

September 20, 2016

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

**Re: Regional Integration California Greenhouse Gas Compliance  
Issue Paper (Aug. 29, 2016)**

Dear CAISO staff and stakeholders,

Thank you for the opportunity to comment on CAISO's recent Issue Paper on key market design questions relevant to potential regionalization of the ISO and integration with California's climate policies.<sup>1</sup>

For context, I am a longtime academic observer of California's energy and climate policies. I have spent over a decade conducting research on state, federal, and international climate policy with a particular focus on the design and implementation of emissions trading systems and their impact on the electricity sector. I have also worked extensively on legal issues that affect the application of state climate policies to interstate markets for electricity and transportation fuels.

Today I am writing to share my perspective on the relationship between California's evolving climate policy portfolio and the critical market design questions reviewed in the CAISO Issue Paper. I am grateful to CAISO staff for preparing this helpful overview and offering the opportunity for public comment. Since I have not had the chance to participate in the stakeholder discussions to date, I am also mindful that some of these issues may be well understood within the stakeholder community—in which case please accept my apologies for reviewing well-tread territory. In any case, I

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<sup>1</sup> CAISO, Regional Integration California Greenhouse Gas Compliance Issue Paper (Aug. 29, 2016) (hereinafter "CAISO Issue Paper"), *available at* <https://www.caiso.com/informed/Pages/StakeholderProcesses/RegionalIntegrationCaliforniaGreenhouseGasCompliance.aspx>.

look forward to hearing from and working with others on strategies to support their effective resolution.

My comments focus on two specific issues:

- **Successful CAISO regionalization depends on California developing a legally robust post-2020 carbon pricing policy.** I urge stakeholders to independently assess whether California already has the necessary authority to maintain a carbon price from its cap-and-trade market after 2020, and if not, what would be required to create this authority in light of Proposition 26's constraints.
- **The legal and policy risks of regionalization will vary on the basis of critical market design details, and therefore future stakeholder discussions would benefit from more specific proposals.** Ideally, future proposals will include specific mechanisms for integrating state carbon pricing into wholesale market structures, the relationship between the market mechanism and state climate policy accounting, and the relationship between these two issues and regional governance structures. Given the heterogeneous views on climate policy across the western grid, it will be important for the governance requirements to operate in harmony with the proposed market mechanisms.

I describe these issues and my recommendations in greater detail below.

1. **Successful CAISO regionalization depends on California developing a legally robust post-2020 carbon pricing policy.**

As discussed in the Issue Paper, CAISO regionalization implicitly assumes that California's carbon market will continue to exist and therefore produce a carbon price signal that can be used in economic dispatch algorithms—*e.g.*, as is done in the CAISO Energy Imbalance Market (EIM) GHG Bid Adder.<sup>2</sup>

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<sup>2</sup> CAISO Issue Paper at 5-9; CAISO Tariff § 29.32 (March 2016).

My concern is that in the absence of a legally robust basis for post-2020 carbon pricing in California state law, CAISO regionalization could work at cross purposes with California’s climate strategy. Accordingly, I respectfully urge the CAISO stakeholder community to carefully examine the prospects for post-2020 carbon pricing under California state law.

As most stakeholders are likely aware, the California Air Resources Board (CARB) has formally proposed extending the cap-and-trade program through 2030, with interim targets all the way through 2050.<sup>3</sup> Such a program would very likely produce carbon prices that are sufficient to accomplish California’s climate goals while simultaneously enabling a regional wholesale market operator to integrate state-level carbon pricing into its economic dispatch algorithm.

However, CARB’s proposed cap-and-trade regulation does not confront a very serious legal problem: that CARB may not actually have the necessary statutory authority to proceed with a post-2020 cap-and-trade program at this time. Notably, CARB’s proposal does not discuss how the original provision of AB 32 that authorized the cap-and-trade program appears to be time-limited. Section 38562(c) states:

In furtherance of achieving the statewide greenhouse gas emissions limit, by January 1, 2011, the state board may adopt a regulation that establishes a system of market-based declining annual aggregate emission limits for sources or categories of sources that emit greenhouse gas emissions, **applicable from January 1, 2012, to December 31, 2020, inclusive**, that the state board determines will achieve the maximum technologically feasible and cost-effective

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<sup>3</sup> CARB, 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 (Aug. 2, 2016) (hereinafter “CARB ISOR”), *available at* <https://www.arb.ca.gov/lispub/comm/bccommlog.php?listname=capandtrade16> (see comment #49).

reductions in greenhouse gas emissions, in the aggregate, from those sources or categories of sources.<sup>4</sup> [Emphasis added.]

As my colleague Michael Wara and I detail in a comment letter submitted yesterday to CARB, a reviewing court would most likely conclude that this provision forecloses any argument that CARB is authorized to continue cap-and-trade in the post-2020 period.<sup>5</sup>

These concerns persist despite some very positive climate policy developments in California. State lawmakers have recently established strong post-2020 climate targets via SB 32, which Governor Brown recently signed into law. SB 32 sets a target of reducing statewide greenhouse gas emissions to 40% below their 2020 levels by 2030.<sup>6</sup>

Although SB 32 is a critical milestone in state climate policy, it likely cannot be used to authorize post-2020 cap-and-trade because it passed by only a simple legislative majority. Under the provisions of Proposition 26, which are codified in the California Constitution, a 2/3 legislative supermajority is now required for “any change in statute” that raises taxes.<sup>7</sup> For the purposes of analyzing Proposition 26’s requirements, a “tax” is broadly defined as “any levy, charge, or exaction of any kind imposed by the State.”<sup>8</sup> The current cap-and-trade program includes the periodic auction of government-owned allowances, which raise revenue for the state and therefore almost certainly constitute a “tax” for the purposes of Proposition 26. Since the current cap-and-trade system appears to be a

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<sup>4</sup> Cal. Health & Safety Code § 38562(c).

<sup>5</sup> Danny Cullenward and Michael Wara, Comment letter to California Air Resources Board re: Proposed Amendments to the California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms (Legal comment letter) (Sept. 19, 2016), *available at* [https://www.arb.ca.gov/lispub/comm/bccomdisp.php?listname=capandtrade16&comment\\_num=50&virt\\_num=49](https://www.arb.ca.gov/lispub/comm/bccomdisp.php?listname=capandtrade16&comment_num=50&virt_num=49).

<sup>6</sup> Cal. Health & Safety Code § 38556 (as added by SB 32).

<sup>7</sup> Cal. Constitution, Art. XIII A § 3(a).

<sup>8</sup> *Id.* at § 3(b).

“tax” under Proposition 26, and because SB 32 passed by only a simple majority, SB 32 likely cannot extend the cap-and-trade program.<sup>9</sup>

Unfortunately, Proposition 26 makes it more difficult for the Legislature to authorize market-based climate policies—whether in the form of carbon taxes/fees or cap-and-trade. As SB 32 illustrates, however, a simple legislative majority can authorize ARB to regulate its way toward a climate target. Yet without a post-2020 carbon price, it is difficult to imagine a regional wholesale electricity market design that is consistent with California’s climate goals.

In the future, CAISO regionalization discussions may wish to explicitly consider a range of post-2020 carbon pricing options in California. Based on my understanding of the CAISO EIM and FERC’s approval of the EIM Tariff, it would appear that the form of a state-based carbon price is not particularly important—such that the EIM and further regionalization could function whether California law provides for an economy-wide cap-and-trade system, a carbon tax/fee, or even some sort of electricity sector-specific carbon price. Critically, there must be a legally robust basis for long-term carbon pricing.

The good news is that both the Governor’s office and key Legislative leaders have publicly announced their intention to revisit ARB’s post-2020 authority to use market-based measures in the 2017 legislative session—or, if necessary, at the ballot box via future propositions.

Meanwhile, I urge CAISO and other stakeholders to independently assess (1) whether they believe ARB has the authority to proceed with cap-and-trade after 2020, and (2) if not, what would be required to establish authority to impose a post-2020 carbon price within the constraints of Proposition 26.

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<sup>9</sup> SB 32 does not directly address ARB’s authority to use market-based regulations in service of the new target. Thus, any relevance would come in the form of a legal theory that justifies post-2020 authority to use cap-and-trade through a connection to SB 32’s 2030 target.

**2. The legal and policy risks of regionalization will vary on the basis of critical market design details, and therefore future stakeholder discussions would benefit from more specific proposals.**

As the CAISO Issue Paper observes, there has been some controversy as to the net greenhouse gas emissions impact of electricity dispatches in the EIM.<sup>10</sup> CARB has expressed concern that so-called “secondary dispatch” that “backfills” relatively clean EIM deliveries to California is causing in emissions leakage in the state’s cap-and-trade market.<sup>11</sup> In turn, CARB has proposed a number of adjustments to the calculation of imported electricity for the purposes of cap-and-trade program compliance<sup>12</sup> and proposed eliminating the safe harbor exemption to the prohibition on resource shuffling that current applies to the EIM.<sup>13</sup> In response, CAISO has proposed calculating net greenhouse gas emissions benefits when excess renewable generation from California is exported to and replaces CO<sub>2</sub>-emitting generation in neighboring states.<sup>14</sup>

Reconciling these concerns will take hard work, so I am grateful for the cooperation CARB and CAISO have both pledged. But these cross-border emissions accounting issues also highlight the need for CAISO to develop specific regionalization proposals that include sufficient detail to evaluate the legal and policy risks with which they are associated. Indeed, as CAISO recognizes in the Issue Paper, each option for managing leakage in a regional market “has legal/regulatory risk and market inefficiency impacts that need careful evaluation.”<sup>15</sup> Without further detail on what these options are, as well as how they would interact with a regional ISO

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<sup>10</sup> CAISO Issue Paper at 8-9.

<sup>11</sup> *Id.*

<sup>12</sup> CARB ISOR at 51-52.

<sup>13</sup> *Id.*; *see also* CARB ISOR, Appendix A at 125 (to be codified at Cal. Code Regs. tit. 17, § 95852(b)(2)(A)(10)).

<sup>14</sup> CAISO Issue Paper at 8.

<sup>15</sup> *Id.* at 9.

governance structure, it is difficult for other stakeholders to assess the spectrum of legal and policy risks.

A key overarching question is whether CAISO views regionalization as taking the basic form of the EIM market, which I refer to as a “two-bucket” system: there is a market that is subject to California’s cap-and-trade system (current-day CAISO territory), and there is a market outside of California that is not. Under this model, and subject to the FERC-approved EIM Tariff, participating EIM resources elect via their bids whether or not they would be willing to be dispatched to the California market, and therefore make their power deliveries subject to the cap-and-trade program’s compliance obligations.

In contrast to the two-bucket system, there is the standard ISO/RTO market design—a “one-bucket” system in which the market operator dispatches resources within its territory without concern for variation across participating states’ climate policies (or lack thereof). This kind of system may have additional economic efficiencies (leaving aside the external costs of greenhouse gas pollution), but comes at the cost of not being able to accommodate substantive differences between states on climate policy.

I hesitate to characterize the CAISO Issue Paper as favoring one model over another; however, in Section 6, the Issue Paper assumes “for discussion purposes” that the EIM market’s two-bucket model is preferred.<sup>16</sup> Additional clarification from CAISO would be welcome.

If stakeholders wish to pursue a one-bucket system, it would be particularly helpful to describe how a regional governance system might operate in light of the divergent views on climate policy across western states. Presumably a one-bucket system would require a carbon price that applies equally to all participating resources; but because this might also require all participating jurisdictions to agree to such a price, it may be more politically plausible to pursue the two-bucket model.

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<sup>16</sup> *Id.* at 10-11.

In either case, it will be necessary to quantitatively model—with significant geographic and temporal detail—how the likely dispatch of regional generation would affect (1) region-wide CO<sub>2</sub> emissions as well as (2) CO<sub>2</sub> emissions from power deemed, under regional market rules, to be delivered to California. While such analysis should be technically feasible using CAISO data, the critical analytical variables depend on the specific market structure concepts under discussion.

Finally, I would like to highlight the need for additional analysis regarding the legal risks that may accompany different forms of regionalization. I note that Professors Ann Carlson of UCLA and William Boyd of the University of Colorado have analyzed some of these issues in a recent study commissioned by CAISO.<sup>17</sup> They find that an assessment of the legal risks is “straightforward”—and specifically, that:

[I]nclusion of PacifiCorp assets in CAISO ... would not alter the constitutionality of California’s environmental and clean energy laws under the Commerce Clause of the United States Constitution because the policies are already subject to Commerce Clause scrutiny.<sup>18</sup>

With respect to Professors Carlson and Boyd, I believe this conclusion is premature. Without a tangible regional market design to analyze—and perhaps most critically, one that includes a specified interaction between the wholesale market design and California’s greenhouse gas accounting system—the constitutional risks under the dormant Commerce Clause are particularly difficult to anticipate. Simply put, to the extent California’s energy and climate laws have been subject to Commerce Clause scrutiny, that scrutiny could take new forms in a regional market.

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<sup>17</sup> Ann E. Carlson and William Boyd, Evaluation of Jurisdictional and Constitutional Issues Arising from CAISO Expansion to include PacifiCorp Assets (Aug. 1, 2016), *available at* <https://www.caiso.com/Documents/LegalEvaluationOfISOExpansion.pdf>.

<sup>18</sup> *Id.* at 1-2.



These concerns apply even though California enjoys a strong precedent from the Ninth Circuit Court of Appeals, which has previously recognized the state’s right to even-handedly apply a domestic carbon price to imported energy (as Professors Carlson and Boyd observe).<sup>19</sup> Specifically, the nuances of a regional electricity market where dispatch algorithms automatically assign least-cost outcomes reflecting differences in carbon prices across participating jurisdictions calls for deeper analysis. By design, these kinds of dispatch algorithms preferentially assign low-carbon resources to jurisdictions that price carbon, and high-carbon resources to jurisdictions that do not. It is even possible that jurisdictions with low-carbon generation assets could preferentially export these resources to California and replace them with higher-carbon alternatives for domestic consumption, further complicating the task of accounting for the net emissions associated with imports into California.

Should it become necessary to adjust the emissions profile of deemed deliveries into California to account for the “secondary dispatch” leakage concerns CARB has raised, such a response could raise new dormant commerce clause concerns. Similar concerns may arise if policymakers decide to prohibit certain kinds of cross-border transactions to avoid these kinds of impacts. In both cases, the form of California’s efforts to account for interstate activity could potentially edge closer to impermissible extraterritorial regulation under the dormant Commerce Clause<sup>20</sup> — though of course the analysis depends on the details.

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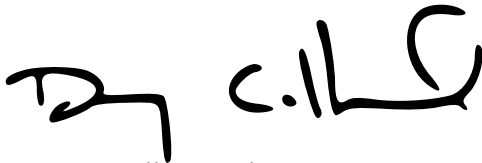
<sup>19</sup> *See generally* Rocky Mountain Farmers Union v. Corey, 730 F.3d 1070 (9th Cir. 2013), *cert. denied*, 134 S. Ct. 2875 (2014). I note that this case concerned transportation fuels, not electricity. Conceptually, the issues should be comparable and the Ninth Circuit’s reasoning was broadly constructed, but there is no guarantee that a reviewing court would assume this case is strictly controlling in response to a hypothetical lawsuit challenging the interaction between state climate policy and a regionalized electricity market.

<sup>20</sup> For example, this issue recently arose in *North Dakota v. Heydinger*, Case No. 14-2156 (8th Cir. 2016). One of the three judges on the circuit panel, Judge Loken, read a Minnesota energy law as impermissibly controlling MISO transactions that occur entirely outside of Minnesota. The holding of the case is by no means clear, however, as each judge ruled on different

None of this is to prejudice the merits of regionalization or to advise against one particular model or another. Rather, it is a call for more information to better evaluate the policy options—precisely because the details matter.

I look forward to continuing this discussion with CAISO and other stakeholders as the conversation evolves. Thank you again for the opportunity to comment.

Sincerely,

A handwritten signature in black ink, appearing to read 'D. Cullenward'.

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grounds. Moreover, as Professors Carlson and Boyd note, there are ways to read the Minnesota statute more narrowly than did Judge Loken, focusing only on its effect on bilateral contracts rather than permitting it to be read to affect MISO's real-time energy markets. Carlson and Boyd, *supra* note 17 at 20. Nevertheless, Judge Loken reached the opposite conclusion, raising concerns that could plausibly parallel the kinds of approaches that state climate regulators may find necessary to achieve their aims in a regionalized market. Again, more discussion is warranted, not less.