



September 19, 2016

VIA ELECTRONIC SUBMISSION

Clerk of the Board
Air Resources Board
1001 I Street
Sacramento, CA 95814

Re: Comments of PacifiCorp on the August 2, 2016 Proposed Amendments to the California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms Regulation and the Regulation for the Mandatory Reporting of Greenhouse Gas Emissions

PacifiCorp respectfully submits these comments in accordance with the public notices issued August 2, 2016 on proposed amendments to the California Cap on Greenhouse Gas Emissions and Market-Based Compliance Mechanisms Regulation (“Cap-and-Trade Program”) and the Regulation for the Mandatory Reporting of Greenhouse Gas Emissions (“MRR”).

I. Regional ISO and Energy Imbalance Market

As part of its proposed amendments, the California Air Resources Board (“ARB”) is proposing to modify how it accounts for greenhouse gas emissions that are imported into California via the energy imbalance market (“EIM”). With respect to these proposals, PacifiCorp’s central interest is in preserving the value and integrity of the EIM while also respecting California’s environmental objectives. As they are currently proposed, the amendments to the Cap-and-Trade Program and MRR have the potential to negatively impact the EIM, including emissions reductions currently being achieved. Moreover, the current proposal is unlikely to solve issues raised by ARB regarding the existing methodology for identifying emissions associated with electricity imported to California via the EIM. To more effectively achieve California’s overall environmental and energy policy objectives, PacifiCorp recommends that these complex issues be resolved as part of a joint inter-agency effort between ARB and the California Independent System Operator (“CAISO”). ARB’s accounting for emissions associated with electricity imports is unavoidably intertwined with the CAISO methodology for identifying those electricity imports. The CAISO methodology for identifying emissions and the associated regulation and accounting by ARB should be developed and/or modified at the same time. ARB’s current proposal is made in the absence of a clear proposal from the CAISO as to any potential changes to the existing methodology. In light of potential negative impacts to the EIM and a future multi-state Regional Independent System Operator (“RSO”), accounting for emissions associated EIM imports must be much more carefully considered before the adoption of any proposed amendments.

While ARB’s amendments are pending, the CAISO recently announced a new stakeholder initiative called Regional Integration California Greenhouse Gas Compliance. This initiative will determine how greenhouse gas costs for supply resources outside of California will be treated in

the CAISO's integrated forward market covering an expanded multi-state balancing authority area. In the issue paper for the RSO initiative, the CAISO acknowledges the connection between greenhouse gas treatment in the EIM and the RSO, noting that it is currently working with ARB and stakeholders to address concerns that the EIM greenhouse gas market design is not capturing the impact on the atmosphere that occurs in connection with EIM transfers into the CAISO to serve CAISO load. The paper states, "Resolution of those concerns may inform how to address similar concerns in connection with a day-ahead [greenhouse gas] market design." As noted above, these complex issues should be addressed jointly by CAISO and ARB to ensure the harmonization of energy and environmental policies and to avoid both economic inefficiencies and emissions leakage.

A. The EIM Has Resulted In Significant Economic and Environmental Benefits for Entities Inside and Outside of California

The EIM is of critical value to PacifiCorp as well as other existing and future EIM participants in terms of both economic and environmental benefits. The EIM provides significant benefits to electricity customers both inside and outside of California in the form of economic, reliability, and renewable integration benefits. By accessing a wider portfolio of resources, the EIM can reduce the amount of reserves needed to maintain system balancing within an intra-hour time interval and automatically dispatch generation needed to meet future imbalances. The geographical diversity of loads and resources participating in EIM also enables improved integration of variable energy resources which can be managed more closely and at lower cost. In this way, the EIM can also facilitate the reduction of greenhouse gas emissions by enabling greater integration of renewable resources.

The CAISO quantifies benefits associated with the EIM on a quarterly basis. As of July 28, 2016, the CAISO estimated the total benefits of the EIM to be \$88.19 million from November 2014 through June 2016. Of this total, \$28.14 million in benefits accrued to the CAISO region. In addition, the EIM has resulted in overall greenhouse gas emissions reductions: a recent analysis conducted by the CAISO found that from January-June 2016, EIM dispatch reduced greenhouse gas emissions by 291,998 metric tons.¹ These emissions reductions (and economic benefits) are largely enabled through transfers across balancing areas. In other words, if not for energy exports out of California facilitated by the EIM, some renewable generation located within the CAISO would have been curtailed. Generally, these renewable exports displace energy from higher-emitting resources outside of California. The EIM has resulted in actual emissions reductions of greenhouse gases in the Western Interconnection. Importantly, these actual emission reductions are quantified through CAISO's assessment of resource dispatch with and without the EIM and are a result of exports of renewable energy from California which displace higher-emitting resources outside of California.

Not only have emission reductions been realized from avoided renewable curtailment in California, but the EIM has allowed PacifiCorp to experience environmental benefits on its own system by enabling PacifiCorp to balance greater quantities of generation from its renewable

¹ http://www.caiso.com/Documents/EIMGreenhouseGasCounter-FactualComparison-PreliminaryResults_Jan-Jun_2016_.pdf

resources. These renewable resources are not bid into the EIM but are nonetheless subject to the CAISO's five-minute dispatch for purposes of managing imbalance. Though these resources are not eligible to be "deemed dispatched" to California because they are largely flagged as ineligible to be dispatched to California², the absorption of unexpected increased generation from these resources is nonetheless enabled by EIM transfers to California. PacifiCorp's wind and solar generating capacity has increased by 39 percent thus far in 2016 (compared to 2015), from 1,952 megawatts to 2,712 megawatts; PacifiCorp anticipates the addition of another 322 megawatts to come on line by the end of 2016. This year-end capacity of 3,034 megawatts is expected to constitute 29 percent of PacifiCorp's peak load. The ability to integrate this level of variable generation is in part enabled by the EIM. PacifiCorp's owned-resource emissions from January-August 2016 are 14 percent lower than the average of the previous five years for that time period, partially due to PacifiCorp's participation in the EIM and associated greater integration of renewables.

As will be described in detail below, ARB's proposals, in particular the removal of the EIM from the resource shuffling safe harbor, have the potential to significantly dampen continued interest in EIM and, in the extreme, result in entities such as PacifiCorp choosing to discontinue their participation in EIM altogether as the only way to avoid an enforcement action. Given that the EIM has already resulted in demonstrable emissions reductions, ARB should strive to avoid creating policy changes that will prevent future environmental benefits from being realized, either through greater participation in EIM or a potential future RSO.

B. CARB Should Not Remove the EIM From the Resource Shuffling Safe Harbor

Entities participating in the EIM have little or no control over how resources are dispatched in the EIM or how resources are deemed delivered to California. CAISO dispatches resources in the EIM—regulated entities have no ability to "shuffle" their resources to intentionally avoid a compliance obligation. However, because CAISO is not regulated under the Cap-and-Trade Program, removing the EIM from the resource shuffling safe harbor creates significant uncertainty regarding how the prohibition of resource shuffling in EIM would be enforced, both for existing and future EIM participants. This is likely to dampen continued and future participation in the EIM as well as a future RSO. Given the lack of control that entities have over dispatch in the EIM or a broader regional market, the concept of resource shuffling should be reconsidered entirely in this context and should be rejected for purposes of the EIM or an RSO.

PacifiCorp understands that the ARB is including this amendment as a "placeholder" for further discussion; however, this approach for proposing regulatory amendments is extremely

² Oregon and Washington require compliance with their respective renewable portfolio standard (RPS) requirements through the retirement of renewable energy credits (RECs)—the definition of REC in both states includes all of the environmental attributes associated with one megawatt-hour of renewable energy. See OAR 330-160-0015(13) and RCW 19.285.030(2). Informal discussions with staff of Oregon and Washington state agencies led PacifiCorp to the conclusion that those states would consider reporting energy as zero-emitting when imported into California for purposes of California's Cap-and-Trade Program would constitute a "use" of the environmental attributes, and therefore the REC, associated with that energy. Because Oregon's and Washington's share of PacifiCorp RECs are allocated to those states for RPS compliance and must be preserved, the underlying energy is rendered unavailable for import to California.

problematic. At the very least, this method of establishing regulations fails to meet the necessary notice and comment provisions required as a fundamental principle of administrative law. ARB indicates that this change provides notice that ARB will continue to work with CAISO and stakeholders to ensure any final accounting method for emissions associated with load imported to serve California through EIM transactions does not pose a conflict with prohibitions to resource shuffling, which would result in the possibility of emissions leakage.³ It is unclear why, if ARB's intent is to begin a dialogue around the definition of resource shuffling in EIM, it was necessary to take the extreme approach of proposing to remove EIM from the resource shuffling safe harbor. Assurance from ARB that it does not intend to enforce this provision as drafted fails to provide the necessary policy direction needed for regulated entities to make informed decisions to avoid being in violation of the rules the ARB ultimately decides to implement. Regardless of ARB's stated intent, this proposed change creates significant uncertainty for existing and future EIM participants and an unknown and unknowable burden on market participation. ARB should not propose such amendments, even as a "placeholder," without a full understanding and explanation of the potential market impacts and the potential *negative* environmental impacts in the form of increased greenhouse gas emissions associated with decreased participating in the EIM.

C. Accounting for Emissions Associated With Electricity Imported via EIM Should Be Clearly Separate From Accounting For the Overall Environmental Effects of the EIM

In its statement of reasons, ARB continually conflates the concept of assessing the overall greenhouse gas emissions associated with the EIM, as felt by the atmosphere, with the concept of accounting for emissions associated with imported electricity. ARB refers to its exercise as reporting the "full [greenhouse gas] burden experienced by the atmosphere as a consequence of the electricity consumed in California"⁴ and "full accounting of [greenhouse gas] emissions experienced by the atmosphere when there is dispatch to serve California load during periods of imbalances."⁵

The concept of accounting for greenhouse gas emissions experienced by the atmosphere as a consequence of California load is separate from the concept of accounting for greenhouse gas emissions associated with imported electricity. Because ARB's programs do not fully account for emissions reductions that occur outside of California, quantifying emissions associated with electricity imports does not give a *full* picture of the overall emissions associated with California load resulting from the EIM. While this limitation in ARB's programs might arguably make sense for imports outside of the EIM structure which lack the operational visibility and control that comes with the EIM, it does not make sense where the EIM has been implemented. With the EIM, the CAISO has superior dispatch tracking data for the resources outside of California which are serving California load *and* which are being displaced by renewable exports from California. Depending on how greenhouse gases associated with imports are accounted for under the EIM, there may be an *increase* in emissions imported to California even while overall emissions outside of California are reduced. Accordingly, the only credible approach for greenhouse gas emissions accounting with the EIM is to consider all of these effects. Only in this

³ Cap-and-Trade ISOR at 156.

⁴ Cap-and-Trade ISOR at 52.

⁵ MRR ISOR at 9.

manner can there be a full accounting of greenhouse gas emissions experienced by the atmosphere when there is dispatch to serve California load during periods of imbalances.

Since the time ARB issued its proposed regulations on August 2, 2016, the CAISO released a greenhouse gas counter-factual comparison of resources dispatched in EIM with a counter-factual without the EIM which precisely illustrates how emissions associated with imported electricity may increase while overall emissions attributable to EIM may decrease. As noted above, the CAISO's study found an overall impact to the atmosphere of a reduction of 291,998 metric tons. These reductions are largely associated with renewable energy exports out of California to neighboring balancing areas. CAISO's study also shows that the greenhouse gas emissions associated with electricity imported via EIM were incrementally lower in some months and incrementally higher in other months. Accordingly, unless ARB accounts for emissions reductions associated with California load, it is simply not capturing the full environmental impact of the EIM. Unless ARB is considering an accounting mechanism that includes emission reductions associated with electricity exported out of California, ARB's current exercise should be more clearly focused on the accounting methodology for emissions associated with electricity imports as opposed to an assessment of the overall emissions impact of California's participation in the EIM.

D. Given the Challenges Associated with Accounting for Emissions Attributable to Energy Imported Via EIM, CAISO's Existing Methodology Is Reasonable

There are a number of challenges associated with accurately accounting for greenhouse gas emissions associated with EIM imports. In large part these challenges stem from the fact that, for resources outside of California, a greenhouse gas compliance cost is only incurred if load inside California is met with resources outside of California. If resources outside of California serve load outside of California, no greenhouse gas compliance costs are incurred. This dual framework creates challenges for dispatching a single footprint on a simultaneous basis. CAISO's dispatch must also accommodate participating resources that have flagged a resource as ineligible to be imported into California. As a result, the CAISO developed a methodology to "deem" certain resources as meeting California load.

ARB notes its issue with the CAISO's existing methodology as: clean resources with lower deemed-delivery bid price are selected for "deemed-delivery" to California, while higher-emitting power plants with higher deemed-delivery bid may be the actual plants dispatching to serve California load.⁶ This approach is reasonable from a market perspective in that ARB's market-based policies place a higher price on emitting resources thus communicating a policy preference to the market for cleaner resources. The consequence of placing a compliance obligation on emitting resources imported into California is to increase the cost, all other things equal, of importing emitting resources. With this policy, California is placing a preference for zero-emitting resources. Accordingly, from a market perspective, CAISO's existing methodology is reasonable because it places a preference for zero-emitting resources.

While PacifiCorp supports CAISO's current methodology, PacifiCorp also acknowledges that there may be other methodologies for capturing emissions associated with resources that are

⁶ Cap-and-Trade ISOR at 52.

dispatched in the EIM to meet California load. PacifiCorp does not currently have a stated preference for any of the proposals regarding an alternative mechanism. However, any methodology must adhere to the principle that PacifiCorp or other EIM entity participants outside of California are not impacted by California's policies.

Importantly, ARB and CAISO should also consider any revised methodology in the context of broader energy policy trends including the development of an RSO and evolving federal carbon standards. As states in the West adopt Clean Power Plan compliance programs and/or their own state carbon regulations that may or may not link with California's program or adopt California's design elements, the complexity of developing an accounting mechanism in EIM or an RSO that efficiently accommodates all state policies may be prohibitive. Multiple state programs are also likely to result in the double regulation of emissions that would create inefficiencies in the market and increase costs unnecessarily without associated environmental benefits. The significance of these issues calls for a broader, more thoughtful joint-agency process, with both ARB and CAISO, which should consider how to harmonize these complex environmental and energy policies. ARB's current proposal falls significantly short of this objective.

II. Compliance with the Federal Clean Power Plan

ARB is proposing to use a "state measures" approach to demonstrate California's compliance with the federal Clean Power Plan, which establishes guidelines for carbon emission reductions from electric generating units.⁷ This will allow California to incorporate Clean Power Plan compliance into the Cap-and-Trade Program and MRR. However, this approach may potentially limit California's ability to participate in a broader carbon allowance trading regime, if one is developed, across the Western Interconnection or nationally. California's potential to be isolated from a broader regional or national carbon market is likely to create seams issues if the western energy market develops into a regional organized market. As described above with respect to the EIM, the energy market is becoming more integrated to maximize the benefits of a regional market to integrate the region's increasing renewable resources. State-specific carbon policies such as California's, if imposed myopically, have the potential to hinder this modernization and integration and slow the transition to a less carbon-intensive future. Accordingly, PacifiCorp urges ARB to consider its Clean Power Plan compliance approach with this long-term regional vision in mind and, to the extent feasible, retain flexibility to ensure that California's energy and environmental policies are developed in concert.

III. Allowance Allocation

PacifiCorp supports ARB's "cost burden" approach to post-2020 utility allowance allocations. PacifiCorp also generally supports comments submitted by the Joint Utility Group regarding the application of this principle.

ARB proposes to use load data from the California Energy Commission 2015 Energy Demand Forecast and resource data from 2015 S-2 forms, supplemented by additional data as needed. Due to its small service territory in California and its status as a multi-state utility, PacifiCorp is

⁷ Cap-and-Trade ISOR at 24.

not currently required to submit the S-2 form. In addition, as a multi-jurisdictional retail provider (MJRP), PacifiCorp's compliance obligation under the Cap-and-Trade Program is developed uniquely through the establishment of a system emission factor. PacifiCorp develops its load forecasts and resource plans through its integrated resource plan ("IRP"), which is filed with the California Public Utilities Commission as well as PacifiCorp's five other state utility commissions. Through informal conversations with ARB staff, PacifiCorp understands that flexibility is available to utilize a methodology for calculating PacifiCorp's allocation that takes the IRP and system emission factor approach into account. PacifiCorp looks forward to working with ARB to develop this methodology.

IV. Conclusion

PacifiCorp appreciates the opportunity to submit these comments and is also available to discuss the issues addressed herein with ARB staff if doing so would be constructive.

Dated: September 19, 2016

Respectfully submitted,

By

/s/ Mary Wiencke

Mary Wiencke

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