



December 4, 2017

California Air Resources Board
 Via e-mail: LCFSworkshop@arb.ca.gov

RE: Comments of the San Francisco Public Utilities Commission (SFPUC) on CARB’s Low Carbon Fuel Standard (LCFS) Workshop

The San Francisco Public Utilities Commission (SFPUC) provides almost 1 million megawatt hours (MWh) per year of zero-GHG energy to its customers, primarily other City departments. One of these departments is the San Francisco Municipal Transportation Authority (SFMTA or more commonly known as “Muni”) that operates the nation’s largest fleet of electrically-operated buses (over 300) as well as the nation’s third busiest light-rail vehicle (LRV) fleet (151 vehicles). SFMTA has opted-in to CARB’s Low Carbon Fuel Standard (LCFS) program starting in January 2016.

The SFPUC’s and SFMTA’s primary concern is that San Francisco receive full credit for providing zero-GHG energy to these electric-powered transit vehicles.

The SFPUC proposes that CARB make the following changes to its proposed LCFS regulations to fully and fairly benefit the GHG reductions occurring in California’s public transit sector:

- CARB should allow public utilities and other load-serving entities (LSEs) to develop and use their own LSE-specific GHG emission profile for calculating vehicle credits;
- The corresponding LSE-specific GHG emission profile should be available for all vehicle categories (specifically such public transit categories as light-rail, heavy rail, and trolley bus) and not just for Electric Vehicles (EVs);
- These emission profiles should be developed using CARB’s current US EPA methodology for calculating electric system emissions adjusted to reflect each LSE’s specific resource mix;
- LSEs offering a 100% GHG-free portfolio to all vehicles, not just Electric Vehicles, should receive LCFS credits based on the LSE’s 100% GHG-free portfolio; and
- Consistent with CARB regulations, any 100% GHG-free portfolio should be able to include all zero-GHG renewable resources, not just solar and wind as currently proposed.

Each of these points is discussed further below.

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CARB should allow public utilities and other load-serving entities (LSEs) to develop and use their own LSE-specific GHG emission profile for their electric energy used for calculating vehicle credits.

Currently, grid-provided electricity used for public transit (i.e. light rail, heavy rail, trolley buses, medium and heavy duty vehicles) receives LCFS credits based on the difference in GHG emissions between the fossil fuel being displaced and the system-average GHG emissions of the California electric grid. This understates the benefit of the SFPUC providing zero-GHG electric energy to operate Muni's electric transit fleet.

CARB's proposed changes recognize that California's electric grid is becoming increasingly GHG-free as California's Renewable Portfolio Standard (RPS) and other GHG-reducing activities are phased in. The SFPUC supports CARB's proposal to annually update the default GHG-intensity of the California electric grid.

CARB should go a step further and allow each public utility or load serving entity (LSE)¹ to develop its own specific GHG-emission profile. This not only more accurately reflects the actual GHG emissions of each public utility but also recognizes the individual actions of public utilities to promote, retain, and develop GHG-free (and/or lower GHG emitting) resources. All of these specific attributes are lost by use of the current system-wide average.

Under the current LCFS regulations, it appears (although somewhat unclear) that an individual public utility could develop its own specific GHG emission profile using the LCFS Pathway Path 2 approach.² Although electricity usage is listed as an eligible Tier 2 Pathway, the corresponding documentation requirements focus almost exclusively on setting CI Pathways for liquid fuels. Other requirements are unclear how they would apply to electric utilities. To date, we are unaware of any electric utility using this approach.³

A better approach for public utilities, would be to streamline the LCFS Pathway process allowing them to document their individual GHG emission profile using the same US EPA methodology currently used by CARB to calculate system-wide electric GHG emissions adjusted to reflect the utility's specific resource portfolio.

At a minimum, the Tier 2 Pathway process should remain available for public utilities and modified to simplify and more clearly identify the requirements that LSEs need to meet to use their LSE-specific portfolio.

¹ In addition to public utilities, load-serving entities (LSEs) include Community Choice Aggregators (CCAs) and Energy Service Providers (ESPs) that provide electric energy to their customers using the public utility's distribution system.

² In informal discussions with CARB staff, staff stated the SFPUC could use the CI Pathway approach to document its lower GHG emissions for its electric system.

³ CARB's list of proposed Path 2 LCFS Pathways (<https://www.arb.ca.gov/fuels/lcfs/2a2b/2a-2b-apps.htm>) identifies 233 applications, some still pending three years after submittal, none of which seek an electric-specific LCFS Pathway.

The corresponding LSE-specific GHG emission profile should be available for all vehicle categories (specifically public transit) and not just for Electric Vehicles (EVs)

CARB's proposed changes would annually update the GHG emissions profile of California's electric grid to recognize that California's electric grid is becoming increasingly GHG-free. However, as currently written, the draft regulations only apply this annual update to Electric Vehicles (EVs).

This annual update should be applied equally to all other electric vehicle types, specifically public transit-related vehicles such as LRVs, trolley buses, and heavy rail.

Additionally, as noted above, the credits should be adjusted to reflect any LSE-specific GHG emission rate.

LSEs offering a 100% GHG-free portfolio to all vehicles, not just Electric Vehicles, should receive LCFS credits based on the LSE's 100% GHG-free portfolio.

The SFPUC supports the ability of LSEs to receive full credit for providing a 100% zero-GHG portfolio for EVs. This should be in addition to the use of a LSE-specific GHG emission profile.

This 100% GHG-free portfolio option should not be limited solely to EVs but should apply to all vehicle types, specifically public transit.

Emission profiles should be developed using CARB's current methodologies adjusted to reflect each LSE's specific resource mix.

As noted above, the current LCFS Pathway process for electric utilities should be simplified and made clearer. A better approach for public utilities would be to streamline the LCFS Pathway process allowing them to document their individual GHG emission profile using the same US EPA methodology currently used by CARB to calculate system-wide electric GHG emissions.

As CARB will need to develop some methodology to document that the 100% GHG-free energy proposed to serve EVs is actually occurring, it would only take minimal additional effort to extend this same methodology and requirements for calculating a LSE-specific GHG emission profile.

Consistent with CARB regulations, any 100% GHG-free portfolio should be able to include all zero-GHG renewable resources, not just solar and wind as currently proposed.

As currently written, the 100% GHG-free portfolio option is limited to portfolios that are 100% wind or solar. This precludes the eligibility of other zero-GHG resources that provide the same benefits. Such a limitation is contrary to CARB's policies regarding fuel-neutrality that seek to identify a goal (e.g. 100% GHG free) and then allow any technology that meets the criteria to qualify. It is also inconsistent with the current LCFS methodology. There is no reason that the same type of zero-GHG resources already included in determining the

system-wide electric GHG emission levels should suddenly not count equally if this same type of resource is part of a 100% GHG-free portfolio.

Limiting eligibility to wind and solar is also inconsistent with CARB's own cap-and-trade regulations regarding the classification of zero-GHG resources, as well as California's Renewable Portfolio Standards (RPS) regulations. This language should be changed to read "zero-GHG resources" or "zero-GHG renewable resources."

Conclusion

The SFPUC appreciates CARB's attempts to better reflect the reduced GHG intensity of California's electric system. These GHG reductions should be available to all forms of electric transit, specifically public transit. Load Serving Entities should be able to document and receive credit for their specific GHG emission profile in a simple and readily understood manner.

The SFPUC looks forward to working with CARB as it develops its regulations.

Please feel free to contact us for any further information at jhendry@sfgwater.org or at (415) 554-1526.

Sincerely,

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