

State of California
AIR RESOURCES BOARD

**AMENDMENTS TO ALTERNATIVE FUEL CONVERSION
CERTIFICATION PROCEDURES**

Resolution 13-35

September 26, 2013

Agenda Item No.: 13-8-2

WHEREAS, sections 39600 and 39601 of the Health and Safety Code authorize the Air Resources Board (ARB or Board) to adopt standards, rules and regulations, and to do such acts as may be necessary for the proper execution of the powers and duties granted to and imposed upon the Board by law;

WHEREAS, in section 43000 of the Health and Safety Code the Legislature has declared that the emission of air pollutants from motor vehicles is the primary cause of air pollution in many parts of the state and, in sections 39002 and 39003 of the Health and Safety Code, has charged the Board with the responsibility of systematically attacking the serious air pollution problem caused by motor vehicles;

WHEREAS, section 43004 of the Health and Safety Code provides that the emission standards applicable to gasoline-powered motor vehicles shall also apply to vehicles which have been modified to use fuels other than gasoline or diesel;

WHEREAS, section 43006 of the Health and Safety Code authorizes the Board to certify the fuel systems of vehicles powered by fuels other than gasoline or diesel which meet the standards specified in section 43004, and to adopt test procedures for such certification;

WHEREAS, section 43018 of the Health and Safety Code directs the Board to endeavor to achieve the maximum degree of emission reduction possible from vehicular sources in order to accomplish the attainment of the state ambient air quality standards at the earliest practicable date and that the Board is to adopt standards and regulations which will result in the most cost-effective combination of control measures for motor vehicles and motor vehicle fuels, including controls which will achieve reductions in motor vehicle exhaust and evaporative emissions;

WHEREAS, sections 27156 and 38391 of the California Vehicle Code prohibit the installation, sale, offer for sale or advertisement of any device, apparatus, or mechanism intended for use with, or as part of any required motor vehicle pollution control device or system which alters or modifies the original design or performance of any such motor vehicle pollution control device or system unless the Board finds that the device, apparatus, or mechanism either does not reduce the effectiveness of any required motor vehicle pollution control device or does not result in emissions from a modified vehicle which exceed the applicable emission standards for the vehicle;

WHEREAS, the increased market availability of low priced natural gas has resulted in more interest in converting light-, medium-, and heavy-duty vehicles and engines to operate on compressed natural gas (CNG) and liquefied petroleum gas (LPG);

WHEREAS, the United States Environmental Protection Agency (U.S. EPA) recently finalized regulations for certifying alternative fuel conversion systems for on-road motor vehicles and engines that provide conversion manufacturers with streamlined certification requirements and provide small volume conversion manufacturers with additional testing flexibility;

WHEREAS, the California Natural Gas Vehicle Coalition and other alternative fuel advocates have requested that the Board update title 13, California Code of Regulations, sections 2030 and 2031 governing alternative fuel conversion certification procedures for on-road motor vehicle retrofits and more closely align California's procedures with those of U.S. EPA;

WHEREAS, the current requirements for obtaining ARB certification of alternative fuel conversion systems for on-road motor vehicles and motor vehicle engines were last substantively amended in 1995, and consequently do not incorporate the more stringent low emission vehicle standards (LEV II and LEV III) adopted by the Board since 1995;

WHEREAS, the current process for certifying an alternative fuel conversion system can be especially time consuming and costly for small volume conversion manufacturers with limited engineering resources and limited access to vehicle programming by original equipment manufacturers because the existing regulations require conversion manufacturers to provide test data and demonstrate that emission levels will not exceed applicable certification standards over the useful life of the vehicle (which requires accelerated aging of the vehicle/engine and its emission control components) and a demonstration that all OBD monitors have been properly recalibrated to function correctly with the alternative fuel;

WHEREAS, the test fuel required to perform emissions tests under the current regulatory process must meet stringent standards in purity, and the cost of obtaining certified test fuel can exceed \$100 per gasoline gallon equivalent;

WHEREAS, an alternative fuel conversion manufacturer that obtains a new vehicle or engine certification must reapply for an in-use vehicle or engine certification to obtain approval to sell the identical conversion system as an aftermarket retrofit kit which requires a separate application and may also include additional requirements;

WHEREAS, staff believes that providing the additional flexibility requested by small volume alternative fuel conversion manufacturers can be accomplished without significantly risking the emission performance of the converted vehicles and engines;

WHEREAS, the proposed amendments would modify the existing test procedure to apply to 1994 through 2003 model year motor vehicles and engines and add a new test procedure to apply to 2004 and subsequent model year motor vehicles and engines that

are converted shortly after their legal or equitable title have transferred to ultimate purchasers;

WHEREAS, the proposed amendments would streamline the existing emissions testing requirements and on-board diagnostic (OBD) system testing and demonstration requirements, especially for small volume conversion manufacturers;

WHEREAS, the proposed amendments would allow alternative fuel conversion manufacturers of retrofit systems with sealed fuel systems to obtain a waiver from the evaporative testing requirements;

WHEREAS, the proposed amendments would allow alternative fuel conversion manufacturers to demonstrate compliance with the non-methane organic gases (NMOG) emissions standard for conversions to CNG and LPG by multiplying non-methane hydrocarbon (NMHC) emissions by 1.5, instead of actually measuring NMOG emissions;

WHEREAS, the proposed amendments would allow conversion manufacturers of a dual fuel system to apply for a test waiver to eliminate repeating the emissions testing on the original fuel if the original emissions control system is not compromised;

WHEREAS, the proposed amendments would allow small volume conversion manufacturers to use assigned deterioration factors (DF) provided by ARB or U.S. EPA to determine compliance with useful life emissions testing instead requiring high mileage emission tests;

WHEREAS, the proposed amendments would allow manufacturers of conversion systems for heavy-duty engines and vehicles originally certified under an engine-dynamometer test procedure to utilize alternative test methods that do not require dynamometer testing in order to demonstrate that the conversion system does not increase emissions compared to the original engine;

WHEREAS, the proposed amendments would retain the OBD testing and demonstration requirements for the catalyst system, the fuel system at the rich and lean limits, and the exhaust gas sensors of the emissions control system;

WHEREAS, the proposed amendments would allow small volume conversion manufacturers to waive testing requirements if no significant changes are made to the original vehicle and would reduce OBD compliance demonstrations to only those needed to show that these systems will continue to function as designed by the original vehicle manufacturer, which will provide for an easier certification process while retaining confidence that the performance of the OBD system will not be compromised in the converted vehicles;

WHEREAS, the proposed amendments would allow small volume conversion manufacturers to use less expensive commercial CNG fuel that meets federal standards for testing in lieu of ARB CNG certification test fuel and use less expensive LPG that meets ARB's motor vehicle fuel requirements in lieu of ARB LPG certification test fuel;

WHEREAS, the proposed amendments would sunset testing and demonstration waivers in the 2018 model year because the specific proposed test procedures will need to be updated by that time to reflect changes in emission control and OBD systems for the 2018 model year, when the declining LEV III exhaust emission fleet average will be driving a significant portion of light-duty vehicles to lower exhaust emission levels, and when the heavy-duty OBD standards will be fully implemented for both conventional and alternative fueled engines;

WHEREAS, the proposed amendments would also establish an expedited approval provision so that an alternative fuel conversion manufacturer that obtains a new vehicle or engine certification from ARB may request certification of an alternative fuel retrofit system for in-use vehicles that is identical in configuration to the fuel system in the newly certified vehicle or engine;

WHEREAS, the proposed amendments would establish emissions warranty requirements for both the manufacturers and installers of alternative fuel conversion systems, and require manufacturers to retain and review warranty claims for each conversion system on a production year basis for three years;

WHEREAS, the proposed amendments would also establish in-use enforcement testing and confirmatory testing provisions for alternative fuel conversion systems;

WHEREAS, the proposed amendments identified above are set forth at title 13, California Code of Regulations, sections 2030 and 2031, Attachment A hereto, in the existing test procedure "California Certification and Installation Procedures for Alternative Fuel Retrofit Systems for Motor Vehicles Certified for 1994 and Subsequent Model Years and for all Model Year Motor Vehicle Retrofit Systems Certified for Emission Reduction Credit" that applies to 1994 through 2003 model year motor vehicles and engines, Attachment B hereto, and in a new test procedure that applies to 2004 and subsequent model year motor vehicles and engines, "California Certification and Installation Procedures for Alternative Fuel Retrofit Systems for On-Road Motor Vehicles and Engines," incorporated by reference in CCR, title 13, sections 2030 and 2031, Attachment C hereto;

WHEREAS, ARB staff prepared a staff report entitled "Initial Statement of Reasons (ISOR) for Rulemaking, Proposed Amendments to Alternative Fuel Conversion Certification Procedures," (ISOR) which presents the rationale for the proposed amendments and associated certification procedures;

WHEREAS, the ISOR and proposed regulatory language were made available to the public for at least 45 days prior to the public hearing to consider the proposed regulation;

WHEREAS, the California Environmental Quality Act (CEQA) requires that a public agency not approve a project as proposed if the project would cause significant environmental impacts, and if there are feasible alternatives or feasible mitigation measures available which would substantially lessen the significant environmental impacts of such a project; in the event that specific economic, social, or other conditions

make infeasible the alternatives or mitigation measures, the project may be approved if it is determined that any remaining unavoidable significant impacts are acceptable due to overriding considerations;

WHEREAS, Public Resources Code section 21080.5 allows public agencies with regulatory programs to prepare a plan or other written document in lieu of an environmental impact report or negative declaration once the Secretary of the Resources Agency has certified the regulatory program;

WHEREAS, that portion of the ARB's regulatory program that involves the adoption, approval, amendment, or repeal of standards, rules, regulations, or plans has been certified by the Secretary of Resources Agency (CEQA Guidelines, section 15251(d));

WHEREAS, in accordance with ARB's certified regulatory program at title 17, CCR, section 60005 (b), and the policy and substantive requirements of CEQA, as part of the ISOR, ARB staff prepared an assessment of the potential for significant adverse and beneficial environmental impacts associated with the proposed amendments and a succinct analysis of those impacts, which found that the amendments will not result in any significant adverse impacts on the environment;

WHEREAS, the Board has considered the impact of the proposed regulatory action on the economy of the State and the potential for adverse economic impacts on California business enterprises and individuals;

WHEREAS, a public hearing and other administrative proceedings have been held in accordance with the provisions of Chapter 3.5 (commencing with section 11340), part 1, division 3, title 2 of the Government Code; and

WHEREAS, in consideration of the information in the public record, including the ISOR, written comments, and testimony provided at the hearing, the Board finds that:

The proposed amendments and incorporated certification procedures were developed in an open public process, in consultation with affected parties through numerous public workshops, individual meetings, and other outreach efforts;

The reporting requirements applicable to businesses in the proposed regulations are necessary for the health, safety, and welfare of the people of the State;

The proposed amendments to the regulation and 1994 through 2003 model-year certification and installation procedures and the new 2004 and subsequent model-year certification and installation procedures retain the testing and demonstration requirements for the most important components of motor vehicle and motor vehicle engine emission control systems, and would waive many test requirements for small volume conversion manufacturers that demonstrate that their alternate fuel conversion systems do not significantly alter vehicles or engines previously certified in California;

The proposed amendments and new certification and installation procedures will reduce the demonstration requirements and certification costs for small volume conversion manufacturers compared to existing certification requirements, and will allow such manufacturers to develop and to sell alternative fuel conversion systems in California much sooner than under the existing certification process;

The proposed amendments and new certification and installation procedures are necessary and appropriate to ensure that the emissions from converted vehicles and engines will not exceed the emissions standards applicable to the original vehicles and engines;

The U.S. EPA recently adopted changes to its procedures for alternative fuel conversions do not adequately address California's more severe air quality problems, and the proposed amendments will ensure that conversions of vehicles to operate on alternative fuels in California maintain the emissions reductions associated with the applicable emissions standards for the model year of the motor vehicle or engine being modified or converted and will not increase emissions;

The economic and fiscal impacts of the proposed regulation and incorporated certification procedures have been analyzed as required by California law, and the conclusions and supporting documentation for this analysis are set forth in the ISOR, as supplemented by staff's presentation at the hearing of this item;

Overall, the proposed amendments are anticipated to provide cost savings to a small business of \$85,100 for an in-use conversion compared to existing requirements; and

No reasonable alternative considered, or that has otherwise been identified and brought to the attention of ARB, would be more effective at carrying out the purpose for which the amendments are proposed, or would be as effective and less burdensome to affected private persons and businesses than the proposed amendments.

WHEREAS, pursuant to the requirements of the California Environmental Quality Act (CEQA) and the Board's regulations under its certified regulatory program, the Board further finds that:

ARB staff has prepared an environmental analysis for the proposed regulatory action, which is contained in Chapter V of the ISOR;

Staff's environmental analysis determined that the proposed regulatory action would not result in any potentially significant adverse impacts on the environment as the proposed amendments associated with the initial emissions tests would not result in increased emissions, and the proposed regulatory action may provide air emissions benefits compared to current practices to the extent that manufacturers elect to certify conversion systems to convert vehicles and engines to more stringent certification standards than those applicable to the originally certified

vehicles and engines and to the extent that such conversion systems are purchased and installed;

Staff's environmental analysis also determined that the proposed regulatory action does not require or result in any new development or require modifications to buildings or other structures, affect operations at existing facilities, or cause any new land use designation and is therefore not expected to result in any adverse impacts that would result from development including aesthetics, air quality, agricultural and forestry resources, biological resources, cultural resources, geology and soils, greenhouse gases, land use planning, mineral resources, population and housing, public services, recreation, or traffic and transportation;

The proposed amendments are consistent with ARB's environmental justice policies and do not disproportionately impact people of any race, culture, or income.

NOW, THEREFORE, BE IT RESOLVED that the Board hereby approves for adoption the proposed amendments to title 13, California Code of Regulations sections 2030 and 2031, as set forth in Attachment A hereto, the proposed amendments to the incorporated "California Certification and Installation Procedures for Alternative Fuel Retrofit Systems for Motor Vehicles Certified for 1994 and Subsequent Model Years and for all Model Year Motor Vehicle Retrofit Systems Certified for Emission Reduction Credit," as set forth in Attachment B hereto, and the incorporated, "California Certification and Installation Procedures for Alternative Fuel Retrofit Systems for On-Road Motor Vehicles and Engines," as set forth in Attachment C hereto.

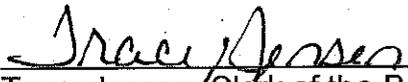
BE IT FURTHER RESOLVED that the Board directs the Executive Officer to adopt the proposed amendments to title 13, California Code of Regulations sections 2030 and 2031, as set forth in Attachment A hereto, the proposed amendments to the incorporated "California Certification and Installation Procedures for Alternative Fuel Retrofit Systems for Motor Vehicles Certified for 1994 and Subsequent Model Years and for all Model Year Motor Vehicle Retrofit Systems Certified for Emission Reduction Credit," as set forth in Attachment B hereto, and the incorporated "California Certification and Installation Procedures for Alternative Fuel Retrofit Systems for On-Road Motor Vehicles and Engines," as set forth in Attachment C hereto, with the modifications set forth in Attachment D, after making the modified regulatory language available for public comment for a period of 15 days, provided that the Executive Officer shall consider such written comments regarding the modification and additional supporting documents and information as may be submitted during this period, shall make modifications as may be appropriate in light of the comments received, and shall present the regulations to the Board for further consideration if he determines that this is warranted.

BE IT FURTHER RESOLVED, that to the extent that the Executive Officer receives comments raising significant environmental issues, the Executive Officer shall, if appropriate, conduct any further environmental analysis as required for a regulatory program certified under Public Resource Code section 21080.5, and if it is determined that any 15-day modifications to the

regulation may have a significant impact on the environment, the Executive Officer shall incorporate all feasible mitigation or alternatives that could eliminate or substantially lessen any significant adverse environmental impacts identified; the Executive Officer shall also prepare written responses to comments raising significant environmental issues and shall present to the Board for its consideration and approval the proposed Final Regulation Order, the environmental analysis prepared for the proposed regulatory action pursuant to ARB's regulatory program, and written responses to any comments received during the evaluation process that raised significant environmental issues.

BE IT FURTHER RESOLVED that the Board directs staff to monitor the implementation of the proposed amendments and new certification and installation procedure, and to report staff's findings and recommendations to the Board regarding the need to extend the applicability of the proposed sunset provisions for emissions test procedures and on board diagnostic (OBD) system requirements beyond the 2017 model year.

I hereby certify that the above is a true and correct copy of Resolution 13-35, as adopted by the Air Resources Board.


Tracy Jensen, Clerk of the Board

Resolution 13-35

September 26, 2013

Identification of Attachments to the Resolution

- Attachment A: Proposed Modifications to the Regulation for "Alternative Fuel Conversion Certification Procedures", California Code of Regulations, title 13, sections 2030 and 2031, as set forth in Appendix A to the Staff Report: Initial Statement of Reasons, released August 7, 2013.
- Attachment B: Proposed Modifications to "California Certification and Installation Procedures for Alternative Fuel Retrofit Systems for Motor Vehicles Certified for 1994 and Subsequent Model Years and for all Model Year Motor Vehicle Retrofit Systems Certified for Emission Reduction Credit," as set forth in Appendix B to the Staff Report: Initial Statement of Reasons released August 7, 2013.
- Attachment C: Proposed Adoption of the "California Certification and Installation Procedures for Alternative Fuel Retrofit Systems for On-Road Motor Vehicles and Engines," as set forth in Appendix C to the Staff Report: Initial Statement of Reasons released August 7, 2013.
- Attachment D: Staff's Suggested Modifications to the Original Proposal (Distributed at the September 26, 2013 Board hearing).