

ATTACHMENT A-2

Final Regulation Order

Proposed Amendments to the Low Carbon Fuel Standard Regulation

[Note: The entire text of sections 95486.3, 95486.4, and 95491.2 set forth below is new language in “normal type” proposed to be added to title 17, California Code of Regulations.]

Final Regulation Order

Title 17, California Code of Regulations

Adopt Sections 95486.3, 95486.4, and 95491.2 of title 17, California Code of Regulations, to read as follows:

§ 95486.3. Generating and Calculating Credits for ZEV Fueling Infrastructure Pathways for Light- and Medium-Duty Vehicles.

- (a) *Hydrogen Refueling Infrastructure (HRI) Pathways for light- and medium-duty (LMD) hydrogen refueling stations.*
 - (1) *HRI Pathway Eligibility.* A hydrogen station owner or their designee identified in subsection 95483(b)(2) may submit a LMD-HRI application to certify an HRI pathway subject to the following eligibility conditions:
 - (A) The proposed LMD-HRI station must be located in California.
 - (B) The HRI pathway application must be received on or before December 31, 2030.
 - (C) The following stations are not eligible for HRI crediting as LMD-HRI stations:
 - 1. Any station that is permitted to operate prior to January 1, 2022; or
 - 2. Any station previously approved for HRI crediting; or
 - 3. Any station receiving or spending funds pursuant to any settlement related to any California or Federal regulation enforcement; or
 - 4. Any station built as a required mitigation measure pursuant to the California Environmental Quality Act.
 - 5. Any LMD station co-located with a HD-HRI station that is not a public LMD-HRI station.
 - (2) *LMD-HRI Application Requirements.* For each LMD hydrogen refueling station, the station owner must submit an application in the LRT-CBTS containing the following information:
 - (A) Name and address of the owner of the proposed station.
 - (B) Contact person for the owner entity.

1. Name
 2. Title or position
 3. Phone number
 4. Mobile phone number
 5. Email address
- (C) Name, street address, latitude, longitude, and a location description for the proposed station.
- (D) Expected daily permitted hours of operation for the station. If the daily permitted hours are less than 24 hours, the applicant must provide documentation from a permitting authority demonstrating that daily permitted hours for the station are limited.
- (E) The station nameplate refueling capacity for the permitted hours of operation calculated using the HyCap model or an equivalent model or capacity estimation methodology approved by the Executive Officer. The applicant must submit a completed model with the application.
- (F) The LMD-HRI refueling capacity for a LMD-HRI station is calculated using the following equation:

$$Cap_{HRI}^i = F_{LMD}^{station} \times RF_{HRI}^i$$

where:

Cap_{HRI}^i is the HRI refueling capacity (kg/day) for the LMD-HRI station; and

$F_{LMD}^{station}$ is the factor applied to the station based on LMD-HRI site type:

- For a public LMD-HRI station, 62.5%
- For a private LMD-HRI station, 31.5%

RF_{HRI}^i is the nameplate refueling capacity for the LMD-HRI station determined in subsection (E) above or 1,200 kg/day, whichever is less.

- (G) The number of dispensing units at the station.
- (H) Expected source(s) of hydrogen, CI value(s), and method(s) used for delivery.
- (I) Expected date that the station will be operational.

- (J) A signed attestation letter from the applicant attesting to the veracity of the information in the application packet. The attestation letter must be submitted as an electronic copy, be on company letterhead, be signed by an officer of the applicant with authority to attest to the veracity of the information in the application and to sign on behalf of the applicant, be from the applicant and not from an entity representing the applicant (such as a consultant or legal counsel), and include the following attestation:

I, an authorized representative of _____ (applicant entity), attest to the veracity of the information submitted as part of the Light- and Medium-Duty Hydrogen Refueling Infrastructure (LMD-HRI) application, attest that the proposed station is not receiving funds pursuant to any enforcement settlement related to any California or Federal regulation, and declare that the information submitted accurately represents the anticipated and intended design and operation of the hydrogen refueling station. Further, I understand and agree to each of the statements in the attached application. I am a duly authorized officer with authority to attest to the veracity of the information in the application and to sign on behalf of the respective applicant.

I understand that the following information in the LMD-HRI application will be made available on the LCFS website: Name of the Applicant Entity, Station Name, Station Owner, Station Address, Number of Dispensing Units, LMD-HRI Refueling Capacity, Publicly Accessible Hours, and Effective Date Range for HRI Crediting.

By submitting this application, _____ (applicant entity) accepts responsibility for the information herein provided to CARB. I certify under penalty of perjury under the laws of the State of California that I have personally examined, and am familiar with, the statements and information submitted in this document. I certify that the statements and information submitted to CARB are true, accurate, and complete.

Signature

Print Name & Title

Date

- (K) CBI must be designated pursuant to the requirements described in section 95488.8(c).
- (L) An application and supporting documents must be submitted electronically via the LRT-CBTS unless the Executive Officer has approved or requested in writing another format.
- (3) *Application Approval Process.*
- (A) The LMD-HRI application must be approved by the Executive Officer before the station may generate HRI credits. LMD-HRI applications will be evaluated for approval on a first come, first served basis.
1. If estimated potential HRI credits from all approved HRI and LMD-HRI stations exceed 2.5 percent of deficits in the prior quarter, the Executive Officer will not approve additional HRI pathways for LMD-HRI stations and will not accept additional LMD-HRI applications until estimated potential HRI credits

for approved HRI and LMD-HRI stations are less than 2.5 percent of deficits.

2. If estimated potential HRI credits from an individual applicant's approved HRI and LMD-HRI stations exceed 1 percent of deficits in the most recent quarter for which data is available, the Executive Officer will not approve additional HRI pathways for that applicant's LMD-HRI stations and will not accept additional LMD-HRI applications from that applicant until the applicant's estimated potential HRI credits for that applicant's approved HRI and LMD-HRI are less than 1 percent of deficits.

- (B) Estimated potential HRI credits for LMD-HRI stations will be calculated using the following equation:

$$Credits_{LMD-HRI}^{Potential} = Credits_{LMD-HRI}^{Prior\ qtr} \times \frac{Cap_{LMD-HRI}^{Approved}}{Cap_{LMD-HRI}^{Operational}}$$

where:

$Credits_{LMD-HRI}^{Potential}$ means the estimated potential HRI credits from all approved HRI and LMD-HRI stations;

$Credits_{LMD-HRI}^{Prior\ qtr}$ means the total HRI credits generated by operational HRI and LMD-HRI stations in the most recent quarter for which data is available;

$Cap_{LMD-HRI}^{Operational}$ means the total HRI and LMD-HRI capacity of HRI and LMD-HRI stations that were operational in the prior quarter; and

$Cap_{LMD-HRI}^{Approved}$ means the total HRI and LMD-HRI capacity of all approved HRI and LMD-HRI stations, both operational and nonoperational.

- (C) The estimated potential HRI credits for HRI and LMD-HRI stations for an individual applicant will be calculated using the same equation as in subsection (B) above, where:

$Credits_{LMD-HRI}^{Potential}$ means the estimated potential HRI credits from the applicant's approved HRI and LMD-HRI stations;

$Credits_{LMD-HRI}^{Prior\ qtr}$ means the total HRI credits generated by the applicant's operational HRI and LMD-HRI stations in the most recent quarter for which data is available;

$Cap_{LMD-HRI}^{Operational}$ means the total HRI and LMD-HRI capacity of the applicant's stations that were operational in the most recent quarter for which data is available; and

$Cap_{LMD-HRI}^{Approved}$ means the total HRI and LMD-HRI capacity of the applicant's approved stations, both operational and nonoperational.

- (D) After receipt of an application designated by the applicant as ready for formal evaluation, the Executive Officer will advise the applicant in writing either that:
1. The application is complete, or
 2. The application is incomplete, in which case the Executive Officer will identify which requirements of section 95486.3(a)(2) have not been met.
 - a. The applicant may submit additional information to correct deficiencies identified by the Executive Officer.
 - b. If the applicant is unable to achieve a complete application in the quarter of the Executive Officer's receipt of the original application, the application will be denied on that basis, and the applicant will be informed in writing. The applicant may submit a new application for the station.
 3. At any point during the application evaluation process, the Executive Officer may request in writing additional information or clarification from the applicant.
- (E) The Executive Officer will not approve an application if the Executive Officer determines, based upon the information submitted in the application and any other available information, that the application does not meet requirements in subsections 95486.3(a)(1) and (a)(2). If the Executive Officer does not approve the application, the applicant will be notified in writing and the basis for the disapproval shall be identified.
- (F) If the Executive Officer determines that the applicant and application have met all requirements for approval pursuant to subsections 95486.3(a)(1) and (a)(2), the Executive Officer will approve the application and provide an approval summary on the LCFS website including the LMD-HRI station location and assigned identifier, number of dispensing units, LMD-HRI refueling capacity, and effective date range for HRI pathway crediting.

- (G) *Crediting Period.* HRI crediting for LMD-HRI stations is limited to 10 years starting with the quarter the Executive Officer approves the LMD-HRI application.
- (4) *Requirements to Generate HRI Credits.* To generate credits using the HRI pathway the LMD-HRI station must meet the following conditions. The applicant must maintain, and submit to CARB upon request, records demonstrating adherence to these conditions.
- (A) The applicant must update the LMD-HRI refueling capacity if different from the design LMD-HRI refueling capacity provided in the application. Any station design or operational information that deviates from the original LMD-HRI application must be declared to the Executive Officer, and a new attestation must be submitted pursuant to 95486.3(a)(2).
- (B) For a LMD-HRI station available to the public, no obstructions or obstacles exist to preclude vehicle operators from entering the station premises, no access cards or personal identification (PIN) codes are required for the station to dispense fuel, and no formal or registered station training shall be required for individuals to use the hydrogen refueling station.
- (C) For a public LMD-HRI station that charges a fee for service, the station uses a public point of sale terminal that accepts major credit and debit cards.
- (D) The station is connected to the Station Operational Status System (SOSS), is listed open for retail, and:
1. The station passed final inspection by the appropriate authority having jurisdiction and has a permit to operate.
 2. The station owner has fully commissioned the station, and has declared it fit to service retail light- and medium-duty FCV drivers. This includes the station owner's declaration that the station meets an appropriate SAE fueling protocol.
- (E) All dispensers installed in the hydrogen refueling station have undergone type evaluation according to the California Type Evaluation Program (CTEP) administered by the California Department of Food and Agriculture/Division of Measurement Standards (CDFA/DMS) and have either a Temporary Use Permit or a type approval Certificate of Approval issued by CDFA/DMS. The FSE registration must be completed pursuant to section 95483.2(b)(8) and the quantity of dispensed hydrogen must be reported as required in section 95491. The station must dispense hydrogen in a given quarter to generate HRI credits.

- (F) Dispensed hydrogen meets the following CI and renewable content requirements on a company-wide, weighted average basis. The Executive Officer will consider all the stations registered by an entity with a unique FEIN in the LRT-CBTS for calculating the company-wide weighted average CI and renewable content.
1. CI of 150 gCO₂e/MJ or less before January 1, 2030, and 90 gCO₂e/MJ or less thereafter, and
 2. Renewable content of 40 percent or greater before January 1, 2030, and 80 percent thereafter.
- (G) If the applicant fails to demonstrate the operability within 24 months of approval and if the estimated potential HRI credits from HRI and LMD-HRI stations exceed 2.5 percent of deficits in the most recent quarter for which deficit data is available, then the application will be canceled. The applicant may submit a new application for the same LMD-HRI station the following quarter.
- (5) *Calculation of HRI Credits.* HRI credits for LMD-HRI stations will be calculated using the following equation:

$$Credits_{LMD-HRI} (MT) = (CI_{standard}^{gasoline} \times EER^{gasoline} - CI_{HRI}) \times E_{H2} \times (Cap_{LMD-HRI} \times N \times UT - H2_{disp}) \times C$$

where:

$CI_{standard}^{gasoline}$ is the average carbon intensity requirement of gasoline for a given year as provided in sections 95484(d);

$EER^{gasoline}$ is the dimensionless Energy Economy Ratio for H2/FCV relative to gasoline as listed in Table 5;

CI_{HRI} is the company-wide weighted average CI for dispensed hydrogen during the quarter or 0 g/MJ, whichever is greater;

E_{H2} is the energy density for hydrogen in MJ/kg as listed in Table 4;

$Cap_{LMD-HRI}$ is the HRI refueling capacity for the LMD-HRI station (kg/day);

N is the number of days during the quarter;

UT is the uptime multiplier which is the percentage of time that the LMD-HRI station is available as reported to SOSS during the quarter;

$H2_{disp}$ is the quantity of hydrogen dispensed during the quarter (kg);

C is a factor used to convert credits to units of metric tons from gCO₂e and has the value of:

$$C = 1.0 \times 10^{-6} \frac{(MT)}{(gCO_2e)}$$

- (6) *Reporting and Recordkeeping Requirements.* The following must be reported to the Executive Officer each quarter as set forth in section 95491 before credits will be issued to the LRT account associated with an approved HRI pathway.
- (A) Station availability. This is the percentage of hours the station is available for fueling during the quarter relative to the permitted hours of operation for the station, as reported to the SOSS. Any period of time that SOSS reports that a portion of the station capacity is not available will count as a pro-rated amount of station availability, proportional to the percentage of the station capacity that remains available for fueling for this period of time.
 - (B) Company-wide, weighted average renewable content (percent) for dispensed hydrogen.
 - (C) Cost and revenue data. Provide an annual account of the following costs borne and revenues received by the station owner up through the most recent reporting quarter per station. The cost and revenue account must be included in the annual report submitted pursuant to section 95491.
 - 1. Total capital expenditures (\$), including a breakdown by equipment, labor, materials, land, and fees (\$). Costs for on-site generation, land, working capital and off-site facilities are not included in the initial capital expenditure.
 - 2. Total delivered cost (\$) of hydrogen and average delivered cost (\$/kg) for hydrogen
 - 3. Total maintenance costs (\$)
 - 4. Total land rental cost (\$)
 - 5. Total grant revenue or other external funding received towards capital expenditures (\$)
 - 6. Total grant revenue or other external funding received towards operational and maintenance expenditures (\$)
 - 7. Total revenue (\$) received from sale of hydrogen and average retail price (\$/kg) for hydrogen sold
 - 8. Other operational expenditures (\$)

- (b) *DC Fast Charging Infrastructure (FCI) Pathways for Light- and Medium-Duty (LMD) Charging Sites.*
- (1) *FCI Pathway Eligibility.* An FSE owner or their designee identified in subsection 95483(c)(2)(B) may submit a LMD-FCI application to certify an FCI pathway subject to the following eligibility conditions:
- (A) The proposed FSE must be located in California.
 - (B) The FCI pathway application must be received on or before December 31, 2030.
 - (C) The following FSE are not eligible for FCI crediting:
 - 1. Any FSE that is permitted to operate prior to January 1, 2022; or
 - 2. Any FSE previously approved for FCI crediting; or
 - 3. Any FSE receiving or spending funds pursuant to any settlement related to any California or Federal regulation enforcement; or
 - 4. Any FSE built as a required mitigation measure pursuant to the California Environmental Quality Act.
 - 5. Any LMD-FCI FSE co-located with a HD-FCI site that is not a public LMD-FCI FSE.
 - (D) Each LMD-FCI FSE must have a minimum nameplate power rating of 50 kW.
 - (E) Each LMD-FCI FSE must be networked and capable of monitoring and reporting its availability for charging.
- (2) *LMD-FCI Application Requirements.* For each site of LMD-FCI FSEs at the same address, the applicant must submit an application in the LRT-CBTS containing the following information:
- (A) Name and address of the owner of the proposed FSEs.
 - (B) Contact person for the owner entity.
 - 1. Name
 - 2. Title or position
 - 3. Phone number

4. Mobile phone number
 5. Email address
- (C) Name, street address, latitude, longitude and a location description for each proposed LMD-FCI site.
 - (D) The number of FSEs.
 - (E) The nameplate power rating (kW), FCI power rating (kW), connector type(s), and model for each FSE. The FCI power rating of the FSE can be less than the nameplate power rating to meet the requirements of (F) below, but cannot exceed the nameplate power rating.
 - (F) The total FCI power rating for all LMD-FCI FSEs claiming FCI credit at one address under this provision cannot exceed 2,500 kW.
 - (G) The total site power (kW) available to the chargers at the site, including from the electric grid, battery energy storage, and on-site production. The total site power (kW) that can be supplied to all on-site FSEs must be greater than or equal to the sum of the FCI power rating of on-site FSEs certified to use the FCI pathway.
 - (H) The FCI charging capacity for each LMD-FCI FSE calculated using the following equation:

$$Cap_{FCI}^i = F_{LMD}^{site} \times P_{FCI}^i \times 24$$

where:

Cap_{FCI}^i is the FCI charging capacity (kWh/day) for the LMD-FCI FSE i

F_{LMD}^{site} is the factor applied to the FSE based on LMD-FCI site type:

- For an FSE at a public LMD-FCI charging site, 20%
- For an FSE at a private LMD-FCI charging site, 10%

P_{FCI}^i is the lesser of the FCI power rating for the LMD-FCI FSE or 350 kW.

24 is the number of hours in a day (hr/day)

- (I) Expected date that the FSE will be operational.
- (J) Expected daily permitted hours of operation for the site. If the daily permitted hours are less than 24 hours, the applicant must provide documentation from a permitting authority demonstrating that daily permitted hours for the FSE are limited.

- (K) A signed attestation letter from the applicant attesting to the veracity of the information in the application packet. The attestation letter must be submitted as an electronic copy, be on company letterhead, be signed by an officer of the applicant with authority to attest to the veracity of the information in the application and to sign on behalf of the applicant, be from the applicant and not from an entity representing the applicant (such as a consultant or legal counsel), and include the following attestation:

I, an authorized representative of _____ (proposed FSE owner entity), attest to the veracity of the information submitted as part of the Light- and Medium-Duty DC Fast Charging Infrastructure (LMD-FCI) application, attest that the proposed FSE is not receiving funds pursuant to any enforcement settlement related to any California or Federal regulation, and declare that the information submitted accurately represents the anticipated and intended design and operation of the charging infrastructure. Further, I understand and agree to each of the statements in the attached application. I am a duly authorized officer with authority to attest to the veracity of the information in the application and to sign on behalf of the respective applicant.

I understand that the following information in the LMD-FCI application will be made available on the LCFS website: Name of the Applicant Entity, Site Name, Site Owner, Site Address, Number and Type of Charging Units, Nameplate Power Rating for Each Unit, Publicly Accessible Hours, and Effective Date Range for FCI Crediting

By submitting this application, _____ (applicant entity) accepts responsibility for the information herein provided to CARB. I certify under penalty of perjury under the laws of the State of California that I have personally examined, and am familiar with, the statements and information submitted in this document. I certify that the statements and information submitted to CARB are true, accurate, and complete.

- (L) CBI must be designated pursuant to the requirements described in section 95488.8(c).
- (M) An application and supporting documents must be submitted electronically via the LRT-CBTS unless the Executive Officer has approved or requested in writing another format.

(3) *Application Approval Process.*

- (A) The LMD-FCI application must be approved by the Executive Officer before the applicant may generate FCI credits. LMD-FCI applications will be evaluated for approval on a first come, first served basis.
1. If estimated potential FCI credits from all approved FCI and LMD-FCI FSEs exceed 2.5 percent of deficits in the most recent quarter for which data is available, the Executive Officer will not approve additional FCI pathways for LMD-FCI FSEs and will not accept additional LMD-FCI applications until estimated potential FCI credits for approved FCI and LMD-FCI FSEs are less than 2.5 percent of deficits.

2. If estimated potential FCI credits from an individual applicant's approved FCI and LMD-FCI FSEs exceed 0.5 percent of deficits in the most recent quarter for which data is available, the Executive Officer will not approve additional FCI pathways for that applicant's LMD-FCI FSEs and will not accept additional LMD-FCI applications from that applicant until the estimated potential FCI credits for that applicant's approved FCI and LMD-FCI FSEs are less than 0.5 percent of deficits.

- (B) Estimated potential FCI credits for LMD-FCI FSEs will be calculated using the following equation:

$$Credits_{LMD-FCI}^{Potential} = Credits_{LMD-FCI}^{Prior\ qtr} \times \frac{Cap_{LMD-FCI}^{Approved}}{Cap_{LMD-FCI}^{Operational}}$$

where:

$Credits_{LMD-FCI}^{Potential}$ means the estimated potential FCI credits from all approved FCI and LMD-FCI FSEs;

$Credits_{LMD-FCI}^{Prior\ qtr}$ means the total FCI credits generated by operational FCI and LMD-FCI FSEs in the most recent quarter for which data is available;

$Cap_{LMD-FCI}^{Operational}$ means the total FCI charging capacity of FCI and LMD-FCI FSEs that were operational in the most recent quarter for which data is available; and

$Cap_{LMD-FCI}^{Approved}$ means the total FCI charging capacity of all approved FCI and LMD-FCI FSEs, both operational and nonoperational.

- (C) The estimated potential FCI credits for FCI and LMD-FCI FSEs for an individual applicant will be calculated using the same equation as in subsection (B) above, where:

$Credits_{LMD-FCI}^{Potential}$ means the estimated potential FCI credits from the applicant's approved FCI and LMD-FCI FSEs;

$Credits_{LMD-FCI}^{Prior\ qtr}$ means the total FCI credits generated by the applicant for operational FCI and LMD-FCI FSEs in the most recent quarter for which data is available;

$Cap_{LMD-FCI}^{Operational}$ means the total FCI charging capacity of the applicant's FCI and LMD-FCI FSEs that were operational in the most recent quarter for which data is available; and

$Cap_{LMD-FCI}^{Approved}$ means the total FCI charging capacity of all of the applicant's approved FCI and LMD-FCI FSEs, both operational and nonoperational.

- (D) After receipt of an application designated by the applicant as ready for formal evaluation, the Executive Officer shall advise the applicant in writing either that:
1. The application is complete, or
 2. The application is incomplete, in which case the Executive Officer will identify which requirements of section 95486.3(b)(2) have not been met.
 - a. The applicant may submit additional information to correct deficiencies identified by the Executive Officer.
 - b. If the applicant is unable to achieve a complete application during the quarter of the Executive Officer's receipt of the original application, the application will be denied on that basis, and the applicant will be informed in writing. The applicant may submit a new application for the station.
 3. At any point during the application evaluation process, the Executive Officer may request in writing additional information or clarification from the applicant.
- (E) The Executive Officer shall not approve an application if the Executive Officer determines, based upon the information submitted in the application and any other available information, that the application does not meet requirements in subsections 95486.3(b)(1) and (b)(2). If the Executive Officer does not approve the application, the applicant will be notified in writing and the basis for the disapproval shall be identified.
- (F) If the Executive Officer determines the application has met all requirements for approval pursuant to subsections 95486.3(b)(1) and (b)(2), the Executive Officer will approve the application and provide an approval summary on the LCFS website including the site location and assigned identifier, number and type of FSE, nameplate power rating for each FSE, and effective date range for FCI pathway crediting.
- (G) *Crediting Period.* FCI crediting for LMD-FCI FSEs is limited to 10 years starting with the quarter the Executive Officer approves the LMD-FCI application.

- (4) *Requirements to Generate FCI Credits.* To generate credits using the FCI pathway a LMD-FCI FSE must meet the following conditions. The applicant must maintain, and submit to CARB upon request, records demonstrating adherence to these conditions.
- (A) The applicant must update the nameplate and FCI power ratings of any FSEs if different from the power ratings provided in the LMD-FCI application. Any FSE design or operational information that deviates from the original LMD-FCI application must be declared to the Executive Officer, and a new attestation must be submitted using the language in section 95486.3(b)(2).
 - (B) For a LMD-FCI FSE available to the public, no obstructions or obstacles exist to preclude vehicle operators from entering the FSE premises, no access cards or personal identification (PIN) codes are required for the FSE to dispense fuel, and no formal or registered equipment training shall be required for individuals to use the FSE.
 - (C) For a LMD-FCI FSE available to the public that charges a fee for service, the site must use a public point-of-sale terminal that accepts all major credit and debit cards.
 - (D) The FSE passed final inspection by the appropriate authority having jurisdiction and has a permit to operate.
 - (E) The FSE owner has fully commissioned the FSE, and has declared it fit to service light- and medium-duty EV drivers.
 - (F) The FSE registration must be completed pursuant to section 95483.2(b)(8) and the quantity of dispensed electricity must be reported as required in section 95491. The FSE must dispense electricity in a given quarter to generate FCI credits.
 - (G) If the applicant fails to demonstrate the operability within 24 months of approval and if the estimated potential FCI credits from all approved FCI and LMD-FCI FSEs exceed 2.5 percent of deficits in the most recent quarter for which deficit data is available, then FCI certification for the LMD-FCI FSEs will be canceled. The applicant may submit a new application for the same FSEs the following quarter.
 - (H) The estimated cumulative value of FCI credits generated for the LMD-FCI FSEs at a site in the prior quarters must be less than the difference between 1.5 times the initial capital expenditure of the charging site, including battery storage but not on-site generation, reported pursuant to section 95486.3(b)(6)(B)1. and the sum of total grant revenue or other external funding before the station is

both approved and operational, pursuant to section 95486.3(b)(6)(B)5. and 6.

1. The estimated value of FCI credits, for the purpose of this determination, shall be calculated using the number of FCI credits generated for the LD-FCI FSE in the quarter and the average LCFS credit price for that quarter published on the LCFS website.
2. The estimated value calculated under this provision will be made available only to the respective reporting entity in LRT-CBTS and will not be published on the LCFS website.
3. This will not affect the reporting entity's ability to generate non-FCI LCFS credits for the electricity dispensed at the FSE.

- (5) *Calculation of FCI Credits.* FCI credits for LMD-FCI FSEs will be calculated using the following equation for each FSE approved under this provision:

$$\begin{aligned} Credits_{LMD-FCI} (MT) &= (CI_{standard}^{gasoline} \times EER^{gasoline} - CI_{FCI}) \times C_{Elec} \\ &\times (Cap_{LMD-FCI}^i \times N \times UT - Elec_{disp}) \times C \end{aligned}$$

where:

$CI_{standard}^{gasoline}$ is the average carbon intensity requirement for gasoline for a given year as provided in section 95484(d);

$EER^{gasoline}$ is the dimensionless Energy Economy Ratio for Electricity/BEV or PHEV relative to gasoline as listed in Table 5;

CI_{FCI} is the California average grid electricity carbon intensity as listed in Table 7-1;

C_{Elec} is the conversion factor for electricity as listed in Table 4;

$Cap_{LMD-FCI}^i$ is the FCI charging capacity (kWh/day) for the LMD-FCI FSE;

N is the number of days during the quarter;

UT is the uptime multiplier which is the fraction of time that the LMD-FCI FSE is available for charging during the quarter;

$Elec_{disp}$ is the quantity of electricity dispensed during the quarter (kWh);

C is a factor used to convert credits to units of metric tons from gCO_{2e} and has the value of:

$$C = 1.0 \times 10^{-6} \frac{(MT)}{(gCO_2e)}$$

- (6) **Reporting and Recordkeeping Requirements.** The following must be reported to the Executive Officer each quarter as set forth in section 95491 before credits will be issued to the LRT account associated with an approved FCI pathway.
- (A) FSE availability. This is the percentage of hours the FSE is available for charging during the quarter relative to the permitted hours of operation for the site.
 - (B) Cost and revenue data. Provide an annual account of the following costs borne and revenues received for the site. The cost and revenue account must be included in the annual report submitted pursuant to section 95491.
 - 1. Total capital expenditures (\$), including a breakdown of initial capital expenditure by equipment, labor, materials, land, and fees (\$). Costs for land, working capital and off-site facilities are not included in the initial capital expenditure.
 - 2. Total delivered cost (\$) of electricity, including demand charges, and average delivered cost (\$/kWh) for electricity
 - 3. Total maintenance costs (\$)
 - 4. Total land rental cost (\$)
 - 5. Total grant revenue or other external funding received towards capital expenditures (\$)
 - 6. Total grant revenue or other external funding received towards operational and maintenance expenditures (\$)
 - 7. Total revenue (\$) received from sale of electricity and average retail price (\$/kWh) for electricity sold
 - 8. Other operational expenditures (\$)

NOTE: Authority cited: Sections 38510, 38530, 38560, 38560.5, 38571, 38580, 39600, 39601, 41510, 41511 and 43018, Health and Safety Code; 42 U.S.C. section 7545; and *Western Oil and Gas Ass'n v. Orange County Air Pollution Control District*, 14 Cal.3d 411, 121 Cal.Rptr. 249 (1975). Reference: Sections 38501, 38510, 39515, 39516, 38571, 38580, 39000, 39001, 39002, 39003, 39515, 39516, 41510, 41511 and 43000, Health and Safety Code; Section 25000.5, Public Resources Code; and *Western Oil and Gas Ass'n v. Orange County Air Pollution Control District*, 14 Cal.3d 411, 121 Cal.Rptr. 249 (1975).

§ 95486.4. Generating and Calculating Credits for ZEV Fueling Infrastructure Pathways for Heavy-Duty Vehicles.

(a) *Hydrogen Refueling Infrastructure (HRI) Pathways for heavy-duty (HD) hydrogen refueling stations.*

(1) *HD-HRI Pathway Eligibility.* A hydrogen station owner or their designee identified in subsection 95483(b)(2) may submit an HD-HRI application to certify an HRI pathway subject to the following eligibility conditions:

- (A) The proposed HD-HRI station must be open and accessible to vehicles with a gross vehicle weight rating 14,001 lbs and greater.
- (B) The proposed HD-HRI station must be located in California, and if a shared HD-HRI station, must:
 - 1. Be located within five miles of any ready or pending Federal Highway Administration Alternative Fuel Corridor, which shall be determined by calculating the shortest great-circle distance between the proposed site and an Alternative Fuel Corridor; or
 - 2. Be located on or adjacent to a property used for heavy-duty vehicle overnight parking; or
 - 3. Have received capital funding from a local, State or Federal competitive grant program for heavy-duty hydrogen refueling that includes location evaluation as criteria.
- (C) The HD-HRI pathway application must be received on or before December 31, 2035.
- (D) The following stations are not eligible for HRI crediting as HD-HRI stations:
 - 1. Any station that is permitted to operate prior to January 1, 2022; or
 - 2. Any station receiving or spending funds pursuant to any settlement related to any California or Federal regulation enforcement; or
 - 3. Any station built as a required mitigation measure pursuant to the California Environmental Quality Act.

(2) *HD-HRI Application Requirements.* For each new HD-HRI hydrogen refueling station, the applicant must submit an application in the LRT-CBTS containing the following information:

- (A) Name and address of the owner of the proposed station.
- (B) Contact person for the owner entity.
 - 1. Name
 - 2. Title or position
 - 3. Phone number
 - 4. Mobile phone number
 - 5. Email address
- (C) Name, street address, latitude, longitude, and a location description for the proposed station.
- (D) Expected daily permitted hours of operation for the station for private fleets and the for the public. If the total daily permitted hours are less than 24 hours, the applicant must provide documentation from a permitting authority demonstrating that daily permitted hours for the station are limited.
- (E) The station nameplate refueling capacity for the permitted hours of operation calculated using the HyCap model (released on March 12, 2025) incorporated by reference by section 95481, or an equivalent model or capacity estimation methodology approved by the Executive Officer. The applicant must submit a completed model with the application.
- (F) The HRI refueling capacity for an HD-HRI station is calculated using the following equation:

$$Cap_{HRI}^i = F^{station} \times RF_{HRI}^i$$

where:

Cap_{HRI}^i is the HRI refueling capacity (kg/day) for the HD-HRI station i ; and

$F^{station}$ is the factor applied to the station based on site type:

- For a shared HD-HRI station, 62.5%
- For a private HD-HRI station, 31.5%

RF_{HRI}^i is the nameplate refueling capacity for the HD-HRI station i determined in subsection (E) above or 6,000 kg/day, whichever is less.

- (G) The number of dispensing units at the station.
- (H) Expected source(s) of hydrogen, CI value(s), and method(s) used for delivery.
- (I) Expected date that the station will be operational.
- (J) A signed attestation letter from the applicant attesting to the veracity of the information in the application packet. The attestation letter must be submitted as an electronic copy, be on company letterhead, be signed by an officer of the applicant with authority to attest to the veracity of the information in the application and to sign on behalf of the applicant, be from the applicant and not from an entity representing the applicant (such as a consultant or legal counsel), and include the following attestation:

I, an authorized representative of _____ (applicant entity), attest to the veracity of the information submitted as part of the Heavy-Duty Hydrogen Refueling Infrastructure (HD-HRI) application, attest that the proposed station is not receiving funds pursuant to any enforcement settlement related to any California or Federal regulation, and declare that the information submitted accurately represents the anticipated and intended design and operation of the hydrogen refueling station. Further, I understand and agree to each of the statements in the attached application. I am a duly authorized officer with authority to attest to the veracity of the information in the application and to sign on behalf of the respective applicant.

I understand that the following information in the HD-HRI application will be made available on the LCFS website: Name of the Applicant Entity, Station Name, Station Owner, Station Address, Number of Dispensing Units, HD-HRI Refueling Capacity, Accessible Hours and Effective Date Range for HRI Crediting.

By submitting this application, _____ (applicant entity) accepts responsibility for the information herein provided to CARB. I certify under penalty of perjury under the laws of the State of California that I have personally examined, and am familiar with, the statements and information submitted in this document. I certify that the statements and information submitted to CARB are true, accurate, and complete.

Signature

Print Name & Title

Date

- (K) CBI must be designated pursuant to the requirements described in section 95488.8(c).
- (L) An application and supporting documents must be submitted electronically via the LRT-CBTS unless the Executive Officer has approved or requested in writing another format.
- (3) *Application Approval Process*
 - (A) The HD-HRI application must be approved by the Executive Officer before the station owner may generate HRI credits. HD-HRI

applications will be evaluated for approval on a first come, first served basis.

1. If estimated potential HRI credits from all approved HD-HRI stations exceed 2.5 percent of deficits in the most recent quarter for which data is available, the Executive Officer will not approve additional HRI pathways for HD-HRI stations and will not accept additional applications until estimated potential HRI credits for approved HD-HRI stations are less than 2.5 percent of deficits.
2. If estimated potential HRI credits from an individual applicant's approved HD-HRI stations exceed 1 percent of deficits in the most recent quarter for which data is available, the Executive Officer will not approve additional HRI pathways for that applicant's HD-HRI stations and will not accept additional applications from that applicant until the applicant's estimated potential HRI credits for HD-HRI stations are less than 1 percent of deficits.

- (B) Estimated potential HRI credits for HD-HRI stations will be calculated using the following equation:

$$Credits_{HD-HRI}^{Potential} = Credits_{HD-HRI}^{Prior\ qtr} \times \frac{Cap_{HD-HRI}^{Approved}}{Cap_{HD-HRI}^{Operational}}$$

where:

$Credits_{HD-HRI}^{Potential}$ means the estimated potential HRI credits from all approved HD-HRI stations;

$Credits_{HD-HRI}^{Prior\ qtr}$ means the total HRI credits generated by operational HD-HRI stations in the most recent quarter for which data is available;

$Cap_{HD-HRI}^{Operational}$ means the total HD-HRI capacity of stations that were operational in the most recent quarter for which data is available; and

$Cap_{HD-HRI}^{Approved}$ means the total HD-HRI capacity of approved stations, both operational and nonoperational.

- (C) The estimated potential HRI credits for HD-HRI stations for an individual applicant will be calculated using the same equation as in subsection (B) above, where:

$Credits_{HD-HRI}^{Potential}$ means the estimated potential HRI credits from the applicant's approved HD-HRI stations;

$Credits_{HD-HRI}^{Prior\ qtr}$ means the total HRI credits generated by the applicant's operational HD-HRI stations in the most recent quarter for which data is available;

$Cap_{HD-HRI}^{Operational}$ means the total HD-HRI capacity of the applicant's stations that were operational in the most recent quarter for which data is available; and

$Cap_{HD-HRI}^{Approved}$ means the total HD-HRI capacity of the applicant's approved stations, both operational and nonoperational.

- (D) After receipt of an application designated by the applicant as ready for formal evaluation, the Executive Officer will advise the applicant in writing either that:
1. The application is complete, or
 2. The application is incomplete, in which case the Executive Officer will identify which requirements of section 95486.4(a)(2) have not been met.
 - a. The applicant may submit additional information to correct deficiencies identified by the Executive Officer.
 - b. If the applicant is advised the application is incomplete, unable to achieve a complete application during the quarter of the Executive Officer's formal evaluation, the application will be denied on that basis, and the applicant will be informed in writing. The applicant may submit a new application for the station.
 3. At any point during the application evaluation process, the Executive Officer may request in writing additional information or clarification from the applicant.
- (E) The Executive Officer will not approve an application if the Executive Officer determines, based upon the information submitted in the application and any other available information, that the application does not meet requirements in subsections 95486.3(a)(1) and (a)(2). If the Executive Officer does not approve the application, the applicant will be notified in writing and the basis for the disapproval shall be identified.
- (F) If the Executive Officer determines that the applicant and application have met all requirements for approval pursuant to subsections 95486.4(a)(1) and (a)(2), the Executive Officer will

approve the application and provide an approval summary on the LCFS website including the HD-HRI station location and assigned identifier, number of dispensing units, HRI refueling capacity, and effective date range for HRI pathway crediting.

- (G) *Crediting Period.* HRI crediting for HD-HRI stations is limited to 10 years starting with the quarter the Executive Officer approves the application.
- (4) *Requirements to Generate HRI Credits.* To generate credits using HRI pathways the HD-HRI station must meet the following conditions. The applicant must maintain, and submit to CARB upon request, records demonstrating adherence to these conditions.
 - (A) The applicant must update the HD-HRI refueling capacity if different from the design capacity provided in the application. Any HD-HRI station design or operational information that deviates from the original HD-HRI application must be declared to the Executive Officer, and a new attestation must be submitted pursuant to section 95486.4(a)(2).
 - (B) For a HD-HRI station available to the public, no obstructions or obstacles exist to preclude vehicle operators from entering the station premises, no access cards or personal identification (PIN) codes are required for the station to dispense fuel, and no formal or registered station training shall be required for individuals to use the hydrogen refueling station.
 - (C) For a HD-HRI station available to the public and charging a fee for service, the station must use a public point of sale terminal that accepts major credit, and debit cards, and any fuel cards with which the station owner or designee has branded or partnered.
 - (D) A fleet-owned shared HD-HRI station cannot be reserved for one HDV fleet for more than 12 hours each day. There is no limit on the length of reservations at shared HD-FCI sites that are owned by third parties and designed for multi-fleet access so long as the site is shared and open to multiple fleets.
 - (E) The station is connected to the Station Operational Status System (SOSS) if available, is listed open for retail, and:
 - 1. The station passed final inspection by the appropriate authority having jurisdiction and has a permit to operate.
 - 2. The station owner has fully commissioned the station and has declared it fit to service heavy-duty FCV drivers. This

includes the station owner's declaration that the station meets an appropriate SAE fueling protocol.

3. All dispensers installed in the hydrogen refueling station have undergone type evaluation according to the California Type Evaluation Program (CTEP) administered by the California Department of Food and Agriculture/Division of Measurement Standards (CDFA/DMS) and have either a Temporary Use Permit or a type approval Certificate of Approval issued by CDFA/DMS.
- (F) The FSE registration must be completed pursuant to section 95483.2(b)(8) and the quantity of dispensed hydrogen must be reported as required in section 95491. The FSE must dispense hydrogen in a given quarter to generate HRI credits.
- (G) Dispensed hydrogen meets the following CI and renewable content requirements on a company-wide, weighted average basis. The Executive Officer will consider all the stations registered by an entity with a unique FEIN in the LRT-CBTS for calculating the company-wide weighted average CI and renewable content.
1. CI of 150 gCO₂e/MJ or less before January 1, 2030, and 90 gCO₂e/MJ or less thereafter, and
 2. Renewable content of 40 percent or greater before January 1, 2030, and 80 percent thereafter.
- (H) If the applicant fails to demonstrate station operability within 24 months of approval and if estimated potential HD-HRI credits from all approved FSEs exceed 2.5 percent of deficits in the most recent quarter for which data is available, the application will be canceled. The applicant may submit a new application for the same HD-HRI station the following quarter.
- (5) *Calculation of HRI Credits.* HRI credits for HD-HRI stations will be calculated using the following equation:

$$Credits_{MHD-HRI} (MT) = (CI_{standard}^{diesel} \times EER^{diesel} - CI_{HRI}) \times E_{H_2} \times (Cap_{HD-HRI} \times N \times UT - H2_{disp}) \times C$$

where:

$CI_{standard}^{diesel}$ is the carbon intensity benchmark for diesel for a given year as provided in sections 95484(e);

EER^{diesel} is the dimensionless Energy Economy Ratio for H2/FCV relative to diesel as listed in Table 5;

CI_{HRI} is the company-wide weighted average CI for dispensed hydrogen during the quarter or 0 g/MJ, whichever is greater;

E_{H2} is the energy density for hydrogen in MJ/kg as listed in Table 4;

Cap_{HD-HRI} is the HRI refueling capacity for the HD-HRI station (kg/day);

N is the number of days during the quarter;

UT is the the uptime multiplier which is the station availability as defined in section 95486.3(a)(6)(A);

$H2_{disp}$ is the quantity of hydrogen dispensed during the quarter (kg);

C is a factor used to convert credits to units of metric tons from gCO₂e and has the value of:

$$C = 1.0 \times 10^{-6} \frac{(MT)}{(gCO_2e)}$$

- (6) **Reporting and Recordkeeping Requirements.** The following must be reported to the Executive Officer each quarter as set forth in section 95491 before credits will be issued to the LRT account associated with an approved HRI pathway.
- (A) Station availability. This is the percentage of hours the station is available for complete fills during the quarter relative to the permitted hours of operation for the station, as reported to SOSS. Any period of time that SOSS reports that a portion of the station capacity is not available will count as a pro-rated amount of station availability, proportional to the percentage of the station capacity that remains available for fueling for this period of time.
 - (B) Company-wide, weighted average renewable content (percent) and carbon intensity (gCO₂e/MJ) for dispensed hydrogen.
 - (C) Cost and revenue data. Provide an annual account of the following costs borne and revenues received for the station. The cost and revenue account must be included in the annual report submitted pursuant to section 95491.
 - 1. Total capital expenditures (\$), including a breakdown of initial capital expenditure by equipment, labor, materials, and fees (\$). Costs for on-site generation, land, working capital and off-site facilities are not included in the initial capital expenditure.

2. Total delivered cost (\$) of hydrogen and average delivered cost (\$/kg) for hydrogen
3. Total maintenance costs (\$)
4. Total land rental cost (\$)
5. Total grant revenue or other external funding received towards capital expenditures (\$)
6. Total grant revenue or other external funding received towards operational and maintenance expenditures (\$)
7. Total revenue (\$) received from sale of hydrogen and average retail price (\$/kg) for hydrogen sold
8. Other operational expenditures (\$)

(b) *DC Fast Charging Infrastructure (FCI) Pathways for Heavy-Duty (HD) charging sites.*

(1) *FCI Pathway Eligibility.* An HD-FCI FSE owner or their designee identified in subsection 95483(c)(2)(B) may submit an application to certify an FCI pathway subject to the following eligibility conditions:

- (A) The proposed FSE must be open and accessible to vehicles with a gross vehicle weight rating 14,001 lbs and greater.
- (B) The proposed HD-FCI chargers must be located in California, and if a shared HD-FCI site, must:
 1. Be located within five miles of a ready or pending electric vehicle Federal Highway Administration Alternative Fuel Corridor, which shall be determined by calculating the shortest great-circle distance between the proposed site and an Alternative Fuel Corridor; or
 2. Be located on or adjacent to a property used for heavy-duty vehicle overnight parking; or
 3. Have received capital funding from a local, State or Federal competitive grant program that includes location evaluation as criteria.
- (C) The FCI pathway application must be received on or before December 31, 2035.
- (D) The following FSE are not eligible for FCI crediting:

1. Any FSE that is permitted to operate prior to January 1, 2022; or
 2. Any FSE receiving or spending funds pursuant to any settlement related to any California or Federal regulation enforcement; or
 3. Any FSE built as a required mitigation measure pursuant to the California Environmental Quality Act.
- (E) Each HD-FCI FSE at a site must have a minimum nameplate power rating of 50 kW.
- (F) Each HD-FCI FSE must be networked and capable of monitoring and reporting its availability for charging.
- (2) *HD-FCI Application Requirements.* For each new HD-FCI FSE, the applicant must submit an application in the LRT-CBTS containing the following information:
- (A) Name and address of the owner of the proposed FSE.
 - (B) Contact person for the owner entity.
 1. Name
 2. Title or position
 3. Phone number
 4. Mobile phone number
 5. Email address
 - (C) Name, street address, latitude, longitude and a location description for each proposed HD-FCI FSE site.
 - (D) The nameplate power rating (kW), FCI power rating (kW), connector type(s), and model for each FSE.
 1. The FCI power rating of the FSE can be less than the nameplate power rating to meet the requirements of (F) below, but cannot exceed the nameplate power rating.
 2. The total FCI power rating for all HD-FCI FSEs claiming FCI credit at one address cannot exceed 40 MW.
 - (E) The total site power (kW) available to the chargers at the site, including from the electric grid, battery energy storage, and on-site

production. The total site power (kW) that can be supplied to all on-site FSEs must be greater than or equal to the sum of the FCI power rating of on-site FSEs certified to use the FCI pathway.

- (F) The FCI charging capacity for each HD-FCI FSE calculated using the following equation:

$$Cap_{FCI}^i = F_{HD}^{site} \times P_{FCI}^i \times 24$$

where:

Cap_{FCI}^i is the FCI charging capacity (kWh/day) for the HD-FCI FSE i

F_{HD}^{site} is the factor applied to the FSE based on HD-FCI site type:

- For an FSE at a shared HD-FCI charging site, 20%
- For an FSE at a private HD-FCI charging site, 10%

P_{FCI}^i is the FCI power rating for the HD-FCI FSE or 2,000 kW, whichever is less.

24 is the number of hours in a day (hr/day)

- (G) Expected date that the FSE will be operational.
- (H) Expected daily permitted hours of operation for the site. If the daily permitted hours are less than 24 hours, the applicant must provide documentation from a permitting authority demonstrating that daily permitted hours for the FSE are limited.
- (I) A signed attestation letter from the applicant attesting to the veracity of the information in the application packet. The attestation letter must be submitted as an electronic copy, be on company letterhead, be signed by an officer of the applicant with authority to attest to the veracity of the information in the application and to sign on behalf of the applicant, be from the applicant and not from an entity representing the applicant (such as a consultant or legal counsel), and include the following attestation:

I, an authorized representative of _____ (proposed FSE owner entity), attest to the veracity of the information submitted as part of the Heavy-Duty DC Fast Charging Infrastructure (HD-FCI) application, attest that the proposed FSE is not receiving funds pursuant to any enforcement settlement related to any California or Federal regulation, and declare that the information submitted accurately represents the anticipated and intended design and operation of the charging infrastructure. Further, I understand and agree to each of the statements in the attached application. I am a duly authorized officer with authority to attest to the veracity of the information in the application and to sign on behalf of the respective applicant.

I understand that the following information in the HD-FCI application will be made available on the LCFS website: Name of the Applicant Entity, Site Name, Site Owner, Site Address, Number and Type of Charging Units, Nameplate Power Rating for Each Unit, Accessible Hours, and Effective Date Range for FCI Crediting

By submitting this application, _____ (applicant entity) accepts responsibility for the information herein provided to CARB. I certify under penalty of perjury under the laws of the State of California that I have personally examined, and am familiar with, the statements and information submitted in this document. I certify that the statements and information submitted to CARB are true, accurate, and complete.

(J) CBI must be designated pursuant to the requirements described in section 95488.8(c).

(K) An application and supporting documents must be submitted electronically via the LRT-CBTS unless the Executive Officer has approved or requested in writing another format.

(3) *Application Approval Process.*

(A) The HD-FCI application must be approved by the Executive Officer before the applicant may generate FCI credits. HD-FCI applications will be evaluated for approval on a first come, first served basis.

1. If estimated potential FCI credits from all approved HD-FCI FSEs exceed 2.5 percent of deficits in the most recent quarter for which data is available, the Executive Officer will not approve additional FCI pathways for HD-FCI FSEs and will not accept additional HD-FCI applications until estimated potential FCI credits for approved HD-FCI FSEs are less than 2.5 percent of deficits.

2. If estimated potential FCI credits from an individual applicant's approved HD-FCI FSEs exceed 0.5 percent of deficits in the most recent quarter for which data is available, the Executive Officer will not approve additional FCI pathways for that applicant's HD-FCI FSEs or accept additional applications from that applicant for HD-FCI sites until the applicant's estimated potential FCI credits for HD-FCI sites are less than 0.5 percent of deficits.

(B) Estimated potential FCI credits for HD-FCI FSEs will be calculated using the following equation:

$$Credits_{HD-FCI}^{Potential} = Credits_{HD-FCI}^{Prior\ qtr} \times \frac{Cap_{HD-FCI}^{Approved}}{Cap_{HD-FCI}^{Operational}}$$

where:

$Credits_{HD-FCI}^{Potential}$ means the estimated potential HD-FCI credits from all approved HD-FCI FSEs;

$Credits_{HD-FCI}^{Prior\ qtr}$ means the total HD-FCI credits generated by operational HD-FCI FSEs in the most recent quarter for which data is available;

$Cap_{HD-FCI}^{Operational}$ means the total HD-FCI charging capacity of HD-FCI FSEs that were operational in the most recent quarter for which data is available; and

$Cap_{HD-FCI}^{Approved}$ means the total HD-FCI charging capacity of approved FSEs, both operational and nonoperational.

- (C) The estimated potential FCI credits HD-FCI FSEs for an individual applicant will be calculated using the same equation as in subsection (B) above, where:

$Credits_{HD-FCI}^{Potential}$ means the estimated potential FCI credits from the applicant's approved HD-FCI FSEs;

$Credits_{HD-FCI}^{Prior\ qtr}$ means the total FCI credits generated by the applicant for operational HD-FCI FSEs in the most recent quarter for which data is available;

$Cap_{HD-FCI}^{Operational}$ means the total HD-FCI charging capacity of the applicant's HD-FCI FSEs that were operational in the most recent quarter for which data is available; and

$Cap_{HD-FCI}^{Approved}$ means the total HD-FCI charging capacity of all of the applicant's approved HD-FCI FSEs, both operational and nonoperational.

- (D) After receipt of an application designated by the applicant as ready for formal evaluation, the Executive Officer shall advise the applicant in writing either that:

1. The application is complete, or
2. The application is incomplete, in which case the Executive Officer will identify which requirements of section 95486.4(b)(2) have not been met.
 - a. The applicant may submit additional information to correct deficiencies identified by the Executive Officer.
 - b. If the applicant is unable to achieve a complete application at the end of the quarter of the Executive Officer's formal evaluation, the application will be denied on that basis, and the applicant will be

informed in writing. The applicant may submit a new application for the site.

3. At any point during the application evaluation process, the Executive Officer may request in writing additional information or clarification from the applicant.
- (E) The Executive Officer shall not approve an application if the Executive Officer determines, based upon the information submitted in the application and any other available information, that the application does not meet requirements in subsections 95486.4(b)(1) and (b)(2). If the Executive Officer does not approve the application, the applicant will be notified in writing and the basis for the disapproval shall be identified.
- (F) If the Executive Officer determines the application has met all requirements for approval pursuant to subsections 95486.4(b)(1) and (b)(2), the Executive Officer will approve the application and provide an approval summary on the LCFS website including the site location and assigned identifier, number and type of FSE, nameplate power rating for each FSE, and effective date range for FCI pathway crediting.
- (G) *Crediting Period.* FCI crediting for HD-FCI FSEs is limited to 10 years, starting with the quarter of Executive Officer approval of the HD-FCI application.
- (4) *Requirements to Generate FCI Credits.* To generate credits for HD-FCI FSEs using the FCI pathways the following conditions must be met. The applicant must maintain, and submit to CARB upon request, records demonstrating adherence to these conditions.
 - (A) The applicant must update the nameplate and FCI power rating of any FSEs if different from the power ratings provided in the HD-FCI application. Any FSE design or operational information that deviates from the original HD-FCI application must be declared to the Executive Officer, and a new attestation must be submitted using the language in section 95486.4(b)(2).
 - (B) For a HD-FCI FSE available to the public, no obstructions or obstacles exist to preclude vehicle operators from entering the FSE premises, no access cards or personal identification (PIN) codes are required for the FSE to dispense fuel, and no formal or registered equipment training shall be required for individuals to use the FSE.
 - (C) For a HD-FCI FSE available to the public that charges a fee for service, the site must use a public point of sale terminal that

accepts all major credit and debit cards, and any fuel cards with which the site owner or designee has branded or partnered.

- (D) The FSEs at a fleet-owned shared HD-FCI charging site cannot be reserved for one HDV fleet for more than 12 hours each day. There is no limit on the length of reservations for FSEs at shared HD-FCI sites that are owned by third parties and designed for multi-fleet access so long as the site is shared and open to multiple fleets.
- (E) The FSE passed final inspection by the appropriate authority having jurisdiction and has a permit to operate.
- (F) The FSE owner has fully commissioned the FSE and has declared it fit to service heavy-duty vehicles.
- (G) The FSE registration must be completed pursuant to section 95483.2(b)(8) and the quantity of dispensed electricity must be reported as required in section 95491. The FSE must dispense electricity in a given quarter to generate FCI credits.
- (H) If the applicant fails to demonstrate FSE operability within 24 months of approval and if estimated potential FCI credits from all approved HD-FCI FSEs exceed 2.5 percent of deficits in the most recent quarter for which data is available, then FCI certification for the HD-FCI FSE will be canceled. The applicant can reapply for the same FSEs the following quarter.
- (I) The estimated cumulative value of FCI credits generated for the HD-FCI FSEs at a site in the prior quarters must be less than the difference between 1.5 times the initial capital expenditure of the charging site, including battery energy storage but not on-site generation, land, working capital, or off-site facilities, reported pursuant to section 95486.4(b)(6)(B)1. and the sum of total grant revenue or other external funding before the site is both approved and operational, pursuant to section 95486.4(b)(6)(B)5. and 6. in the prior quarter.
 - 1. The estimated value of FCI credits, for the purpose of this determination, shall be calculated using the number of FCI credits generated for the HD-FCI FSE in the quarter and the average LCFS credit price for that quarter published on the LCFS website.
 - 2. The estimated value calculated under this provision will be made available only to the respective reporting entity in LRT-CBTS and will not be published on the LCFS website.

3. This will not affect the reporting entity's ability to generate non-FCI LCFS credits for the electricity dispensed at the FSE.

- (5) **Calculation of FCI Credits.** FCI credits for HD-FCI FSEs will be calculated using the following equation for each FSE approved under this provision:

$$\begin{aligned} Credits_{HD-FCI} (MT) &= (CI_{standard}^{diesel} \times EER^{XD} - CI_{HD-FCI}) \times C_{Elec} \\ &\times (Cap_{HD-FCI}^i \times N \times UT - Elec_{disp}) \times C \end{aligned}$$

where:

$CI_{standard}^{diesel}$ is the carbon intensity benchmark for diesel for a given year as provided in sections 95484(e);

EER^{diesel} is the dimensionless Energy Economy Ratio for electricity relative to diesel as listed in Table 5;

CI_{FCI} is the California average grid electricity carbon intensity as listed in Table 7-1;

C_{Elec} is the conversion factor for electricity as listed in Table 4;

Cap_{HD-FCI}^i is the FCI charging capacity (kWh/day) for the HD-FCI FSE;

N is the number of days during the quarter;

UT is the uptime multiplier which is the fraction of time that the HD-FCI FSE is available for charging during the quarter;

$Elec_{disp}$ is the quantity of electricity dispensed during the quarter (kWh);

C is a factor used to convert credits to units of metric tons from gCO₂e and has the value of:

$$C = 1.0 \times 10^{-6} \frac{(MT)}{(gCO_2e)}$$

- (6) **Reporting and Recordkeeping Requirements.** The following must be reported to the Executive Officer each quarter as set forth in section 95491 before credits will be issued to the LRT account associated with an approved FCI pathway.

- (A) FSE availability. This is the percentage of hours the FSE is available for charging during the quarter.
- (B) Cost and revenue data. Provide an annual account of the following costs borne and revenues received for the site. The cost and revenue account must be included in the annual report submitted pursuant to section 95491.

1. Total capital expenditures (\$), including a breakdown of initial capital expenditure by equipment, labor, materials, and fees (\$). Costs for land, working capital and off-site facilities are not included in the initial capital expenditure.
2. Total delivered cost (\$) of electricity, including demand charges, and average delivered cost (\$/kWh) for electricity
3. Total maintenance costs (\$)
4. Total land rental cost (\$)
5. Total grant revenue or other external funding received towards capital expenditures (\$)
6. Total grant revenue or other external funding received towards operational and maintenance expenditures (\$)
7. Total revenue (\$) received from sale of electricity and average retail price (\$/kWh) for electricity sold
8. Other operational expenditures (\$)

NOTE: Authority cited: Sections 38510, 38530, 38560, 38560.5, 38571, 38580, 39600, 39601, 41510, 41511, and 43018 Health and Safety Code; 42 U.S.C. section 7545, and *Western Oil and Gas Ass'n v. Orange County Air Pollution Control District*, 14 Cal.3d 411, 121 Cal.Rptr. 249 (1975). Reference: Sections 38501, 38510, 39515, 39516, 38571, 38580, 39000, 39001, 39002, 39003, 39515, 39516, 41510, 41511 and 43000, Health and Safety Code; Section 25000.5, Public Resources Code; and *Western Oil and Gas Ass'n v. Orange County Air Pollution Control District*, 14 Cal.3d 411, 121 Cal.Rptr. 249 (1975).

§ 95491.2. Measurement Accuracy and Data Provisions.

All Fuel Pathway Applications, Annual Fuel Pathway Reports, Quarterly Fuel Transactions Reports, Crude Oil Quarterly and Annual Volumes Reports, Project Reports, and Low-Complexity/Low-Energy-Use Refinery Reports subject to third-party validation and verification must meet the following requirements:

(a) Measurement Accuracy

- (1) Calibration Requirement. All measurement devices that log or record data must comply with the manufacturer-recommended calibration frequency and precision requirements. If manufacturer-recommendations are not provided, the measurement devices must be calibrated every six years.
 - (A) All flow meters and other measurement devices that provide data used to calculate LCFS credits must be calibrated according to the manufacturer's recommended procedures. If manufacturer's recommended procedures do not exist, then a method that meets

the ± 5.00 percent accuracy requirements of this section must be documented in the monitoring plan. The calibration method(s) used must be documented in the monitoring plan required under section 95488.10(c), and are subject to verification under this subarticle and review by the Executive Officer to ensure that measurements used to calculate LCFS credits have met the accuracy requirements of this section.

- (B) All flow meter and other measurement devices covered by this section, regardless of type, must be selected, installed, operated, and maintained in a manner to ensure accuracy within ± 5.00 percent.
- (2) Requests to Postpone Calibration. For units and processes that operate continuously with infrequent outages, it may not be possible to meet manufacturer-recommended calibration deadlines for measurement devices. In such cases, the owner or operator may submit a written request to the Executive Officer to postpone calibration or inspection until the next scheduled maintenance outage. Such postponements are subject to the procedures of subsections (A) through (B) below and must be documented in the monitoring plan.
- (A) A written request for postponement must be submitted to the Executive Officer not less than 30 days before the required calibration, recalibration or inspection date. The Executive Officer may request additional documentation to validate the operator's claim that the device meets the accuracy requirements of this section. The operator shall provide any additional documentation to CARB within 14 days of a request by CARB.
 - (B) The request must include:
 - 1. The date of the required calibration, recalibration, or inspection;
 - 2. The date of the last calibration or inspection;
 - 3. The date of the most recent field accuracy assessment, if applicable;
 - 4. The results of the most recent field accuracy assessment, if applicable, clearly indicating a pass/fail status;
 - 5. The proposed date for the next field accuracy assessment, if applicable;
 - 6. The proposed date for calibration, recalibration, or inspection which must be during the time period of the next scheduled

shutdown. If the next shutdown will not occur within three years, this must be noted and a new request must be received every three years until the shutdown occurs and the calibration, recalibration or inspection is completed.

7. A description of the meter or other device, including at a minimum:
 - a. Make,
 - b. Model,
 - c. Install date,
 - d. Location,
 - e. Parameter measured by the meter or other device, including the data capture rate,
 - f. Description of how data from the meter or other device is used,
 - g. Calibration or inspection procedure,
 - h. Reason for delaying calibration or inspection,
 - i. Proposed method to ensure that the precision requirements listed by the manufacturer are upheld,
 - j. Name, title, phone number and e-mail of contact person capable of responding to questions regarding the device.

(b) *Missing Data Provisions.*

- (1) Meter Record, Accuracy, or Calibration Requirements Not Met. If a measurement device is not functional, not calibrated within the time period recommended by the manufacturer, fails a field accuracy assessment, or otherwise does not meet the measurement accuracy requirements of this section, the reporting entity must use the missing data provisions below.
- (2) Missing Data Provisions.
 - (A) For Fuel Pathway Applications, Annual Fuel Pathway Reports, and Quarterly Fuel Transactions Reports, the missing data substitution methods in Table 13 shall be used.

Table 13. Missing Data Substitution Requirements

<i>Data Capture Rate</i>	<i>Data Substitution Method</i>
> 95.00%	Average of quality assured values from 30 days before and after
>90.00-95.00%	Use the 10 th or 90 th percentile of quality assured values from the current data year, whichever is more conservative
80.00-90.00%	Use the highest or lowest quality assured value from current data year, whichever is more conservative
< 80.00%	Use the highest or lowest quality assured value from the previous two years, whichever is more conservative.

The data capture rate for the data year must be calculated as follows:

$$\text{Data capture rate} = S / T \times 100\%$$

Where:

S = Number of measurement periods (e.g., days or weeks) in the data year for which valid measurements are available. Do not include monitoring periods with no activity.

T = Total number of measurement periods (e.g., days or weeks) in the data year.

If all the quality assured data for the time periods required under Table 13 do not exist or it is not possible to replace the data using the methods in Table 13, the reporting entity must request approval from the Executive Officer to use an alternate method as early as possible but no later than 10 days after submitting their annual or quarterly report.

- (B) For report types not identified in section 95491.2(b)(2)(A), if missing data exists, the entity may use a temporary method for a period not to exceed six months, or may submit for Executive Officer approval an alternate method of reporting the missing data as early as possible but no later than 10 days after report submittal. Alternate methods are required in all instances where missing data exceeds six months. The Executive Officer will review the alternate method to determine if it meets the ± 5.00 percent accuracy requirements of this section. If the alternate method meets the accuracy requirements, the Executive Officer will approve the alternative method. If the alternate method is not capable of meeting the accuracy requirements, the entity must apply a conservative factor in the alternative method. For alternative methods that cannot meet the ± 5.00 percent accuracy requirements, the entity must apply a conservative factor of 5.00 percent per month of missing data to a maximum of 50.00 percent to the replacement value. For the first month of missing data, a 5.00 percent factor will be applied, for the second month of missing data a 10.00 percent factor will be

applied, and so on, until, beginning the tenth month of missing data, a 50.00 percent conservative factor is applied for the duration of the alternative method. The conservative factor does not reset across quarters or years.

- (C) If alternate method requests are not submitted within the timeframes identified in this section, no reporting entity may generate LCFS credits associated with the time period for which there is missing data. For deficit generating entities that do not submit an alternate method request within the timeframes identified in this section, the Executive Officer will assign a conservative alternate method for use during the missing data timeframe using the requirements of Table 13.
 - (D) Replacement of missing data that utilize methods that extend beyond a quarter do not constitute retroactive crediting per section 95486(a)(2).
- (3) Force Majeure Events. In the event of a facility shutdown or disruption drastically affecting production attributable to a force majeure event, the Executive Officer must be notified within 90 days of the beginning of the shutdown or disruption. The Executive Officer may request additional supporting documents demonstrating the connection between the shutdown or disruption and the force majeure event. Entities must include operational data from the force majeure period when submitting applicable reports for quarterly or annual verification.

NOTE: Authority cited: Sections 38510, 38530, 38560, 38560.5, 38571, 38580, 39600, 39601, 41510, 41511, and 43018 Health and Safety Code. Reference: Sections 38501, 38510, 39515, 39516, 38571, 38580, 39000, 39001, 39002, 39003, 39515, 39516, 41510, 41511 and 43000, Health and Safety Code; Section 25000.5, Public Resources Code; and *Western Oil and Gas Ass'n v. Orange County Air Pollution Control District*, 14 Cal.3d 411, 121 Cal.Rptr.