

**PUGET SOUND ENERGY COMMENTS  
ON THE AMENDMENTS TO THE CALIFORNIA CAP ON  
GREENHOUSE GAS EMISSIONS AND MARKET-BASED  
COMPLIANCE MECHANISMS REGULATION  
January 20, 2017**

Puget Sound Energy (PSE) appreciates the opportunity to provide comments for consideration by the California Air Resources Board (ARB). These comments are based on proposed 15-day modifications (posted December 21, 2016) to ARB’s proposed amendments to (1) California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms Regulation, and (2) the Regulation for the Mandatory Reporting of Greenhouse Gas Emissions. Our comments are directed towards modifications that affect the Energy Imbalance Market (EIM).

**A. COMMENTS**

ARB describes their concerns about the EIM market design and greenhouse gas emissions in the “Analysis of the Energy Imbalance Market and Mandatory Greenhouse Gas Emissions and Market-based Compliance Mechanisms Regulation” document,<sup>1</sup> which is included with the 15-day modifications. In summary, ARB concludes that the current EIM market design does not adequately capture the full impact of EIM imports serving California load on global greenhouse gas (GHG) emissions and has labeled this issue as leakage. Regarding the proposed amendments and 15-day modifications, PSE has two primary concerns: (1) that the value and integrity of the EIM is not undermined; and (2) that system reliability, customer benefits, and GHG reductions continue to be realized.

In general, PSE supports the provisions for retiring unsold allowances for EIM outstanding emission as a bridge solution; however, we continue to be concerned about any changes to the EIM’s market design that would introduce market inefficiencies, discourage participation in the EIM, and increase global GHG emissions.

*1. The EIM Provides Substantial Economic and Environmental Benefits*

Since November 2014, the EIM has produced substantial economic and environmental benefits for customers both inside and outside of California. By accessing a wider portfolio of resources, the EIM reduces the amount of reserves needed to maintain system balancing within an intra-hour time interval and optimizes the generation needed to meet system imbalances. The geographic diversity of loads and resources participating in the EIM enables improved integration of renewable resources, which can be followed more closely and at lower cost using the EIM’s wide-area dispatch model. Further, the geographic diversity of the multi-state EIM

---

<sup>1</sup> State of California Air Resources Board, Analysis of the Energy Imbalance Market and Mandatory Greenhouse Gas Reporting and Cap-and-Trade Regulation, Release Date December 21, 2016.

can reduce the curtailment of renewable resources, including California's, insofar as there is access to more resources capable of being displaced by carbon-free generation in real-time.

In terms of economic benefits, the California ISO ("ISO") has estimated EIM benefits to customers totaling \$114.35 million from November 2014 through September 2016.<sup>2</sup> In terms of environmental benefits, the ISO calculates in the first three quarters of 2016 that EIM dispatch reduced GHG emissions in the footprint by 143,695 MTons.<sup>3</sup>

These benefits are expected to grow in magnitude as the EIM expanded with Arizona Public Service and Puget Sound Energy joining in October 2016, and future expansion including Portland General Electric (2017), Idaho Power (2018), Seattle City Light (2019) and beyond.

*2. PSE Generally Supports Provisions to Retire Unsold Allowances for Energy Imbalance Market (EIM) Outstanding Emissions.*<sup>4</sup>

PSE generally supports the retirement of unsold allowances for EIM outstanding emissions. This provision is needed until the ISO is able to implement effective changes to the EIM market design to address ARB's concerns about GHG leakage. We base our support on the assumption that the ISO will be able to calculate and report EIM outstanding emissions as defined by ARB.<sup>5</sup>

In December 2016, the ISO issued a straw proposal for stakeholder input that presented a two-pass option in the market model to address ARB's concerns about GHG leakage in the EIM. In PSE's comments to the ISO's straw proposal,<sup>6</sup> PSE voiced reservations about the unquantified negative effects on EIM market efficiencies, customer benefits, and other unintended consequences that could result from implementing a two-pass solution in the EIM market design. We requested that the ISO provide an analysis of potential market outcomes. Similarly, the Department of Market Monitoring submitted comments to the ISO<sup>7</sup> which raised specific concerns about modeling simplifications that would introduce errors in a two-pass solution, as well as concerns that these changes "would discourage participation in EIM on both a resource and system level."<sup>8</sup>

---

<sup>2</sup> ISO EIM Benefits Report Q2 2016, [http://www.caiso.com/Documents/ISO-EIMBenefitsReportQ3\\_2016.pdf](http://www.caiso.com/Documents/ISO-EIMBenefitsReportQ3_2016.pdf).

<sup>3</sup> Ibid at p. 7

<sup>4</sup> Proposed 15-day Modifications to the California Cap on Greenhouse Gas Emissions and Market-based Compliance Mechanisms Regulation, Section 95852(b)(1)(D), p. 127.

<sup>5</sup> ARB, 15-day Amendment Text, Proposed Amendments to the California Cap on Greenhouse Gas Emission and Market-Based Compliance Mechanisms Regulation, p. 127.

<sup>6</sup> Puget Sound Energy, Comments on Regional Integration California Greenhouse Gas Compliance and EIM Greenhouse Gas Enhancement Straw Proposal, December 7, 2016.

<sup>7</sup> Department of Market Monitoring, Comments on the Regional Integration California Greenhouse Gas Compliance and EIM Greenhouse Gas Enhancement Straw Proposal, December 15, 2016.

<sup>8</sup> Ibid at p. 3

Given concerns about the ISO's straw proposal, we ask that ARB allow sufficient time for and fully support the ISO having a CAISO Stakeholder Initiative process in this matter. This process will take time to develop proposals for input by stakeholders, CAISO Board approval, drafting appropriate tariff changes, Federal Energy Regulatory Commission review, updates to Business Practice Manuals, and market software testing and updates.

PSE is also concerned about changes to the EIM market that could provide a disincentive for EIM participation. The EIM as a whole is providing significant reductions in GHG emissions, in particular due to less curtailment of renewables in the state of California. It would be unfortunate if changes in the EIM model to address ARB's leakage concerns results in increased GHG emissions.

### *3. ARB's Analysis of the EIM is Misleading*

As noted above, PSE supports the adoption of the proposed bridge solution as a way to satisfy ARB's concerns regarding emissions leakage in EIM as well as allow sufficient time for the development of a more permanent and durable solution. However, we found that the ARB analysis of leakage in the EIM<sup>9</sup> was not based on ISO reported emissions from secondary dispatch supporting imports to California. Although ARB concluded in its analysis that "EIM imported electricity specified resource attribution is underreported to ARB by 43.8 percent over a 12-month period relative to unspecified source electricity,"<sup>10</sup> ARB's conclusion is based on a calculation of emissions using the default emission factor of 0.428 MTCO<sub>2e</sub>/MWh applied to EIM electricity imports of zero-emitting resources. This overestimates the amount of leakage in the EIM because the ISO has shown that EIM transfers to California do not always create a secondary dispatch.<sup>11</sup>

It would be helpful if ARB would clarify this approach in future analyses, as well as work with the ISO to evaluate the percentage of imports of zero-emitting resources that are associated with secondary dispatch.

PSE also asks that ARB provide an opportunity for the ISO to review and comment on future analyses of the EIM so that it most accurately represents EIM market dispatch and operations.

---

<sup>9</sup> State of California Air Resources Board, Analysis of the Energy Imbalance Market and Mandatory Greenhouse Gas Reporting and Cap-and-Trade Regulation, Release Date December 21, 2016.

<sup>10</sup> Ibid at p. 1

<sup>11</sup> ISO Regional Integration California Greenhouse Gas Compliance and EIM Greenhouse Gas Enhancement Straw Proposal Conference Call, Slide Deck p. 9-13. [http://www.caiso.com/Documents/Agenda-Presentation-RegionalIntegration-EIMGreenhouseGasCompliance-Dec1\\_2016.pdf](http://www.caiso.com/Documents/Agenda-Presentation-RegionalIntegration-EIMGreenhouseGasCompliance-Dec1_2016.pdf)

*4. PSE Proposes that ARB Include a Provision Where GHG Emissions Regulated in Another State Reduces the Compliance Obligation to ARB for Electricity Imports*

The Washington State Department of Ecology (Ecology) has implemented the Clean Air Rule, which took effect on January 1, 2017. This rule covers air emissions from PSE's gas-fired generating plants and places a compliance obligation on those emissions at the source. PSE typically makes our gas-fired generating plants available for dispatch in the EIM, including for import to California. As a result of the Ecology rule, PSE incurs compliance obligations in Washington State and California when our gas-fired plants are dispatched into the ISO.

The ARB rules allow for reduction of compliance obligations for linked programs.<sup>12</sup> However, the Ecology program is not linked to the ARB program, and thus the ARB regulations do not allow for the exemption of compliance obligations for electricity imported from Washington State. Because the EIM footprint extends into several other western states, this dual compliance obligation could occur if and when other states also adopt GHG compliance programs (carbon tax and cap-and-trade programs have also been considered in Oregon). This creates a situation of inequitable treatment to resources in certain states that participate in the EIM because power imported to California from Washington State, for example, (or other states in the future) will have an added cost from double GHG accounting and overlapping GHG compliance programs.

PSE proposes that ARB modify the  $CO_2e_{covered}$  equation<sup>13</sup> to include the reduction of compliance obligations covered by another state. We suggest creating a new term,  $CO_2e_{other-state}$ , that would be defined as annual metric tons of  $CO_2e$  with a compliance obligation covered by another state with a GHG reduction program. This new term would be subtracted from the total amount of  $CO_2e_{covered}$ . This solution would work in the EIM, as well as in a regional ISO market should it be implemented.

## **B. CONCLUSION**

PSE is grateful for the opportunity to submit these comments and appreciates ARB's consideration.

---

<sup>12</sup> ARB, 15-day Amendment Text, Proposed Amendments to the California Cap on Greenhouse Gas Emission and Market-Based Compliance Mechanisms Regulation, p. 282.

<sup>13</sup> Ibid at p. 126