



June 4, 2018

The Honorable Christopher Holden  
Chair, Assembly Committee on Utilities and Energy  
State Capitol Room 5136  
Sacramento, CA 95814

**Re: AB 813 (CAISO regional expansion) -- OPPOSE**

Assembly Member Holden,

On behalf of consumer, environmental and labor interests, we write to express our shared opposition to changing the governance structure of the California Independent System Operator (CAISO) and authorizing its expansion into a Regional Transmission Organization (RTO) as proposed in AB 813 (Holden). The proposal is not ripe for consideration in light of significant risks that the contemplated regional expansion proposal could substantially harm California. Instead of rushing to authorize a decision that cannot be reversed, we urge the Legislature to consider alternative approaches to regional coordination that could harness the promised benefits of CAISO expansion without abandoning state oversight and jeopardizing California's ability to continue its clean energy leadership.

Our organizations have been involved in discussions relating to CAISO expansion over the past several years and see little progress towards addressing the many legitimate concerns that have been raised. Moreover, the election of Donald Trump and his appointment of a new majority at the Federal Energy Regulatory Commission (FERC) establishes new risks that regional wholesale markets could be used to frustrate California's energy policy goals, devalue renewable energy resources, and force California customers to subsidize the continued operation of coal-fired generation located in other parts of the West.

The proposed expansion could raise costs for California consumers, increase utilization of coal and gas-fired power plants, produce higher in-state emissions of Greenhouse Gases (GHGs) and criteria pollutants, and, according to the CAISO's own analysis, cost **more than 110,000 California middle class, union solar construction jobs**. Regional expansion would also irrevocably alter the state's landmark Renewables Portfolio Standard (RPS) program in a manner that could result in less new renewable energy development, greater reliance on distant renewable energy resources that never deliver their electricity to California, and fewer in-state environmental and public health benefits. Finally, CAISO expansion increases the risks that cutting-edge state policies will be subject to federal preemption and that California consumers would be forced to subsidize out-of-state coal-fired generation.

The question before the Legislature is not whether California will opt for isolationism or participation in regional electricity markets. California is already part of a regional market where in-state buyers and sellers transact with other western entities every hour of every day. Our organizations support greater regional coordination to enhance electricity exports, optimize grid operations, minimize uneconomic curtailment of in-state renewable generation, and reduce Greenhouse Gas Emissions. These outcomes can be achieved through modifications to the current Energy Imbalance Market and other efforts to facilitate exports, interstate exchanges of zero-GHG electricity and multi-state reserve sharing arrangements. None of these measures would jeopardize the RPS program or increase the risks of federal preemption.

Despite lacking key details, the proposed CAISO expansion authorized by AB 813 would not undergo any further review by elected officials prior to being finalized. It would be a mistake for the Legislature to endorse irrevocable change to California's energy markets given the potential for the Trump Administration to move to preempt California's leadership.

The attached document outlines a series of concerns with the current proposal for CAISO expansion and the assumptions that are often cited by proponents. We also identify alternative measures for California to achieve its clean energy and low-carbon grid objectives without eliminating state control over CAISO.

Thank you for your consideration of our comments and concerns.

Sincerely,

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The Utility Reform Network

Kathryn Phillips  
Director  
Sierra Club California

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President  
State Building and Construction Trades  
Council of California

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Richard Samaniego  
Secretary/Treasurer  
California State Association of Electrical  
Workers

**Cc: Members and Chair, Senate Energy Utilities and Communications committee**

# CAISO Regional Expansion

## *Concerns and Alternatives*

### **New governance structure eliminates accountability to the California Legislature**

The current CAISO Board of Governors is appointed by the California Governor and subject to confirmation by the California Senate. Under the expansion proposal, California's elected leadership would be stripped of any direct role in selecting or approving Board members. The resulting Board would have no obligations or accountability to the California Governor or Legislature. The lack of any state role in selecting board members is made worse by the apparent backtracking of any commitment to give states any formal power to review and approve major new tariffs and policy proposals under consideration by CAISO. Draft proposals circulated by CAISO in 2016 would have provided California a seat on the Western States Committee and required all major proposals to be approved by that Committee prior to any tariff filing at FERC. AB 813 limits this committee's function to providing "input" rather than empowering states with any formal role in approving or rejecting regional market design initiatives.

### **Promised State Protections are not Durable**

It is virtually impossible for California to relinquish control over CAISO while securing meaningful and durable commitments that subsequent actions taken by FERC and a multistate RTO would not undermine current and future state resource planning and procurement policies. There is no clear method for enforcing commitments made by CAISO in exchange for eliminating accountability to the Legislature, the Governor and state regulators. California runs the risk that any promises made prior to regional expansion will be abandoned or eliminated through FERC action. The Legislature would be powerless to reverse such an outcome.

Maryland and New Jersey discovered this hard truth when commitments made to these states in exchange for their support of a regional capacity market were rescinded after the market was created, leaving these states without the ability to protect their consumers through the development of in-state generation. Promises made to the states by PJM (a Regional Transmission Organization) were later withdrawn, leaving state efforts to promote local generation to be challenged in federal court and ultimately struck down by the US Supreme Court.<sup>1</sup>

### **CAISO Expansion is a one-way ticket that cannot be undone**

Expansion of CAISO will result in irrevocable changes to regional markets that cannot be undone by a future act of the Legislature. Under AB 813, the Legislature would relinquish its authority to set conditions for the ongoing management and operation of wholesale markets and the governance of the grid. Although California utilities would retain the right to unilaterally withdraw from the multistate RTO "with or without cause" so long as they provide 2-years of advance notice, any effort to exercise this right would be fraught with huge

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<sup>1</sup> *Hughes v. Talen, 136 S. Ct. 1288 (2016).*

challenges and substantial costs. California utilities would be forced to establish new systems for managing their own transmission networks and wholesale transactions that would be complex and costly. These obstacles make it extremely difficult and expensive for California to extract itself from a hostile wholesale market.

**The CAISO SB 350 Study Estimates higher in-state GHG emissions, greater utilization of gas-fired generation, and more coal generation under regional expansion**

Despite claims by proponents that the switch to a single regional market would reduce the use of coal-fired generation and cause GHG emissions to significantly decline, the results of recent studies do not support this conclusion under the most realistic modeled scenario. The move to regional markets *could result in an increase in the utilization of cheap coal-fired generation* and higher overall GHG emissions than would have occurred absent regional expansion. The CAISO SB 350 study found that, by 2030, the following results should be expected under regional expansion:<sup>2</sup>

- GHG emissions are forecasted to increase by 0.6% within California and decrease across the entire Western footprint by as little as 0.1%.
- Total regional coal generation increases by 1.1%
- Gas-fired generation in California increases by 1.4%

These results show that increases in cheap coal-fired generation are expected to displace some gas-fired generation outside California. Most importantly, these results have not taken into account new federal policies under the Trump administration that may increase coal-fired generation in the West.

**The CAISO SB 350 study forecasts that regional expansion would cost California 110,000 renewable energy construction jobs**

The CAISO's SB 350 study examined the effect of regional expansion on California solar construction jobs. The study analyzed the effect on jobs of regional expansion with and without the existing RPS preference for renewable generation directly connected or delivering energy to a California Balancing Authority. Retaining the RPS preference (known as the "bucket system") would yield 110,000 additional renewable energy construction jobs in California from 2020 through 2030. Without the RPS bucket system, those jobs would be lost to other states.

CAISO regional expansion would eviscerate the RPS bucket system. No valid replacement approach has been identified to continue the current preference approach. This means approving AB 813 would cause California to forfeit these 110,000 jobs. This estimate of jobs lost, while enormous, does not tell the full story. Nearly all of the solar construction jobs in California are good, middle class, career union jobs. Many are gateway jobs that provide a first job in rural areas to people with few other opportunities. They lead to apprenticeships that

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<sup>2</sup> CAISO SB 350 results comparing Scenario 1a (base case) to Scenario 3 *without* "beyond RPS wind".

provide training for a lifetime career, benefiting both the individual and the California construction industry.

The CAISO SB 350 study underestimates the total job losses by assuming that achieving a 50% RPS target is the endpoint of state policy. Many local governments, community choice aggregators and state agencies are already committed to higher renewable generation penetration. This means that the count of lost jobs and the damage to the California economy from regional expansion would be even worse.

**Expanding CAISO’s footprint would undermine the Renewable Portfolio Standard program focus on providing in-state and local environmental, economic and public health benefits**

Expanding the CAISO would eliminate the existing preference under the Renewables Portfolio Standard (RPS) for renewable energy projects that directly deliver energy to California customers, displace fossil fuel usage within the state, and provide local environmental and public health benefits. The RPS program requires that 75% of all procurement be sourced from products that have a first point of interconnection within a “California Balancing Authority” or can directly deliver their electricity (without substitution) into a California Balancing Authority.<sup>3</sup>

CAISO expansion would allow remote renewable energy projects throughout the Western US, Canada, or Mexico to become automatically eligible to satisfy up to 100% of RPS compliance. This outcome would reduce the value of local resources and encourage the use of existing, surplus resources outside the state (and the country) that do not actually provide many of the key benefits to California customers are promised under the RPS program. Substituting existing resources for new development would defeat the key objectives of the RPS program and the state’s GHG objectives.

**No protections against rate increases for California customers caused by new out-of-state transmission investments**

Revised cost allocation protocols under a multi-state CAISO are likely to force California customers to absorb a significant percentage of several billion dollars in new transmission investments in other parts of the West sought by PacifiCorp and other private developers (along with a higher FERC-authorized rate of return for any new transmission operated by the ISO). If California is forced to bear both the full costs of the existing CAISO transmission grid plus a significant share (80% or more) of new investments outside the state, the net impact would be an increase in Transmission Access Charges and higher retail rates for California customers. In this event, the Legislature would have no ability to protect California customers from escalating transmission rates attributable to out-of-state investments that provide no real benefits to California.

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<sup>3</sup> Existing California Balancing Authorities include CAISO, Los Angeles Department of Water and Power, Balancing Authority of Northern California, Imperial Irrigation District, and Turlock Irrigation District.

**CAISO’s recent efforts to establish Centralized Capacity Markets and require the development of 4,600 MW of new in-state gas generation were only prevented due to state oversight that would be eliminated under regional expansion**

Relieving the CAISO of any state oversight would open the door to new market design concepts and resource requirements that were previously rejected by state agencies. This change is problematic in light of CAISO’s prior efforts to establish centralized capacity markets and establish the need for substantial volumes of new gas-fired generation. In 2007, CAISO proposed a “Centralized Forward Capacity Market” despite opposition from many state interests over concerns about cost and the potential for diluting state control over resource planning. Because the California Public Utilities Commission (CPUC) rejected this central capacity market proposal, it did not move forward.

In 2011, the CAISO argued that California needed 4,600 MW of new gas-fired plants by 2020 to maintain reliable service.<sup>4</sup> The CPUC declined to require this additional procurement by the Investor-Owned Utilities. Today, there is no longer any support for the claim that 4,600 MW of new gas capacity is needed. Had CAISO been able to enforce its preferred assessment of need in 2011, California would now be saddled with substantial excess gas-fired generation with these new costs being collected from retail customers and driving up electricity rates.

Under regional expansion, CAISO would not need any approval from the California Legislature or any state agency to move forward with these and other controversial proposals. Decisions would be made by management, subject to approval by an independent Board of Governors (not tied to California) and FERC. Since FERC Commissioners may have little sympathy for the state’s progressive energy policy goals, any concerns raised by California are unlikely to receive serious consideration.

**Expansion would increase the potential for successful federal court challenges of cutting-edge state policies**

CAISO expansion would increase the likelihood of successful federal preemption challenges when state procurement and resource planning policies directly affect multi-state RTO wholesale markets. To the extent that CAISO’s preferred regional energy market design or other regional requirements conflict with state policies, California could be forced to defend its laws and regulations against challenges that would be adjudicated at FERC or in federal court. Conflicts in other regional markets have led to a variety of state laws being challenged by private interests with a number of high-profile state initiatives being struck down by federal courts on the basis of federal preemption.<sup>5</sup> In at least one major case, the court relied heavily on the fact that the state was part of a multi-state RTO as the basis for striking down its efforts to reduce reliance on coal-fired generation.<sup>6</sup>

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<sup>4</sup> See August 18, 2011 Briefing on Renewable Integration to ISO Board of Governors, available at <http://www.caiso.com/Documents/110825BriefingonRenewableIntegration-Memo.pdf>. The CPUC rejected this view of “need” in Decision 12-04-046 based on a settlement among major parties – including the CAISO.

<sup>5</sup> *Hughes v. Talen*, 136 S. Ct. 1288 (2016), *State of North Dakota v. Heydinger*, No. 14-2156, 14-2251 (8th Cir. 2016).

<sup>6</sup> *State of North Dakota v. Heydinger*, No. 14-2156, 14-2251 (8th Cir. 2016).

Contentious issues litigated to date include the validity of state laws to promote local generation, limitations on imports of coal-fired electricity produced within the same regional ISO, and whether state policies to incentivize renewable energy are incompatible with the development of competitive wholesale markets.<sup>7</sup> Moreover, FERC could attach other conditions to regional expansion adverse to California interests. Recent efforts of the Trump Administration to rollback state authority on other environmental matters demonstrate that the risks of aggressive preemption by FERC should not be underestimated.<sup>8</sup>

The risks will increase if CAISO is expanded to include additional out-of-state market participants who may feel disadvantaged by California's numerous policies designed to minimize the use of fossil fuels and increase reliance on preferred resources and locally-sited distributed energy resources. These out-of-state utilities and generators would directly experience the impact of California policies on wholesale markets and be motivated to challenge any mechanism that could be deemed to impermissibly discriminate against other resources located within the same RTO footprint. For example, the state of Utah has already set aside \$1.6 million to sue California over its GHG policies, a lawsuit that is more likely to succeed if both states are within the same RTO.

### **Efforts by the Trump Administration to subsidize coal-fired generation through wholesale markets will affect California customers only if CAISO expansion occurs**

President Trump has identified preservation of existing coal-fired generation, and opposition to GHG regulation, as top energy and environmental priorities for his regulatory agencies. Following this direction, the new Trump majority at FERC has already taken actions that demonstrate hostility to California's energy and climate policies. These actions include the establishment of a policy that could devalue renewable resources, directing RTOs to assess their efforts to promote grid resiliency, and declining to consider GHG impacts in the approval of new natural gas pipelines.<sup>9</sup> Secretary of Energy Rick Perry is considering emergency measures to subsidize existing nuclear and coal plants.<sup>10</sup> A recent Administration memo calls

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<sup>7</sup> In *Hughes v. Talen at 1291*, the US Supreme Court identified a variety of "competitive wholesale auctions" that could justify federal preemption of state policy. These include "a 'same-day auction' for immediate delivery of electricity to LSEs facing a sudden spike in demand; a 'next-day auction' to satisfy LSEs' anticipated near-term demand; and a 'capacity auction' to ensure the availability of an adequate supply of power at some point far in the future". The CAISO already runs two of these three types of "wholesale auctions" in the form of day ahead and real-time energy markets. Any state policies that direct load-serving entities to procure specific resources and have a direct effect on prices in these markets could be subject to challenge even if no centralized market for the forward procurement of capacity is established.

<sup>8</sup> For example, the US Environmental Protection Agency appears poised to withdraw the Clean Air Act waiver that allows California enact stricter emission standards for new motor vehicles.

<sup>9</sup> FERC recently stated an intention to apply a "Minimum Offer Price Rule" that would adversely affect the participation of renewable resources in wholesale markets (162 FERC ¶61,205, March 9, 2018 / "we intend to use the MOPR to address the impacts of state policies on the wholesale capacity markets"); FERC also recently ordered each ISO and RTO to identify challenges relating to "grid resilience" including broader consideration of the impact of "wholesale market rules, planning and coordination, and NERC standards" on resiliency and evaluating "options to mitigate any risks" (*Order Terminating Rulemaking Proceeding, Initiating New Proceeding, And Establishing Additional Procedures*, 162 FERC ¶ 61,012, January 8, 2018.)

<sup>10</sup> These measures would be undertaken pursuant to §202(c) of the Federal Power Act.



for the US Department of Energy to require all ISOs/RTOs to purchase electricity or capacity from existing coal or nuclear plants at risk of retirement.<sup>11</sup> President Trump directed Energy Secretary Perry to prepare “immediate steps” to pursue this policy.<sup>12</sup>

Because the CAISO footprint includes very limited legacy coal generation, the Trump administration cannot currently force California customers to subsidize dirty power plants located in other parts of the West. An expanded CAISO would include substantial amounts of Western coal-fired generation that could become eligible for new subsidies ordered by FERC or DOE. CAISO expansion could thereby force California ratepayers to subsidize out-of-state coal generation and extend the lives of these facilities even if such outcomes are contrary to the objectives of state regulators and the Legislature.

### **CAISO processes allow limited meaningful participation by California interests**

Unlike state agencies, CAISO has no formal process for considering evidence and weighing comments submitted by individuals and organized interests. Instead, CAISO typically oversees informal stakeholder processes but has no obligation to respond to comments, give weight to alternative perspectives, justify its own factual assumptions, or explain what comments were relied upon in making final decisions. There is no process for seeking rehearing of CAISO decisions and no judicial review possible in any state court. Parties with concerns about CAISO process or outcomes can only pursue factual or legal issues at FERC.

If CAISO is freed from its state law obligations and permitted to assume greater authority for the design and operation of western electricity markets, California stakeholders will be left with limited options to influence outcomes and contest any decisions adverse to California interests. The costs of participating at CAISO can be significant, leaving only well-funded companies (*i.e.* utilities and independent generators) with sufficient resources to comprehensively engage in stakeholder processes and pursue challenges at FERC. Bestowing increased authority on an expanded CAISO would effectively remove a wide array of public interest stakeholders (such as environmental, low-income, and consumer organizations) from effective participation in critical electricity policy debates and tilt the playing field even more strongly towards powerful private interests.

### **Estimates of economic and environmental benefits of regional expansion developed by CAISO are based on flawed assumptions and misleading calculations**

Pursuant to SB 350 (DeLeon), CAISO prepared a study assessing the potential benefits of creating a single regional balancing authority. Unfortunately, the study included a variety of unrealistic assumptions and raises concerns about the value of regional expansion. Key problems, omissions or misrepresentations include the following:

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<sup>11</sup> <https://www.bloomberg.com/news/articles/2018-06-01/trump-said-to-grant-lifeline-to-money-losing-coal-power-plants-jhv94ghl>.

<sup>12</sup> <http://www.latimes.com/business/la-fi-trump-coal-20180601-story.html>.

- The greatest job creation would result under a scenario where regional expansion does not occur but California increases coordination with other parts of the West to enable greater exports of electricity. This approach would yield an additional 10,000 in-state jobs by 2030.<sup>13</sup> These results were withheld from the original results presented to stakeholders, are omitted from the main volume of the final report and can only be found through careful review of a cryptic table buried within the 688-page document.<sup>14</sup>
- The study double counts the savings that could be achieved through the recently expanded Energy Imbalance Market and does not attempt to identify any incremental benefits from regional expansion.<sup>15</sup>
- CAISO assumes that the cost of California-based solar energy in 2030 will be 30-50% higher (in real terms) than actual 2018 market prices and substantially above long-term industry forecasts. This assumption inflates the value of alternatives to solar located in Wyoming and New Mexico.
- Although reductions in the curtailment of in-state renewable resources are often cited as a key benefit of CAISO expansion, the study finds that approximately 75% of the assumed reductions could be realized through enhanced bilateral coordination without any need to transform CAISO into a regional entity.<sup>16</sup> The study did not review the extent to which the recently expanded Energy Imbalance Market (EIM) could reduce curtailment despite the fact that prior CAISO studies identified significant reductions in curtailment as a key benefit of the EIM.
- Approximately 70% of the estimated benefits to California customers in 2020 are assumed to result from PacifiCorp paying a full share of CAISO operational costs. The study ignores the fact that PacifiCorp has insisted that it will pay little or none of these costs even after joining CAISO.
- Expected economic benefits for California communities fail to account for the manner in which costs and savings are actually distributed, including the fact that low-income

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<sup>13</sup> SB 350 Study: The Impacts of a Regional ISO-Operated Power Market on California, Prepared for CAISO, July 8, 2016, Electronic workpapers of Berkeley Economic Advising and Research.

<sup>14</sup> The reference to Scenario 1b is buried at the end of Volume VIII of the study (page VIII-19) and is not shown in any of the summary results. A wide range of stakeholders (including the major utilities) expressed support for using Scenario 1b (enhanced exports) as a proper base case.

<sup>15</sup> CAISO response to SB 350 comments, page 29 (*"the benefits analyzed and quantified in the SB 350 study do not include any that could be (or would be) achieved by expanding the EIM to the geographic market footprint analyzed for 2030"*)

<sup>16</sup> CAISO forecasts a base case in which renewable resources are curtailed in 4.5% of all hours in 2030 but estimates that curtailment declines to 2.0% of hours if enhanced bilateral coordination occurs and to 1.2% under full regional expansion. The enhanced bilateral coordination scenario (Scenario 1b) was endorsed as the most realistic 2030 base case by TURN, Southern California Edison, Pacific Gas & Electric, San Diego Gas & Electric, the CA Department of Water Resources, and the California Large Energy Consumers Association.

customers will not receive the same share of utility bill savings as higher-income customers.

- The results frequently cited by CAISO include a key assumption that 5,000 MW of new “beyond RPS” wind would be installed in Wyoming and New Mexico due to favorable economics resulting from a single regional market. CAISO assumes that California customers pay none of the costs for this generation but receive many of the benefits. This assumption was added to the model at the direction of CAISO management at the last-minute in an effort to boost the claimed economic and environmental benefits. A review of the model shows that 2,500 MW of wind power in New Mexico would be a money-losing proposition for developers, thereby making it impossible to justify the reasonableness of this last-minute addition to the study inputs.<sup>17</sup>
- Economic benefits to California do not properly take into account pricing differences across the West and the costs of congestion associated with the “delivery” of a large quantity of out-of-state renewable energy to California customers.
- Based on experience with the Energy Imbalance Market (EIM), the economic benefits to California customers may be significantly overstated. Although initial studies estimated that California would receive most of the economic benefits from this market, the real-world experience shows that other Western utilities are the biggest winners. To date, California customers have realized approximately 28% of total EIM savings despite constituting the majority of the overall market.<sup>18</sup> In 2017, California’s share of total savings dropped to 25%.<sup>19</sup> This disconnect suggests that California’s share of savings from a fully expanded CAISO market will be lower than projected and that the economic benefits may primarily flow to utilities and customers outside of California.

Perhaps most troubling is the fact that CAISO ignored thoughtful critiques of the study submitted by consumer groups, utilities, generators and other state agencies. Despite receiving comments from 35 stakeholders raising a variety of concerns about the study inputs and methodology, CAISO rejected almost every critique and made no significant changes to the final study. This behavior highlights the fact that the study was not designed to develop an unbiased assessment of the costs and benefits of regional expansion.

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<sup>17</sup> The CAISO model forecasts negative pricing in 40% of total hours when the wind is assumed to be generating leading to an average price (across all hours of generation) of  $-\$11/\text{MWh}$ . This means that the generator is assumed to be paying for the grid to accept its output rather than actually making money on the sale of power.

<sup>18</sup> CAISO EIM Quarterly Benefits Reports, 4Q2014 through 1Q2018 (showing CAISO receiving \$94.05 million in savings out of \$330.5 million in savings for all EIM participants).

<sup>19</sup> CAISO EIM Quarterly Benefits Reports, 1Q2017 through 4Q2017 (showing CAISO receiving \$36.96 million in savings out of \$145.82 million in savings for all EIM participants).

## **California can achieve its clean energy and low-carbon grid objectives without eliminating state control over CAISO**

The Legislature can avoid these consequences, reduce the risk of federal preemption, and direct CAISO to focus on measures that will assist the state in meeting its ambitious energy objectives. Rather than removing California authority over CAISO and eliminating a board appointed by the Governor and subject to Senate confirmation, the Legislature should direct CAISO to explore other measures that serve the goal of optimizing system operations, reducing GHG emissions, and addressing concerns about overgeneration and curtailment. These options include:

- Expanding the voluntary Energy Imbalance Market (EIM) to permit transactions with other western balancing authorities that go beyond real-time and allow day ahead scheduling. Previous CAISO studies found that participation by other Western utilities in the EIM could significantly reduce, or even eliminate, all expected curtailments of renewable resources within California.<sup>20</sup> CAISO identified this potential change in its most recent policy initiatives roadmap and notes that an expanded EIM would improve market efficiency and more effectively integrate renewable generation while allowing each state to retain control over reliability responsibilities, integrated resource planning, resource adequacy and transmission planning and investment.<sup>21</sup>
- Coordinating with the Bonneville Power Administration and other Northwest utilities to facilitate exchanges of excess California renewable power and northwest hydroelectric power. This approach could assist with managing mid-day surpluses in California and helping with late afternoon ramping needs.
- Taking steps to enable greater exports of surplus in-state renewable generation including obtaining an assessment from the Western Electricity Coordinating Council regarding the feasibility of increasing net export limits.
- Investigating the establishment of a regional planning reserve sharing agreement amongst Western Balancing Authorities to reduce overall reserve requirements.
- Work with other western balancing authorities to reduce barriers to exporting excess power produced by in-state renewable resources.

These options should be explored along with other measures that do not require eliminating California control over CAISO governance and expanding the footprint of its balancing authority. Before pursuing the only action that is almost impossible to reverse, the Legislature should actively explore alternatives that do not pose the same risks to California consumers and state policy.

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<sup>20</sup> These findings appeared in the studies performed by CAISO regarding the potential participation of PacifiCorp, NV Energy and Arizona Public Service in the EIM market.

<sup>21</sup> CAISO 2018 Policy Initiatives Roadmap, January 12, 2018, pages 20-22.