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SENT BY ELECTRONIC AND U.S. MAIL

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

RE: Comments on 15-day Mandatory Reporting Regulation Changes

Dear Members of the California Air Resources Board:

San Diego Gas & Electric (SDG&E) respectfully submits the following comments in response to the California Air Resources Board (ARB) Staff-proposed changes to the Mandatory Reporting Regulation (MRR) that became publically available on December 21, 2016. These comments focus on Greenhouse Gas (GHG) accounting, which is an important element in measuring the success in meeting the State's 2030 GHG emission reduction goals. Specifically, these comments support separate comments from SDG&E on the changes to the Cap-and-Trade Regulation requesting the Board to adopt the California Independent System Operator (CAISO) "counterfactual" approach to accounting for GHG emissions associated with the Energy Imbalance Market (EIM). These comments also address the Staff-proposed change to the "lesser of" analysis that would substantially increase the burden of reporting with no tangible benefit.

A. Changes Consistent with SDG&E Proposed Changes to the Cap-and-Trade Regulation

Attachment B to the MRR explains that ARB Staff does not believe the EIM, as currently constituted, is providing all of the data necessary to support full accounting of GHG emissions emitted to the atmosphere. Specifically, the EIM identifies the least-cost resource as being "deemed delivered" to serve California load. But according to ARB Staff, though MRR accurately tracks the electricity imports identified by CAISO's current EIM system, the tracking is incorrect because the "deemed delivered" resources may not be the ones incrementally dispatched to serve California load. The new reporting approach proposed by ARB Staff for EIM imported electricity requires EIM participating resource scheduling coordinators to continue reporting as they currently do under MRR. However, ARB Staff will calculate the amount of emissions ("EIM outstanding emissions") emitted to the atmosphere in excess of the GHG emissions of the resources identified by the CAISO as delivering power to California. The EIM outstanding emissions will be calculated by determining the amount of electricity transferred into California by EIM, and multiplying that amount by the default emission factor ARB uses for

unspecified market transactions, and then subtracting known emissions associated with EIM "deemed delivered" imports.

This approach treats all EIM-reported power transferred to California as unspecified power while requiring importers to treat the power as specified imports under the MRR. This approach is confusing since it treats EIM-transferred power in opposite ways at the same time. There are several more accurate methods to calculating GHG emissions for EIM electricity as described below.

First, ARB could require EIM sellers to report emissions as asset-controlling suppliers (ACSs) and allow renewable power in other jurisdictions to deliver as null power, electricity stripped of its renewable attributes. The development of the ACS designation was specifically designed to account for entities with renewable resources selling them to California and back-filling with fossil generation. It is not clear why EIM sellers with renewable resources should be treated differently than sellers in the day-ahead market with renewable resources. Given that ARB Staff is explicitly accounting for the EIM power as unspecified power, the ACS designation seems appropriate. Likewise, entities with renewable power in other jurisdictions may assign the renewable attribute to meet in-state RPS requirements, but like to sell the null power to California. ARB could allow renewable resources in the EIM market to include a GHG compliance cost and treat their power as unspecified since ARB is proposing to treat it as unspecified anyway. This change would not only allow more electricity to be delivered to California, but would make the "deemed delivered" GHG emissions closer to the proposed ARB assignment of unspecified to the power, minimizing EIM Outstanding Emissions.

A second, more accurate approach to calculating the EIM outstanding emissions would be to use the emissions of the CAISO's "two pass solution" to determine the specified resources dispatched to serve California based on the CAISO's optimization model. The CAISO two pass solution first optimizes the EIM market outside California and then includes California. This two pass solution determines which resources are dispatched to serve California. EIM outstanding emissions would use the emissions of the resources dispatched to California from the two-pass solution and then subtract known GHG emissions associated with EIM deemed delivered imports. Since the CAISO two pass solution approach correctly identifies resources dispatched to serve California , it captures what ARB intends to capture rather than using the unspecified default emissions factor. While the CAISO cannot complete the two passes within the 5 minute increment, it can produce the second pass solution presently. ARB has not explained why it has rejected the more accurate CAISO two pass solution to calculate EIM total emissions instead of using the default emissions factor applied to EIM "deemed delivered" resources.

Third, SDG&E urges ARB to use the CAISO's full "counterfactual" approach to assess the "impact to the atmosphere." The counterfactual calculates the net GHG increases or reductions in the western U.S. as a result of the operation EIM market in all hours, not just the hours California is importing power. This calculation is a much truer estimation of the "impact to the atmosphere" of the EIM market than ARB Staff's approach that cherry-picks impacts to the atmosphere only in hours California is a net importer of power. In Attachment B to the MRR, the ARB Staff incorrectly concludes that emission reductions from power plants outside the State caused by the operation of the EIM market cannot be counted. But the fact that ARB allows offsets from anywhere in the United States and also allows reductions in the province of Quebec, Canada and potentially Ontario, Canada to count toward reductions in compliance obligations in

California shows that the reductions in emissions outside of California as a result of the operation of the EIM market, as calculated in the CAISO's counterfactual, can in fact be counted if ARB chooses to do so.

SDG&E Recommendation: SDG&E requests the Board reject the Staff-proposed changes to the MRR regarding EIM in Section 95111(h) regarding "EIM outstanding emissions" and replace it with the following: (SDG&E proposed change is double underscored)

(h) Reporting requirements for Imported Electricity in the Energy Imbalance Market (EIM)~~the California Independent System Operator (CAISO)~~. Annually, CAISO will calculate, report, and cause to be verified, the information listed here:

(1) Calculation of EIM Outstanding Emissions. Each year after the verification deadline in section 95103(f), ARB will calculate "EIM Outstanding Emissions" using information reported annually by CAISO and Participating Resource Scheduling Coordinators with imported electricity in EIM. Annual information reported by CAISO and Participating Resource Scheduling Coordinators must be based on data for each 5- minute interval, ~~CAISO will calculate the following:~~.

(A) "~~Remaining~~EIM Outstanding emissions" ~~=~~equals "Total California EIM dispatch e~~E~~missions" less "Deemed Delivered EIM Emissions" ~~– emissions~~ associated with electricity imported by EIM Participating Resource Scheduling Coordinators deemed delivered to California by the EIM optimization model.

Where "Total California EIM dispatch e~~E~~missions" equals the amount of emissions calculated by CAISO pursuant to section 95111(h)(1)(B) ~~EIM transfers (Mwh) identified by CAISO to serve California load multiplied by the unspecified emission factor;~~.

(B) Calculating Total California EIM dispatch ~~E~~emissions. Annually, based on each 5-minute interval, CAISO must calculate, report and cause to be verified, the CO2 equivalent mass emissions associated with ~~imported~~ electricity in EIM using the counterfactual based on the two pass solution for each 5-minute interval. ~~following equation:~~

~~CO2e □□MWh □□ EFunsp □□ TL~~

~~Where:~~

~~CO2e = CO2 equivalent mass emissions from Total California EIM electricity (MT of CO2e).~~

~~MWh = Megawatt-hours of EIM imports identified by CAISO to serve California load.~~

~~EFunsp = 0.428 MT of CO2e/MWh~~

~~TL = 1.02 (transmission loss factor).~~

(C) Deemed Delivered EIM Emissions. Annually, based on each 5-minute interval, each EIM Participating Resource Scheduling Coordinator must calculate, report, and cause to be verified, emissions associated with electricity imported as deemed delivered to California by the EIM optimization model.

(2) Annually, CAISO will report, and cause to be verified, the following information:

(A) ~~Annual sum of the "remaining emissions" calculated in section 95111(h)(1);~~Annual State-Wide Total for EIM Imports and Exports. Total annual imports and exports into and out of California in MWh, consistent with the results of the EIM optimization based on Real-Time Dispatch (RTD), and associated with (1) Total California EIM Emissions, and (2) Deemed Delivered EIM Emissions;

(B) ~~Names of entities meeting California imbalances from EIM transfers and annual quantity of purchased MWh for each entity based on 5 minute interval data;~~Annual State-Wide Total for EIM Imports By Entity. Total annual imports into California in MWh, consistent with the results of the EIM optimization model based on Real-Time Dispatch (RTD), and associated with (1) Total California EIM dispatch e~~E~~missions, and (2) Deemed Delivered emissions, for each Participating Resource Scheduling Coordinator (PRSC) and for CAISO;

~~(C) Annual State-Wide Total for EIM Exports. Report total annual exports out of California in MWh, consistent with the results of the EIM optimization model based on Real-Time Dispatch (RTD), for each Participating Resource Scheduling Coordinator (PRSC) and for CAISO.~~

(3) The data provided in this section 95111(h)(2) must be verified per section 95103(f).

B. A Change That Needlessly Increases the Complexity of Reporting

The proposed change to 95111(b)(2)(E)(1) should not be adopted by the Board. Staff-proposed changes would eliminate certain exclusions to the "lesser of" analysis. This Staff-proposed change should be rejected for dynamically tagged power deliveries and the EIM. Having these resources perform a "lesser of" analysis adds reporting complexity unnecessarily at a time when ARB is tightening reporting and verification deadlines. In the case of dynamically tagged power deliveries, it creates incompatibility with the RPS reporting requirements by potentially relying on less accurate E-tag information. With respect to the EIM, it creates unnecessary complication since ARB is not using the tagged resources to determine emissions.

Dynamically tagged resources are outside the CAISO's balancing authority, but the resource is dispatched by the CAISO to meet CAISO load; it is identical to a renewable resource within California. The "lesser of" analysis is an hour-by-hour comparison of what was tagged compared to what was metered, but the meter data is the most accurate. As such, if meter data can be used, it is ineffective to have to compare it to the less accurate tagged amount. Tagging is a North American Electric Reliability Corporation (NERC) requirement when transferring power between balancing authorities that does not require the same degree of accuracy as the meter data, as acknowledged by ARB Staff.[1]

For EIM, it is unclear why the proposed increase in accuracy is needed since "deemed delivered" resources are not assumed to be the resources dispatched. Further, this approach would complicate the operation of the EIM market by making the GHG cost uncertain while leaving the EIM Total California dispatch emissions unchanged.

[1] ARB Staff, Initial Statement of Reasons for MRR, page 44.

SDG&E Recommendation: The Board should continue the exemption to the "lesser of" analysis for dynamically tagged resources and EIM resources in95111(b)(2)(E)(1).
(SDG&E proposed change is double underscored)

~~This provision~~ A lesser of analysis is applicable to imports from specified sources~~, including imported electricity under EIM,~~ for which ARB has calculated an emission factor of zero, and for imports from California Renewable Portfolio Standard (RPS) eligible resources, excluding the following: (1) ~~contract or ownership agreements, known as grandfathered contracts that meet California RPS program requirements in Public Utilities Code Section 399.16(d) or California Code of Regulations, Title 20 Section 3202(a)(2)(A);~~ (1~~2~~) dynamically tagged power deliveries; (2~~3~~) untagged power deliveries, including EIM imports; …

SDG&E looks forward to continued dialogue with ARB, and we thank you for the opportunity to comment on ARB's proposed amendments to Mandatory Reporting Regulation. Please contact me if you have any questions or concerns about these comments.

Sincerely,

/s/_Tim Carmichael