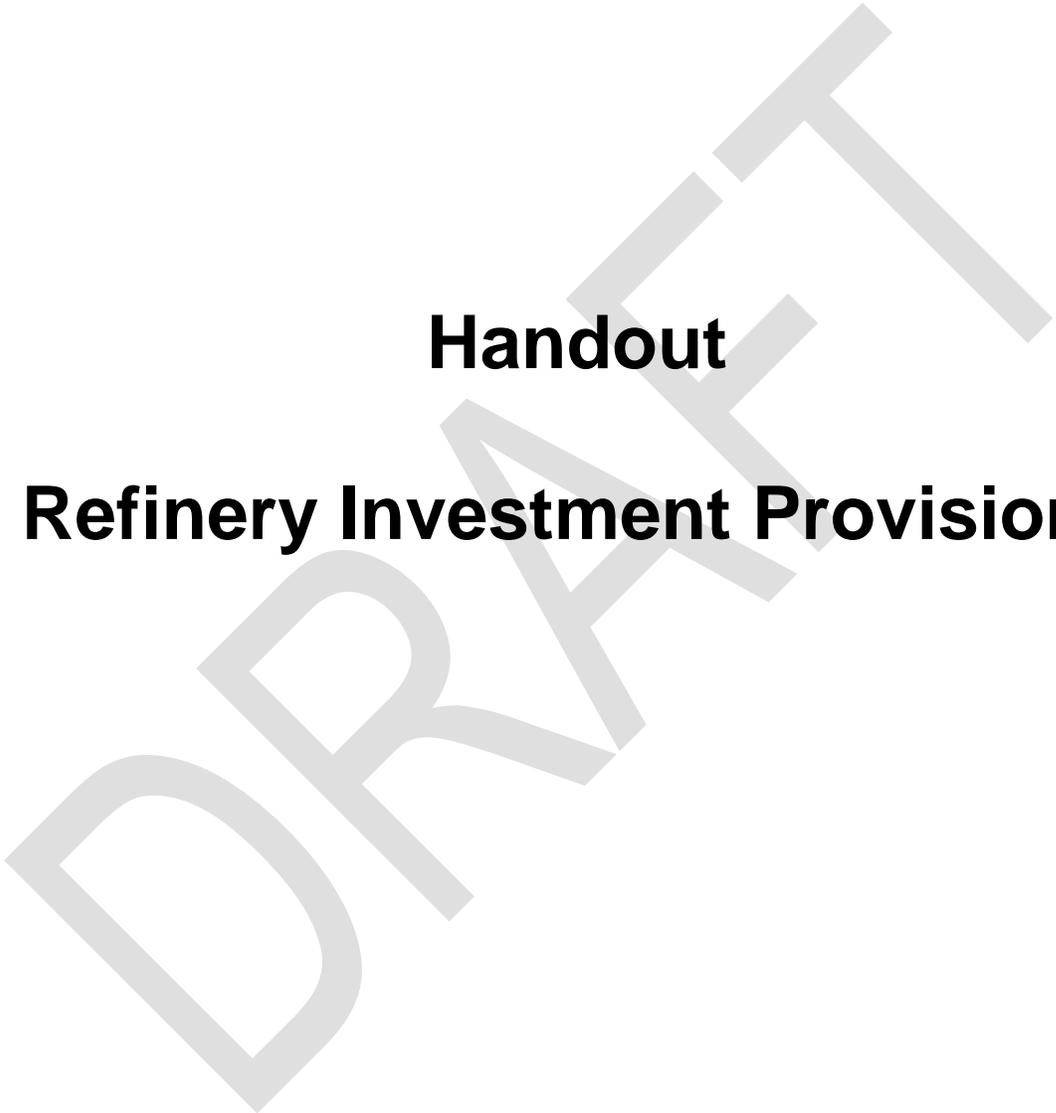


Handout

Refinery Investment Provisions



Subchapter 10. Climate Change
Article 4. Regulations to Achieve Greenhouse Gas Emission Reductions

Subarticle 7. Low Carbon Fuel Standard

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§ 95489. Provisions for Petroleum-Based Fuels. [from 95486(b) Table 8, page 67]

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(f) Refinery Investment Credit. A refinery may receive credit for reducing greenhouse gas emissions from its facility.

(1) General Requirements.

(A) The refinery greenhouse gas emissions reduction project must be implemented during or after the year 2015 and must be approved pursuant to this section before the refinery can receive credit.

(B) The refinery greenhouse gas emissions reduction project must achieve a carbon intensity reduction from the comparison baseline of at least 0.1 gCO₂e/MJ.

(2) Calculation of Credits.

$$Credits_{RIC}^{XD} = \Delta CO_2e \times T$$

where

ΔCO_2e is the reduction in tons CO₂e (a positive value) associated with the refinery greenhouse gas reduction project as compared to the refinery without the greenhouse gas reduction project;

$$T = \left(\frac{Volume^{XD}}{Volume^{Total}} \right)$$

where

T = percentage of transportation fuel produced;

$Volume^{XD}$ = volume of CARBOB and CARB Diesel output in barrels (bbl);

and

$Volume^{Total}$ = total volume of product output in barrels (bbl).

$$\Delta CO_2e = CO_2e_{pre} - CO_2e_{post}$$

where

$$CO_2e_i = (CO_2) + (CH_4)(25) + (N_2O)(298) + \text{electricity} + \text{thermal}$$

where

CO₂ is as reported in CCR, Title 17, section 95100 - 95158;

CH₄ is as reported in CCR, Title 17, section 95100 – 95158;

N₂O is as reported in CCR, Title 17, section 95100 – 95158;

electricity is imported electricity minus exported electricity per year converted to tons CO₂e by using 0.431 tons CO₂e /MWh;

thermal = imported thermal energy minus exported thermal energy per year converted to tons CO₂e by using 0.0663 tons CO₂e/MMBtu; and i is pre- or post-project.

(3) Application Contents and Submittal. Unless otherwise noted, an application for refinery investment credits shall comply with the following requirements:

(A) An application must contain the following summary material:

1. A complete description of the greenhouse gas emissions reduction project and how emissions are reduced;
2. An engineering drawing(s) or process flow diagram(s) that illustrates the investment and clearly identifies the system boundaries, relevant process equipment, mass flows, and energy flows necessary to calculate the refinery investment credits; and
3. A preliminary estimate of the refinery investment credit, calculated as required in section 95489(f)(2), including descriptions and copies of production and operational data or other technical documentation utilized in support of the calculation. The application must contain process-specific data showing that the reductions are part of the transportation fuel pathway.

(B) An application shall include a list of references covering all information sources used in the calculation of refinery investment credit. The reference list shall, at a minimum, identify the author(s), the author's affiliation, the title of the referenced document, the publisher, and the publication date. All in-text parenthetical citations shall correspond to complete publication information

provided in the list of references, and provide pages cited. For internet citations, the reference shall include the universal resource locator (URL) address of the citation, as well as the date the website was last visited.

- (C) An application shall include a signed transmittal letter from the applicant attesting to the veracity of the information in the application packet and declaring that the information submitted accurately represents the actual and/or intended long-term, steady-state operation of the refinery greenhouse gas emissions reduction project described in the application packet. The transmittal letter shall be the original 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.
- (D) All documents (including spreadsheets and other items not in a standard document format) that are claimed to contain confidential business information (CBI) must prominently display the phrase "Contains Confidential Business Information" above the main document title and in a running header. Additionally, a separate, redacted version of such documents must also be submitted. The redacted versions must be approved by the applicant for posting to a public LCFS web site. Specific redactions must be replaced with the phrase "Confidential business information has been deleted by the applicant." This phrase must be displayed clearly wherever CBI has been redacted. If applicant claims that information it submits is confidential, it must also provide contact information required in section 91011.
- (E) An applicant that submits any information or documentation in support of a proposed refinery investment credit must include a written statement clearly showing that the applicant understands and agrees that all information in the application not identified as confidential business information is subject to public disclosure pursuant to CCR, title 17, sections 91000-91022 and the California Public Records Act (Government Code sec. 6250 et seq.), and that information claimed by the applicant to be confidential might later be disclosed under section 91022 if the state board determines the information is subject to disclosure.
- (F) An application, supporting documents, and all other relevant data or calculation or other documentation, except for the transmittal letter described in section 95489(f)(3)(C), shall be submitted electronically, such as via e-mail or an online-based interface,

unless the Executive Officer has approved or requested another format.

- (4) Application Approval Process. An application must be approved by the Executive Officer before the greenhouse gas emissions reduction project can generate credits under the LCFS regulation.
- (A) Within 30 calendar days of 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 95489(f) have not been met. The applicant may submit additional information to correct deficiencies identified by the Executive Officer. If the applicant is unable to achieve a complete application within 180 days 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.
- (B) After accepting an application as complete, the Executive Officer will post the application at <http://www.arb.ca.gov/fuels/lcfs/lcfs.htm>. Public comments will be accepted for 10 calendar days following the date on which the application was posted. Only comments related to potential factual or methodological errors may be considered. The Executive Officer will forward to the applicant all comments identifying potential factual or methodological errors. Within 30 days, the applicant shall either submit revisions to its application to the Executive Officer, or submit a detailed written response to the Executive Officer explaining why no revisions are necessary.
- (C) If the Executive Officer finds that an application meets the requirements set forth in section 95489(f), the Executive Officer will take final action to approve the greenhouse gas emissions reduction project. The Executive Officer may prescribe conditions of approval that contain special limitations, recordkeeping and reporting requirements, and operational conditions that the Executive Officer determines should apply to the project. . If the Executive Officer finds that an application does not meet the requirements of section 95489(f), the application will not be approved, and the applicant will be notified in writing, and the basis for the disapproval shall be identified.

- (5) Credit Review. Each refinery that has an approved refinery investment credit must solicit Executive Officer review and re-approval of the credit every three years.
- (A) Refineries shall submit process and emissions data to the Executive Officer for review and approval that confirm the greenhouse gas emission reductions estimated in the original submittal pursuant to the process in section 95489(f)(3) and (4). Failure to submit data for review every three years will result in automatic revocation of the refinery investment credit.
- (B) When the Executive Officer determines that the carbon intensity reduction from refinery investment credits has decreased by 10 percent or more from the original reduction, the refinery investment credit shall be adjusted to reflect the new credit. If a revised carbon intensity reduction drops below 0.1 gCO₂e/MJ compared to the refinery's baseline without the refinery greenhouse gas reduction project, the refinery investment credit shall be canceled.
- (6) Recordkeeping. For each approved refinery greenhouse gas emissions reduction project, the refinery must compile and retain records pursuant to section 95491(b) showing compliance with all limitation and recordkeeping requirements identified by the Executive Officer pursuant to section 95489(f)(4)(C), above.