State of California

Air Resources Board

Attachment B to Executive Order R-25-001

A. Introduction

This attachment provides the basis for a California Air Resources Board (CARB) determination that no subsequent or supplemental environmental analysis is required for the April 2025 Proposed Modifications (Proposed Modifications) to the Amendments to the Low Carbon Fuel Standard Regulation (LCFS Amendments). A brief explanation of this determination is provided in Section D below. CARB's regulatory program—which involves the adoption, approval, amendment, or repeal of standards, rules, regulations, or plans for the protection and enhancement of the State's ambient air quality—has been certified by the California Secretary for Natural Resources under Public Resources Code section 21080.5 of the California Environmental Quality Act (CEQA) (Cal. Code Regs., tit. 14, § 15251, subd. (d)). Public agencies with certified regulatory programs are exempt from certain CEQA requirements, including but not limited to, preparing environmental impact reports, negative declarations, and initial studies. CARB, as a lead agency, prepares a substitute environmental document (referred to as an "Environmental Impact Analysis" or "EIA") as part of the Staff Report to comply with CEQA (Cal. Code Regs., tit. 17, §§ 60000-60008).

This analysis serves as an addendum to the prior EIA, *Final Environmental Impact Analysis for the Proposed Amendments to the Low Carbon Fuel Standard Regulation*, (CARB 2024) or Final EIA,[1] to explain CARB's determination that no additional environmental analysis is required for the proposed modifications to the LCFS Amendments (Third 15-Day Changes or April 2025 Proposed Modifications or Proposed Modifications).

B. Prior Environmental Analysis

CARB previously prepared the Final EIA under its certified regulatory program (Cal. Code Regs., tit. 17, §§ 60000-60008) to comply with the CEQA requirements. The Final EIA provided an environmental analysis, which focused on reasonably foreseeable potentially significant adverse and beneficial impacts on the physical environment resulting from reasonably foreseeable compliance responses. CARB responded in writing to comments received on the Draft EIA and Recirculated Draft EIA in the Response to Environmental Impact Analysis Comments document that was made publicly available on November 6, 2024. At the public hearing on November 8, 2024, the Board adopted Resolution 24-14 certifying the Final EIA and adopting the findings and statement of overriding considerations. A Notice of Decision was filed with the Secretary

[1] California Air Resources Board, Final Environmental Impact Analysis for the Proposed Amendments to the Low Carbon Fuel Standard Regulation. November 6, 2024.

of State on November 22, 2024. All associated documents are available at *https://ww2.arb.ca.gov/rulemaking/2024/lcfs2024.*

The Final EIA provided an analysis of the potentially significant adverse and beneficial environmental impacts resulting from implementation of the LCFS Amendments and their associated reasonably foreseeable compliance responses. In addition, the Final EIA used a conservative approach and considered some environmental impacts as potentially significant because of the inherent uncertainties in the relationship between physical actions that were reasonably foreseeable under the rulemaking and environmentally sensitive resources or conditions that may be affected.

Compliance responses to the LCFS Amendments were expected to result in beneficial impacts to greenhouse gas emissions.

The Final EIA also concluded that there could be less-than-significant impacts to air quality (odor-related), energy demand, mineral resources (short-term construction-related), population and housing, public services, recreation. In addition, it was determined that potentially significant and unavoidable adverse impacts to the following resource areas could occur: aesthetics, agriculture and forestry, air quality, biological resources, cultural resources, geology and soils, hazards and hazardous materials, hydrology and water quality, land use and planning, mineral resources (long-term operational related), noise, transportation, tribal cultural resources and utilities and service systems. While many of the identified potentially significant adverse impacts could be reduced to a less-than-significant level by mitigation that can and should be implemented by local lead agencies, authority to do so is beyond the purview of CARB. The authority to determine project-level impacts and require project-level mitigation lies with land use and/or permitting agencies for individual projects, causing inherent uncertainty in the degree of mitigation that may ultimately be implemented to reduce potentially significant impacts. Consequently, the Final EIA took the conservative approach in its post-mitigation significance conclusion and disclosures of potentially significant and unavoidable adverse impacts, for CEQA compliance purposes. The significance determinations are discussed in greater detail in the Final EIA. As discussed below, the Proposed Modifications to the LCFS Amendments would not constitute a substantial change or new information resulting in any new significant effects or a substantial increase in the severity of previously identified significant effects.

C. The Proposed Regulatory Action

CARB submitted the final rulemaking package to the Office of Administrative Law (OAL) on January 3, 2025. On February 18, 2025, OAL disapproved the rulemaking package. On February 25, 2025, CARB received a “Decision of Disapproval of Regulatory Action” from OAL identifying 26 proposed regulatory provisions that OAL determined did not comply with the clarity standard of the Administrative Procedure Act (APA). OAL also noted that the final regulation text and documents incorporated by reference required non-substantive revisions pursuant to Section 40, Title 1 of the California Code of Regulations.

As outlined in Government Code section 11349.4, CARB may rewrite and resubmit the amendments to OAL within 120 days of its receipt of OAL’s decision. On April 4, 2025,

CARB released the Third 15-Day Changes for a public review and comment period through April 21, 2025. These Third 15-Day Changes, designed to address concerns noted by OAL and further improve alignment with the objectives of the rulemaking, include the following:

- In sections 95482(f); 95482(g); 95483.1(a)(1)(D); 95483.2; 95486.1 (c)(1); 95486.1(g); 95486.2(a)(3)(A); 95486.2(b)(3)(A)(1); 95486.2(b)(3)(A)(2); 95486.4(a)(1)(B)(1); 95486.4(a)(2)(E), 95486.4(b)(1)(B)(1); 95488(c)(1); 95488(c)(2); 95488.3(b)(9); 95488.8(g)(1)(D)(3)(e); 95488.9(g)(5)(C)(1); 95488.9(g)(6)(C)(2); 95488.9(g)(7)(C)(1); 95488.9(g)(8)(A); 95488.9(g)(8)(H); 95488.9(g)(8)(I); 95488.9(g)(8)(J); 95488.9(g)(8)(K); 95488.10(a)(6); 95488.10(b); 95489(c)(3)(B); 95489(e)(4)(B); 95489(f)(4)(B); 95491(b)(2); 95491(e)(5)(A)(4); 95491.2(a)(1)(A); 95491.2(b)(2)(A); 95491.2(b)(2); and 95491.2(b)(2)(C) staff proposes minor changes to promote clarity and consistency.
- In section 95481(a), staff proposes to add, delete, or modify a number of definitions, including but not limited to: “Break ground,” “Clean Fuel Reward,” “Battery Electric Motorcycle,” “LCFS Data Management System,” “Quality-assured data,” and “Standard value.”
- In subsection 95482(h), staff proposes to allow hydrogen produced with accompanying carbon capture and sequestration technology to count toward the 80% low carbon intensity (low-CI) hydrogen requirement by 2030. Staff also proposes to exclude hydrogen produced with accompanying carbon capture and sequestration technology from the previously proposed phaseout of LCFS crediting eligibility for fossil hydrogen by 2035. This modification would allow the LCFS to further support growing supplies of low-CI hydrogen in alignment with federal incentives and investment in carbon dioxide removal technology as well as California’s 2022 Scoping Plan for Achieving Carbon Neutrality (2022 Scoping Plan Update).
- In subsection 95483(c), staff proposes to remove an option for the Executive Officer to direct a portion of base credits to Original Equipment Manufacturers (OEMs) following a specified regulatory trigger. With that option removed, all base credits will be allocated to Electrical Distribution Utilities (EDUs) following the regulatory default, and a portion of these credit proceeds will be allocated to a Clean Fuel Reward program following the requirements listed in section 95483(c)(1)(A). As specified by the definition of the term as amended in section 95481, the Clean Fuel Reward program will provide reductions in price for electric medium-and heavy-duty vehicles, in support of the State’s climate goals, Executive Order N-79-20, and the 2022 Scoping Plan Update. The program is designed to support emissions reductions from on-road fleets that disproportionately impact air quality for communities adjacent to goods movement corridors–thereby helping to close existing health gaps. In addition, staff proposes to include battery electric on-road motorcycles in the Clean Fuel Reward program, in alignment with the 2022 Scoping Plan Update, Board direction in Resolution 24-14, and Executive Order N-79-20. The transportation sector accounts for 50 percent of greenhouse gas emissions in California and 45 percent of particulate matter and 85 percent of oxides of nitrogen. Reducing

emissions in this sector is critical for achieving California's air quality and greenhouse gas targets.

- In subsection 95486.3(a)(2)(F), staff proposes to modify the derating factor for LMD (light- and medium-duty) HRI stations. The Proposed Modifications increase the derating factor from the previous staff proposal and align with the proposed derating factors for the HD-HRI (heavy-duty HRI) program, which is expected to allow more stations to participate in the LMD-HRI program.
- In subsection 95486.3(a)(4)(H), staff proposes to remove language that would have limited the estimated cumulative value of HRI credits generated by a particular station to 1.5 times the initial capital expenditures. This proposed change, made in tandem with the modification to the derating factor, reflects the need for increased support for hydrogen refueling.
- In subsection 95486.4(a)(2)(F), staff proposes to modify the derating factor for HD-HRI stations in order to increase credit generation opportunities for these stations and support investment in infrastructure buildout.
- In subsection 95486.4(a)(4)(I), staff proposes to remove language that would have limited the estimated cumulative value of HRI credits generated by a particular station to 1.5 times the initial capital expenditures. This proposed change, made in tandem with the modification to the derating factor, reflects the need for increased support for hydrogen refueling.
- In subsection 95488(d), staff proposes to change "may choose not to" to "shall not" in order to clarify that the Executive Officer will not accept new fuel pathway applications for biomass-based diesel if the specified conditions are met.
- In subsection 95488.3(d), staff added contextual detail on the models used to calculate the Land Use Change (LUC) values in Table 6, and clarified that the Executive Officer will calculate a conservative LUC value only if an entity's fuel pathway application does not exactly match the biomass/region/fuel combination in Table 6, and if no Table 6 value is appropriate. Additions of detailed definitions that include specified data sources clarify the procedure for calculating new LUC values. The term "crop" was replaced with "biomass" to improve regulatory consistency
- In subsection 95488.9(f)(3)(A), staff proposes to clarify that the Executive Officer will renew crediting periods for fuel pathways certified before the effective date of the regulation, upon receiving the request.
- Staff proposes to add subsection 95491.2(b)(2)(D) in order to clarify that fuel reporting entities will receive retroactive credits if they use missing data methods that extend beyond a quarter.
- In subsection 95500(c)(2)(B), staff proposes to clarify the eligibility requirements for deferred verification. The maximum threshold is 10,000 credits. It is not additive of 6,000 and 10,000 credits.

The Proposed Modifications would not introduce any potential new significant impacts, nor alter the severity of potentially significant impacts associated with the LCFS Amendments, nor do staff anticipate that they will significantly change the types of compliances responses that are anticipated to be implemented by regulated entities covered by the program. As such, these Proposed Modifications are not expected to

introduce any new or more severe significant environmental impacts that were not already evaluated under the Final EIA.

D. Analysis

1. Legal Standards

When considering modifications to a regulation for which a substitute document equivalent to an Environmental Impact Report (EIR) or negative declaration had previously been prepared, CARB looks to Public Resources Code section 21166 and CEQA Guidelines sections 15162 and 15164 for guidance on the requirements for subsequent or supplemental environmental review. (Cal. Code Regs. tit. 17, § 60004.4.)

CEQA Guidelines section 15162 states:

(a) When an EIR has been certified or a negative declaration adopted for a project, no subsequent EIR shall be prepared for that project unless the lead agency determines, on the basis of substantial evidence in the light of the whole record, one or more of the following:

(1) Substantial changes are proposed in the project which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects;

(2) Substantial changes occur with respect to the circumstances under which the project is undertaken which will require major revisions of the previous EIR or negative declaration due to the involvement of new significant environmental effects or a substantial increase in the severity of previously identified significant effects; or

(3) New information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous EIR was certified as complete or the negative declaration was adopted, shows any of the following:

(A) The project will have one or more significant effects not discussed in the previous EIR or negative declaration;

(B) Significant effects previously examined will be substantially more severe than shown in the previous EIR;

(C) Mitigation measures or alternatives previously found not to be feasible would in fact be feasible and would substantially reduce one or more significant effects of the project, but the project proponents decline to adopt the mitigation measure or alternative; or

(D) Mitigation measures or alternatives which are considerably different from those analyzed in the previous EIR would substantially reduce one or more significant effects on the environment, but the project proponents decline to adopt the mitigation measure or alternative.

If a subsequent or supplemental EIR or negative declaration is not required, the lead agency may document its decision and supporting evidence in an addendum (Cal. Code

Regs., tit. 14, § 15164, subd. (e)). The addendum and lead agency's findings should include a brief explanation, supported by substantial evidence, of the decision not to prepare a subsequent or supplemental EIR or negative declaration (Cal Code Regs., tit. 14, § 15164, subd. (e)). An addendum need not be circulated for public review, but must be considered by the lead agency prior to making a decision on the project (Cal. Code Regs., tit. 14 § 15164, subd. (c), subd. (d)).

2. Basis for Determination

CARB has determined that the Proposed Modifications to the LCFS Amendments do not involve any changes that result in any new significant adverse environmental impacts or a substantial increase in the severity of the significant adverse impacts previously disclosed in the Final EIA. Further, there are no changes in circumstances or new information that would otherwise warrant any subsequent or supplemental environmental review. The Final EIA adequately addresses the implementation of the regulation as modified by the April 2025 Proposed Modifications and no additional environmental analysis is required. CARB's determination that none of the conditions requiring further environmental review are triggered by the April 2025 Proposed Modifications is based on the following analysis.

(1) There are no substantial changes to the project previously analyzed in the Environmental Impact Analysis which require major revisions to the Environmental Impact Analysis involving new significant environmental effects or a substantial increase in the severity of previously identified effects.

The April 2025 Proposed Modifications would not result in any new types of construction or operational-related impacts that could lead to potential adverse environmental impacts beyond those analyzed in the Final EIA. The modifications are minor and intended to promote clarity and consistency and are in line with the intent originally analyzed under the Final EIA, so no new potentially significant impacts or increased severity of significant impacts is expected.

The April 2025 Proposed Modifications to subsection 95482(h) would allow hydrogen produced with accompanying carbon capture and sequestration (CCS) technology to meet low carbon-intensity hydrogen crediting eligibility requirements beginning in 2030 and beyond 2035. Given the compliance responses resulting from the April 2025 Proposed Modifications to subsection 95482(h) were contemplated in the Final EIA, substantial evidence supports CARB's determination that these modifications will not create new significant impacts or exacerbate previously-disclosed impacts in the Final EIA. These modifications continue the existing crediting eligibility of fossil hydrogen with CCS in the LCFS program, which was included as a part of the existing baseline conditions in the Final EIA. The Final EIA analyzed the construction of new or expanded hydrogen production facilities using steam methane reformation, which is what would be expected to occur with this modification, as well as electrolysis, or gasification technologies. (Final EIA at p. 36, 115). New hydrogen pipeline installation and operation, additional truck transportation, as well as hydrogen storage both at refueling stations and off-site were all considered as potential compliance responses. Modification of existing facilities, or construction of new facilities to capture CO_2 emissions using CCS technology was also considered as a compliance response and

analyzed, including potential impacts related to hazardous material from processing such as contamination and amine-based solvents (Final EIA at p.38, 102.). Additionally, the Final EIA analyzed potential impacts related to new or modified processing facilities for feedstock and finished fuel production as well as modifications to existing or new industrial facilities to capture CO_2 emissions, including impacts to air quality (Final EIA at p. 59, 62), energy resources (Final EIA at p. 87-88), and water quality and hydrology (Final EIA at p. 110, 113). Potentially significant impacts of geologic sequestration were also analyzed in the Final EIA, including long-term operational impacts on hydrologic resources associated with drinking water contamination and demand on water resources depending on the CCS technology and approach deployed (Final EIA at p. 116).

CARB does not anticipate the April 2025 Proposed Modifications will substantially increase the severity of the impacts identified in the Final EIA because the potential compliance responses are consistent with those analyzed in the Final EIA, including increased production of hydrogen using steam methane reformation, modification of existing facilities or new construction to implement CCS technology, and construction of new infrastructure, such as pipelines, within or near new/existing fuel production/storage facilities (Final EIA at p. 51). Staff found that the potential substitution from fossil fuels to low-CI hydrogen (among other low-CI fuels) may result in reductions in criteria pollutants and air toxics, based on a life cycle analysis that considered upstream emissions associated with extracting and transporting raw materials, producing the finished fuel, and transporting/using the finished fuel (Final EIA p. 62). In addition to the air quality analysis conducted for the regulation, staff's carbon intensity analyses for fuel pathways also take into account leakage of methane as part of the life cycle.[2] Despite staff's modeling suggesting beneficial long-term operational impacts statewide, staff concluded that long-term local air quality impacts associated with the LCFS Amendments could be potentially significant and unavoidable. The Final EIA also discloses that use of CCS could place additional demand on water resources depending on the CCS technology and the approach deployed, which is one of the reasons long-term operation impacts on hydrologic resources were considered potentially significant (Final EIA, p. 116). Hydrogen produced using fossil gas as a feedstock and paired with CCS is one of many hydrogen production pathways eligible for crediting under the LCFS program, and maintaining its eligibility for crediting continues historical treatment of this pathway under the LCFS program since 2019, when the incorporation of the CCS Protocol by the LCFS came into effect. No fuel pathways utilizing CCS have been certified under the LCFS to-date, including hydrogen produced using CCS. No evidence suggests that hydrogen produced using fossil gas as a feedstock paired with CCS will become a dominant source of hydrogen supply in California. The Proposed

[2] For the purposes of the modeling conducted in support of the Proposed Amendments, staff utilized a methane leakage rate of 1.14% for conventional natural gas and 1.21% for shale gas. These assumptions were pulled from the CA-GREET3.0 model, which underpins life cycle analysis calculations for all fuel pathway carbon intensities analyzed under the LCFS program and relies upon dozens of reputable studies. The CA-GREET3.0 model cites one such study as the source for this leakage rate, a publication from Argonne National Laboratory, as follows:

A. Burnham, J. Han, A. Elgowainy, M. Wang, "Updated Fugitive Greenhouse Gas Emissions for Natural Gas Pathways in the GREET1_2014 Model", (October 3, 2014).

Modifications maintain eligibility in case future projects come online, but the State's overall climate and energy policies are designed to support greater production of renewable hydrogen. As stated in FSOR Addendum Response J-1.1, the State is prioritizing efforts to expand the supply of low-carbon hydrogen through efforts like the Alliance for Renewable Clean Hydrogen Energy Systems (ARCHES) and other State funding programs that prioritize renewable feedstocks. Historically, the majority of hydrogen dispensed to vehicles in California has occurred at stations approved for LCFS hydrogen refueling infrastructure (HRI) crediting (since 2019, when the HRI provisions were introduced to the LCFS program). As modified by the Third 15-Day changes, the amendments continue to require that hydrogen dispensed at stations eligible for HRI crediting must be at least 80 percent renewable starting January 1, 2030. The mutual support between these policies is designed and expected to support renewable hydrogen continuing to be the predominant source of hydrogen transportation fuel supply in California. The changes in the April 2025 Proposed Modifications are thus consistent with the impacts identified in the Final EIA, and CARB reasonably anticipates the adoption of CCS technology and fossil hydrogen production to be at a scale consistent with the environmental impacts already disclosed in the Final EIA.

Because the LCFS does not specify the specific sites at which compliance projects are to take place or specific technology to be used (e.g., hydrogen produced from fossil fuel and CCS technology), both the extent and location of new facilities cannot be known at this time and would be too speculative to quantify. In addition, CARB does not have the authority to require implementation of mitigation related to new or modified facilities that would be approved by local jurisdictions. The ability to require such measures is under the purview of jurisdictions with local or state land use approval and/or permitting authority. New or modified facilities in California would typically qualify as a "project" under CEQA. The jurisdiction with primary approval authority over a proposed action is the Lead Agency, which is required to review the proposed action for compliance with CEQA statutes. Project-specific impacts and mitigation would be identified during the environmental review by agencies with project-approval authority.

(2) There are no substantial changes with respect to the circumstances under which the project is being undertaken which require major revisions to the previous Environmental Impact Analysis involving new significant environmental effects or a substantial increase in the severity of previously identified effects.

There are no substantial changes to the circumstances under which the April 2025 Proposed Modifications are being implemented compared to those analyzed in the Final EIA certified in November 2024. As explained above, the limited modifications are primarily edits for clarity and consistency, and some modifications address improvements for technology and processes that were already analyzed in the compliance responses and do not substantially increase the severity. Therefore, the April 2025 Proposed Modifications also do not substantially alter the compliance responses of the regulated entities or result in any changes that significantly affect the physical environment.

(3) There is no new information of substantial importance, which was not known and could not have been known with the exercise of reasonable diligence at the time the previous Environmental Impact Analysis was certified as complete, that changes the conclusions of the Environmental Impacts Analysis with regard to impacts, mitigation measures, or alternatives;

There is no new information of substantial importance that has become available to CARB staff since the Final EIA was certified in November 2024, that would alter any of the conclusions of the Final EIA relating to significant environmental impacts. Additionally, there are no feasible mitigation measures or alternatives that were previously found to be infeasible, nor any new mitigation measures or alternatives considerably different from those previously considered in the Final EIA. As discussed above, the potential compliance responses to the April 2025 Proposed Modifications were analyzed under the Final EIA, so the mitigation measures proposed in the Final EIA would similarly apply here. Therefore, the conclusions found the Final EIA about the compliance responses for the LCFS Amendments or potential environmental impacts to any resource areas have not changed.

E. Conclusion

The April 2025 Proposed Modifications would not result in any potential for significant new or more severe impacts that would change the Final EIA analysis, particularly since there would be no changes to the compliance response types that were analyzed previously. Therefore, an addendum is appropriate here. Because there is no substantive change to the way in which regulated entities operate, the Proposed Modifications will not result in additional physical changes to the environment beyond what would already occur under the LCFS Amendments. Therefore, CARB staff does not anticipate that the April 2025 Proposed Modifications will cause new significant environmental effects or a substantial increase in the severity of previously identified effects in the Final EIA.

In summary, no supplemental or subsequent environmental analysis is required for these Proposed Modifications because, as described above, the proposed changes do not result in any new environmental impacts or in a substantial increase in severity to the impacts previously disclosed in the Final EIA. Further, there are no changes in circumstances or new information that would otherwise warrant an additional environmental review.