

December 8, 2016

California Independent System Operator (CAISO)
P.O. Box 639014
Folsom, CA 95630

Re: Regional Integration Straw Proposal (Nov. 17, 2016)

Dear CAISO staff and stakeholders,

Thank you for the opportunity to comment on the recent Straw Proposal concerning regional greenhouse gas accounting and market design mechanisms.¹

We write today to express our strong support for the two-pass solution CAISO has developed in the Straw Proposal. We appreciate the mathematical complexity of the optimization process and the computational constraints created by the short time horizon over which CAISO must perform it. We are grateful that CAISO decided to explore this path further, as it offers a more reliable means of identifying the marginally dispatched generating resource in an expanded wholesale market. In our view, the two-pass solution provides the necessary information for California to properly account for the regional greenhouse gas emissions attributable to its electricity load.

In addition, we believe that CAISO's willingness to undertake the hard work necessary to resolve these stakeholder concerns is commendable. CAISO's actions reflect exactly the kind of attitude towards technical complexity that will be critical to ensuring California's continued and deepening commitment to climate policy.

¹ CAISO, Regional Integration California Greenhouse Gas Compliance and EIM Greenhouse Gas Enhancement: Straw Proposal (Nov. 17, 2016), <https://www.caiso.com/informed/Pages/StakeholderProcesses/RegionalIntegrationEIMGreenhouseGasCompliance.aspx>

Although the proposed two-pass solution offers a viable market design that would preserve California's ability to lead on climate policy in partnership with states whose generating resources and policy priorities differ from California's, we urge CAISO staff and stakeholders to perform additional modeling exercises to explore how the two-pass solution would operate in a post-2020 carbon pricing environment. As detailed in our previous comment letter,² the carbon prices discussed thus far are significantly lower than should be expected in a post-2020 California climate policy regime. Rather than carbon prices constituting a small fraction of energy prices, we believe that state carbon price component of bids will likely be on par with—and could well exceed—the current energy component of wholesale bids, assuming the price on carbon reflects the economy-wide costs of complying with California's 2030 climate target.

Confirming that the two-pass solution functions in a high carbon price environment would provide additional confidence in CAISO's Straw Proposal. One approach would be for CAISO to ensure bid adder functionality at the estimated auction floor and allowance price containment reserve prices for the California cap-and-trade program presented by CARB in its recent regulatory amendments package for the program.³ While these estimates are not necessarily representative of the costs of achieving California's 2030 climate target, they nevertheless offer a better proxy than the low costs included in CAISO's examples to date (*i.e.*, CARB's estimates are more representative of likely post-2020 prices than the carbon price implied by a \$6/MWh greenhouse gas bid adder).

² Michael Wara and Danny Cullenward, Comment letter to CARB re: Regional Greenhouse Gas Emissions Accounting and Energy Market Design Proposals from CAISO and CARB (Oct. 27, 2016), *available at* <http://www.ghgpolicy.org/law-policy/>.

³ California Air Resources Board, Public Hearing to Consider the Proposed Amendments to the California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms, Staff Report: Initial Statement of Reasons, 314 (Aug. 2, 2016), *available at* <https://www.arb.ca.gov/regact/2016/capandtrade16/capandtrade16.htm>.

In addition, we urge CAISO staff and stakeholders to recognize that the two-pass solution—like all other regional market mechanisms discussed to date—requires California to maintain a price on carbon that reflects state climate policy goals. As we have explained elsewhere in detail, California currently has this authority only through the end of 2020.⁴ Thus, while we support the proposed two-pass solution, its successful implementation is contingent on California securing the authority to price carbon in the post-2020 period. Due to the requirements of Proposition 26, however, this likely requires a 2/3 vote on new enabling legislation.⁵

Again, we are very grateful for CAISO's commitment to developing constructive solutions and believe that the proposed two-pass market optimization algorithm provides a reliable basis for maintaining California's climate policy goals in a regional wholesale energy market.

Sincerely,



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⁴ Danny Cullenward and Michael Wara, Comment letter to CARB re: Proposed Amendments to the California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms (legal comment) (Sept. 19, 2016), available at <http://www.ghgpolicy.org/law-policy/>.

⁵ Andy Coghlan and Danny Cullenward, State Constitutional Limitations on the Future of California's Carbon Market, *Energy Law Journal* 37(2): 219-63 (2016), available at <http://www.felj.org/energy-law-journal/current-issue>.



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