

# **Appendix A-2**

## **Proposed Regulation Order**

### *Proposed Amendments to the Low Carbon Fuel Standard Regulation*

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

## Proposed Regulation Order

Title 17, California Code of Regulations

Adopt Sections 95486.3 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.**

- (a) *Medium- and Heavy-Duty Hydrogen Refueling Infrastructure (MHD-HRI) Pathways.*
  - (1) *MHD-HRI Pathway Eligibility.* A hydrogen station owner or designee may submit an application to certify an MHD-HRI pathway subject to the following eligibility conditions:
    - (A) The proposed MHD-HRI station must be open and accessible to vehicles with a gross vehicle weight rating 8,501 lbs and greater.
    - (B) The proposed MHD-HRI station must be:
      - 1. Located in California; and
      - 2. Located within one mile of any ready or pending hydrogen Federal Highway Administration Alternative Fuel Corridor or on or adjacent to a property used for medium or heavy-duty vehicle overnight parking, or has received capital funding from a State or Federal competitive grant program that includes location evaluation as criteria.
    - (C) The MHD-HRI pathway application must be received on or before December 31, 2030.
    - (D) Any station built as a required mitigation measure pursuant to the California Environmental Quality Act or pursuant to any settlement related to any California or Federal regulation enforcement is not eligible for MHD-HRI crediting:
      - 1. Any FSE 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) *MHD-HRI Application Requirements.* For each 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 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 most recent 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 MHD-HRI refueling capacity for a station is calculated using the following equation:

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

where:

$Cap_{MHD-HRI}^i$  is the MHD-HRI refueling capacity (kg/day) for the FSE  $i$ ; and

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

- For a shared MHD-HRI station, 50%



(3) *Application Approval Process*

- (A) The MHD-HRI application must be approved by the Executive Officer before the station owner may generate hydrogen refueling infrastructure credits. MHD-HRI applications will be evaluated for approval on a first come, first served basis.
1. If estimated potential MHD-HRI credits from all approved stations exceed 2.5 percent of deficits in the most recent quarter for which data is available, the Executive Officer will not approve additional MHD-HRI pathways and will not accept additional applications until estimated potential MHD-HRI credits are less than 2.5 percent of deficits.
  2. If estimated potential MHD-HRI credits from an individual applicant's approved stations exceed 1 percent of deficits in the most recent quarter for which data is available, the Executive Officer will not approve additional MHD-HRI pathways or accept additional applications from that applicant until the applicant's estimated potential MHD-HRI credits are less than 1 percent of deficits.
- (B) Estimated potential MHD-HRI credits will be calculated using the following equation:

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

where:

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

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

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

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

- (C) 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 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.
- (D) 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). The Executive Officer may reject an application if satisfactory justification is not provided for station location pursuant to subsection 95486.2(a)(2)(J). 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.
- (E) 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 station location and assigned identifier, number of dispensing units, MHD-HRI refueling capacity, and effective date range for MHD-HRI pathway crediting.
- (F) *Crediting Period.* MHD-HRI crediting is limited to 10 years starting with the quarter following Executive Officer approval of the application.
- (4) *Requirements to Generate MHD-HRI Credits.* To generate credits using HRI pathways the station must meet the following conditions. The station owner must maintain, and submit to CARB upon request, records demonstrating adherence to these conditions.

- (A) The applicant must update the MHD-HRI refueling capacity if different from the design capacity provided in the application. Any station design or operational information that deviates from the original application must be declared to the Executive Officer, and a new attestation must be submitted pursuant to section 95486.3(a)(2).
- (B) If an MHD-HRI station is available to the public and charges a fee for service, it must use a public point of sale terminal that accepts major fuel, credit, and debit cards.
- (C) 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 retail 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.
- (D) 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.
- (E) The station must dispense hydrogen in a given quarter to generate MHD-HRI credits. 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 gCO<sub>2</sub>e/MJ or less before January 1, 2030, and 90 gCO<sub>2</sub>e/MJ or less thereafter, and
  - 2. Renewable content of 40 percent or greater before January 1, 2030, and 80 percent thereafter.

- (F) If the applicant fails to demonstrate station operability within 24 months of approval and if estimated potential MHD-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.
- (G) The estimated cumulative value of MHD-HRI credits generated for the station in the prior quarter must be less than the difference between 1.5 times the initial capital expenditure reported pursuant to section 95486.3(a)(6)(B)1 and the initial grant revenue or other funding reported pursuant to section 95486.3(b)(6)(B)5 and section 95486.3(b)(6)(B)6 in the prior quarter.
1. The estimated value of MHD-HRI credits, for the purpose of this determination, shall be calculated using the number of MHD-HRI credits generated for the station 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 credits for the hydrogen dispensed at the FSE.
- (5) *Calculation of MHD-HRI Credits.* MHD-HRI credits will be calculated using the following equation:

$$\begin{aligned}
 Credits_{MHD-HRI} (MT) &= (CI_{Standard}^{diesel} \times EER^{XD} - CI_{MHD-HRI}) \times E_{H2} \\
 &\times (Cap_{MHD-HRI} \times N \times UT - H2_{disp}) \times C
 \end{aligned}$$

where:

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

$EER^{XD}$  is the dimensionless Energy Economy Ratio for H2/FCV relative to diesel (XD = "Diesel") as listed in Table 5;

$CI_{MHD-HRI}$  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;

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

$N$  is the number of days during the quarter;



$UT$  is 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  $gCO_2e$  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 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. Any period of time for which a portion of the station capacity is not available for complete fills 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 ( $gCO_2e/MJ$ ) 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 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 Medium- and Heavy-Duty Fast Charging Infrastructure (MHD-FCI) Pathways.*

- (1) *MHD-FCI Pathway Eligibility.* An FSE owner or designee may submit an application to receive 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 8,501 lbs and greater.
  - (B) The proposed MHD-FCI chargers must be:
    1. Located in California; and
    2. Located within one mile of a reading or pending electric vehicle Federal Highway Administration Alternative Fuel Corridor or on or adjacent to a property used for medium or heavy-duty vehicle overnight parking, or has received capital funding from a State or Federal competitive grant program that includes location evaluation as criteria.
  - (C) The MHD-FCI pathway application must be received on or before December 31, 2030.
  - (D) The following FSE are not eligible for MHD-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 FSE at an MHD-FCI site must have a minimum nameplate power rating of 250 kW.
  - (F) Each FSE must be networked and capable of monitoring and reporting its availability for charging.
- (2) *MHD-FCI Application Requirements.* 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 FSE site.
- (D) The number of FSEs. The total number for all FSEs claiming MHD-FCI credit owned by a single applicant within ¼ mile of an MHD-FCI site cannot exceed ten.
- (E) The nameplate power rating (kW), connector type(s), and model for each FSE. The total nameplate power rating for all FSEs claiming MHD-FCI credit owned by a single applicant within ¼ mile of an MHD-FCI site cannot exceed 10 MW.
- (F) The total site power (kW) available to the MHD-FCI chargers, including from the electric grid, battery energy storage, and on-site production. The total site power (kW) supplied to the MHD-FCI FSEs must be greater than or equal to the sum of the nameplate power rating of the MHD-FCI FSEs.
- (G) The MHD-FCI charging capacity for each FSE calculated using the following equation:

$$Cap_{MHD-FCI}^i = F^{site} \times P_{MHD-FCI}^i \times 24$$

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

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

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

$P_{MHD-FCI}^i$  is the lesser of the nameplate power rating for the FSE or 2,000 kW.

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

- (H) Expected date that the FSE will be operational.
- (I) 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.
- (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 \_\_\_\_\_ (proposed FSE owner entity), attest to the veracity of the information submitted as part of the Medium- and Heavy-Duty DC Fast Charging Infrastructure (MHD-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 MHD-FCI application will be made available on the LCFS website: Name of the Applicant Entity, Site Name, Site Address, Number and Type of Charging Units, Nameplate and Effective Simultaneous Power Rating for Each Unit, 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.

- (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 MHD-FCI application must be approved by the Executive Officer before the station owner may generate hydrogen refueling infrastructure credits. MHD-FCI applications will be evaluated for approval on a first come, first served basis.

1. If estimated potential MHD-FCI credits from all approved stations exceed 2.5 percent of deficits in the most recent quarter for which data is available, the Executive Officer will not approve additional MHD-FCI pathways and will not accept additional applications until estimated potential MHD-FCI credits are less than 2.5 percent of deficits.
2. If estimated potential MHD-FCI credits from an individual applicant's approved stations exceed 0.5 percent of deficits in the most recent quarter for which data is available, the Executive Officer will not approve additional MHD-FCI pathways or accept additional applications from that applicant until the applicant's estimated potential MHD-HRI credits are less than 0.5 percent of deficits.
3. If estimated potential MHD-FCI credits from approved private MHD-FCI stations exceed 1 percent of deficits in the most recent quarter for which data is available, the Executive Officer will not approve additional private MHD-FCI pathways and will not accept additional applications for private MHD-FCI stations until private MHD-FCI stations' estimated potential MHD-HRI credits are less than 1 percent of deficits.

Estimated potential MHD-FCI credits will be calculated using the following equation:

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

where:

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

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

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

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

- (B) 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 95486.2(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.
- (C) 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.
- (D) 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 FSE ID, number and type of FSE, nameplate power rating for each FSE, and effective date range for MHD-FCI pathway crediting.
- (E) *Crediting Period.* MHD-FCI crediting is limited to 10 years, starting with the quarter of Executive Officer approval of the application.
- (4) *Requirements to Generate MHD-FCI Credits.* To generate credits using MHD-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 power rating of FSEs if different from the power rating provided in the application. Any FSE design or operational information that deviates from the original 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) The FSE at a shared MHD-FCI charging site cannot be reserved for one MHDV fleet for more than 12 hours each day.
- (C) If a MHD-FCI FSE is available to the public and charges a fee for service, it must use a public point of sale terminal that accepts all major fuel, credit, or debit cards.
- (D) The FSE passed final inspection by the appropriate authority having jurisdiction and has a permit to operate, and a registered professional engineer has determined that the FSE is accessible by Class 8 heavy-duty vehicles.
- (E) The FSE owner has fully commissioned the FSE and has declared it fit to service medium- and heavy-duty vehicles.
- (F) The FSE registration must be completed pursuant to section 95483.3(b)(8) and the quantity of dispensed electricity must be reported as required in section 95491.
- (G) If the applicant fails to demonstrate FSE operability within 24 months of approval and if estimated potential MHD-FCI credits from all approved FSEs exceed 2.5 percent of deficits in the most recent quarter for which data is available, MHD-FCI eligibility for the FSE will be canceled. The applicant can reapply for the same FSEs the following quarter.
- (H) The estimated cumulative value of MHD-FCI credits generated for the FSE in the prior quarter must be less than the difference between 1.5 times the initial expenditure of the charging site, including battery energy storage but not on-site generation, reported pursuant to section 95486.3(b)(6)(B)1 and the total grant revenue or other funding for capital, operational and maintenance expenses reported pursuant to section 95486.3(b)(6)(B)5 and (B)6 in the prior quarter.
  - 1. The estimated value of MHD-FCI credits, for the purpose of this determination, shall be calculated using the number of MHD-FCI credits generated for the 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-MHD-FCI LCFS credits for the electricity dispensed at the FSE.
- (5) **Calculation of MHD-FCI Credits.** MHD-FCI credits will be calculated using the following equation for each FSE approved under this provision:

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

where:

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

$EER^{XD}$  is the dimensionless Energy Economy Ratio for electricity relative to diesel (XD = "diesel") as listed in Table 5;

$CI_{MHD-FCI}$  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;

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

$N$  is the number of days during the quarter;

$UT$  is the uptime multiplier which is the fraction of time that the 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<sub>2e</sub> 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.
  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 reasonable method must be identified that meets the accuracy requirements of this section. The calibration method(s) used must be documented in the monitoring plan required under section 95488.10(b), 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  $\pm 5.00$  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 report types not identified in section 95491.2(b)(2)(B), 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 and the Executive Officer may evaluate on a case-by-case basis.

- (B) 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 for Fuel Pathways**

<b><i>Data Capture Rate</i></b>	<b><i>Data Substitution Method</i></b>
> 95%	Average of quality assured values from 30 days before and after
90-95%	Use the 10 <sup>th</sup> or 90 <sup>th</sup> percentile of quality assured values from the current data year, whichever is more conservative
80-90%	Use the highest or lowest quality assured value from current data year, whichever is more conservative
< 80%	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.

- (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.

- (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.