

Senator Hueso, Chair

Senator Steven Bradford, Vice Chair

Senator Anthony Cannella

Senator Robert M. Hertzberg

Senator Jerry Hill

Senator Mike McGuire

Senator Nancy Skinner

Senator Henry I. Stern

Senator Andy Vidak

Senator Scott D. Wiener

Senate Standing Committee on Energy, Utilities and Communications

State Capitol, Room 4035

Sacramento, CA 95814

Cc: Nidia Bautista

Re: OPPOSE AB 813

June 15, 2018

Dear Senator Hueso,

The Clean Coalition is writing to express its opposition to AB 813. The proposed CAISO expansion simply would not deliver the promised benefits and there are cheaper and more effective ways to address the issues. Using grid integration, energy storage, and better reserve and transmission rules are better approaches to integrate inflexible fossil fuel sources into the transition to the 100% renewable energy system. Given that reality, it is unconscionable to create massive regulatory and political risks by opening CAISO's governance to an unaccountable regional board that gives disproportionate authority to coal and anti-renewable states. While AB 813 attempts to establish valuable standards for any regional transmission operator, these standards would be utterly unenforceable once CAISO is converted to an unaccountable regional transmission board. In addition to the points made by the opposition letter of The Utility Reform Network and the Sierra Club, which the Clean Coalition endorses, we wish to highlight the following points:

CAISO expansion is unlikely to deliver any ratepayer savings.

CAISO expansion will simply not deliver significant benefits and in fact may cost ratepayers money if CAISO's assumptions about transmission are wrong. CAISO's SB 350 study makes extremely optimistic assumptions that next to no new transmission would be built by any new regional transmission operator in offering rosy predictions of \$500 million to \$1.4 billion in ratepayer savings a year. This sounds substantial, but by comparison, fixing CAISO's market distorting Transmission Access Charges rules would save ratepayers \$1.5 billion to \$3 billion a year by incentivizing clean local energy and avoiding unneeded transmission.

If CAISO's rosy assumptions are wrong by so much as a single large transmission line, the entire theoretical savings would vanish. In fact, this kind of market expansion is likely to drive new transmission spending as the regional transmission operator seeks new links between different areas across the west. For example, when CAISO was created in the 1990s, the immediate result was a boom in transmission construction to connect the different regions of California. This same issue will arise under an expanded unaccountable regional transmission operator. Even the construction and maintenance of a single new high voltage transmission line from California to Montana or Idaho would devour any theoretical savings completely. At the end of the day, any ratepayer savings are highly speculative and would depend on the restraint of an unaccountable regional board that lacks incentives to contain transmission spending.

CAISO expansion is not the best solution to getting to a 100% renewable energy system

Regional integration was a good idea even five years ago, but the arrival of cost-competitive battery storage has completely changed the game - and storage prices continue to decline rapidly. Today, CAISO expansion is completely unwarranted, as we have better, simpler, cheaper and lower risk options to create a 100% clean energy grid by managing intermittent renewables with storage and advanced control systems. Battery and pumped storage, local grid integration, better reserve rules, an expanded Energy Imbalance Market with a day ahead market, and more sensible curtailment rules can address any issues motivating the CAISO expansion, and would do so with less risk and more benefits for local communities, while maintaining California's control over our energy future.

Both energy storage and better reserve and curtailment rules have been demonstrated to be perfectly able to address market and energy integration issues facing renewable energy. In one important study of approaches to reaching high levels of renewable penetration, the Union of Concerned Scientists demonstrated that 6 GW of energy storage would be enough to eliminate any curtailment concerns for decades to come. California already has approximately 3.5 GW of pumped hydro and battery energy storage today and is deploying battery storage in various mandates of more than 1GW. Battery storage

prices are dropping and projects such as Tesla's Hornsdale Energy Reserve 100MW battery are slashing grid management costs by 90% by eliminating the need for natural gas (<https://electrek.co/2018/05/11/tesla-giant-battery-australia-reduced-grid-service-cost/>). California is already investing in batteries that seem likely to solve any curtailment issues long CAISO can complete the regionalization process to create an unaccountable regional board.

Combining increased energy storage with an Expanded EIM with a day ahead market has the potential to provide most of the benefits of an expanded CAISO without the governance risks. Given that the main goal of AB 813 is to give California the ability to sell excess solar energy into other states, it makes far more sense to accomplish this goal by simply expanding our existing Energy Imbalance Market, especially with a day-ahead market, to allow for interstate trading as needed. If instead we choose to turn over control of our transmission system to an unaccountable regional board, California will have risked its clean energy future for little to no benefit.

CAISO Expansion is addressing the wrong problem in trying to address solar curtailment.

CAISO expansion would be a Band-Aid that does not address the structural issues that drive solar curtailment, which means CAISO expansion might completely fail to reduce curtailment. It's critical to recognize that the curtailment of solar energy in California doesn't happen because we have more generation than load, it happens because CAISO's rules and market approach gives effective priority to nuclear and natural gas plants. When CAISO relies on natural gas as reserves and defers to contractual arrangements among third parties, CAISO ends up forcing solar to curtail. Expanding CAISO's broken approaches to this issue across western North America will not solve the underlying problem and will make it more difficult to fix when coal and natural gas states have a greater influence.

California's curtailment process demonstrates the critical importance of market rules and procedures for determining the success of climate efforts. In California, solar is forced to turn off or "curtail" not because we have too much solar, but because of how CAISO identifies what generators will be required to cut back. When generation exceeds load, CAISO seeks those generators that have the lowest opportunity costs and can be curtailed. This does not reflect the best curtailment for ratepayer costs or for carbon emissions, but rather the vagaries of contract and market rules. In fact, when CAISO needs generators to curtail, nuclear does not respond, because it cannot. Wind tends not to respond because it earns tax credits based on production, so it needs to generate to get its tax credit. Solar, on the other hand, receives an investment tax credit, so faces lower opportunity costs in curtailing. Natural gas generators are generally too inflexible to respond or have contracts with buyers that specify they will not be required to curtail. Additionally, CAISO has established outdated renewables-unfriendly reserve rules that keep unneeded

generators running. As a result, solar is often curtailing to make room for natural gas imports from Nevada, rather than because there is too much solar – a policy that hurts California and the environment.

These same issues that force solar to curtail unnecessarily in California may well persist after CAISO expands. If an unaccountable regional board continues CAISO’s policies that prefer natural gas over solar, solar may find itself similarly shut out from meeting load in other western states that drive curtailment in California. A Regional Transmission Operator with a questionable commitment to renewables will be unlikely to address these problems.

This reality highlights two key issues: First, if curtailment is the main concern, the right approach is to address CAISO’s renewables-unfriendly rules that drive curtailment. Indeed, the Union of Concerned Scientists estimate that curtailment could largely be eliminated up to 50% renewable penetration by allowing renewables to participate in reserve markets (<https://www.ucsusa.org/clean-energy/california-and-western-states/achieving-50-percent-renewable-energy-in-california>). Thus, the legislature should address the issues driving curtailment first before looking to CAISO expansion.

Second, this issue highlights that protecting California’s control over the market rules and procedures are every bit as critical to advancing our clean energy economy as defending our RPS procurement standards. An unaccountable regional board with a goal of slowing the deployment of renewable energy would have a wide range of levers to do so.

CAISO Expansion runs grave risks to California’s climate action.

It is an extraordinarily poor policy to hand coal and gas producing Trump states five times the voting power of California, even though California represents half the population, half the load, and half the economy, all to achieve speculative benefits that can be better accomplished with smarter policies. AB 813 runs two major legal and political risks.

CAISO expansion hands disproportionate power to states hostile to California’s renewable energy goals.

First, AB 813 would hand significant power over California’s grid to a set of Trump states that have shown themselves to be very hostile to renewable energy. Proponents of CAISO expansion make a great deal of noise about whether the jurisdiction of the Federal Energy Regulatory Commission (FERC) would change (it would not), which demonstrates that they have failed to correctly diagnose the true legal risks inherent in CAISO expansion. By far the bigger concern is increased influence by states that have already sued California and threatened Washington over our climate policies. This is an abdication of California’s rightfully central role that should be completely unacceptable to any California legislator. The one-state-

one-vote proposal for the western states committee is a profound betrayal of California's interests. Handing such disproportionate influence to coal states and Trump states that have already used every available lever to undermine renewable energy will set back California's climate efforts and perhaps reverse them. Furthermore, the limitations on conflicts of interest are weak, because any retired coal company executive or consultant would be able to sit on the board a mere two years after leaving a company that is a direct market participant.

As a result, CAISO expansion would involve shifting from a CAISO board accountable for supporting renewable energy policy as a goal, to an unaccountable regional board that would not prioritize such a goal. The composition of the board and staff play a massive role in setting the market rules and procedures that can determine market outcomes. For example, see the role they play in determining what generators curtail, or the distorting influence of Transmission Access Charges, above. Such rules are holding back local renewables and undermining the financing of large scale renewable projects, driving up ratepayer costs and making the energy transition far more difficult and expensive than it should be. Thus, regardless of what procurement standards California may set, a regional transmission operator that is hostile to renewables can easily undermine California's aggressive climate action. It is spectacularly naïve to think that anti-renewables interests will not use every means available to undermine competitors for fossil fuel industry interests. Since some of the proponents of CAISO expansion are those who told us we can trust Enron, California should be extremely cautious in accepting their political judgments. (see, *e.g.*, <http://articles.latimes.com/2001/dec/28/opinion/oe-cockburn28>). If California is to have success in combatting climate change, we cannot surrender control over these rules. Procurement policies such as the Renewable Portfolio Standard, by themselves are nowhere near enough to transform our energy system to a carbon-free economy alone.

An expanded, unaccountable regional transmission operator with greater influence from some of the top coal states and anti-climate action states would have a tremendous advantage over California's remaining policymakers and regulators because FERC reviews what is proposed by transmission operators and is often deferential to such proposals. While California would retain rights to challenge proposals, it would face a high hurdle in overturning such proposals, especially if outnumbered in any proceeding by coal states.

AB813's CAISO expansion standards could be repealed at will by an independent board.

The second major legal failing of AB 813 is that it lacks any enforcement mechanism for its standards whatsoever once the unaccountable regional transmission board is established. While AB 813 does create substantial and valuable standards, the lack of enforceability makes them utterly meaningless. Once CAISO has an independent board, that board would have full authority to change the RTO's bylaws.

California's only recourse would be to withdraw, which would be a difficult, contentious, expensive and extremely damaging process, if FERC would even allow it.

CAISO Expansion is premature at this time

The Clean Coalition strongly urges a NO vote on AB 813 because it is simply premature to engage in a highly risky restructuring at a time when emerging technologies and policies can provide a far better solution in the next few years. A safer and more sensible approach would instead be to expand the Energy Imbalance Market to include a day ahead market; develop grid integration and energy storage policies; and fix the transmission charges and reserves policies of CAISO that are holding renewables back. After these existing problems are addressed, it may be prudent to reassess whether CAISO expansion is needed once the safer options have had a chance to prove themselves. These more optimal solutions could then be expanded regionally, advancing the national effort to transition to 100% renewable energy. Surrendering California's Climate leadership position for short term and speculative gain would be a potentially catastrophic error.

Respectfully submitted,



Doug Karpa, J.D., Ph.D.

Policy Director

Clean Coalition