



**Comments of the National Hydropower Association on
Local Market Power Mitigation Enhancements
Revised Straw Proposal**

Submitted by	Company	Date Submitted
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The National Hydropower Association (NHA) appreciates this opportunity to comment on the November 16, 2018 Local Power Mitigation Enhancements Revised Straw Proposal. This initiative contemplates a number of market enhancements to address local market power mitigation in the CAISO energy imbalance market (EIM). As the trade association for the hydropower industry, we are monitoring how these proposals may affect the efficient and economic dispatch of all hydropower resources, including pumped storage. We believe that market rules should accommodate, to the extent practicable, the actual marginal costs, opportunity costs and storage capabilities of hydropower. If done right, hydropower can maximize its contributions to a low-emission, inter-regional grid.

NHA represents more than 240 companies, from Fortune 500 corporations to family-owned small businesses. Our diverse membership includes public and investor-owned utilities, independent power producers, developers, equipment manufacturers and other service providers. As a national association, we have members across the country, including California and its neighboring states in the Southwest and Pacific Northwest. The treatment of hydropower in this initiative will affect our members. As the CAISO recognizes, “EIM participants have identified cases when mitigation results in the market dispatching their use-limited resources at prices below their marginal costs and often in quantities greater than needed to resolve market power.”¹

NHA believes the CAISO proposal takes significant steps toward reducing barriers to hydropower participation in the voluntary EIM. We agree that “supply should not be forced to sell power below its bid price if it cannot exert market power.”² Of particular importance to hydropower, we also support the principle that “marginal costs used to calculate default energy bids for use-limited resources should include opportunity costs for future market sales.”³ The Revised Proposal is a marked improvement over the earlier draft. These comments express general support, while highlighting where additional refinement is necessary to better account for the participation of diverse hydropower resources.

¹ Local Market Power Mitigation Enhancements Revised Straw Proposal. November 16, 2018. p. 3.

² Revised Straw Proposal at 14.

³ Ibid.

Storage and Opportunity Costs

NHA supports the development of a default energy bid option that provides reasonable flexibility and certainty for hydropower generation. One of CAISO's principles in the Revised Straw Proposal is that: "[t]he marginal costs used to calculate default energy bids for use limited resources should include opportunity costs for future market sales."⁴ The CAISO therefore proposes "a new default energy bid designed to approximate the opportunity costs for hydro resources."⁵ The CAISO incorporated input from a number of hydropower owners and operators into its Revised Straw Proposal. The result attempts to capture "opportunity costs for hydro resources to sell energy in markets outside of the CAISO and at various points in the future depending on available storage."⁶

The Revised Straw Proposal incorporates several factors into a new default energy bid option for hydropower: maximum storage horizon; ability to sell energy at different locations outside of the CAISO or EIM; opportunity cost of generation substituting local resources; and short-term limitations on generation.⁷ Accounting for hydropower's ability to sell within a shorter-term horizon or over the course of its storage horizon reflects the operational reality of hydropower and the ability of owners and operators to utilize "fuel" when it is most valuable. Instead of penalizing hydropower owners for prudently managing a use-limited resource, NHA believes this approach recognizes one of the most intrinsic, beneficial characteristics of hydropower. Further, the proposal accommodates the reality that hydropower can face short-term constraints when managing for multiple uses (flood control, water supply, environmental, recreation, etc.).

NHA offers the following comments on the default energy bid (DEB) for hydropower resources:

- *Election of multiple trading hubs for short-term storage resources*

Generally, NHA supports CAISO's proposal enabling long-term storage projects to elect up to four trading hubs in calculating default energy bids upon demonstration of available transmission rights. However, NHA urges the CAISO to offer the same opportunity to hydropower resources with less than four months of reservoir storage. These projects also may have transmission rights that facilitate sales in other bilateral trading hubs. If a hydropower owner can demonstrate market opportunity and associated transmission rights, there should be no discrimination based on storage horizon. In either case, the default energy bid for hydropower resources should be based on the highest-priced (of the four) trading hubs to which it has transmission access (as opposed to a weighted average). Hydropower owners would certainly choose to transact where transmission rights are combined with highest values, making this calculation the most accurate reflection of dispatch.

- *DEB calculations for shortest-term storage resources*

Overall, the Revised Straw Proposal's accommodations should improve the ability of hydropower resources to participate in the EIM. However, NHA urges the CAISO to give

⁴ Ibid at 14.

⁵ Ibid at 6.

⁶ Ibid at 26.

⁷ Ibid at 26.

additional consideration to hydropower resources with one month or less of reservoir storage. The Revised Straw Proposal includes this footnote:

“Any resource with one month of storage or less will receive a default energy bid that includes the gas floor, day-ahead peak price, balance of month price, and month-ahead price in the calculation. A resource with storage duration longer than 12 months will receive a default energy bid that includes these terms and each month-ahead future prices up to 12.”⁸

This comment recognizes that there are opportunity costs for projects with shorter storage horizons. However, NHA proposes that the CAISO use a separate calculation to further differentiate projects with the shortest storage horizon. Day-ahead and month-ahead forward prices at bilateral hubs may not account for hydropower’s ability to generate during critical peak periods, and average prices over a week can be very different than the average price over a month. Intra-day volatility likely would not be reflected in the day-ahead price. For projects with shorter storage windows, the formula should recognize that hydropower owners would choose to generate during the highest value hours over a 24-hour period. Also, limited reservoir storage projects may have very volatile opportunity costs associated with operational restrictions.

Conclusion

In addition to being carbon-free, hydropower, including pumped storage, can provide a suite of reliability services ranging from flexible capacity, storage, voltage support, regulation, spinning and non-spinning reserves, black start capability and inertia. These services are ideally suited to support a transformed, clean electric grid. Yet many regulatory and market policies are not designed to account for hydropower’s unique abilities, value streams, and operational challenges. To ensure hydropower is dispatched for its highest and best use, market rules should fully account for hydropower’s opportunity costs, while ensuring there are adequate safeguards in place to protect end-use consumers from excessive or unsupported pricing during periods of actual market power. The CAISO has done an admirable job of listening to stakeholder input and adjusting the proposal accordingly. The NHA appreciates this further opportunity to provide comments that, if adopted, will encourage a fuller participation of hydropower resources in the EIM.

⁸ Ibid. Footnote 13, page 27.