

May 10, 2024

California Air Resources Board
1001 I Street
Sacramento, CA 95815

RE: Proposed Low Carbon Fuel Standard Amendments

Dear California Air Resources Board Members and Staff:

We respectfully submit the following addendum to our prior comments to the California Air Resources Board (CARB) on its proposed Low Carbon Fuel Standard (LCFS) Amendments, dated February 22, 2024, which call for equitable access to book-and-claim accounting for medium- and heavy-duty (MHD) electric vehicle (EV) charging microgrids involving hydrogen and renewable natural gas (RNG) energy sources.¹

About Prologis, Inc.

Headquartered in San Francisco, CA, Prologis, is the global leader in logistics real estate, with a portfolio of over 1.2 billion square feet across four continents and approximately 2.8% of global GDP flowing through our properties each year. Prologis leases modern warehousing and distribution facilities to customers, which include manufacturers, retailers, transportation companies, third-party logistics providers, and other enterprises. Our large, flat rooftops have enabled us to build out commercial solar installations to serve onsite and offsite load with clean energy and battery storage, helping our customers reduce their emissions and placing us second in the U.S. for corporate on-site solar.

Prologis' Mobility business is helping transform the fleet and logistics industry and enabling our customers to transition to zero-emissions through industry-leading electric vehicle (EV) charging technology and solutions. With roughly 180 million square feet of industrial real estate across our California portfolio, the opportunity for us to help our customers with this transition is significant, and we are developing dedicated charging infrastructure at Prologis sites to support their medium- and heavy-duty (MHD) fleets across last mile, drayage, and other applications. In addition to providing charging solutions at our own properties, we offer electrification services at non-Prologis buildings and are developing multi-fleet charging hubs serving areas with dense concentrations of warehouses.

Amend fueling supply equipment requirements to best serve MHD fleets

Prologis echoes the broader comments submitted today by the Joint MHD EV Infrastructure Parties, especially on removing the 250kW Fueling Supply Equipment (FSE) requirement and 10 FSE cap for an important additional reason: as FSE is currently defined in LCFS regulations, and depending on which equipment houses the energy meter, it could create an unintended MHD-Fast Charging Incentive (FCI) toward multi-port all-in-one cabinets when split architectures (dispensers separate from power cabinets) are critical technology catalog options for MHD projects. (See Figure 1)

¹ <https://www.arb.ca.gov/lists/com-attach/7026-lcfs2024-UCBUIF0zVmkKYwVi.pdf>

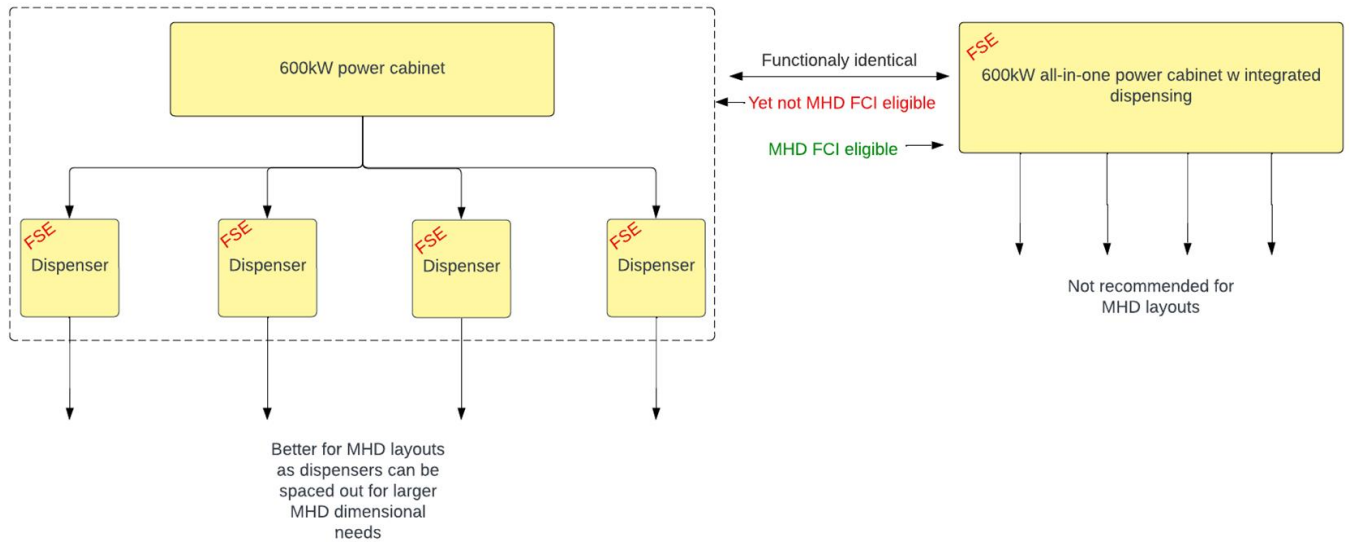


Figure 1 – Illustration of the issue caused by 250kW minimum FSE and 10 FSE maximum proposed rules in MHD-FCI

If the 250kW minimum FSE nameplate and maximum 10 count FSE per-site rules were to be adopted, it would create an unintended consequence where awkward, multi-port, all-in-one FSE designs qualify for MHD-FCI, but the functionally identical, and more ergonomic split-architecture alternatives would not. It is critical to not create this bias, as MHD layouts are significantly more sensitive to equipment placement and cable reach given the larger dimensions involved with these vehicles and the trailers that they are hauling. Site design varies widely based on MHD use case (dwell vs. corridor), and split-architecture infrastructure designs provide critical flexibility in our technology catalog for our customers. Simply removing the 250kW FSE minimum and 10 FSE maximum rules would solve the issue, while also allowing the market to self-determine how to best serve MHD fleet customers with the large-MW capacity platform of any given site.

Provide equal access to book-and-claim accounting for EV charging microgrids

We would also like to take this opportunity to reiterate the recommendations previously made by Prologis in earlier comments on revisions to LCFS, most recently in our letter dated February 20, 2024, regarding providing equitable access to book-and claim accounting for EV charging microgrids, as follows below, with one additional comment in red, as we are tracking additional technology pathways for producing hydrogen from biomethane.

Section §95488.8(i)(2)(A) states *“RNG injected into the common carrier pipeline in North America (and thus comingled with fossil natural gas) can be reported as dispensed as bio-CNG, bio-LNG, or bio-L-CNG, or as an input to hydrogen production, without regards to physical traceability.”*

MHD charging projects are in a difficult position: they are extremely capacity and energy intensive, second only to data centers in light-industrial real estate,² making them time-consuming to connect to the grid, yet they require accelerated schedules to meet fleet electrification mandates and avoid stranding EV assets. Projects in this predicament look to on-site generation with energy storage as a solution to meet fleet electrification objectives ahead of utility connections, with the added benefit of

² According to Prologis benchmarks of typical alternative uses for comparable properties

additional resiliency for critical fleet operations when the utility connection is eventually established in parallel. However, due to the exceptional energy intensity of industrial MHD charging projects on limited footprints, dispatchable power-dense on-site generation such as fuel cells or linear generators sometimes can be the only feasible technical solution that can fit the available real estate and meet the energy demand.

This important EV charging pathway for biomethane (whether RNG or hydrogen in its final delivered form for on-site generation) is not only a more energy efficient pathway for biomethane, but it also has significantly lower NOx emission profile than CNG vehicle application in sensitive disadvantaged communities around ports.³ Yet, only CNG vehicle fueling projects are incentivized with book-and-claim LCFS accounting from RNG energy sources.

As Prologis has recommended in prior comment letters, CARB should grant equitable access to biomethane book-and-claim LCFS accounting for MHD EV charging projects investing in on-site RNG/hydrogen generation that add resiliency and accelerate around transmission and distribution upgrade delays. We ask that CARB consider amending 95488.8(g)(1)(A)(2) to read as follows (changes in bold):

*“Biomethane supplied using book-and-claim accounting pursuant to section 95488.8(i)(2) and is claimed as feedstock in pathways for bio-CNG, bio-LNG, bio-L-CNG, hydrogen via steam methane reformation **or other methods, and electricity generation for co-located EV charging;**”*

Further, we suggest a revision of Section §95488.8(i)(2) to explicitly state:

*“(2) Book-and-Claim Accounting for Pipeline-Injected Biomethane Used as a Transportation Fuel or to Produce Hydrogen **or to generate Electricity**. Indirect accounting may be used for RNG used as a transportation fuel or to produce hydrogen **or to generate Electricity** for transportation purposes (including hydrogen that is used **either** in the production of a transportation fuel **or in the generation of electricity for transportation purposes**), provided the conditions set forth below are met:*

*(A) RNG injected into the common carrier pipeline in North America (and thus comingled with fossil natural gas) can be reported as dispensed as bio-CNG, bio-LNG, or bio-L-CNG, or as an input to hydrogen production, **or as an energy source for electricity generation**, without regards to physical traceability. Entities may report natural gas as RNG within only a three-quarter time span. If a quantity of RNG (and all associated environmental attributes, including a beneficial CI) is pipeline-injected in the first calendar quarter, the quantity claimed for LCFS reporting must be matched to natural gas sold in California as RNG no later than the end of the third calendar quarter. After that period is over, any unmatched RNG quantities expire for the purpose of LCFS reporting.*

*(B) Biomethane reported under fuel pathways associated with projects that break ground after December 31, 2029, injected into the common carrier pipeline, and claimed indirectly under the LCFS program for use as bio-CNG, bio-LNG, or bio-L-CNG in CNG vehicles or as an input to hydrogen production **or as an energy source for electricity generation** for transportation purposes, must demonstrate compliance with the following requirements:*

³ 0.059 gNOx/mile for a battery electric truck supported by linear generators vs. 0.317 gNOx/mile for a CNG truck per industry SME calculations provide to Prologis

*1. Starting January 1, 2041 for bio-CNG, bio-LNG and bio-LCNG pathways, and January 1, 2046 for biomethane used as an input to hydrogen production **or electricity generation**, the entity reporting biomethane must demonstrate that the pipeline or pipelines along the delivery path physically flow from the initial injection point toward the fuel dispensing facility at least 50 percent of the time on an annual basis. Entities may report natural gas as RNG within only a three-quarter time span. If a quantity of RNG (and all associated environmental attributes, including a beneficial CI) is pipeline-injected in the first calendar quarter, the quantity claimed for LCFS reporting must be matched to natural gas sold in California as RNG no later than the end of the third calendar quarter.*

After that period is over, any unmatched RNG quantities expire for the purpose of LCFS reporting.”

Prologis believes these recommendations will further enhance CARB’s proposed improvements to the LCFS program to align with the State’s transportation electrification goals and ensure they reflect the multiple use cases supporting logistics sector fleets, including both MHD-FCI Private and Shared charging, as well as address the realities of utility energization delays and resiliency risks for charging projects.

Thank you for considering our recommendations, and we welcome the opportunity to elaborate on our views with the Board and staff. Please do not hesitate to contact me at amoch@prologis.com or 571-895-5763 for more information or to discuss our comments in further detail.

Respectfully submitted,

Alexis Moch
Vice President, Government Affairs
Prologis