101 California Street 34th Floor San Francisco, CA 94111 T +1 415 591 1000 F +1 415 591 1400

THOMAS W. SOLOMON

Partner (415) 591-6809 tsolomon@winston.com

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By Electronic Submittal

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

Re: Proposed Amendments to the Low Carbon Fuel Standard, as Modified by 15-Day Changes

Dear Clerk of the Board:

I write on behalf of the San Francisco Bay Area Rapid Transit District ("BART") to offer comments to the California Air Resource Board ("CARB") on CARB staff's proposed amendments to the Low Carbon Fuel Standard ("LCFS") regulation, 17 Cal. Code Regs. §§ 95480-95479 ("Regulation")

BART is a public transportation system serving the San Francisco Bay Area with electric rapid transit passenger rail service. As the operator of a "fixed guideway system," BART generates credits under the existing LCFS Regulation. BART provides over 430,000 passenger trips each weekday, and nearly 129 million trips annually. Consequently, BART service is among the most significant factors affecting the carbon intensity ("CI") of the transportation sector in the Bay Area. As outlined in BART's prior comment letter submitted in this rulemaking process, BART is actively pursuing a goal of both reducing the energy consumption and greenhouse gas ("GHG") emissions associated with its transit service, while also seeking to increase its ridership. Notably, BART has entered into multiple power purchase agreements ("PPAs") under which it will procure electricity to power its system from renewable and low-CI sources such as solar and wind electric generating facilities, and Asset-Controlling Suppliers ("ACSs").

BART appreciates CARB's recent 15-day modifications to the proposed new LCFS Regulation, which add small-scale hydroelectricity (generated by facilities 30 MW or less) to the zero-CI electricity fuel pathway, and make other clarifications requested by BART in its prior comment letter. However, further changes are necessary to clarify that fixed guideway systems may claim electricity fuel pathways in the lookup table, and may use book-and-claim accounting for low-CI electricity reporting:

1. CARB should further modify the Regulation to clarify that both lookup table electricity fuel pathways, and book and claim accounting, are available to fuel reporting entities other than onroad electric vehicles.



- 2. CARB should confirm in the FSOR its intent that fuel reporting entities may submit a Tier II application to seek a certified CI for electricity procured from low-CI electricity sources, such as Asset Controlling Suppliers.
- 3. CARB should clarify in the FSOR its intent that low-CI electricity, as well as zero-CI electricity, is eligible for book-and-claim accounting. Currently, proposed Section 95488.8(i) references only "renewable electricity." CARB should confirm in the FSOR that the proposed Regulation intends to allow fuel reporting entities to use book-and-claim accounting to report low-CI electricity generally.

Each of these requests is set out in detail below.

1. CARB should modify the proposed LCFS Regulation further, and re-circulate for another 15-Day comment period, to make clear that lookup table pathways for electricity are not limited to electricity used for charging on-road EVs, and that fuel reporting entities other than on-road EVs may use book-and-claim accounting for reporting low-CI electricity use.

While CARB staff have indicated informally to BART that the lookup table pathways for electricity will be available to fixed guideway systems, the 15-day text still limits those pathways to electricity used for EV charging. Fuel pathways ELCG and ELCR are described in Table 7-1 as applying only to electricity "supplied to electric vehicles in California." References to these fuel pathways throughout the proposed Regulation, as well as references to the use of book-and-claim accounting of electricity, similarly refer only to electricity dispensed to electric vehicles. As explained in BART's prior comments, the Regulation currently defines the term "electric vehicle," or "EV," to include only battery-electric and plug-in hybrid on-road vehicles ("BEVs" and "PHEVs," respectively); the term "electric vehicle" or "EV" does not include fixed guideway systems or other off-road modes of electric transportation. CARB should modify the text of the Regulation to make it clear that fuel reporting entities may use those pathway codes for electricity uses in transportation modes other than on-road EV charging, such as fixed guideway system operation.

Specifically, CARB should modify the current draft regulatory language as follows, and re-circulate for another 15-day comment period:

• Modify the first sentence of proposed Section 95488.5(d)(1) as follows:

Annual Update to California Average Grid Electricity Pathway. In order to reflect the rapidly evolving portfolio of electricity generating resources in California, the Executive Officer will update the "California Average Grid Electricity Supplied to Electric Vehicles" Lookup Table pathway CI value on an annual basis.

 Modify proposed Section 95488.5, Table 7-1, to change the description of electricity fuel pathways ELCG and ELCR as follows:

ELCG: California average grid electricity supplied to electric vehicles in California



ELCR: Electricity that is generated from 100 percent zero-CI sources supplied to electric vehicles in California.

Similarly, CARB staff have indicated informally to BART that fixed guideway systems may use book-and-claim accounting to report low-CI electricity used for public transportation. Yet, proposed Section 95488.8(i)(1)(A) of the Regulation refers only to electricity "dispensed to electric vehicles." Again, because the term "electric vehicle" is defined to include only on-road vehicles such as BEVs and PHEVs, CARB should modify proposed Section 95488.8(i)(1)(A) to refer more generally to electricity "dispensed for use as a transportation fuel." Specifically, CARB should:

• Modify proposed Section 95488.8(i)(1)(A) as follows:

Reporting entities may report electricity dispensed to electric vehicles for use as a transportation fuel or as an input to hydrogen production (including for purposes of the Renewable Hydrogen Refinery Credit) as renewable electricity without regard to physical traceability if it meets all requirements of this subarticle. The renewable electricity must be supplied to the grid within a California Balancing Authority (or local balancing authority for hydrogen produced outside of California). Such book-and-claim accounting for renewable electricity may span only three quarters. If a renewable electricity quantity (and all associated environmental attributes, including a beneficial CI) is supplied to the grid in the first calendar quarter, the quantity claimed for LCFS reporting must be matched to grid electricity dispensed to electric vehicles for use as a transportation fuel or for hydrogen production no later than the end of the third calendar quarter. After that period is over, any unmatched renewable electricity quantities expire for the purpose of LCFS reporting.

These changes are necessary to reconcile the above-identified provisions with other existing and proposed provisions of the LCFS Regulation that (a) authorize fixed guideway systems to generate credits for the use of electricity as a transportation fuel, and (b) authorize book-and-claim accounting for electricity used as a transportation fuel more generally, without limiting book-and-claim accounting to EV charging. For example:

- Existing Section 95483(e)(6) provides that "[f]or transportation fuel supplied to a fixed guideway system, the transit agency operating the system is eligible to generate credits for electricity used to propel the system."
- Proposed Section 95488.8(i) authorizes the use of book-and-claim accounting "for renewable electricity to reduce the CI of electricity supplied as a transportation fuel", without limiting book-and-claim accounting to EV charging.

These proposed changes would affirm CARB's longstanding policy of equitably treating on-road and offroad modes of electric transportation in the LCFS program. This policy was made clear in the 2015 Initial Statement of Reasons for the LCFS Regulation, which notes that the Board directed Staff, in Resolutions 09-31 and 11-39, to pursue credit generation for electricity used to fuel off-road



transportation, as well as on-road EV use.¹ Similarly, the 2015 Final Statement of Reasons for the LCFS Regulation states that "Use of *electricity* for transportation, not use of particular *equipment*, is what LCFS incentivizes."² (Emphasis in original.) CARB should not deviate from these principles now by affording special treatment to on-road electric vehicles. BART's fixed guideway system provides a proven and low-cost mode of low-CI electric transportation throughout the Bay Area, and should have its investment in low-carbon fuel supply recognized in the same manner as on-road EVs.

In addition to the regulatory changes identified above, CARB should also clarify in the FSOR that the lookup table pathways ELCG and ELCR will be available to fuel reporting entities that operate fixed guideway systems.

2. CARB should confirm in the FSOR that fuel reporting entities may submit a Tier II application for low-CI electricity sources such as Asset Controlling Suppliers.

Proposed Section 95488.1(b)(2), as modified by the 15-day changes, lists various renewable electricity sources that are identified as having a CI of zero, including solar photovoltaic, wind, solar thermal, small hydroelectric facilities of 30 megawatts or less, ocean wave, ocean thermal, and tidal current. Proposed Section 95488.1(d)(4) allows fuel reporting entities to submit Tier II applications for "[e]lectricity pathways not found in the Lookup Table." BART appreciates that the proposed Regulation now recognizes a broader list of zero-CI electricity sources, including small-scale hydroelectric facilities. However, the proposed Regulation remains vague as to how CARB will treat Tier II pathway applications under proposed Section 95488.1(d)(4) for other low-CI electricity sources that have a CI significantly lower than grid average, but that are not listed as zero-CI sources in proposed Section 95488.1(b)(2).

Fuel reporting entities should be incentivized to procure electricity for their transportation fuel from low-CI sources, even if those sources are not listed in proposed Section 95488.1(b)(2). Incentivizing fuel reporting entities to invest in electricity supply portfolios that have significantly lower CIs than the grid average, even though not from zero-CI sources listed in proposed Section 95488.1(b)(2), is entirely consistent with the goals of the LCFS program, which according to CARB is "designed to decrease the carbon intensity of California's transportation fuel pool and provide an increasing range of *low-carbon* and renewable alternatives." However, in order to make such investments in low-CI electricity procurement, fuel reporting entities must have confidence that the low-GHG characteristics of such purchases will be recognized by CARB in the Tier II process.

For example, the proposed Regulation does not make clear how CARB would evaluate the CI of electricity purchases from Asset Controlling Suppliers, which themselves operate a diverse portfolio of resources, and are assigned a single emissions factor by CARB for purposes of the California Cap and Trade Program. As detailed in BART's prior comments on the proposed LCFS changes, there is currently limited publicly available information about the underlying sources in ACS portfolios. Still,

¹ Staff Report: Initial Statement of Reasons for Proposed Rulemaking (December 2014) ("2015 ISOR") at ES-14.

² Final Statement of Reasons for Rulemaking, Including Summary of Comments and Agency Response (October 2, 2015) ("2015 FSOR") at 980.

³ 2015 ISOR at I-2 (emphasis supplied).



ACS purchases clearly represent a form of electricity with a CI factor well below the grid average. The LCFS should clearly and unambiguously incentivize the purchase of electricity from such sources.

In informal discussions with BART, CARB staff have expressed their intent that BART will be permitted to file a Tier II application seeking a single custom CI representative of BART's low-CI electricity portfolio, including its ACS purchases. Given that this is not clearly expressed in the current proposed regulatory text, CARB should confirm its intent in the FSOR that fuel reporting entities may seek a custom CI for a diverse electricity portfolio through the Tier II process, and may use the best publicly available information to describe the CI of low-CI sources, including ACS purchases. CARB should further clarify in the FSOR that the best available information about the CI of electricity sourced from an ACS may be the emissions factor assigned to the ACS portfolio by CARB under the Cap and Trade and Mandatory Reporting Regulations.

3. CARB should clarify in the FSOR that book-and-claim accounting is available for reporting low-CI electricity used for transportation

Finally, CARB should clarify in the FSOR that book-and-claim accounting is available for reporting low-CI electricity that is used for transportation, and is reported under a certified fuel pathway for electricity (either a zero-CI lookup table pathway, or a custom low-CI Tier II pathway as described above). The current proposed Section 95488.8(i) of the Regulation is inconsistent in its description of the sources to which book-and-claim accounting applies. At points, Section 95488.8(i) indicates that book-and-claim accounting is available for reporting "low-CI electricity." For example, proposed Section 95488.8(i)(1)(B) would provide that "[1]ow-CI electricity can be indirectly supplied through a green tariff program or other contractual low carbon electricity supply relationship" Elsewhere, however, proposed Section 95488.8(i) refers instead to "renewable electricity," which is not defined. CARB should confirm in the FSOR that references to "renewable electricity" in proposed Section 95488.8(i) are intended to include all electricity from zero-CI or low-CI sources reported pursuant to a certified fuel pathway.

Please contact me or my colleague Andrew Mayer (e-mail: amayer@winston.com; tel.: (415) 591-6816) with any questions or concerns about these comments. Again, BART fully supports CARB's goal of reducing California's GHG emissions, and to this end appreciates CARB's efforts to continue to improve the LCFS Regulation.

Best regards,

/s/ Thomas W. Solomon

⁴ For example, proposed Section 95488.8(i)(1), as modified by the 15-day changes, provides that "reporting entities may use indirect accounting mechanisms for *renewable electricity* to reduce the CI of electricity supplied as a transportation fuel or for hydrogen production through electrolysis, provided the conditions set forth below are met". Similarly, proposed Section 95488.8(i)(1)(B)(1) provides that "[i]n order to substantiate *renewable electricity* claims, the applicant must make contracts available to the Executive Officer" (emphasis added).