

**Attachment A: Second 15-Day Modified Regulation for the AB 118 Air Quality Guidelines for the Air Quality Improvement Program and the Alternative and Renewable Fuel and Vehicle Technology Program**

Shown on the following pages are proposed modifications to the original proposed regulation set forth in Appendix A to the Staff Report: Initial Statement of Reasons, which was released August 8, 2008. Text proposed for adoption during the 45-day notice period is shown in regular text. The proposed modifications that were made available by the first "15-day" notice on October 27, 2008, are shown in underline to indicate additions and ~~strikeout~~ to indicate deletions. The additional proposed modifications made available by the second "15-day" notice are shown in double underline to indicate additions and ~~double-strikeout~~ to indicate deletions.

## SECOND 15-DAY PROPOSED REGULATION ORDER

### **Regulation for the AB 118 Air Quality Guidelines for the Air Quality Improvement Program and the Alternative and Renewable Fuel and Vehicle Technology Program**

Adopt new sections 2340, 2341, 2342, 2343, 2344, and 2345, title 13, chapter 8.1, California Code of Regulations (CCR) to read as follows:

(Note: The entire text of sections 2340 through 2345 is new language.)

### **Chapter 8.1. AB 118 Air Quality Guidelines for the Alternative and Renewable Fuel and Vehicle Technology Program and the Air Quality Improvement Program**

#### **§ 2340. Purpose**

The purpose of this regulation is to fulfill the requirements of the California Alternative and Renewable Fuel, Vehicle Technology, Clean Air, and Carbon Reduction Act of 2007 (Assembly Bill 118 Statutes of 2007, Chapter 750; Health and Safety Code sections 44270-44274) section 44271(b). Health and Safety Code (HSC) section 44271(b) requires the Air Resources Board (ARB or Board) to develop guidelines which ensure that both the Air Quality Improvement Program and the Alternative and Renewable Fuel and Vehicle Technology Program complement, and do not interfere with, California's existing air quality programs and maintain or improve upon the emission benefits achieved through these programs.

NOTE: Authority cited: 39600, 39601, and 44271, Health and Safety Code. Reference cited: 39600, 39601, and 44271, Health and Safety Code.

#### **§ 2341. Applicability**

This regulation applies to the Air Resources Board and the California Energy Commission (Energy Commission or CEC) for the evaluation of projects funded under the Air Quality Improvement Program and the Alternative and Renewable Fuel and Vehicle Technology Program, respectively. Except for the following projects, the requirements set forth in section 2343 of the regulation must be completed for all projects prior to approval for funding:

- (a) Workplace training.
- (b) Research projects that do not:
  - (1) Involve a fuel supply stage with the intent to sell the fuel.
  - (2) Involve construction that initiates permitting or licensing requirements established under local, state, or federal law.
- (c) Demonstration projects that meet all of the following requirements:

- (1) Projects designed to develop, test, or evaluate technologies for advancement to market.
- (2) Technologies that are not sold or leased.
- (3) Projects designed to collect data or evaluate air quality impacts where the data or evaluations are provided to the funding agency.

NOTE: Authority cited: 39600, 39601, and 44271, Health and Safety Code. Reference cited: 39600, 39601, and 44271, Health and Safety Code.

## § 2342. Definitions

- (a) **“ARB”** means the California Air Resources Board.
- (b) **“Baseline fuel or vehicle technology”** means the conventional fuel or vehicle technology that the funded project would replace.
- (c) **“Criteria pollutants”** means air pollutants that contribute to the formation of ozone and particulate matter (PM), including hydrocarbons, carbon monoxide (CO), oxides of nitrogen (NOx), and PM.
- (d) **“Emerging technology”** means a technology that has not been certified or verified by the ARB.
- (e) **“Energy Commission or CEC”** means the California Energy Commission.
- (f) **“Fuel projects”** means a project that involves one of the following fuel supply stages: feed stock production, fuel production, bulk fuel transportation, bulk receiving, bulk storage, bulk distribution, bulk terminal storage, or fuel dispensing infrastructure. This includes, but is not limited to, production, infrastructure, transport, and storage of hydrogen and electricity.
- (g) **“Full Fuel Cycle”** means an evaluation and comparison of the full environmental and health impacts of each step in the life cycle of a fuel, including, but not limited to, all of the following:
  - (1) Feedstock production, extraction, transport, and storage.
  - (2) Fuel production, distribution, transport, and storage.
  - (3) Vehicle operation, including refueling, combustion, conversion, permeation, and evaporation.
- (h) **“Fuel Pathway”** means the full fuel cycle of the applicable fuel and vehicle technology.
- ~~(i) (h)~~ **“Funding agency”** means the ARB or the Energy Commission.
- ~~(j) (i)~~ **“Grantee”** means the party with which the funding agency signs a funding agreement.

- (k) ~~(j)~~ **“Greenhouse gases (GHG’s)”** mean carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), sulfur hexafluoride (SF<sub>6</sub>), hydrofluorocarbons (HFCs), and perfluorocarbons (PFCs) as defined in Subchapter 10, Article 1, title 17, California Code of Regulations.
- (l) ~~(k)~~ **“Infrastructure”** means the facilities or installations needed for the function of the fuel supply system.
- ~~(i) **“Low Carbon Fuel Standard (LCFS)”** means regulations adopted by the ARB pursuant to Governor Executive Order S 01 07. This standard will be established to achieve at least a ten percent reduction in the carbon intensity of California’s transportation fuels by 2020 to help achieve the statewide greenhouse gas emissions limit required by Assembly Bill 32 (Statutes of 2006, Chapter 488).~~
- (m) **“New vehicle/equipment purchase”** means the purchase of new advanced technology vehicle or equipment.
- (n) **“Project fuel”** means the alternative or renewable fuel for which the project proponent is requesting funding.
- (o) **“Total weighted toxic air contaminants”** means the combined total of toxic air contaminants weighted by their aggregate cancer potency.
- (p) **“Toxic air contaminant”** means an air pollutant which may cause or contribute to an increase in mortality or in serious illness, or which may pose a present or potential hazard to human health.
- (q) **“Vehicle/equipment replacement”** means the replacement of an older, operational vehicle or piece of equipment that still has remaining useful life with a newer, lower-emitting vehicle or piece of equipment.
- (r) **“Vehicle/equipment repower”** means the replacement of an existing engine in a vehicle/equipment with a new, engine instead of rebuilding the existing engine to its original specifications or configuration.
- (s) **“Vehicle/equipment retrofit”** means the installation of an emission control, fuel efficiency system, or fuel conversion system on an existing engine or piece of equipment.

NOTE: Authority cited: 39600, 39601, and 44271, Health and Safety Code. Reference cited: 39600, 39601, and 44271, Health and Safety Code.

## § 2343. Requirements

Except as provided in section 2341 (a) through (c) above, the following requirements are applicable to all projects:

### (a) Local, State, and Federal Laws

Projects must be in compliance with all local, state, and federal laws, ordinances, and regulations in order to be eligible for funding.

### (b) Full Fuel Cycle Analysis

Projects must be evaluated using Appendix A of the August 2007 Full Fuel Cycle Assessment: Well-to-Wheels Energy Inputs, Emissions, and Water Impacts, CEC- 600-2007-004-REV, which is hereby incorporated by reference, that was prepared to support the December 2007 State Alternative Fuels Plan, CEC-600-2007-011-CMF, adopted by the ARB on November 15, 2007, Resolution 07 51. the current, and as amended periodically thereafter, ARB full fuel cycle methodology including indirect land use set forth in the ARB's LCFS<sup>4</sup> regulations, 13 California Code of Regulations section XXX, [date]. Vehicle and equipment projects where the replacement vehicle/equipment uses the same fuel as the baseline vehicle/equipment are not subject to this requirement. Eligibility of a project must be determined using the following process:

- (1) **Emissions Determination-** Full fuel cycle emissions for both the project fuel and baseline fuel must be determined ~~pursuant to the full fuel cycle methodology including indirect land use methodology as adopted by the ARB as part of the LCFS. Full fuel cycle emissions must be determined~~ using scenario year 2012 for GHG's, criteria pollutants, and total weighted toxic air contaminants.
  - (A) The funding agency must use the fuel pathway specific to the project if a single fuel pathway is applicable.
  - (B) The funding agency must use the average of the fuel pathways available for the project if multiple fuel pathways are applicable.
  - (C) ~~The funding agency must use the baseline fuel pathway adopted by the ARB with the LCFS for the calendar year that applies to the project to evaluate the baseline fuel.~~ The baseline fuel pathways must be determined using the appropriate fuel and vehicle/equipment combination set forth in Table 1. Fuel projects must use the baseline fuel pathway for the baseline fuel and vehicle/equipment combination that the project fuel would be displacing.

---

<sup>4</sup> ~~The LCFS is being considered for adoption by the ARB at a future Board hearing. The provision in section 2343(f) shall apply until the LCFS has been adopted by the ARB and is legally effective. When the LCFS is adopted, ARB shall add the cite and date of adoption to this regulation and will delete section 2343(f).~~

**Table 1. Baseline Fuel Pathways**

<b><u>Baseline Fuel and Vehicle/Equipment</u></b>	<b><u>Baseline Fuel Pathway</u></b>
<u>Gasoline model year 2009 or older vehicle/equipment.</u>	<u>Appendix A, page A-3, Reformulated Gasoline (RFG) Marginal, internal combustion engine vehicle (ICEV)</u>
<u>Gasoline model year 2010 or newer vehicle/equipment.</u>	<u>Appendix A, page A-7, RFG Marginal, ICEV.</u>
<u>Diesel model year 2009 or older vehicle/equipment.</u>	<u>Appendix A, page A-31, Diesel, California ultra low sulfur diesel (CA ULSD), ICEV</u>
<u>Diesel model year 2010 or newer vehicle/equipment.</u>	<u>Appendix A, page A-35, Diesel, CA ULSD, ICEV</u>

(2) **Emissions Evaluation-** The following criteria must be used for evaluating project emissions using the full fuel cycle analysis:

(A) **Comparison of GHG emissions-**

The total full fuel cycle and indirect land use GHG emissions of the project fuel pathway must be less than or equal to those of the baseline fuel pathway to be eligible for funding.

(B) **Comparison of criteria pollutants and air toxic emissions-**

If emissions of one or more criteria pollutants or total weighted toxic air contaminants occurring in California from the project fuel pathway are greater than the baseline fuel pathway, then the funding agency must choose one of the two following options:

1. The funding agency may choose to not fund the project, or
2. The funding agency may choose to conduct a supplemental evaluation to weigh the potential merits of the project. The supplemental evaluation must include all of the following:
  - a. The emission disbenefits of the criteria pollutant(s) or toxic air contaminants must be fully mitigated by emission benefits of the identical criteria pollutant(s) or toxic air contaminants from other concurrently funded projects in the same air basin within the same funding cycle to be eligible for funding.
  - b. The total criteria pollutant emissions and total weighted toxic air contaminant emissions occurring in California from the project fuel pathway must be less than or equal to the baseline fuel pathway to be eligible for funding.
  - c. The supplemental evaluation must be published for review and comment by the public at least ~~40~~ 30 calendar days prior to being presented in a publicly noticed meeting. The supplemental evaluation must be made available, at a minimum, through the funding agency's website. The meeting must include a discussion of the pollutant trade offs of the proposed project including any potential health impacts, a

description of the proposed fuel/technology, an analysis demonstrating that the emission increases are fully mitigated in accordance with section 2343(b)(2)(B)2.a., the project's role in furthering the objectives of HSC sections 44270 through 44274, and how the proposed project supports the State of California's climate change goals.

- d. The Energy Commission will consult with ARB in conducting any supplemental evaluations.

**(c) Permitting, licensing, and environmental review**

Projects that require licensing, permitting, environmental review, or other entitlement or precondition if of use from local, state, or federal entities are subject to the requirements set forth herein:

- (1) Projects must comply with all applicable licensing, permitting, conditional use, environmental review, emission offsets, and mitigation strategy requirements that may be required under local, state, or federal law including, but not limited to, the federal Clean Air Act (42 United States Code section 7401 et seq.), National Environmental Policy Act of 1969 (42 United States Code section 4321 et seq.), California Clean Air Act of 1988 (Statutes of 1988, Chapter 1568, HSC section 39000 et seq.), Air Toxics "Hot Spots" Information and Assessment Act of 1987 (Statutes of 1987, Chapter 1252, HSC section 44300 et seq.), California Environmental Quality Act (CEQA)(Statutes of 1970, Chapter 1433, Public Resources Code sections 21000-21178) and CEQA Guidelines (Title 14 California Code of Regulations section 15000 et seq.), CEC Regulations (Title 20 California Code of Regulations, Division 2, Chapter 5, section 1701 et seq.), and local rules or ordinances.
- (2) For each project, all identified air quality impacts and mitigation strategies must be determined at the project level with the governmental entities that have regulatory or other jurisdiction over the project pursuant to local, state, and federal laws, ordinances, and regulations.
- (3) The grantee must commit in the funding agreement with the funding agency to implementing all air pollution mitigation strategies, if any, recommended or required by the applicable jurisdictional and regulatory entities.
- (4) All mitigation commitments must be set forth in writing prior to the grantee receiving the first funding allocation.
- (5) Documentation of required mitigation must be maintained by the funding agency for any project selected for funding. The funding agency must monitor the status of all required mitigation through completion of the project and maintain records according to the provisions set forth in section 2344.

- (6) Localized health impacts must be considered when selecting projects for funding. ~~The funding agency must include criteria for environmental justice review in its project selection process. The criteria must be consistent with state law defining environmental justice (Government Code section 65040.12(e)).~~ The funding agency must consider environmental justice consistent with state law and, at a minimum, include complete the following:
- (A) For each fiscal year, the funding agency must publish a staff report for review and comment by the public at least ~~40~~ 30 calendar days prior to approval of projects. The report must analyze the aggregate locations of the funded projects, analyze the impacts in communities with the most significant exposure to air contaminants or localized air contaminants, or both, including, but not limited to, communities of minority populations or low-income populations, and identify agency outreach to community groups and other affected stakeholders.
  - (B) Projects must be selected and approved for funding in a publicly noticed meeting.

**(d) Specific Requirements for Vehicle and Equipment Projects**

Tailpipe emissions for vehicle and equipment projects must be evaluated in accordance with the following requirements:

**(1) Emissions Evaluation**

The replacement vehicle/equipment tailpipe emissions must be equal to or less than those of the baseline vehicle/equipment for each pollutant for which the technology has an emission or verification standard in order to be eligible for funding.

**(2) Determination of Vehicle/Equipment Emissions**

(A) Emissions must be determined using the appropriate tailpipe emissions analysis inputs set forth in Table ~~2~~ 4.

**Table ~~2~~ 4: Vehicle/Equipment Tailpipe Emissions Analysis Inputs**

<b>Project Type</b>	<b>Baseline Emissions</b>	<b>Replacement Emissions</b>
New vehicle/equipment purchase	Current vehicle/equipment model year emission factors	Emission factors of vehicle/equipment to be purchased
Vehicle/equipment replacement or Engine repower	Emission factors of the vehicle/equipment or engine being replaced	Emission factors of vehicle/equipment or engine to be purchased
Vehicle retrofit	Emission factors of the existing vehicle/equipment without retrofit	Emissions of vehicle/equipment with retrofit installed, based on retrofit verification



- (B) Technologies that have not been certified or verified at the time of project evaluation may be considered for funding in accordance with the provisions set forth in (3) below.

**(3) Emerging technologies**

Emerging technologies shall be eligible for funding on a case-by-case basis. A case-by-case evaluation consists of the following steps and criteria:

- (A) The project applicant must document in writing to the funding agency that the technology has no emissions disbenefit when compared to the baseline vehicle/equipment.
- (B) The documentation may include, but is not limited to, test data, engineering specifications, or scientific studies relating to the technology being funded.
- (C) The funding agency must evaluate the documentation to ensure that it presents evidence that the technology results in no air quality disbenefit in emissions of criteria pollutants, toxic air contaminants, or greenhouse gases (GHG). The funding agency may consult with other entities in this evaluation.

**(e) Specific requirements for fuel projects**

All fuel projects must comply with applicable fuel specifications and future, new fuel specifications set forth in Title 13, California Code of Regulations, Division 3, Chapter 5, Article 1, Subarticle 2 and Article 3. Fuels with no fuel specification are exempt from this provision.

~~**(f) Special provision for LCFS**~~

~~Until the LCFS is adopted by the ARB and is legally effective, the full fuel cycle analysis conducted in section 2343(b) must be conducted using the August 2007 Full Fuel Cycle Assessment: Well to Wheels Energy Inputs, Emissions, and Water Impacts, CEC 600-2007-004 REV, that was prepared to support the December 2007 State Alternative Fuels Plan, CEC 600-2007-011 CME, adopted by the ARB on November 15, 2007, Resolution 07-51.~~

NOTE: Authority cited: 39600, 39601, and 44271, Health and Safety Code. Reference cited: 39600, 39601, and 44271, Health and Safety Code.

**§ 2344. Record keeping**

The funding agency must maintain records for all funded projects. Records must document the reason for exemption from the provisions in section 2343 or compliance with the provisions in section 2343, decisions made on evaluation inputs, and methodology used. These records must be made available to the requesting party within 30 calendar days of agency receipt of the written request and must be retained for a minimum of three years from completion of the funded project.

NOTE: Authority cited: 39600, 39601, and 44271, Health and Safety Code. Reference cited: 39600, 39601, and 44271, Health and Safety Code.

**§ 2345. Severability**

Each part of this article shall be deemed severable, and in the event that any provision of this article is held to be invalid, the remainder of this article shall continue in full force and effect.

NOTE: Authority cited: 39600, 39601, and 44271, Health and Safety Code. Reference cited: 39600, 39601, and 44271, Health and Safety Code.