

State of California
AIR RESOURCES BOARD

**STAFF REPORT: INITIAL STATEMENT OF REASONS FOR
PROPOSED RULEMAKING**

**PROPOSED AB 118 AIR QUALITY GUIDELINES FOR THE AIR QUALITY
IMPROVEMENT PROGRAM AND THE ALTERNATIVE AND RENEWABLE FUEL
AND VEHICLE TECHNOLOGY PROGRAM**

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Executive Summary

In October 2007, Governor Schwarzenegger signed into law the *California Alternative and Renewable Fuel, Vehicle Technology, Clean Air, and Carbon Reduction Act of 2007* (Assembly Bill (AB) 118, Chapter 750, Statutes of 2007). The Act creates two new incentive programs to fund air quality and greenhouse gas improvement projects and develop and deploy technology and alternative and renewable fuels:

The Air Quality Improvement Program (AQIP) provides approximately \$50 million in annual funding through 2015. The goal of the program is to fund air quality improvement projects related to fuel and vehicle technologies. These include vehicle and equipment projects which improve air quality as well as research on the air quality impacts of alternative fuels and advanced technology vehicles. The Air Resources Board (ARB) is responsible for administering this program.

The Alternative and Renewable Fuel and Vehicle Technology Program provides approximately \$120 million in annual funding through 2015. The goal of the program to develop and deploy technology and alternative and renewable fuels in the marketplace to help attain California's climate change policies. The California Energy Commission (Energy Commission) is responsible for administering this program.

AB 118 includes a provision which directs ARB to develop guidelines to ensure that both these programs complement California's existing air quality programs. This provision is codified in Health and Safety Code (HSC) section 44271(b). The guidelines must ensure that the programs: (1) do not interfere with efforts to achieve and maintain ambient air quality standards and to reduce emissions of toxic air contaminants; (2) maintain or improve upon emission benefits in the State Implementation Plan and California's clean fuels regulations. The focus of staff's proposed regulation is Air Quality Guidelines to fulfill these requirements. The proposed regulation is the first step in the implementation of AB 118. Guidelines for the broader administration of AQIP and the Alternative and Renewable Fuel and Vehicle Technology Program will be addressed in separate rulemakings and are beyond the scope of the current proposal.

Summary of Proposal

The proposed AB 118 Air Quality Guidelines set standards that the funding agencies (ARB and the Energy Commission) will use to initially evaluate potential projects for incentive funding under AQIP and the Alternative and Renewable Fuel and Vehicle Technology Program. The guidelines are designed to screen out projects that would interfere with existing air quality programs. Criteria pollutants, toxic air contaminants, and greenhouse gases will be considered in evaluating potential projects.

Because AB 118 is designed to improve, not merely maintain, air quality in California, these proposed guidelines – which are narrowly designed to ensure that potential projects are not detrimental to air quality – will be used as the initial step in the process that funding agencies will use to select projects to receive incentive funding. In

subsequent steps, each of the two funding agencies will conduct further evaluations of potential projects using additional guidelines currently under development.

Because AB 118 lists a wide range of project types potentially eligible for funding – some of which do not have a direct air quality impact, the proposed guidelines specify which project types would be required to undergo an air quality impact analysis. Project types that would trigger an air quality impact analysis include most vehicle and equipment projects, most fuel and infrastructure projects, research projects that involve the construction of infrastructure that triggers permitting or licensing requirements, and research projects that supply fuel for sale. Projects that do not have a direct air quality impact would be exempt from such an analysis. These include workplace training, research projects other than those types listed above, and certain demonstration projects.

The proposed guidelines spell out procedures for evaluating vehicle and equipment projects, evaluating fuel and infrastructure projects, and evaluating the localized impacts of potential projects. The proposed guidelines require the air quality impacts of each potential fuel or vehicle technology project to be evaluated using a comparison of the proposed technology with the relevant “baseline” technology. The baseline technology is the conventional fuel or vehicle that the proposed technology would replace. The analysis would incorporate the analytical tools and methodology which will be used to demonstrate compliance with ARB’s low-carbon fuel standard (LCFS), currently under development and scheduled to be considered by the Board in December 2008. Generally, if the potential project results in emissions that are equal to or less than the baseline technology, it will pass that part of the analysis and may be eligible for further consideration for receiving incentive funding. Some projects that result in minor pollutant increases relative to the baseline technology may still pass the screen if the project reduces other pollutants to a substantial degree, advances the goals of AB 118, the resultant pollutant trade-offs are fully offset by other projects within the air basin, and the pollutant tradeoffs are vetted in a public process.

The evaluation procedures also require that funding agencies ensure that potential projects will comply with all applicable air pollution requirements. Accordingly, the evaluation of fuel projects includes a check for consistency with any existing fuel specifications that apply. Also, proposed projects that trigger existing permitting, licensing, or environmental review requirements must comply with such requirements and must commit to implement all air quality mitigation measures recommended by the applicable oversight agencies.

To ensure that AB 118 is implemented in a manner that ensures the fair treatment of people of all races, cultures, and income levels, potential projects that trigger permitting, licensing, or environmental review requirements will be included in an annual analysis to evaluate whether they are being located disproportionately in environmental justice areas. Such projects will only be approved for funding after a publically-noticed meeting; this will ensure that residents have the opportunity for input regarding projects that are being considered for funding in their community.

I. Introduction

In October 2007, Governor Schwarzenegger signed into law the *California Alternative and Renewable Fuel, Vehicle Technology, Clean Air, and Carbon Reduction Act of 2007* (Act) (Assembly Bill (AB) 118, Statutes of 2007, Chapter 750). The Act creates two new incentive programs: the Air Quality Improvement Program (AQIP) and the Alternative and Renewable Fuel and Vehicle Technology Program. These programs are funded via increases to the smog abatement, vehicle registration, and vessel registration fees. These programs will fund air quality and greenhouse gas improvement projects and develop and deploy innovative technology and alternative and renewable fuels. The full text of AB 118 is provided in Appendix B.

Assembly Bill 118 includes a unique provision which directs the Air Resources Board (ARB or Board) to develop guidelines which ensure that both of these programs complement, and do not interfere with, California's existing air quality programs. This provision is codified in HSC section 44271(b). Staff's proposed regulation, known as the AB 118 Air Quality Guidelines or the anti-backsliding guidelines, is limited in scope to fulfilling the requirements of HSC section 44271(b). Guidelines for the broader administration of AQIP and the Alternative and Renewable Fuel and Vehicle Technology Program will be addressed in separate rulemakings and are not within the scope of the current proposal. However, both of these programs would use this regulation as a filter during the development of the programs and the evaluation of projects.

Assembly Bill 118 also creates a third new incentive program, the Enhanced Fleet Modernization Program, which expands the Bureau of Automotive Repair's (BAR's) voluntary retirement (car scrap) program for high emitting passenger cars and light- and medium-duty trucks. (See HSC section 44125.) Staff's proposal does not address the Enhanced Fleet Modernization Program. Guidelines for that program will be proposed in a separate rulemaking.

The remainder of this introductory chapter provides background on AQIP, the Alternative and Renewable Fuel and Vehicle Technology Program, and the statutory requirement for the proposed AB 118 Air Quality Guidelines.

A. Air Quality Improvement Program (AQIP)

The AQIP provides approximately \$50 million in annual funding through 2015. The goal of the program is to fund air quality improvement projects related to fuel and vehicle technologies. These include vehicle and equipment projects which improve air quality as well as research on the air quality impacts of alternative fuels and advanced technology vehicles. The ARB is responsible for administering this program.

Assembly Bill 118 lists eight broad project types which are eligible for AQIP funding:

- On- and off-road equipment projects.

- Projects to mitigate off-road gasoline exhaust and evaporative emissions.
- Research on the air quality impact of alternative fuels.
- University of California research to increase sustainable biofuels production and improve feedstock.
- Lawn and garden equipment replacement.
- Medium- and heavy-duty vehicle/equipment projects including lower emission school buses, electric or hybrid vehicles/equipment, and regional air quality programs in the most impacted parts of California.
- Workforce training related to advanced technology to reduce air pollution.
- Projects to identify and reduce emissions from high-emitting light-duty vehicles.

The criteria which ARB shall use in evaluating potential projects include potential reduction of criteria or toxic air pollutants, cost-effectiveness, contribution to regional air quality improvement, and ability to promote the use of clean alternative fuels and vehicles technologies.

B. Alternative and Renewable Fuel and Vehicle Technology Program

The Alternative and Renewable Fuel and Vehicle Technology Program provides approximately \$120 million in annual funding through 2015. The goal of the program is to develop and deploy technology and alternative and renewable fuels in the marketplace to help attain California's climate change policies. The California Energy Commission (Energy Commission or CEC) is responsible for administering this program.

Assembly Bill 118 lists eleven broad project types which are eligible for funding:

- Alternative and renewable fuel projects to develop and improve alternative and renewable low-carbon fuels, including feedstock projects.
- Demonstration and deployment projects that optimize alternative and renewable fuels for existing and development of engine technologies.
- Projects to produce alternative and renewable low-carbon fuels in California.
- Projects to decrease the impact of alternative and renewable fuels' carbon footprint and increase sustainability.
- Alternative and renewable fuel infrastructure projects.
- Vehicle technology projects to improve fuel efficiency and lower greenhouse gas emissions.
- Projects to accelerate the commercialization of vehicles and alternative and renewable fuels.
- Retrofits for on- and off-road vehicles to improve fuel efficiencies.
- Infrastructure projects that promote alternative and renewable fuel infrastructure development.
- Workforce training related to alternative and renewable fuel and feedstock production.

- Block grants to not-for-profit technology consortia for education, promotion, and development of alternative and renewable fuels and vehicle technology centers.

Section 44272(b) of the HSC lists eleven criteria which the Energy Commission shall use in evaluating potential projects.

C. AB 118 Air Quality Guidelines

As stated previously, AB 118 directs ARB to develop guidelines which ensure that the AQIP and Alternative and Renewable Fuel and Vehicle Technology Program complement, and do not interfere with, California's existing air quality programs. This requirement is specified in section 44271(b) of the HSC:

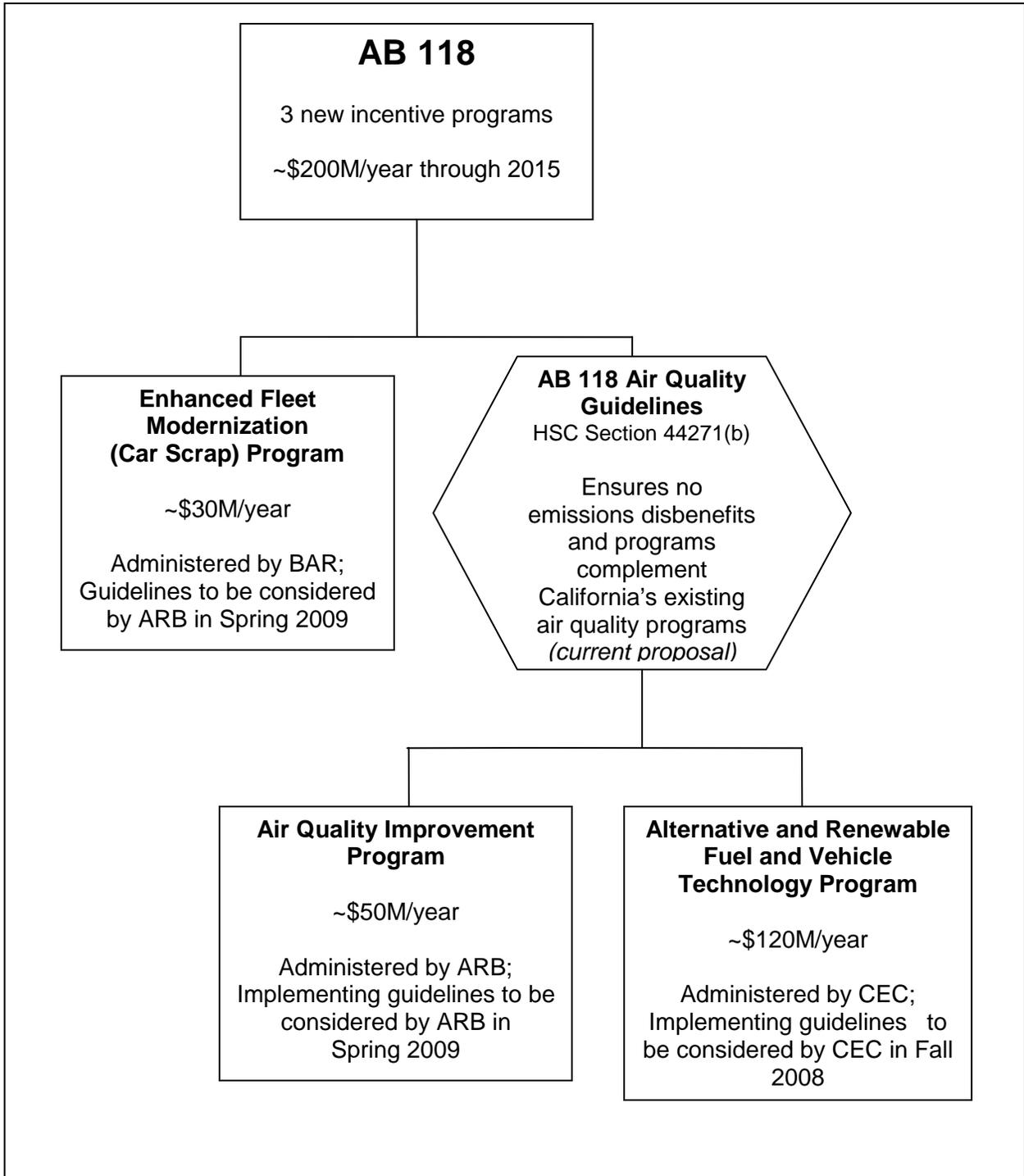
The state board shall develop guidelines for both the Alternative and Renewable Fuel and Vehicle Technology Program and the Air Quality Improvement Program to ensure that programs meet both of the following requirements:

- (1) Activities undertaken pursuant to the programs complement, and do not interfere with, efforts to achieve and maintain federal and state ambient air quality standards and to reduce toxic air contaminant emissions.*
- (2) Activities undertaken pursuant to the programs maintain or improve upon emission reductions and air quality benefits in the State Implementation Plan for Ozone, California Phase 2 Reformulated Gasoline standards, and diesel fuel regulations.*

Staff's proposed rulemaking would fulfill the statutory requirements. Guidelines for the broader administration of these programs will be addressed in separate rulemakings and are not within the scope of the current proposal.

The Energy Commission is expected to consider proposed guidelines for the Alternative and Renewable Fuel and Vehicle Technology Program later in 2008, and ARB is expected to consider proposed AQIP guidelines in Spring 2009. A flow chart depicting how the various programs and requirements created by AB 118 fit together is shown in Figure 1.

Figure 1: AB 118 Programmatic Flow Chart



II. Summary of Proposed Regulation

This chapter summarizes staff's proposal for guidelines to ensure that the Alternative and Renewable Fuel and Vehicle Technology Program and AQIP are implemented in a manner that complements, and does not interfere with, California's existing air quality programs. The proposed regulation would fulfill the requirements of HSC section 44271(b). The proposed regulation, known as the AB 118 Air Quality Guidelines, would require that the funding agencies (ARB and the Energy Commission) evaluate potential projects prior to approval for funding. The proposed regulation provides minimum criteria that each funding agency must include in their program's funding selection process to ensure that no air quality disbenefit would result. The air quality analysis is one step in a two step process that the agencies will use to select projects to fund, serving as a statutorily required air quality backstop. Implementation of AB 118 is envisioned to improve, not merely maintain, air quality in California.

In the second step, the funding agencies would evaluate potential projects relative to the broader goals and criteria of AB 118, specified in HSC section 44272 for the Alternative and Renewable Fuel and Vehicle Technology Program and HSC section 44274 for AQIP. This second step of project evaluation is beyond the scope of this proposed regulation. The Energy Commission and ARB will specify the procedures for conducting the second step of project evaluation in two additional, separate rulemakings.

This chapter describes the requirements of the proposed regulation as well as staff's rationale for its proposal. The proposed regulation needs to be broad enough to cover a wide variety of project types and fuels in addition to being flexible enough to anticipate new technologies and fuels. Staff believes it is necessary for the regulation to use the latest evaluation tools that represent the current state-of-the-science and to be consistent with other ARB programs, but also recognize this is challenging since this field of science is rapidly evolving.

A. Covered Pollutants and Tools for Air Quality Analysis

For the required air quality analysis, staff is proposing that the emissions of each potential fuel or vehicle technology project be compared to the emissions of a baseline fuel or vehicle technology. The baseline reflects the conventional fuel or vehicle technology that the funded project would replace. The potential project would be eligible for consideration if its emissions were less than or equal to that of the baseline fuel or technology. The proposal provides some provisions for minor pollutant trade offs that are offset by reductions from other projects as long as the project advances the goals of AB 118 and the trade offs are formally addressed in a public forum. (Program goals are specified in HSC section 44272(a) and (b) for the Alternative and Renewable Fuel and Vehicle Technology Program and HSC section 44274(a) and (b) for AQIP.)

1. Covered Pollutants

The air quality analysis would evaluate the following pollutants for each project:

- Criteria pollutants (i.e. those that contribute to the formation of ozone and particulate matter (PM) air pollution, including hydrocarbons, oxides of nitrogen (NO_x), and PM);
- Toxic air contaminant emissions, weighted by potency; and
- Greenhouse gases (GHGs).

As required by HSC section 44271(b), the proposed AB 118 Air Quality Guidelines include criteria for assessing criteria pollutants and toxic air contaminants when evaluating projects. In addition, staff proposes including GHG emissions as a criterion for evaluating projects to ensure that projects funded under these programs complement and do not interfere with the state's efforts to meet its GHG reduction targets required by the California Global Warming Solutions Act of 2006 (AB 32) which set in statute the Governor's climate change goals [Gov 2005]. AB 118 states that one of the purposes of the Alternative and Renewable Fuel and Vehicle Technology Program is "to develop and deploy innovative technologies that transform California's fuels and vehicle types to help attain the state's climate change policies" (HSC section 44272(a)). Furthermore, AB 118 requires that potential Alternative and Renewable Fuels and Vehicle Technology Program projects be evaluated based upon their consistency with existing and future state climate change policy and low-carbon fuel standards. Staff believes that incorporating GHG emissions into this regulation is both necessary and appropriate. It is ARB's policy to ensure that all its air quality programs are harmonized with efforts to reduce GHG emission reductions.

2. Tools for Air Quality Analysis

Staff proposes to require ARB and the Energy Commission to conduct evaluations that incorporate a full fuel cycle analysis to ensure that all potential air quality impacts are considered. The analysis would incorporate the same analytical tools which will be used to demonstrate compliance with ARB's low-carbon fuel standard (LCFS), currently under development and scheduled to be considered by the Board in December 2008. This would mean using the updated full fuel cycle methodology- California-specific Greenhouse gases, Regulated Emissions and Energy use in Transportation model (CA-GREET model) plus an analysis of indirect land use impacts- that is part of the proposed LCFS. The GREET model was originally developed by Argonne National Laboratory to evaluate emission impacts of vehicle technologies and new transportation fuels and has been widely accepted. It has been customized with data inputs specific to California for use in ARB and Energy Commission programs.

One of the project evaluation criterion for the Alternative and Renewable Fuel and Vehicle Technology Program listed in HSC section 44272(b) is, "The project's consistency with existing and future state climate change policy and low-carbon fuel standards." Furthermore, a goal of AB 118 is to help attain California's climate change

goals, and the LCFS is one of the Board-approved early action measures to reduce GHG emissions [ARB 2007a, ARB 2007b, Gov 2007]. Staff believes it is necessary to use consistent technical tools and evaluation protocols for both the AB 118 incentive programs and the LCFS because of the close tie-in between the two programs. Significant research, including two interagency agreements between ARB and UC Berkeley and UC Davis, has been invested to update the CA-GREET model and to develop an analysis of indirect land use impacts for use in the LCFS. ARB staff believes it represents the current state-of-the-science, and therefore, the best technical tool to use for the analysis.

This proposed regulation would incorporate by reference the methodology and fuel evaluation processes being finalized as part of the LCFS regulation. When the Board considers the LCFS, it will also consider approving the methodology and fuel evaluation processes for use in the AB 118 Air Quality Guidelines. As part of the rulemaking for the LCFS, staff will propose revisions to section 2343(b) of this regulation to add specific reference to the appropriate sections of the LCFS. Consequently, this regulation is essentially being proposed to the Board in two parts. It will be fully approved once the Board adopts the proposed LCFS.

In the event that Board adoption of the LCFS is delayed, staff proposes that the technical analysis from the *Full Fuel Cycle Assessment: Well-to-Wheels Energy Inputs, Emissions, and Water Impacts*, that was prepared to support the December 2007 *State Alternative Fuels Plan*, be used as the backup tool for the AB 118 air quality analysis [CEC 2007 and CEC/ARB 2007]. The funding agencies will also consider to the extent possible the additional life cycle emission-related factors relevant in evaluating potential projects, but not quantifiable with this analytical tool, such as indirect land use impacts. These could include ARB staff proposals and analyses that become available as part of the LCFS regulatory development process.

The State Alternative Fuels Plan, required by AB 1007 (Chapter 371, Statutes of 2005), was adopted by both the Energy Commission and ARB. The technical analysis for the Plan was conducted using the GREET model, populated with the data available at the time. This model served as the starting point for the updates and improvements being incorporated to support the LCFS. The updated analytical tools for the LCFS will address land use impacts associated with fuel production pathways. Until the LCFS is adopted by ARB and legally effective, the GREET model from the *2007 State Alternative Fuels Plan* represents the current Board-approved tool for analyzing fuels on a full fuel cycle basis.

Staff believes this backup tool is necessary, on an interim basis, so the funding agencies can expend the AB 118 incentive funds appropriated by the Legislature in a timely manner and California can reap the resulting air quality and GHG emission benefits without undue delay. Staff anticipates the contingency, if needed, would only affect one fiscal year of funds.

At the public workshops, some stakeholders expressed concern over linking the proposed air quality analysis to the LCFS because the Board has not yet adopted the standards. Staff believes it is critical to use consistent tools between these two programs. Furthermore, the updated CA-GREET model and indirect land use analysis, as adopted by the Board, will represent the state-of-the science and, therefore, the best analytical tool to use for the proposed air quality analysis. Although concerns were raised, no specific alternatives were proposed by stakeholders.

B. Covered Projects

A wide range of project types are potentially eligible for funding under the provisions of AB 118. Project categories are summarized in Chapter I and listed in their entirety in HSC section 44272(c) for the Alternative and Renewable Fuel and Vehicle Technology Program and HSC section 44274(c) for AQIP. All potential projects considered for funding under each program would be subject to this regulation. However, some project types do not have a direct air quality impact. Staff is proposing to require the air quality analysis only for projects that may have a direct air quality impact. Those project types that do not have a direct air quality impact would be exempt from the analysis. These include:

- Workplace training.
- Research projects, excluding those which have an air quality impact as noted below.
- Demonstration projects of technologies not to be sold or leased and designed to evaluate air quality impact data. To qualify for this exemption, air quality impact data must be collected as part of the project and provided to the funding agency.

The analysis required by this regulation applies to the following types of projects:

- Vehicle and equipment projects (except for those covered by the demonstration project provision noted above).
- Fuel and infrastructure projects (except for those covered by the demonstration project provision noted above).
- Research projects involving the construction of infrastructure that triggers existing permitting or licensing requirements or research projects involving a fuel supply stage with the intent to sell the fuel.

C. Air Quality Analysis Requirements

This section describes the proposed methodology and protocols for conducting the air quality analysis. It includes protocols for evaluating vehicle and equipment projects, protocols for evaluating fuels and infrastructure projects, and protocols for evaluating localized impacts.

1. Vehicle and Equipment Projects

The proposed regulation would require a two-step approach for evaluating the air quality impacts of potential vehicle and equipment projects:

- Vehicle/Equipment Emissions Comparison.
- Full Fuel Cycle Analysis.

In general, the vehicle and equipment projects that will be under consideration for AB 118 funding are those that encourage the introduction of advanced technologies, modernize the fleet, or increase fuel efficiency. These projects, by their very nature, will improve air quality and/or reduce GHG emissions. Staff believes that the proposed air quality analysis requirements dovetails with the type of analysis the funding agencies will already be conducting in order to evaluate whether potential projects meet the broader goals of AB 118. The analysis for vehicle and equipment projects is described in greater detail below. Figure 2, at the end of this section, presents a flow chart summarizing the analysis.

a. Vehicle/Equipment Emission Comparison

The first step of the evaluation is a comparison of the tailpipe and evaporative emissions of baseline vehicles/equipment with those of the proposed vehicle/equipment. The methodology is similar to the procedure used in the Carl Moyer Memorial Air Quality Standards Attainment Program, a joint ARB/air district incentive program in operation since 1998 [ARB 2008]. This provision details the requirements for comparison of both certified/verified technologies as well as emerging technologies which have not been certified or verified.

Staff proposes to require that funded vehicles/equipment must have air pollutant emissions less than or equal to those of the vehicle/equipment being replaced to be eligible. Table 1 lists the required air quality analysis inputs to use when determining eligibility of typical types of vehicle/engine projects.

Table 1: Vehicle/Equipment Air Quality Analysis Inputs

Project Type	Baseline Emissions	Replacement Emissions
New vehicle/equipment purchase ¹	Current model year emission factors	Emission factors of vehicle to be purchased
Vehicle/engine replacement ² or repower ³	Emission factors of the vehicle being replaced	Emission factors of vehicle to be purchased
Vehicle retrofit ⁴	Emission factors of the existing vehicle without retrofit	Emissions of vehicle with retrofit installed, based on retrofit verification

¹New purchase means purchase of new advanced technology vehicle or equipment.

²Vehicle/equipment replacement refers to the replacement of an older vehicle or piece of equipment that still has remaining useful life with a newer, lower emitting vehicle or piece of equipment.

³Engine repower means the replacement of an existing engine with a new, lower emitting engine instead of rebuilding the existing engine to its original specifications.

⁴Retrofit means the installation of an emission control or fuel efficiency system on an existing engine or piece of equipment. Retrofits may also include fuel conversion systems.

The evaluation of vehicle/equipment tailpipe emissions applies only to pollutants for which the control technology has a certification or verification standard. If there is no certification/verification standard that applies to the control technology for a given pollutant, the technology may still be funded. For example, a retrofit technology may only be verified for PM reductions but is not disqualified for funding because it has not been verified as a NO_x or ROG emission reducing technology.

Emerging Technologies

Staff proposes to allow emerging technologies that have not been certified or verified to be eligible for funding as long as a case-by-case evaluation demonstrates no emissions disbenefit. The evaluation may include, but is not limited to, the following documentation:

- test data;
- engineering specifications; and
- scientific studies on pollutant emissions for the emerging technology.

The documentation must be submitted by the project proponent to the funding agency and evaluated by the funding agency prior to funding. The project would only be eligible if the funding agency concludes that the project would result in no air quality disbenefit based on the submitted documentation. The evaluation may be done in consultation with other entities with expertise in the technology.

One of the goals of AB 118 is the development and deployment of innovative technologies, as noted in HSC sections 44272 and 44274. Thus, there is a role in these programs for emerging technologies which are not fully commercialized. These technologies may not yet be emission-certified or verified by ARB or the U.S. Environmental Protection Agency. The proposed flexibility is intended to allow funding for these emerging technologies while ensuring that the requirements of HSC section 44271(b) are met. Staff believes that providing flexibility to allow a case-by-case demonstration be submitted for supplemental evaluation strikes a proper balance. This balance is necessary to encourage and promote innovative technologies while providing the funding agencies a level of confidence that the projects would not result in an air quality disbenefit.

If the project meets the requirements of step 1, the evaluation proceeds to step 2. If the project does not meet the requirements of step 1, the project is not eligible for funding.

b. Full Fuel Cycle Analysis

The second step of the evaluation is a comparison of the proposed vehicle/equipment fuel pathway to the baseline vehicle/equipment fuel pathway using a full fuel cycle analysis. This step would ensure no disbenefits of GHGs, criteria pollutants, or toxic air contaminants from projects involving a switch in fuels. In order to maintain consistency

among ARB regulatory programs and to ensure that the best state-of-the-science is used in performing the evaluations, staff proposes that the full fuel cycle methodology including indirect land use currently under consideration as part of the LCFS be used in the evaluation. This comparison is only necessary for projects where the baseline and replacement vehicles use different fuels (i.e, cases where an alternatively fueled vehicle or piece of equipment is replacing a conventionally fueled one). The comparison is not required in cases where the baseline and replacement vehicles/equipment operate on the same fuel because the emissions upstream of the vehicle/equipment are identical and the tailpipe emissions are already addressed in step 1.

This evaluation includes a comparison of the GHG, criteria pollutant, and toxic air contaminant emissions of the proposed fuel to the baseline fuel. The fuel pathway of the proposed fuel for the new vehicle/equipment is compared to the baseline fuel for the calendar year at the time the project is evaluated. If the vehicle/equipment project has a single fuel pathway, the specifics of that single pathway must be used in the evaluation. If the vehicle/equipment project uses multiple fuel pathways, the average of the available fuel pathways may be used. The baseline fuel is determined by the defined reference fuels in the LCFS. GHG emissions shall be evaluated on total full fuel cycle emissions, or global scale emissions. However, criteria pollutant and toxic air contaminants emissions shall be evaluated based on fuel cycle emissions solely within California. This difference is based upon the global versus local nature of the pollutants.

In the event that Board adoption of the LCFS is delayed, staff proposes that the technical analysis from the *Full Fuel Cycle Assessment: Well-to-Wheels Energy Inputs, Emissions, and Water Impacts*, that was prepared to support the December 2007 *State Alternative Fuels Plan*, be used as the backup tool for the AB 118 air quality analysis [CEC 2007 and CEC/ARB 2007]. A more detailed description of this tool may be found in section II.A.2 of this staff report.

First, the proposed fuel is compared to the baseline fuel for GHG emissions. If the GHG emissions of the proposed fuel are greater than those of the baseline fuel, then the project is not eligible for funding. If the GHG emissions of the proposed fuel are equal to or less than the baseline fuel, then a second comparison is done on criteria pollutants and toxic air contaminants. If the criteria pollutant and toxic air contaminant emissions of the proposed fuel are equal to or less than the baseline fuel, then the project has passed step 2 and the evaluation is complete. If the criteria pollutant or toxic air contaminant emissions of the proposed fuel are greater than those of the baseline fuel, the funding agency may choose to either disqualify the potential project or conduct a supplemental evaluation of the pollutant tradeoffs – that is, consider whether small increases in a pollutant are worth trading off for larger benefits in other pollutants as long as those small increases are fully offset by emission benefits from other funded projects.

Supplemental Evaluation of Pollutant Trade Offs

For the supplemental evaluation, the funding agency must complete an analysis demonstrating that the emission increases of criteria pollutant(s) or weighted toxic air contaminants would be fully offset by emission benefits associated with other projects funded within the same air basin during the same funding cycle. This would ensure the air quality benefits in the SIP are maintained, as required by the statute. If the emission increases can not be fully mitigated by other projects funded within the same air basin during the same funding cycle, then the project is not eligible for funding.

In addition, the funding agency is required to compare the total criteria pollutant and total weighted air toxic emissions occurring in California of the project fuel pathway against those of the baseline fuel pathway. A project could be funded if the total emissions of the project fuel pathway are less than or equal to those of the baseline fuel pathway.

These supplemental evaluations must be presented in a publicly noticed meeting. This meeting does not need to be exclusive to the discussion of this project, but may be a broader public workshop, meeting, or hearing the funding agency is conducting as part of its implementation of AB 118. At the meeting, the agency must present and invite comment on:

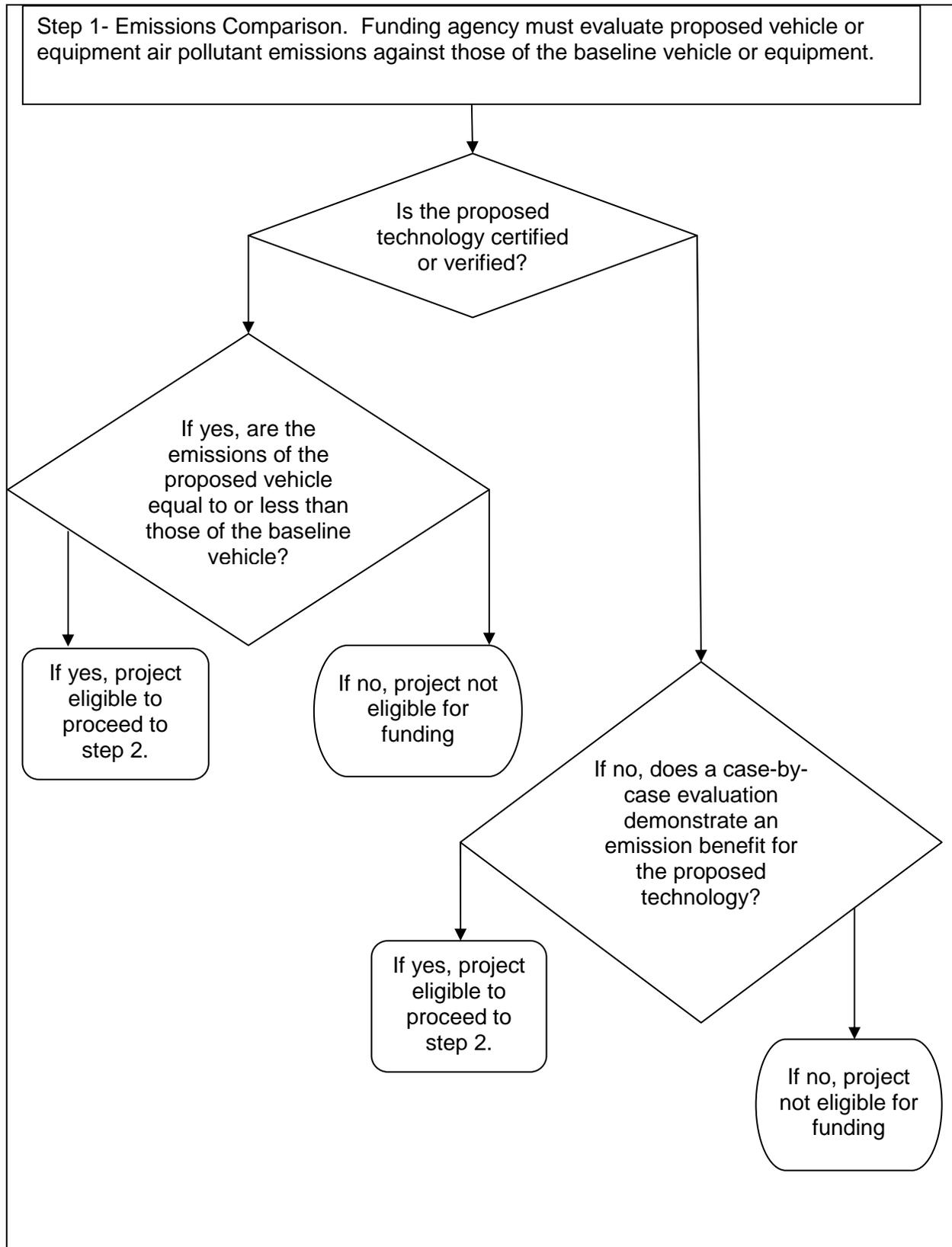
- A description of the technology,
- An analysis demonstrating that the emission increases are fully offset by emission benefits associated with other projects funded within the same air basin during the same funding cycle,
- An analysis of the pollutant tradeoffs, and
- An analysis of the role of the fuel/technology in achieving the state's climate change goals and the other objectives of AB 118.

Staff believes that some flexibility should be provided for pollutant trade offs as long as any disbenefits are fully offset by other projects since one of the goals of AB 118 is to fund innovative or technology-advancing projects. For example, depending upon the origin of the fuel, some alternative fuel projects may result in a slight increase in a criteria pollutant when evaluated on a full fuel cycle basis. However, the project may benefit public health and the environment through significant reductions in other pollutants or by acting as an important bridge towards even cleaner fuels or technologies in the future.

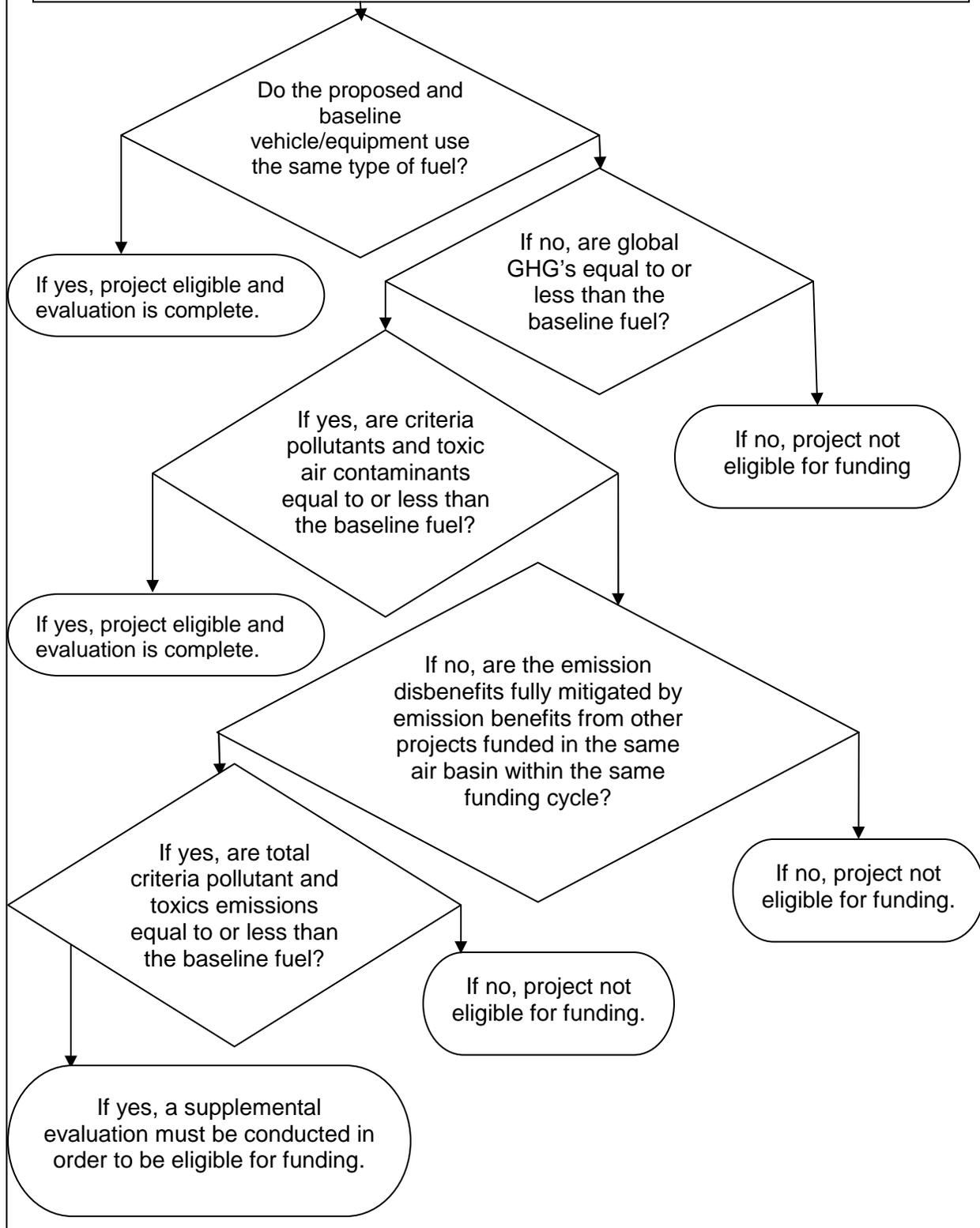
At the public workshops, some stakeholders commented that no pollutant tradeoffs should be allowed. However, staff believes the proposed approach provides the appropriate level of flexibility to effectively and efficiently spend program funds on projects that are consistent with the goals of AB 118 while ensuring the air quality benefits in the SIP are maintained.

If the project meets all the requirements discussed above, it is eligible for funding.

Figure 2: AB 118 Air Quality Guidelines Vehicle & Equipment Project Evaluation



Step 2- Full Fuel Cycle Analysis. Evaluate fuel using the full fuel cycle methodology and inputs from the LCFS. The evaluation compares the project fuel pathway against the baseline fuel. Global GHG's and in-state criteria pollutants and toxic air contaminants are evaluated on a full fuel cycle basis.



2. Fuel and Infrastructure Projects

The proposed regulation requires fuel and infrastructure projects to complete a three-step approach for evaluation:

- Full fuel cycle evaluation.
- Fuel Specifications.
- Compliance with applicable local, state, and federal environmental review requirements and evaluation of local health impacts.

The analysis for fuel and infrastructure projects is described in greater detail below. Figure 3, at the end of this section, presents a flow chart summarizing the analysis steps.

a. Full Fuel Cycle Evaluation

The first step compares the project fuel pathway to the baseline fuel pathway on a full fuel cycle basis. The full fuel cycle evaluation for fuel and infrastructure projects is similar to the full fuel cycle evaluation for vehicle/equipment projects. Refer to the Full Cycle Evaluation for vehicle/equipment projects for a more detailed discussion of this evaluation including the supplemental evaluation for pollutant trade offs.

b. Fuel Specifications

The second step requires that all fuels subject to fuel specifications comply with the applicable fuel specifications, if one exists. If no fuel specification exists, then compliance with a fuel specification is not required. This is a requirement of California's existing fuel regulations and does not impose a new requirement on proposed projects.

c. Compliance with applicable local, state, and federal environmental review and evaluation of local health impacts

The third step requires that the funding agencies ensure that all projects, including, but not limited to, vehicle/equipment projects that fund the development of in-state facilities that manufacture low-carbon and zero-emission vehicles and related technologies, comply with applicable local, state, and federal requirements for environmental review. This includes all applicable permitting or licensing, environmental review, emissions offsets, and mitigation strategy requirements as necessary under the Federal Clean Air Act, National Environmental Policy Act, California Clean Air Act, California Environmental Quality Act (CEQA), Air Toxics "Hot Spots" Information and Assessment Act, CEC regulations for licensing, and local rules and ordinances. Staff believes that these existing laws and regulations provide the appropriate safeguards to prevent pollutant increases.

The air quality impacts and mitigation strategies need to be resolved at the project level with the appropriate jurisdictional and regulatory authorities. The grantee is also

required to commit, in writing, to implementing all project air quality mitigation strategies recommended by the applicable oversight agencies. This requirement ensures that all reasonable and technically feasible strategies within a specified timeframe, as determined by the oversight agency, are adopted and implemented.

If a project initiates permitting, licensing, or environmental review requirements, then the funding agency must also incorporate an evaluation of local health impacts. The funding agencies must establish minimum requirements to ensure the equitable treatment of all Californians in selection of ARB and CEC projects consistent with state law defining environmental justice for projects that trigger this step. The projects and their aggregate impacts must be discussed and approved in a public meeting. The projects would also need to be included in an annual assessment to determine if these projects are disproportionately located 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. This would complement the evaluation of each individual proposed project to ensure that the full suite of projects selected for funding each year do not, in aggregate, have a localized impact. Additional discussions on the requirements of existing environmental review regulations and the evaluation of local health impacts are discussed further in the next section.

If the fuel and infrastructure project meets the requirements discussed above, the project is eligible for funding.

3. Environmental Review and Local impacts

As mentioned above, funded projects are required to meet all applicable permitting or licensing, environmental review, emissions offsets, and mitigation requirements. This section is a more detailed discussion of the existing regulatory requirements and those additional requirements proposed by this regulation. Only certain projects will initiate permitting, licensing, or environmental review requirements. California's New Source Review (NSR) program is the primary mechanism for complying with these existing regulatory requirements and for ensuring new infrastructure projects result in no net increase in emissions and conform to the state's SIP. The NSR permit program is derived from the California Clean Air Act. Each air district which does not attain federal air quality standards is required to include in its attainment plan, a stationary source control program designed to achieve no net increase in emissions of nonattainment pollutants or their precursors for all new or modified sources that exceed particular emission thresholds. In addition, most new and modified stationary sources are required to use Best Available Control Technology (BACT).

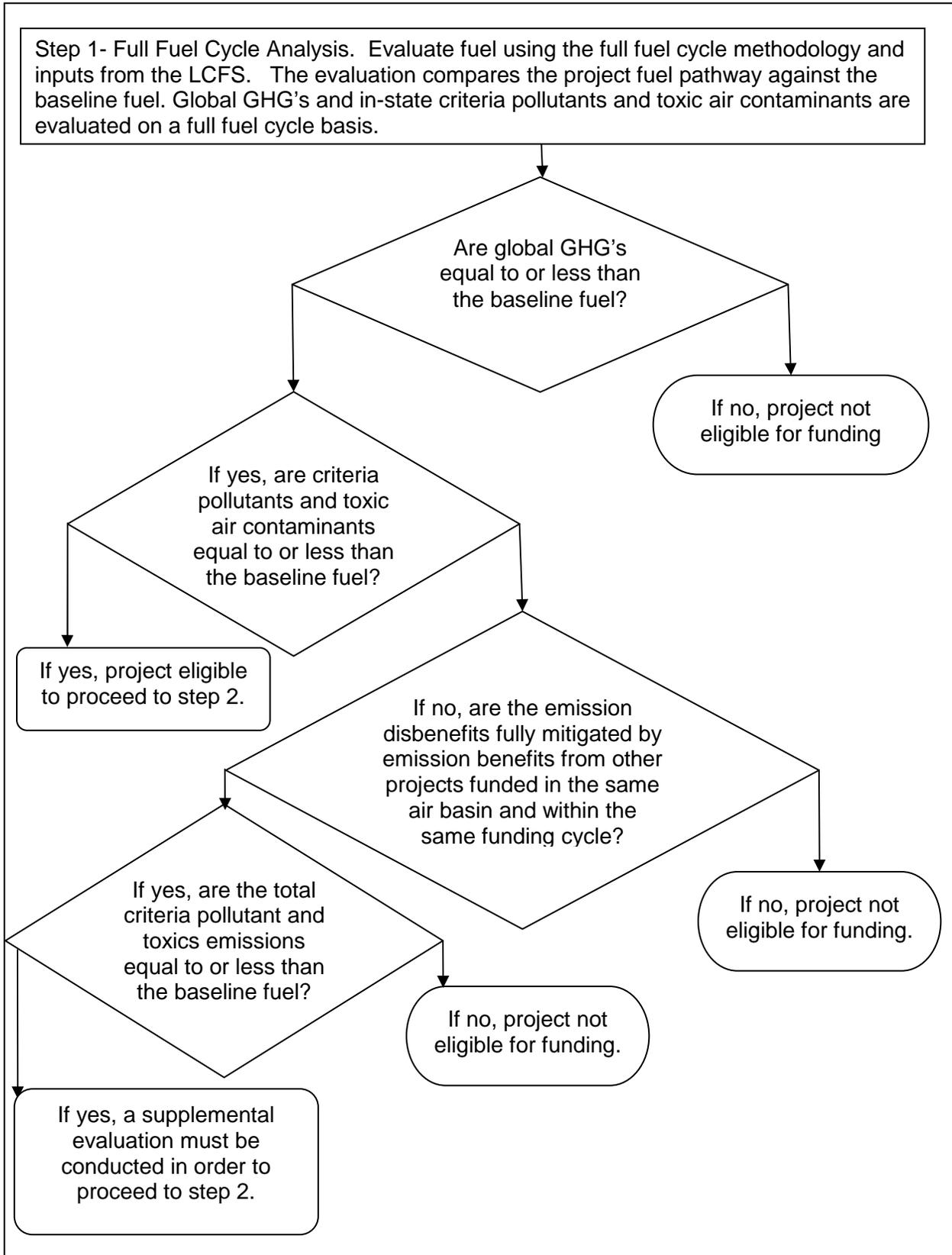
Each of the 35 air pollution control districts in California has its own NSR program and issues its own NSR permits to construct and operate. To do so, each district has adopted its own rules and regulations to comply with state and federal laws. Depending on the amount of air pollutant emissions that will be emitted from the source and the area designation for that pollutant, the new or modified source may be required to install

BACT. In addition, new and/or modified sources in California may be required, depending on the type and quantity of pollutants emitted, to mitigate or "offset" the increases in emissions that result after installation of BACT.

The Air Toxics "Hot Spots" Information and Assessment Act requires local air districts to prioritize facilities by high, intermediate, and low priority categories to determine which must perform a health risk assessment [AB 2588 1987]. Each district is responsible for establishing the prioritization score threshold at which facilities are required to prepare a health risk assessment. In establishing priorities for each facility, local air districts must consider the potency, toxicity, quantity, and volume of hazardous materials released from the facility, the proximity of the facility to sensitive receptors, and any other factors that the district determines may indicate the facility may pose a significant risk. All facilities within the highest category must prepare a health risk assessment. In addition, each district may require facilities in the immediate and low priority categories to submit a health risk assessment. ARB's Air Quality and Land Use Handbook: A Community Health Perspective also provides additional guidance regarding steps local governments should take in their land use decisions to protect vulnerable populations, such as children, from being impacted by nearby sources of air pollution [ARB 2005].

In addition to the existing environmental review requirements, staff is proposing additional requirements for projects that trigger this review. Prior to receiving funding, the grantee would be required to commit in writing to implementing all project air quality mitigation strategies recommended and required by the applicable oversight agencies. The funding agencies shall include environmental justice criteria in the project selection process. Staff recognizes the need for the public to be informed regarding what projects are proposed for funding in their communities, and has proposed that an analysis be performed annually to evaluate whether the suite of projects funded each year is disproportionately located in environmental justice areas. In addition, ARB and CEC would be required to work in an open and transparent way by making program information publicly accessible, working with interested stakeholders, and providing each year's environmental justice analysis in a public staff report prior to project approval by the funding agency. Staff believes that the existing environmental review programs combined with the requirements of this regulation provide the appropriate safeguards for preventing local impacts and pollutant increases.

Figure 3: AB 118 Air Quality Guidelines Fuel Project Evaluation



Step 2- Fuel Specifications. Funding agency must require compliance with the applicable fuel specification, if one exists. If no fuel specification exists, then compliance with a fuel specification is not required.

Step 3. Funding agency must ensure compliance with applicable local, state, and federal requirements for permitting, licensing, or environmental review and implement recommended mitigation strategies (if applicable).

Does the project trigger permitting, licensing, or environmental review requirements?

If no, project eligible and evaluation is complete.

If yes, the following requirements apply in order for the project to be eligible

1. Project must follow all applicable local, state, and federal permitting or licensing requirements.
2. Air quality impacts and mitigation strategies must be resolved at the project level with the entity with jurisdictional and regulatory authority.
3. Grantee must commit to implementing all recommended mitigation strategies.

If yes, local health impacts must be addressed as follows:

1. Project must be selected and approved for funding in a publicly noticed meeting.
2. Project must be included in a public staff report that analyzes if these projects are disproportionately located in environmental justice areas. This staff report must be completed each fiscal year

D. Record Keeping Provisions

Staff is proposing that the funding agencies be required to keep records for each funded project to demonstrate compliance with the provisions of this proposed regulation. The records need to be retained for at least three years following the completion of the funded project. The records would be available to the public upon written request and must be made available to the requesting party within 30 days of receipt of such request.

E. Reporting Requirements

Staff is not proposing reporting requirements as part of the regulation. The California Legislature is currently considering a bill, AB 109 (Núñez), which would require the Energy Commission and ARB each report biennially on projects funded under the Alternative and Renewable Fuel and Vehicle Technology Program and AQIP, respectively. Each report would include an assessment of the air quality benefits of funded projects. Staff believes these reports would serve to document that the provisions of the proposed regulation are being fulfilled by the funding agencies. Staff also believes it makes more sense that such an assessment be included as part of a broader evaluation of each program rather than in a separate report.

If AB 109 is not signed into law in 2008 or does not ultimately include reporting requirements, staff will revisit this issue and propose amending the regulation to include a reporting requirement. Staff would propose such amendments in Spring 2009, at the same time that it is proposing AQIP implementation guidelines.

III. Development of Proposed Regulation

This section describes public outreach conducted by ARB staff during development of the proposed regulation. ARB staff conducted two public workshops to discuss potential regulatory concepts and solicit public input. The first public workshop, held on April 2, 2008, was a kick-off workshop for the Alternative Technology and Renewable Fuel and Vehicle Technology Program, AQIP, and the Air Quality Guidelines. The workshop was held jointly by the ARB and the Energy Commission and included Commissioner James Boyd and ARB Executive Officer James Goldstene. At this workshop, ARB staff provided background information on the Air Quality Guidelines, discussed the proposed schedule for guideline development, and solicited public feedback on key questions to be addressed.

The second public workshop, held on June 20, 2008, was dedicated solely to development of these Air Quality Guidelines. At this workshop, staff solicited public input on specific proposed regulatory concepts, which were made publicly available five days prior to the workshop.

Staff encouraged stakeholders to provide verbal comments during, and written comments after, both workshops. Following the workshops, ARB staff considered the

comments received and incorporated suggestions, where appropriate, into the proposed regulation. Staff also indicated its willingness at the workshops to meet with stakeholders separately to discuss any issues or concerns regarding the AB 118 Air Quality Guideline development.

On June 18, 2008, ARB staff met with representatives from the American Lung Association of California and the Coalition for Clean Air to discuss Air Quality Guideline development. On July 9, 2008 staff again met with representatives from the American Lung Association of California, the Coalition for Clean Air, the Union of Concerned Scientists, and the Center for Energy Efficiency and Renewable Technologies to discuss concerns raised at the June 20, 2008 workshop. ARB staff has also met continually with Energy Commission staff for feedback regarding how regulatory concepts could impact implementation of the Alternative Technology and Renewable Fuel and Vehicle Technology Program.

Notice of the first public workshop was sent to list serves established for the Alternative Technology and Renewable Fuel and Vehicle Technology Program, the AQIP, and 13 additional ARB list serves to reach a broad audience. Notice of the second public workshop was sent to list serves for the AQIP and the Low Carbon Fuel Standard, as well as a general ARB list serve for mobile source issues (Mobile Source mailings). ARB also posted notice of the workshops on its AB 118 webpage (<http://www.arb.ca.gov/msprog/aqip/aqip.htm>).

IV. Environmental and Economic Impacts

The role of the proposed AB 118 Air Quality Guidelines is limited to ensuring that AQIP and Alternative and Renewable Fuel and Advanced Technology Program projects do not adversely impact air quality. The proposed guidelines provide ARB and the Energy Commission with the tools and methodology which each agency must use to evaluate the air quality impacts of projects considered for funding. However, the proposal does not address how ARB or the Energy Commission will develop and implement their respective programs to maximize program benefits and fulfill the program goals identified in AB 118. Separate regulations will be developed by each agency to further define the operation of the programs, eligible project types, and other program administrative and implementation parameters. Environmental and economic impacts associated with the implementation of AQIP and the Alternative and Renewable Fuel and Advanced Technology Program will be addressed in the staff reports which accompany these rulemakings. This section is therefore limited to addressing the environmental and economic impacts of the proposed AB 118 Air Quality Guidelines only.

A. Air Quality Impacts

The proposed regulation will serve as a backstop, as required in the statute, to ensure the emission benefits of California's existing air quality are maintained or improved. The proposed AB 118 Air Quality Guidelines ensure projects funded pursuant to the AQIP

and Alternative and Renewable Fuel and Advanced Technology Program are fully evaluated with regard to potential full fuel cycle criteria pollutant, toxic air contaminants, and climate change emissions, and that negative impacts are mitigated, as appropriate, or that those projects are not funded. The regulation therefore has no negative air quality impact and, to the extent it eliminates funding eligibility for projects that increase emissions, it may provide air quality benefits. Implementation of AQIP and Alternative and Renewable Fuel and Advanced Technology Program will improve, not merely maintain, air quality in California, so the majority of the air quality benefits will accrue from the implementation of these programs.

B. Economic Impacts

The AQIP and the Alternative and Renewable Fuel and Vehicle Technology Programs are voluntary and provide grants for clean fuels and technologies. Therefore, the AB 118 Air Quality Guidelines will not impose an economic cost on businesses. Staff estimates a small cost to ARB and the Energy Commission to implement the proposed regulations. Funding for these positions is included in the proposed California state budget for fiscal year 2008-2009.

C. Environmental Justice

The ARB is committed to ensuring the fair treatment of people of all races, cultures, and incomes with respect to the development, adoption, implementation, and enforcement of environmental laws, regulations, and policies. In 2001, the Board approved the *Policies and Actions for Environmental Justice*, which formally established a framework for incorporating Environmental Justice into the ARB's programs, consistent with the directives of State law. [ARB 2001]

Staff's proposal is consistent with these policies. Proposed provisions to address localized impacts and environmental justice are found in section 2343(c) of the proposed regulation and discussed in greater detail in chapter II.C.2.d and chapter II.C.3. The regulation would require funding agencies to set minimum requirements to ensure the equitable treatment of all Californians in selection of ARB and CEC projects consistent with state environmental justice policies for projects that trigger permitting, licensing, or environmental review requirements. The projects would have to be approved in a public meeting and included in an annual assessment to determine if projects are disproportionately located in environmental justice areas.

Staff's proposed regulation sets the minimum requirements to ensure the equitable treatment of all Californians in selection of projects. Additional measures to address local impacts of proposed projects may be required during environmental review for infrastructure projects as required by local, state, or federal agencies. The funding agencies may also include additional elements in their respective programs to focus program benefits or direct funds to particular communities, and otherwise address environmental justice concerns.

V. Alternatives

Staff has considered two alternatives to the Proposed Air Quality Guidelines. The first is to not adopt the proposed regulation. The second alternative is to defer adoption of the proposed regulation until the LCFS has been adopted. These alternatives are discussed below.

Defer Adoption Until the LCFS Is Adopted

Another alternative would be to defer consideration of the current proposal until the LCFS has been adopted by the Board. Staff is proposing to link the AB 118 Air Quality Guidelines with the LCFS, currently under development and scheduled to be considered by the Board in December 2008. Staff's proposed air quality analysis would incorporate the same analytical tools which will be used to demonstrate compliance with the LCFS as discussed in Chapter 2. Staff's proposal also specifies alternate analytical tools to be used on an interim basis if adoption of the LCFS is delayed (i.e. using the technical analysis from the *Full Fuel Cycle Assessment: Well-to-Wheels Energy Inputs, Emissions, and Water Impacts* [CEC 2007]). Some stakeholders have noted that this approach adds near-term uncertainty because the LCFS has not yet been finalized. Although ARB received comments regarding uncertainty, no stakeholders suggested delaying Board consideration of this the guidelines as a solution.

Staff believes that it is important to move forward with implementation of the AQIP and Alternative and Renewable Fuels and Advanced Technology Programs without undue delay, so the funding agencies can expend the incentive funds appropriated by the Legislature in a timely manner and California can begin reaping the resulting air quality and GHG emission benefits. ARB staff coordinated closely with Energy Commission staff to set the timeline for development and Board consideration of the proposed AB 118 Air Quality Guidelines. Delaying the adoption of staff's proposal would have a negative impact on the Energy Commission's implementation schedule and would likely cause the Energy Commission to miss its goal of issuing its initial solicitation for projects in March 2009.

VI. Conclusions and Recommendations

Staff's proposed AB 118 Air Quality Guidelines would fulfill the requirements of HSC section 44271(b), which directs ARB to develop guidelines to ensure that the Alternative and Renewable Fuel and Vehicle Technology Program and AQIP complement, and do not interfere with, California's existing air quality programs. This regulation will serve as a backstop, as required in statute. Implementation of AB 118 is envisioned to improve, not merely maintain, air quality in California. Staff recommends the Board adopt the proposed regulation.

VII. References

- AB 32 2006: The California Global Warming Solutions Act of 2006 (Nunez), September 27, 2006. [http://www.leginfo.ca.gov/pub/05-06/bill/asm/ab_0001-0050/ab_32_bill_20060927_chaptered.pdf]
- AB 2588 1987: The Air Toxics “Hot Spots” Information and Assessments Act of 1987 (Connelly). [<http://www.arb.ca.gov/ab2588/general.htm>]
- ARB 2001: Air Resources Board, Policies and Actions for Environmental Justice, December 13, 2001. [<http://www.arb.ca.gov/ch/programs/ej/ejpolicies.pdf>]
- ARB 2005: Air Resources Board, Air Quality and Land Use Handbook: A Community Health Perspective, April 2005. [<http://www.arb.ca.gov/ch/handbook.pdf>]
- ARB 2007a: Air Resources Board, Proposed Early Actions to Mitigate Climate Change in California, April 20, 2007. [http://www.arb.ca.gov/cc/042307workshop/early_action_report.pdf]
- ARB 2007b: Air Resources Board, Expanded List of Early Action Measures to Reduce Greenhouse Gas Emissions in California Recommended For Board Consideration, October 2007. [http://www.arb.ca.gov/cc/ceea/meetings/ea_final_report.pdf]
- ARB 2008: Air Resources Board. The Carl Moyer Program Guidelines: Approved Revision 2008, Release Date: April 22, 2008. [<http://www.arb.ca.gov/msprog/moyer/guidelines/current.htm>]
- CEC/ARB 2007: California Energy Commission and Air Resources Board, State Alternative Fuels Plan, Commission Report Number CEC-600-2007-011-CMF, December 2007. [<http://www.energy.ca.gov/2007publications/CEC-600-2007-011/CEC-600-2007-011-CMF.PDF>]
- CEC 2007: California Energy Commission, Full Fuel Cycle Assessment: Well-To-Wheels Energy Inputs, Emissions, and Water Impacts: State Plan To Increase The Use Of Non-Petroleum Transportation Fuels Assembly Bill 1007 (Pavley) Alternative Transportation Fuels Plan Proceeding, Prepared by TIAX LLC for the California Energy Commission, Final Consultant Report Number CEC-600-2007-004-REV, August 2007. [<http://www.energy.ca.gov/2007publications/CEC-600-2007-004/CEC-600-2007-004-REV.PDF>]
- Gov 2005: Governor’s Executive Order S-03-05: Greenhouse Gas Reduction Goals, June 1, 2005. [<http://gov.ca.gov/executive-order/1861/>]
- Gov 2007: Governor’s Executive Order S-01-07: Low-Carbon Fuel Standard, January 18, 2007. [<http://www.arb.ca.gov/fuels/lcfs/eos0107.pdf>]

Appendix A

Proposed Regulation Order

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 (NO_x), 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) **“Funding agency”** means the ARB or the Energy Commission.
- (i) **“Grantee”** means the party with which the funding agency signs a funding agreement.
- (j) **“Greenhouse gases (GHG’s)”** mean carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), sulfur hexafluoride (SF₆), hydrofluorocarbons (HFCs), and

perfluorocarbons (PFCs) as defined in Subchapter 10, Article 1, title 17, California Code of Regulations.

- (k) **“Infrastructure”** means the facilities or installations needed for the function of the fuel supply system.
- (l) **“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 the current, and as amended periodically thereafter, ARB full fuel cycle methodology including indirect land use set forth in the ARB's LCFS¹ 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 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.

- (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:

¹ 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).

- 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 10 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.

(c) Permitting, licensing, and environmental review

Projects that require licensing, permitting, environmental review, or other entitlement or precondition if 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(c)), and, at a minimum, include the following:
 - (A) For each fiscal year, the funding agency must publish a staff report for review and comment by the public at least 10 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 1.

Table 1: Vehicle/Equipment Tailpipe Emissions Analysis Inputs

Project Type	Baseline Emissions	Replacement Emissions
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-CMF, 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.

Appendix B

Assembly Bill No. 118 (Chapter 750, Statutes of 2007)

Appendix B

Assembly Bill No. 118 (Chapter 750, Statutes of 2007)

CHAPTER 750

An act to add Article 11 (commencing with Section 44125) to Chapter 5 of, to add Chapter 8.9 (commencing with Section 44270) to, Part 5 of Division 26 of, and to add and repeal 44060.5 of, the Health and Safety Code, and to add and repeal Sections 9250.1, 9261.1, and 9853.6 of the Vehicle Code, relating to air pollution.

[Approved by Governor October 14, 2007. Filed with Secretary of State October 14, 2007.]

LEGISLATIVE COUNSEL'S DIGEST

AB 118, Nunez. Alternative fuels and vehicle technologies: funding programs.

(1) Existing law imposes various limitations on emissions of air contaminants for the control of air pollution from vehicular and nonvehicular sources. Existing law generally designates the State Air Resources Board as the state agency with the primary responsibility for the control of vehicular air pollution. Under existing law, the State Energy Resources Conservation and Development Commission (Energy Commission), in conjunction with other state agencies, is required to develop and adopt a state plan to increase the use of alternative fuels, as defined.

Existing law establishes the Public Interest Research, Development, and Demonstration Fund in the State Treasury, and provides that the money collected by the public goods charge to support cost-effective energy efficiency and conservation activities, public interest research and development not adequately provided by competitive and regulated markets, be deposited in the fund for use by the Energy Commission to develop, implement, and administer the Public Interest Research, Development, and Demonstration Program to develop technologies to, improve environmental quality, enhance electrical system reliability, increase efficiency of energy-using technologies, lower electrical system costs, or provide other tangible benefits.

The bill would create the Alternative and Renewable Fuel and Vehicle Technology Program, to be administered by the Energy Commission, to provide, upon appropriation by the Legislature, grants, loans, loan guarantees, revolving loans, or other appropriate measures, to public agencies, businesses and projects, public-private partnerships, vehicle and technology consortia, workforce training partnerships and collaboratives, fleet owners, consumers, recreational boaters, and academic institutions to develop and deploy innovative technologies that transform California's fuel and vehicle types to help attain the state's climate change policies.

The bill would create the Alternative and Renewable Fuel and Vehicle Technology Fund (Alternative Fund), and would require the Energy Commission to expend the moneys in the Alternative Fund, upon appropriation by the Legislature, to implement the Alternative and Renewable Fuel and Vehicle Technology Program. The

bill would require \$10,000,000 to be transferred annually to the Alternative Fund from the Public Interest Research, Development, and Demonstration Fund. The bill would also create the Air Quality Improvement Program, to be administered by the State Air Resources Board, to fund air quality improvement projects, upon appropriation by the Legislature, relating to fuel and vehicle technologies. The bill would create the Air Quality Improvement Fund, and would require the state board to expend the moneys in that fund, upon appropriation by the Legislature, to implement the Air Quality Improvement Program.

(2) Existing law creates the High Polluter Repair or Removal Account in the Vehicle Inspection and Repair Fund, and makes moneys deposited in the account available, upon appropriation by the legislature, to the Department of Consumer Affairs and the state board to establish and implement a program for the repair or replacement of high polluters.

This bill would create an enhanced fleet modernization program for the retirement of high polluting vehicles to be administered by the Bureau of Automotive Repair pursuant to guidelines adopted by the state board. The bill would create the Enhanced Fleet Modernization Subaccount in the High Polluter Removal and Repair Account to establish and implement this enhanced program, upon appropriation by the Legislature.

(3) The bill, beginning July 1, 2008, until January 1, 2016, would increase vehicle registration fees from \$31 to \$34, vessel registration fees from \$10 to \$20 and from \$20 to \$40, as applicable, and specified service fees for identification plates from \$15 to \$20. The bill would require the additional revenue generated by those fee increases to be deposited in the Alternative and Renewable Fuel and Vehicle Technology Fund, the Air Quality Improvement Fund, and the Enhanced Fleet Modernization Subaccount, as provided.

The bill beginning July 1, 2008, until January 1, 2016, would also increase smog abatement fees from \$12 to \$20, and would require 1/2 of the additional revenue generated by that fee increase to be deposited in the Air Quality Improvement Fund and the other 1/2 of that additional revenue to be deposited in the Alternative and Renewable Fuel and Vehicle Technology Fund.

The people of the State of California do enact as follows:

SECTION 1. The Legislature finds and declares all of the following:

(a) The California Global Warming Solutions Act of 2006 (Division 25.5 (commencing with Section 38500) of the Health and Safety Code) requires California to reduce statewide greenhouse gas emissions to 1990 levels by 2020.

(b) The transportation sector is responsible for approximately 40 percent of statewide greenhouse gas emissions and significant degradation of public health and environmental quality due to air and water pollution.

(c) The State Energy Resources Conservation and Development Commission (Energy Commission) in its Integrated Energy Policy Report recommends that alternative fuels comprise 20 percent of on-road motor vehicle fuels by 2020.

(d) The State Air Resources Board is currently developing a “low-carbon” fuel standard for transportation fuels to reduce the carbon intensity of transportation fuels by 10 percent by 2020.

(e) The Energy Commission will adopt a state alternative fuel implementation plan to increase the use of alternative transportation fuels by recommending policies and financial incentives, and identifying barriers to alternative fuel use.

(f) Investing in the development of innovative and pioneering technologies will assist California in achieving the 2020 statewide limit on emissions of greenhouse gases.

(g) Research, development, and commercialization of alternative fuels and vehicle technologies in California have the potential to strengthen California’s economy by attracting and retaining clean technology businesses, stimulating high-quality job growth, and helping to reduce the state’s vulnerability to petroleum price volatility. Research, development, demonstration, and deployment of alternative and renewable fuels and vehicle technologies will also result in new skill and occupational demands across California industries.

(h) This act will provide ongoing funding for alternative fuel and vehicle technology research, development, demonstration, and deployment in order to advance the state’s leadership in clean technologies, achieve the state’s petroleum reduction objectives and clean air and greenhouse gas emission reduction standards, develop public-private partnerships, and ensure a secure and reliable fuel supply.

(i) This act will ensure that research is conducted to evaluate the air quality impacts of alternative fuels and to establish clear criteria to prevent net increases in criteria air pollutants and air toxics.

(j) This act will be implemented in a manner to ensure the fair treatment of people of all races, cultures, and income levels, including minority populations and low-income populations of the state.

(k) This act will provide funding consistent with the California Global Warming Solutions Act of 2006, the Integrated Energy Policy Report, the state alternative fuels plan adopted pursuant to Section 43866 of the Health and Safety Code, and other state goals and requirements.

SEC. 2. It is the intent of the Legislature to appropriate moneys from the Alternative and Renewable Fuel and Vehicle Technology Fund and the Air Quality Improvement Fund to the Department of Motor Vehicles to cover the administrative costs of implementing the fee increases created by this act.

SEC. 3. Section 44060.5 is added to the Health and Safety Code, to read:

44060.5. (a) Beginning July 1, 2008, the smog abatement fee described in Section 44060 shall be increased by eight dollars (\$8).

(b) Revenues generated by the increase described in this section shall be distributed as follows:

(1) The revenues generated by four dollars (\$4) shall be deposited in the Air Quality Improvement Fund created by Section 44274.5.

(2) The revenues generated by four dollars (\$4) shall be deposited in the Alternative and Renewable Fuel and Vehicle Technology Fund created by Section 44273.

(c) This section shall remain in effect only until January 1, 2016, and as of that date is repealed, unless a later enacted statute, that is enacted before January 1, 2016, deletes or extends that date.

SEC. 4. Article 11 (commencing with Section 44125) is added to Chapter 5 of Part 5 of Division 26 of the Health and Safety Code, to read:

Article 11. Enhanced Fleet Modernization Program

44125. (a) No later than July 1, 2009, the state board, in consultation with the Bureau of Automotive Repair (BAR), shall adopt a program to commence on January 1, 2010, that allows for the voluntarily retirement of passenger vehicles and light-duty and medium-duty trucks that are high polluters. The program shall be administered by the BAR pursuant to guidelines adopted by the state board.

(b) The guidelines shall ensure all of the following:

(1) Vehicles retired pursuant to the program are permanently removed from operation and retired at a dismantler under contract with the BAR.

(2) Districts retain their authority to administer vehicle retirement programs otherwise authorized under law.

(3) The program is available for high polluting passenger vehicles and light-duty and medium-duty trucks that have been continuously registered in California for two years prior to acceptance into the program or otherwise proven to have been driven primarily in California for the last two years and have not been registered in any other state or country in the last two years.

(4) The program is focused where the greatest air quality impact can be identified.

(5) Compensation levels for retired vehicles are flexible, taking into account factors including, but not limited to, the age of the vehicle, the emission benefits of the vehicle's retirement, the emissions impact of any replacement vehicle, and the location of vehicles in areas of the state with the poorest air quality.

(6) Cost-effectiveness and impacts on disadvantaged and low-income populations are considered.

44126. The Enhanced Fleet Modernization Subaccount is hereby created in the High Polluter Removal and Repair Account. All moneys deposited in the subaccount shall be available to the department and the BAR, upon appropriation by the Legislature, to establish and implement the program created pursuant to this article.

SEC. 5. Chapter 8.9 (commencing with Section 44270) is added to Part 5 of Division 26 of the Health and Safety Code, to read:

CHAPTER 8.9. CALIFORNIA ALTERNATIVE AND RENEWABLE FUEL, VEHICLE TECHNOLOGY, CLEAN AIR, AND CARBON REDUCTION ACT OF 2007

44270. This chapter shall be known, and may be cited, as the California Alternative and Renewable Fuel, Vehicle Technology, Clean Air, and Carbon Reduction Act of 2007.

44270.3. For the purposes of this chapter, the following terms have the following meanings:

(a) "Commission" means the State Energy Resources Conservation and Development Commission.

(b) "Full fuel-cycle assessment" or "life-cycle assessment" means evaluating and comparing 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.

(c) "Vehicle technology" means any vehicle, boat, off-road equipment, or locomotive, or component thereof, including its engine, propulsion system, transmission, or construction materials.

44271. (a) This chapter creates the Alternative and Renewable Fuel and Vehicle Technology Program, pursuant to Section 44272, to be administered by the commission, and the Air Quality Improvement Program, pursuant to Section 44274, to be administered by the state board. The commission and the state board shall do all of the following in fulfilling their responsibilities pursuant to their respective programs:

(1) Determine definitions of terms used in the provisions of this chapter.

(2) Establish sustainability goals to ensure that alternative and renewable fuel and vehicle deployment projects, on a full fuel-cycle assessment basis, will not adversely impact the state natural resources, especially state and federal lands.

(3) Identify revenue streams for the programs created pursuant to this chapter.

(4) Ensure that the results of the reductions in emissions or benefits can be measured and quantified.

(b) The state board shall develop guidelines for both the Alternative and Renewable Fuel and Vehicle Technology Program and the Air Quality Improvement Program to ensure that programs meet both of the following requirements:

(1) Activities undertaken pursuant to the programs complement, and do not interfere with, efforts to achieve and maintain federal and state ambient air quality standards and to reduce toxic air contaminant emissions.

(2) Activities undertaken pursuant to the programs maintain or improve upon emission reductions and air quality benefits in the State Implementation Plan for Ozone, California Phase 2 Reformulated Gasoline standards, and diesel fuel regulations.

(c) For the purposes of both of the programs created by this chapter, eligible projects do not include those required to be undertaken pursuant to state or federal law or district rules or regulations.

44271.5. (a) The commission shall create an advisory body to help develop an investment plan to determine priorities and opportunities for the Alternative and Renewable Fuel and Vehicle Technology Program created pursuant to this chapter. The advisory body shall be subject to the public meetings requirements of the Bagley-Keene Open Meeting Act (Article 9 (commencing with Section 11120) of Chapter 1 of Part 1 of Division 3 of Title 2 of the Government Code). The investment plan shall describe how funding will complement existing public and private investments, including existing state programs that further the goals of this chapter. The plan shall be updated annually.

(b) Membership of the advisory body created pursuant to subdivision (a) shall include, but is not limited to, representatives of fuel and vehicle technology consortia, labor organizations, environmental organizations, community-based justice and public health organizations, recreational boaters, consumer advocates, academic institutions, workforce training groups, and private industry. The advisory body shall also include representatives from the Resources Agency, the Business, Transportation and Housing Agency, the Labor and Workforce Development Agency, and the California Environmental Protection Agency.

44272. (a) The Alternative and Renewable Fuel and Vehicle Technology Program is hereby created. The program shall be administered by the commission. The program shall provide, upon appropriation by the Legislature, grants, revolving loans, loan guarantees, loans, or other appropriate measures, to public agencies, vehicle and technology consortia, businesses and projects, public-private partnerships, workforce training partnerships and collaboratives, fleet owners, consumers, recreational boaters, and academic institutions to develop and deploy innovative technologies that transform California's fuel and vehicle types to help attain the state's climate change policies. The emphasis of this program shall be to develop and deploy technology and alternative and renewable fuels in the marketplace, without adopting any one preferred fuel or technology.

(b) The commission shall provide preferences to those projects that maximize the goals of the Alternative and Renewable Fuel and Vehicle Technology Program created by Section 44272, based on the following criteria, as appropriate:

(1) The project's ability to provide a measurable transition from the nearly exclusive use of petroleum fuels to a diverse portfolio of viable alternative fuels that meet petroleum reduction and alternative fuel use goals.

(2) The project's consistency with existing and future state climate change policy and low-carbon fuel standards.

(3) The project's ability to reduce criteria air pollutants and air toxics and reduce or avoid multimedia environmental impacts.

(4) The project's ability to decrease, on a life-cycle basis, the emissions of water pollutants or any other substances known to damage human health or the environment, in comparison to the production and use of California Phase 2 Reformulated Gasoline or diesel fuel produced and sold pursuant to California diesel fuel regulations set forth in Article 2 (commencing with Section 2280) of Chapter 5 of Division 3 of Title 13 of the California Code of Regulations.

(5) The project does not adversely impact the sustainability of the state's natural resources, especially state and federal lands.

(6) The project provides nonstate matching funds.

(7) The project provides economic benefits for California by promoting California-based technology firms, jobs, and businesses.

(8) The project uses existing or proposed fueling infrastructure to maximize the outcome of the project.

(9) The project's ability to reduce on a life-cycle assessment greenhouse gas emissions by at least 10 percent, and higher percentages in the future, from current reformulated gasoline and diesel fuel standards established by the state board.

(10) The project's use of alternative fuel blends of at least 20 percent, and higher blend ratios in the future, with a preference for projects with higher blends.

(11) The project drives new technology advancement for vehicles, vessels, engines, and other equipment, and promotes the deployment of that technology in the marketplace.

(c) All of the following shall be eligible for funding:

(1) Alternative and renewable fuel projects to develop and improve alternative and renewable low-carbon fuels, including electricity, ethanol, dimethyl ether, renewable diesel, natural gas, hydrogen, and biomethane, among others, and their feedstocks that have high potential for long-term or short-term commercialization, including projects that lead to sustainable feedstocks.

(2) Demonstration and deployment projects that optimize alternative and renewable fuels for existing and developing engine technologies.

(3) Projects to produce alternative and renewable low-carbon fuels in California.

(4) Projects to decrease the overall impact of an alternative and renewable fuel's life-cycle carbon footprint and increase sustainability.

(5) Alternative and renewable fuel infrastructure, fueling stations, and equipment. The preference in paragraph (10) of subdivision (b) shall not apply to these projects.

(6) Projects to develop and improve light-, medium-, and heavy-duty vehicle technologies that provide for better fuel efficiency and lower greenhouse gas emissions, alternative fuel usage and storage, or emission reductions, including propulsion systems, advanced internal combustion engines with a 40 percent or better efficiency level over the current market standard, light-weight materials, energy storage, control systems and system integration, physical measurement and metering systems and software, development of design standards and testing and certification protocols, battery recycling and reuse, engine and fuel optimization electronic and electrified components, hybrid technology, plug-in hybrid technology, fuel cell technology, and conversions of hybrid technology to plug-in technology through the installation of safety certified supplemental battery modules.

(7) Programs and projects that accelerate the commercialization of vehicles and alternative and renewable fuels including buy-down programs through near-market and market-path deployments, advanced technology warranty or replacement insurance, development of market niches, and supply-chain development.

(8) Programs and projects to retrofit medium- and heavy-duty on-road and nonroad vehicle fleets with technologies that create higher fuel efficiencies, including

alternative and renewable fuel vehicles and technologies, idle management technology, and aerodynamic retrofits that decrease fuel consumption.

(9) Infrastructure projects that promote alternative and renewable fuel infrastructure development connected with existing fleets, public transit, and existing transportation corridors, including physical measurement or metering equipment and truck stop electrification.

(10) Workforce training programs related to alternative and renewable fuel feedstock production and extraction, renewable fuel production, distribution, transport, and storage, high-performance and low-emission vehicle technology and high tower electronics, automotive computer systems, mass transit fleet conversion, servicing, and maintenance, and other sectors or occupations related to the purposes of this chapter.

(11) Block grants administered by not-for-profit technology consortia for multiple projects, education and program promotion within California, and development of alternative and renewable fuel and vehicle technology centers.

(d) The same requirements in Section 25620.5 of the Public Resources Code shall apply to awards made on a single source basis or a sole sources basis.

44273. (a) The Alternative and Renewable Fuel and Vehicle Technology Fund is hereby created in the State Treasury, to be administered by the commission. The moneys in the fund, upon appropriation by the Legislature, shall be expended by the commission to implement the Alternative and Renewable Fuel and Vehicle Technology Program in accordance with this chapter.

(b) Notwithstanding any other provision of law, the sum of ten million dollars (\$10,000,000) shall be transferred annually from the Public Interest Research, Development, and Demonstration Fund created by Section 384 of the Public Utilities Code to the Alternative and Renewable Fuel and Vehicle Technology Fund. Prior to the award of any funds from this source, the commission shall make a determination that the proposed project will provide benefits to electric or natural gas ratepayers based upon the commission's adopted criteria.

44274. (a) The Air Quality Improvement Program is hereby created. The program shall be administered by the state board, in consultation with the districts. The purpose of the program shall be to fund, upon appropriation by the Legislature, air quality improvement projects relating to fuel and vehicle technologies. The primary purpose of the program shall be to fund projects to reduce criteria air pollutants, improve air quality, and provide funding for research to determine and improve the air quality impacts of alternative transportation fuels and vehicles, vessels, and equipment technologies.

(b) Projects proposed for funding pursuant to subdivision (a) shall be evaluated based on their proposed or potential reduction of criteria or toxic air pollutants, cost-effectiveness, contribution to regional air quality improvement, and ability to promote the use of clean alternative fuels and vehicle technologies as determined by the state board, in coordination with the commission.

(c) The program shall be limited to competitive grants. Projects to be funded include the following:

(1) On- and off-road equipment projects that are cost effective.

(2) Projects that provide mitigation for off-road gasoline exhaust and evaporative emissions.

(3) Projects that provide research to determine the air quality impacts of alternative fuels and projects that study the life-cycle impacts of alternative fuels and conventional fuels, the emissions of biofuel and advanced reformulated gasoline mixes, and air pollution improvements and control technologies for use with alternative fuels and vehicles.

(4) Projects that augment the University of California's agricultural experiment station and cooperative extension programs for research to increase sustainable biofuels production and improve the collection of biomass feedstock.

(5) Incentives for small off-road equipment replacement to encourage consumers to replace internal combustion engine lawn and garden equipment.

(6) Incentives for medium- and heavy-duty vehicles and equipment mitigation, including all of the following:

(A) Lower emission schoolbus programs.

(B) Electric, hybrid, and plug-in hybrid on- and off-road medium- and heavy-duty equipment.

(C) Regional air quality improvement and attainment programs implemented by the state or districts in the most impacted regions of the state.

(7) Workforce training initiatives related to advanced energy technology designed to reduce air pollution, including state-of-the-art equipment and goods, and new processes and systems. Workforce training initiatives funded shall be broad-based partnerships that leverage other public and private job training programs and resources. These partnerships may include, though are not limited to, employers, labor unions, labor-management partnerships, community organizations, workforce investment boards, postsecondary education providers including community colleges, and economic development agencies.

(8) Incentives to identify and reduce emissions from high emitting light-duty vehicles.

44274.5. The Air Quality Improvement Fund is hereby created in the State Treasury, to be administered by the state board. The moneys in the Air Quality Improvement Fund, upon appropriation by the Legislature, shall be expended by the state board in accordance with this chapter to implement the Air Quality Improvement Program. The Legislature may transfer moneys from the fund to the Carl Moyer Memorial Air Quality Standards Attainment Trust Fund.

SEC. 6. Section 9250.1 is added to the Vehicle Code, to read:

9250.1. (a) Beginning July 1, 2008, the fee described in Section 9250 shall be increased by three dollars (\$3).

(b) Two dollars (\$2) of the increase shall be deposited into the Alternative and Renewable Fuel and Vehicle Technology Fund created by Section 44273 of the Health and Safety Code, and one dollar (\$1) shall be deposited into the Enhanced Fleet Modernization Subaccount created by Section 44126 of the Health and Safety Code.

(c) This section shall remain in effect only until January 1, 2016, and as of that date is repealed, unless a later enacted statute, that is enacted before January 1, 2016, deletes or extends that date.

SEC. 7. Section 9261.1 is added to the Vehicle Code, to read:

9261.1. (a) Beginning July 1, 2008, the fee described in Section 9261, as adjusted pursuant to Section 1678, shall be increased by five dollars (\$5).

(b) Two dollars and 50 cents (\$2.50) of the increase shall be deposited into the Alternative and Renewable Fuel and Vehicle Technology Fund created by Section 44273 of the Health and Safety Code, and two dollars and fifty cents (\$2.50) shall be deposited into the Air Quality Improvement Fund created by Section 44274.5 of the Health and Safety Code.

(c) This section shall remain in effect only until January 1, 2016, and as of that date is repealed, unless a later enacted statute, that is enacted before January 1, 2016, deletes or extends that date.

SEC. 8. Section 9853.6 is added to the Vehicle Code, to read:

9853.6. (a) (1) Beginning July 1, 2008, the fee described in paragraph (1) of subdivision (b) of Section 9853 shall be increased by ten dollars (\$10).

(2) Five dollars (\$5) of the increase shall be deposited into the Alternative and Renewable Fuel and Vehicle Technology Fund created by Section 44273 of the Health and Safety Code and five dollars (\$5) shall be deposited into the Air Quality Improvement Fund created by Section 44274.5 of the Health and Safety Code.

(b) (1) Beginning July 1, 2008, the fee described in paragraph (2) of subdivision (b) of Section 9853 shall be increased by twenty dollars (\$20).

(2) Ten dollars (\$10) of the increase shall be deposited into the Alternative and Renewable Fuel and Vehicle Technology Fund created by Section 44273 of the Health and Safety Code and ten dollars (\$10) shall be deposited into the Air Quality Improvement Fund created by Section 44274.5 of the Health and Safety Code.

(b) This section shall remain in effect only until January 1, 2016, and as of that date is repealed, unless a later enacted statute, that is enacted before January 1, 2016, deletes or extends that date.

SEC. 9. The provisions of this act are severable. If any provision of this act or its application is held invalid, that invalidity shall not affect other provisions or applications that can be given effect without the invalid provision or application.