing electrical service to more than 415,000 residential, commercial, and industrial customers in the City of Seattle, Washington and six adjacent cities. Seattle owns and operates hydroelectric resources with approximately 2,000 MW of flexible, fast-ramping capacity. We regularly transact in the wholesale energy and transmission markets. Seattle executed an Implementation Agreement with the California Independent System Operator (CAISO) and intends to begin participating in the Energy Imbalance Market (EIM) in April 2020.

Seattle City Light appreciates the opportunity to comment on CAISO’s November 16, 2018 Local Market Power Mitigation Enhancements Initiative Revised Straw Proposal. Seattle is generally supportive of the direction of CAISO’s proposal and we greatly appreciate CAISO’s efforts to incorporate stakeholder feedback. Seattle’s comments offer recommendations we believe will further improve the ability of the hydro default energy bid (DEB) to reflect opportunity costs of hydro resources and mitigate against inefficient dispatch. We also make suggestions to monitor the functioning of CAISO’s proposal to remedy “flow reversal” and offer comments on the EIM decisional classification of this initiative. These recommendations are detailed below.

## **Hydro Default Energy Bid**

Seattle is largely supportive of CAISO’s changes to the hydro default energy bid option, including: consideration of maximum storage ability of hydro resources, a scalar that is targeted to the storage horizon of a resource, introduction of a gas price floor, inclusion of balance of month price indices and consideration of multiple geographic market hubs. Seattle believes these changes go far in addressing concerns about the workability of DEB options for hydro resources. Seattle offers the following comments and recommendations that we believe would build on the positive changes CAISO has made to the hydro DEB option.

### ***Resource Eligibility for Hydro DEB***

CAISO proposes that all hydro resources with storage (excluding run-of-river hydro) be eligible

for the new hydro DEB. Seattle requests that CAISO clarify how it is defining of “run-of-river” and strongly encourages CAISO to clarify that any resource that has an ability to shape its water, regardless of how many hours, days, or months be eligible for the hydro DEB option, even if it is described as “run-of-river” in other contexts. Any resource that is able to shape its output will have opportunities to sell outside of the EIM and should be eligible for a hydro DEB that recognizes these opportunities.

### ***Scalar in DEB Formulas***

Seattle is very supportive of the analytical framework CAISO uses to determine what scalar may be appropriate for short and long-term storage hydro resources. CAISO’s framework determines a scalar that is based on achieving an acceptable standard of efficient dispatch for hydro resources. Given the possible consequences of depleting a hydro resource’s water inefficiently (economic harm, environmental impacts, violation of federal operating licenses, etc.) it is essential that a scalar be sufficient to minimize the risk of inefficient dispatch. As explained below, Seattle recommends a few refinements to the inputs of CAISO’s analysis. We recommend CAISO implement a standard of 99% for efficient dispatch rather 95%, use Powerdex bilateral prices as opposed to PacifiCorp West EIM prices and implement a scalar for hydro resources that reflects the above standards and modifications. Seattle also supports an annual review process to assess whether adjustments are needed to the scalar.

CAISO’s proposed scalar for short-term storage resources (any amount of storage-3 month of storage) is 135% and its proposal for long-term storage resources (4-12+ months of storage) is 110% for months 4-12 and is the maximum of the short-term DEB in months 1-3, when long-term storage resources face similar constraints as short-term storage resources. In determining the proposed scalars, CAISO’s analysis looked at the reasonableness of different scalars depending on the maximum storage and energy availability of a resource, with the goal of ensuring efficient dispatch of resources 95% of the time. However, as CAISO acknowledges, there is a range of “energy availability” for resources in any given storage horizon and the proposed scalar of 135% will not result in a 95% efficient dispatch for all short-term storage resources. In order to ensure 95% efficient dispatch of short-term storage hydro resources a 165% scalar is required, as is shown in the below table excerpted from CAISO’s Revised Straw Proposal.

**Table 2: Percent a 1-month storage resource is dispatched less than potential daily availability:**

Scalar	Energy Availability (Hours/Day; Appx percent of intervals)				
	2.3 Hrs. (10%)	3.5 Hrs. (15%)	4.8 Hrs. (20%)	6 Hrs. (25%)	8 Hrs. (33.3%)
116%	65%	78%	85%	91%	95%
122%	72%	83%	89%	95%	98%
130%	81%	89%	95%	97%	99%
143%	88%	95%	98%	99%	100%
165%	95%	99%	100%	100%	100%

**Table 3: Percent a 3-month storage resource is dispatched less than potential weekly availability:**

Scalar	Energy Availability (Hours/Week)				
	16.8 Hrs. (10%)	25 Hrs. (15%)	33.5 Hrs. (20%)	42 Hrs. (25%)	50.3 Hrs. (30%)
101%	55%	72%	83%	91%	94%
105%	62%	83%	91%	96%	96%
110%	75%	87%	94%	96%	98%
115%	81%	94%	100%	100%	100%
131%	96%	100%	100%	100%	100%

**CAISO Local Market Power Mitigation Enhancements Revised Straw Proposal, page 32.**

CAISO’s proposal of a 135% scalar for short-term storage resources is intended to meet in the middle of what may be appropriate for short-term storage resources. Seattle appreciates the difficulty of coming up with a scalar that balances various levels of energy availability within a storage horizon, however, we think that CAISO should err on the side of providing the flexibility required to ensure all resources that fall within the short-term storage horizon receive the determined standard for efficient dispatch. Based on CAISO’s analysis to-date, this would support a 165% scalar for short-term resources.<sup>1</sup> Regarding the standard for efficient dispatch, Seattle recommends that CAISO use a 99% standard instead of 95%. Given the risks associated with inefficient dispatch, Seattle believes it is reasonable to target efficient dispatch in 99% of intervals. We also recommend that CAISO update its analysis to compare the daily DEB to Powerdex bilateral prices as we believe these may be more indicative of EIM prices than PacifiCorp West EIM prices. Finally, we support a process that would allow for an annual assessment and possible adjustment to scalars to as necessary.

**Gas Floor in Short-Term DEB Formula**

Seattle is very supportive of CAISO’s proposal to incorporate a fixed dollar/MWh floor in the short-term DEB formula. CAISO proposes that the floor be based on local gas prices and an average heat rate proxy. Seattle believes a gas price floor in the DEB formula may be a way to better capture changing opportunity costs in real-time, however, Seattle is concerned that a gas floor that is based on an average heat rate proxy may not be able to adequately reflect instances of very high peak prices in bilateral markets. Seattle believes it may be more

<sup>1</sup> 165% may or may not be the right level of scalar for short-term resources. If CAISO revises its analysis to incorporate a 99% confidence level of efficient dispatch, incorporates Powerdex bilateral prices in its analysis and updates the gas floor to reflect peaker heat rates, it is possible a lower scalar would be appropriate.

appropriate to use the heat rate of a peaking gas resource, rather than the average heat rate for a typical gas resource. Peaker heat rates would better reflect a resources' ability to shape its output in critical hours with peak prices. It is possible that a gas floor based on peaker heat rates would still not adequately reflect opportunity costs when electricity prices spike to \$300 for example, however, it would further reduce instances of inefficient dispatch for short-term storage resources and better capture real-time opportunity costs compared to a gas floor based on average heat rates. In order to better assess the impact of a gas floor in the DEB formula, Seattle recommends that CAISO updates its analysis to clearly demonstrate the impact of its proposed gas floor in the DEB formula as well as a gas floor that incorporates peaker heat rates.

### ***Multiple Trading Hubs in DEB Formula***

Seattle supports a method that would allow for multiple trading hubs to be factored into the DEB formula, where a resource can demonstrate transmission rights. However, currently CAISO proposes that this be limited to resources with long-term storage. Seattle recommends CAISO allow short-term storage resources to be eligible for multiple trading hubs as well, given that these resources may also have transmission rights that allow them to sell multiple trading hubs. Seattle also recommends that instead of using a weighted average of the bilateral trading hubs a resource has transmission rights to, the highest priced trading hub should be used since this best represents the sales opportunity a resource would be forgoing.

## **Mitigation Issues**

### ***Flow Reversal***

Seattle is supportive of CAISO's efforts to address inaccurate triggering of mitigation that is occurring by what has been termed "flow reversal." Seattle has consistently encouraged CAISO to perform analysis that investigates why and how often flow-reversal is occurring across the EIM but also by individual EIM entity. We believe a solution to flow reversal can be best tailored when there is a clear understanding behind what has enabled flow reversal to occur in the EIM, which entities have been impacted thus far, how often and why. CAISO acknowledged this request in the revised straw proposal but believes adequate analysis has been performed by the Department of Market Monitoring (DMM). DMM's analysis indicates that flow reversal "has the ability to occur up to 2% of all 15-minute intervals" and ".4% of all 5-minute intervals." CAISO recognizes that this analysis underestimates the magnitude of flow reversal because Powerex is setting export limits to zero in hours where they believe flow reversal is likely to occur. The analysis also does not look at historical instances of flow reversal or break down occurrences by EIM entity. Seattle does not believe the analysis performed to-date is adequate and we continue to encourage CAISO to conduct further analysis.

Notwithstanding the above, Seattle believes that CAISO's proposal to address flow reversal has merit and we support the proposal to eliminate rules that extend mitigation to future intervals and calculating the LMP independently for each interval. CAISO also proposes to include a "nominal" adder to the mitigated bid calculation because even if the competitive LMP is calculated for each interval and market run, mitigated prices can still result in a resource's

default energy bid equal to the competitive LMP, and this would not allow for the flow reversal solution to work. The nominal adder is proposed to ensure price separation occurs and flow reversal can be prevented. Seattle has raised concerns about including a nominal adder to the mitigated bid calculation due to potential impacts to prices/prices signals. We believe as long as the adder remains nominal (\$.0001), the pricing impact should be deminimis, however, CAISO has yet to demonstrate what magnitude the adder must be to achieve the intended outcome. Seattle supports Western Power Trading Forum's recommendation to commit to conducting an analysis after six to twelve months of implementation to evaluate how effective the nominal adder is for preventing cases of flow reversal, economic displacement and its impact on congestion and pricing.

### ***Preventing Economic Displacement Between Mitigated BAAs***

Seattle is supportive of CAISO's efforts to address situations of "economic displacement". Forced additional transfers as a result of mitigated bids is not appropriate in a voluntary market. Seattle supports CAISO's proposal to provide EIM entities the option of limiting their exports to the greater of base transfers, pre-mitigation transfers or flexible ramping up awards. However, given that an EIM entity won't know in advance when economic displacement may occur or what the impact would be, we anticipate it will be difficult to assess whether to use this option or not. Is the CAISO able to indicate mitigation results and specifically instances of economic displacement in real-time for entities to respond to? In addition, Seattle also requests that CAISO clarify how often an entity could update this designation and encourages the maximum level of flexibility, given the potential negative impacts that could occur in economic displacement scenarios.

### **EIM Decisional Classification**

Seattle believes CAISO has appropriately categorized this initiative according to the existing framework for EIM decisional classification. The majority of the changes contemplated in the initiative would apply to both the CAISO and EIM BAAs, and therefore these changes fall under the EIM Governing Body's advisory authority. However, we note that it is unlikely this initiative would have been undertaken but for the EIM. This initiative is a good example of why a greater delegation of authority for the EIM governing body, particularly in instances where rules apply uniformly to both CAISO and EIM BAAs may be appropriate to consider in a future EIM governance review.

Seattle appreciates the opportunity to provide comments. If you have any questions regarding these comments, please contact Lea Fisher at 206-386-4546.