Department of Energy

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CAISO Local Market Power Mitigation Enhancements
Draft Final Proposal (Updated) , February 1, 2019
Bonneville Power Administration Comments

Submitted by	Company	Date Submitted
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Bonneville Power Administration (Bonneville) appreciates CAISO's extensive work on the Local Market Power Mitigation stakeholder process to date. Bonneville is encouraged by the significant progress made on the issues of flow reversal, economic displacement, and hydro default energy bid formulation, believing that the features of the draft final proposal will help ensure that EIM dispatch remains consistent with the commercial and operational objectives of market participants while promoting market outcomes that are mutually beneficial for both loads and resources. Bonneville is supportive of the proposal overall and offers the attached comments to emphasize support for particular aspects of the proposal.

Bonneville is a federal power marketing administration within the U.S. Department of Energy that markets electric power from 31 federal hydroelectric projects and some non-federal projects in the Pacific Northwest with a nameplate capacity of 22,500 MW. Bonneville currently supplies 30 percent of the power consumed in the Northwest. Bonneville also operates 15,000 miles of high voltage transmission that interconnects most of the other transmission systems in the Northwest with Canada and California. Bonneville is obligated by statute to serve Northwest municipalities, public utility districts, cooperatives and then other regional entities prior to selling power out of the region.

Hydro Default Energy Bid

Bonneville appreciates the significant progress made to-date on the hydro default energy bid methodology as presented in the updated Draft Final Proposal of 1 February 2019. Bonneville recognizes that hydro resources will be encouraged to maximize their participation in the energy imbalance market when their default energy bids accommodate their views of their opportunity costs. As such, the primary intent of this stakeholder initiative, for Bonneville, is to establish a

default energy bid that adequately captures the relevant determinants of opportunity costs faced by the majority of hydro resources. At the same time, there are substantive differences in key characteristics that vary across hydro resources that significantly impact the opportunity costs of those resources. Bonneville believes the current proposal strikes a reasonable balance between the two – it is broadly applicable, yet maintains flexibility to accommodate meaningful differentiation from resource to resource.

Bonneville is generally supportive of the current proposal and the additional analysis supplied by CAISO in support of specific attributes of the DEB methodology. In particular:

Continued strong support for inclusion of multiple trading hubs

Bonneville continues to emphasize the importance of an allowance for multiple trading hub indices in the DEB formulation. As discussed during the stakeholder call of 23 January 2019 and again during the Market Surveillance Committee General Session of 25 January 2019, the opportunity cost of hydro resources is primarily derived from the value of foregone sales in an alternate market. This alternate market may be at 1) a different geographic location during the same period; 2) the same geographic location in a future period; or 3) a different geographic location in a future period. It is critically important to acknowledge the practical complementarity of firm transmission rights and energy sales in the bilateral market, and to recognize that this complementarity exists in stark contrast to the de-coupled relationship between transmission and energy sales in a centrally-cleared market. In the latter, transmission value is derived from price differentials between generation and load. Further, the value of the energy generated is agnostic to the delivery point. In bilateral markets, the value of energy generated – the commodity being delivered at a specific point in time in a specific location – is dependent on the transmission used for delivery. In practice, the value of transmission is largely inseparable from the value of energy – *without accompanying energy flow, the value of transmission is diminutive*. In Bonneville's experience, sales of firm transmission rights on the secondary market are both relatively infrequent and very low-priced. Given this coupling of transmission and generation in the bilateral market, it is crucial that the DEB formulation arising from this stakeholder process explicitly acknowledge the geographic diversity of market alternatives in approximating the opportunity cost of hydro resources. Bonneville believes that inclusion of multiple trading hub indices in the DEB formulation will encourage greater market participation, both on the extensive margin (the number of participants in the market) and the intensive margin (the MW amounts participants bring to the market).

Appreciation for the additional supporting analysis on the scalar

Bonneville appreciates the extension of the scalar determination effort – initially presented in the revised straw proposal – to encompass pricing from multiple EIM entity areas. Bonneville believes the CAISO's choices of *energy availability* (4 hours/day) and *dispatch efficiency* (95-99%) offer sufficient conservatism such that the resultant scalar should be palatable to most hydro resource operators, many of which face significant operational uncertainty. Durability of the emergent hydro DEB is important in principle, and Bonneville is encouraged by the apparent robustness of the scalar multiple to choice of LMP location. This robustness may also serve to diminish the penumbra of uncertainty (and associated anxiety) for prospective EIM entities and market participants.

Support for utilization of a peaking heat rate in the gas floor

Bonneville supports and appreciates the modification of the heat rate used in the gas floor. As a component of a proxy for replacement cost of energy in the peak hours of the day, a peaking heat rate is more appropriate than an average heat rate. Bonneville is also supportive of the harmonization of the gas floor scalar with the scalar for the existing variable cost default energy bid option. Finally, Bonneville supports the reference level adjustment for hydro default energy bid based on gas price changes that would manifest in the gas floor component, understanding the relative infrequency of such adjustments likely occurring in practice.

Mitigation Process Enhancements

Support for prevention of flow reversal

Bonneville maintains its support for the mitigation process enhancements related to eliminating flow reversal. Recognizing the relative infrequency of flow reversal and that the incidence of flow reversal may be driven by particular features of the market topology, Bonneville believes that market power mitigation itself should not, in principle, change the fundamental role of a market participant from buyer to seller or vice versa. As such, Bonneville supports the proposed elimination of default balance-of-hour mitigation; recalculation of the competitive locational marginal price; and the nominal price-separation adder.

Support for prevention of economic displacement

Bonneville continues to support the proposed changes to prevent economic displacement, namely the limitation of EIM transfers between balancing authority areas to the greater of the flexible ramping upward requirement of the exporting balancing authority; or the pre-mitigation export quantity. Bonneville also recognizes the computational requirement for a nominal price adder to the competitive locational marginal price to support prevention of economic displacement or flow reversal due to mitigation.