Public Workshop: Proposed Amendments to the Alternative Fuel Conversion Certification Procedures for New and In-Use Vehicles and Engines

Air Resources Board Auditorium
El Monte, California
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California Environmental Protection Agency

Air Resources Board
Agenda

- Purpose
- Background
- Preliminary staff proposals
- Other items under consideration
- Next steps
- Contact information
Need for Proposed Amendments

- Update and simplify the application and approval process
- Update the in-use alternative fuel certification requirements
- Better align ARB’s procedures with recent changes adopted by U.S. EPA
- Streamline ARB’s new and in-use alternative fuel vehicle/engine certification requirements
Background

- New vs. used (in-use) alternative fuel conversions differ
- Overview of the current New vehicle/engine conversion requirements
- Overview of the current in-use vehicle/engine conversion requirements
New vs. Used Conversions

- New vehicle/engine: equitable title has never been transferred to an ultimate purchaser
- Used (in-use) vehicle/engine: any vehicle/engine that is not “new”
- Issue: Requests for in-use conversions of previously ARB certified new vehicle/engine requires applicant to repeat certification
  - Must comply with all new vehicle/engine certification requirements
New Vehicle/Engine Certification Requirements

- Submit an application and update it for changes
- Meet the applicable emission standards and adhere to the appropriate test procedures
- Demonstrate durability
- Meet the applicable labeling requirements
- Provide emissions warranty to the ultimate purchaser
- Identify all makes and models
- Comply with on-board diagnostic (OBD) requirements
New Vehicle/Engine Regulations

- 13 CCR § 1962

- 13 CCR § 1956.8
  - Exhaust Emissions Standards and Test Procedures – 1985 and Subsequent Model Heavy-Duty Engines and Vehicles.

- 13 CCR § 1976

- 13 CCR § 1968.2

- 13 CCR § 1971
  - Engine Manufacturer Diagnostic System Requirements – 2007 and Subsequent Model-Year Heavy-Duty Engines.

- 13 CCR § 1971.1
  - On-Board Diagnostic System Requirements – 2010 and Subsequent Model-Year Heavy-Duty Engines.
In-Use Vehicle/Engine Certification

- Applies to the conversion of any vehicle/engine that’s not “new”
- Certification program administered by ARB’s Aftermarket Parts Section
- Successful applicants receive a non-expiring Executive Order
- Allows applicants to market and sell alternative fuel retrofit systems in California
In-Use Vehicle/Engine Certification Requirements

- Comply with base vehicle/engine certification emission standards or more stringent standards
- Certification based on engine family
- Demonstrate durability
- Supplemental emission control information label
- Manufacturer’s and installer’s warranty
- Evaluation of impact on auxiliary emission control devices
- Comply with OBD requirements
- Installation inspection
- In-Use enforcement testing
In-Use Vehicle/Engine Regulations

13 CCR § 2030
- Liquefied Petroleum Gas or Natural Gas Retrofit Systems.

Associated Test Procedures:
- California Exhaust Emission Standards and Test Procedures for Systems Designed to Convert Motor Vehicles Certified for 1993 and Earlier Model Years to Use Liquefied Petroleum Gas or Natural Gas Fuels
- 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
Preliminary Staff Proposals
Application Process

- New vehicle/engine alternative fuel certifications will automatically qualify for aftermarket certification if requested
- Develop separate webpage for all alternative fuel conversion certification information
- Extend or renew new vehicle/engine alternative fuel certifications to allow manufacturers 1 full year of sales
Test Fuel

- Harmonize natural gas certification test fuel requirements with Federal Standards
- Investigate the feasibility of harmonizing liquid propane gas certification test fuel requirements
- Harmonize natural gas NMHC to NMOG multiplier with Federal Standards
Dual-Fuel Systems

- Currently, new vehicle/engine must comply with exhaust and evaporative emission standards when operating on each fuel
- In-Use: For evaporative emissions, manufacturers can provide engineering justification for a test waiver with the original fuel
- Investigate the feasibility of allowing similar engineering justification to waive exhaust emissions testing with the original fuel
Deterioration Factors (DF’s)

- Numeric factors applied to low mileage mass emissions to account for the potential increase in emissions due to mileage accumulation
- Defined as the estimate of the ratio of the true mean response at high mileage to the true mean response at low mileage
- Used to determine compliance probabilities in lieu of high-mileage emissions tests
DF’s (continued)

- New and in-use alternative fuel certification allows the use of assigned DF’s
- In-use requires manufacturers to validate assigned DF’s within 2 years of receiving certification
- Investigating the feasibility of replacing DF validation with in-use testing
- Request for data
OBD Requirements

- Investigating the feasibility of reducing testing/recalibrating of threshold monitors
- Investigating the feasibility of reducing full useful life testing
- Considering changes that would move some testing to post-certification in lieu of pre-certification
OBD Requirements (continued)

- Changes would also require additional commitment by alternative fuel conversion manufacturers
  - Extended warranty
  - Recall provisions

- Changes may require cap on annual sales, would only be available to alternative fuel conversion manufacturers (not OEM vehicle/engine manufacturer)
Installation Control

- Regulations currently require post-conversion BAR inspection for each in-use conversion
- Investigating the feasibility of alternative installation controls
- Actively seeking stakeholder input
In-Use Compliance Testing

- In-use emissions testing is required upon order by ARB’s Executive Officer.
- Testing of a minimum of ten vehicles per engine family is required, but only if requested.
- Staff open to reducing the requirements, actively seeking stakeholder input.
Update In-Use Certification Procedures

- Staff is proposing changes to §2030
  - Streamline test procedures
  - Update regulatory language
  - Where feasible, align procedures with recent changes adopted by U.S. EPA
Alternative Test Methods

- What role, if any, can alternative test methods, such as PEMS, play in the certification process?
- Are these types of systems robust enough for certification testing or should they only be used for in-use compliance?
- Actively seeking stakeholder input
- Data needs
Other Items Under Consideration
New/In-Use Hybrid Conversions

- Should hybrid conversions be included in the proposed regulatory changes?
- Is there a market demand for these types of systems?
- Complexity of conversion may need to be considered
- Actively seeking stakeholder input
Next Steps

- Please provide comments to ARB by mid February
- Next workshop tentatively scheduled for April, 2013
- Third quarter 2013 Board hearing
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New vehicle/engine alternative fuel conversion certifications, please go to:
http://www.arb.ca.gov/msprog/onroad/cert/ldctp/ldctp.htm

In-use vehicle/engine alternative fuel conversion certifications, please go to:
http://www.arb.ca.gov/msprog/aftermkt/altfuel/altfuel.htm
Certification Contact Information

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