

TITLE 13. CALIFORNIA AIR RESOURCES BOARD

NOTICE OF PUBLIC HEARING TO CONSIDER AMENDMENTS ADOPTING MORE STRINGENT EMISSION STANDARDS FOR 2007 AND SUBSEQUENT MODEL YEAR NEW HEAVY-DUTY DIESEL ENGINES

The Air Resources Board (Board or ARB) will conduct a public hearing at the time and place noted below to consider adopting amendments to the emission standard regulations for 2007 and subsequent model year new heavy-duty diesel engines. The proposal includes amendments to the supplemental emission test procedures, including the Not-to-Exceed and EURO III European Stationary Cycle tests.

DATE: October 25, 2001

TIME: 9:00 a.m.

PLACE: Monterey Bay Unified Air Pollution Control District
Board Room, 3rd Floor
24580 Silver Cloud Court
Monterey, CA 93940

This item will be considered at a two-day meeting of the ARB, which will commence at 9:00 a.m., October 25, 2001, and may continue at 8:30 a.m., October 26, 2001. This item may not be considered until October 26, 2001. Please consult the agenda for the meeting, which will be available at least 10 days before October 25, 2001, to determine the day on which this item will be considered.

This facility is accessible to persons with disabilities. If accommodation is needed, please contact the Clerk of the Board at (916) 322-5594, or Telephone Device for the Deaf (TDD) (916) 324-9531 or (800) 700-8326 for TDD calls from outside the Sacramento area, by October 10, 2001, to ensure accommodation.

INFORMATIVE DIGEST OF PROPOSED ACTION AND POLICY STATEMENT **OVERVIEW**

Sections Affected: California Code of Regulations (CCR), title 13, division 3. Air Resources Board, chapter 1. Motor Vehicle Pollution Control Devices, article 2. Approval of Motor Vehicle Pollution Control Devices (New Vehicles); section 1956.8; and the incorporated "California Exhaust Emission Standards And Test Procedures for 1985 and Subsequent Model Heavy-Duty Diesel Engines and Vehicles," last amended July 25, 2001.

A. Background

Heavy-duty diesel engines (HDDEs) are used in a variety of applications such as large trucks, school buses, and motor homes. For large trucks in particular, HDDEs have proven to be reliable, durable, and very fuel efficient. Because of this, HDDEs play a

vital role in the transportation of goods and material in California, as well as the rest of the nation. Consequently, HDDEs are a key element of a strong economy.

Compared to gasoline-fueled automobiles and light-duty trucks, HDDEs have significantly lagged behind with respect to the use of aftertreatment-based emission control systems. This is primarily because regulatory agencies have acknowledged that HDDEs emit relatively low levels of hydrocarbons, significant reductions in particulate matter (PM) have been achieved through engine modifications, and aftertreatment systems to reduce oxides of nitrogen (NOx) emissions from HDDEs have been slower to develop. However, in recent years, PM filters have become available to address the growing concern that diesel PM causes cancer, and NOx aftertreatment devices are rapidly developing. These devices offer the opportunity to achieve substantial additional reductions in HDDE emissions.

In October of 2000, the United States Environmental Protection Agency (U.S. EPA) adopted a rule that reaffirmed¹ emission standards for 2004 and subsequent model year HDDEs.² This rulemaking also included supplemental test procedures required for certification in addition to the existing Federal Test Procedure (FTP). Because aftertreatment technologies for diesel engines have been fully developed for PM and are on the near horizon for NOx, the U.S. EPA, in January of 2001, followed the 2004 Final Rule with another rule to reduce emission standards for 2007 and subsequent model year heavy-duty engines,³ including both Otto-cycle and diesel-cycle engines. These emission standards represent a 90% reduction of NOx emissions, 72% reduction of non-methane hydrocarbon (NMHC) emissions, and 90% reduction of PM emissions compared to the 2004 emission standards. In addition to the more stringent emission standards, the U.S. EPA adopted minor changes to the previously adopted supplemental test procedures.

The 2007 Final Rule breaks new ground by setting emission standards that require aftertreatment-based technologies. The 2007 Final Rule is analogous to the regulations which first required the use of aftertreatment devices (i.e., catalytic converters) on gasoline-fueled automobiles and light-duty trucks in the mid 1970s. The 2007 Final Rule is also a “systems” approach in that it requires the use of low sulfur fuel, analogous to the requirement for unleaded gasoline in the mid 1970s.

Heavy-duty diesel vehicles, with gross vehicle weight ratings (GVWR) of 14,001 pounds and greater, contribute a large portion of California’s inventory of several key air pollutants including NOx, reactive organic gases (ROG), and PM. On-road heavy-duty diesel vehicles are estimated to account for as much as 28 percent of the statewide mobile source NOx inventory and 16 percent of the statewide mobile source PM inventory in 2010. This is of particular concern due to the relatively small population of heavy-duty diesel vehicles. In addition to heavy-duty diesel-cycle engines, the proposal

¹ The emission standards were originally promulgated in October 1997.

² U.S. EPA’s 2004 Final Rule on the Control of Emissions of Air Pollution from 2004 and Later Model Year Heavy-Duty Highway Engines and Vehicles; Revision of Light-Duty On-Board Diagnostics Requirements (65 FR 59896, October 6, 2000). Referred to as the U.S. EPA’s 2004 Final Rule or 2004 Final Rule.

³ U.S. EPA’s 2007 Final Rule on the Control of Emissions of Air Pollution from 2007 and Later Model Year Heavy-Duty Highway Engines and Vehicles; Revision of Light-Duty On-Board Diagnostics Requirements (66 FR 5002, January 18, 2001). Referred to as the U.S. EPA’s 2007 Final Rule or 2007 Final Rule.

will apply to both natural gas fueled engines and liquefied petroleum gas fueled engines that are derived from the diesel-cycle engine, and to medium-duty diesel engines that certify using engine-based emission standards. The proposed standards are considered optional for medium-duty diesel vehicles since those vehicles may certify to either chassis-based or engine-based emission standards. Medium-duty diesel engines are those used in vehicles with a GVWR of 8,501 pounds to 14,000 pounds. Additionally, included in the inventory of heavy-duty diesel vehicles are motor homes and school buses.

B. Current California Requirements for 2004 and Subsequent Model Years

1. Emission Standards

The current California 2004 and subsequent model year emission standards for heavy-duty diesel-cycle engines and medium-duty diesel engines are 2.4 grams per brake horsepower-hour of NO_x plus NMHC, 0.10 grams per brake horsepower-hour of PM, and 15.5 grams per brake horsepower-hour of CO. There is also an optional NO_x plus NMHC emission standard of 2.5 grams per brake horsepower-hour. When certifying using this option, NMHC emissions are not to exceed 0.5 grams per brake horsepower-hour. For medium-duty diesel engines, the CO emission standard is 14.4 grams per brake horsepower-hour and there is an additional formaldehyde emission standard of 0.050 grams per brake horsepower-hour. Further, for medium-duty diesel engines, there are optional super-ultra-low-emission-vehicle (SULEV) emission standards.⁴ The medium-duty NO_x and NMHC SULEV emission standards are 83% more stringent than the required emission standard. For PM and CO, however, the medium-duty SULEV emission standards are 50% more stringent than the required emission standards. Due to performance concerns and possible damage to the turbocharger and/or aftercooler when crankcase emissions are routed back to the engine intake, currently there is an exemption from controlling crankcase emissions from turbocharged diesel engines.

2. Test Procedures

For certification, heavy-duty diesel-cycle engines and medium-duty diesel engines are required to be tested using the FTP. During the FTP, an engine operates through a narrowly defined test cycle. Additionally, those engines are required to conduct the supplemental Not-to-Exceed (NTE) and European Stationary Cycle (ESC) tests. These supplemental tests are identical to those in the heavy-duty diesel consent decrees and were adopted by the Board in 2000. The NTE test includes an emissions cap of 1.25 times the FTP-based emission standard. The test is applicable to operation within the NTE control zone that represents most operation of a heavy-duty diesel vehicle. Emission samples taken during the test are averaged over a period of at least 30 seconds.

⁴ The existing SULEV emission standards were created as an opportunity to allow manufacturers to design and sell engines that emitted significantly lower emitting engines.

The ESC test includes an emissions cap equivalent to the FTP-based emission standard. This test verifies emissions over thirteen combinations of engine speed and power, including idle. The weighted average total of each test point is compared to the emissions cap. The test also includes the maximum allowable emission limit (MAEL) test. This test ensures that there are no excess emissions between the ESC test points. Additional test points are selected to verify compliance with the test.

3. *Certification Test Fuel Specifications*

The current diesel fuel sulfur content specification for certification test fuel ranges from 100 to 500 parts per million. This specification is identical for both exhaust emission testing and service accumulation. Manufacturers also have the option to use an alternative certification test fuel provided there is sufficient evidence indicating that this test fuel will be the predominant in-use fuel.

4. *Averaging, Banking, and Trading (ABT)*

The current ABT program allows averaging among various engine families only within an averaging set. Each averaging set depends on the U.S. EPA's weight classification, or GVWR, ranges of the engines. There are three U.S. EPA weight class ranges, light heavy-duty (8,501 pounds to 19,500 pounds GVWR), medium heavy-duty (19,501 pounds to 33,000 pounds GVWR), and heavy heavy-duty (33,001 pounds and greater GVWR). Further, engine manufacturers may also bank excess credits. These banked credits may be used in future years, or traded to other engine manufacturers.

C. Proposed Amendments

The ARB staff is proposing the adoption of emission standards and supplemental test procedure modifications to reduce emissions from 2007 and subsequent model year heavy-duty diesel-cycle engines and vehicles. Applicable engines include both natural gas fueled engines and liquefied petroleum gas fueled engines that are derived from the diesel cycle engine. The proposal will not apply to heavy-duty spark-ignited (e.g., gasoline-fueled) engines and urban bus engines. Similar requirements for the spark-ignited engines are scheduled for consideration in 2002. More stringent urban bus engine emission standards were adopted in 2000. In addition, in-use diesel fuel standards similar to those adopted by the U.S. EPA are currently being workshopped and scheduled for consideration in 2002.⁵

1. *Emission Standards*

Identical to the U.S. EPA's 2007 Final Rule, the proposed amendments include more stringent emission standards for 2007 and subsequent model year heavy-duty diesel-cycle engines and medium-duty diesel engines. Heavy-duty diesel-

⁵ ARB staff held public meetings April 5, 2001 and May 18, 2001, to discuss potential diesel fuel sulfur amendments.

cycle engines include diesel-cycle engines fueled with diesel, natural gas, and liquefied petroleum gas. The proposed emission standards are 0.20 grams per brake horsepower-hour of NO_x, 0.14 grams per brake horsepower-hour of NMHC, and 0.01 grams per brake horsepower-hour of PM. To harmonize the ARB medium-duty diesel engine emission standards with those of the U.S. EPA, the proposed CO emission standard is 15.5 grams per brake horsepower-hour. The proposed optional NO_x and NMHC SULEV emission standards will be 83% of the proposed heavy-duty diesel engine emissions standards, while the proposed optional PM and CO SULEV emission standards for medium-duty diesel engines will be half of the proposed heavy-duty diesel engine emissions standards: 0.17 grams per brake horsepower-hour of NO_x, 0.12 grams per brake horsepower-hour of NMHC, 0.005 grams per brake horsepower-hour of PM, and 7.7 grams per brake horsepower-hour of CO. Additionally, for medium-duty diesel engines, the formaldehyde emission standard will remain at 0.050 grams per brake horsepower-hour.

Identical to the U.S. EPA's 2007 Final Rule, only the NO_x and NMHC emission standards are proposed to be phased-in. The phase-in period for these emission standards is proposed to be four years, as follows: 50% for model year 2007, 50% for model year 2008, 50% for model year 2009 and 100% for model year 2010 and subsequent. There is no proposed phase-in of the PM and CO emission standards; therefore, the PM and CO emission standards are proposed to be fully implemented beginning in the 2007 model year.

Identical to the U.S. EPA's 2007 Final Rule, the proposal includes the elimination of the current exception for turbocharged diesel engines from controlling crankcase emissions. Due to technological advances in crankcase filtration, crankcase emissions can be filtered and returned to the engine inlet or even prior to the emission control device.

Identical to the U.S. EPA's 2007 Final Rule, the proposal provides incentives for early introduction of lower emitting engines. Engines that satisfy the proposed requirements and that are introduced into the marketplace before 2007, will receive credits equal to 1.5 times the number of diesel-cycle engines that are introduced early. For example, two early introduction engines will reduce the number of required phased-in engines by three. Each early engine must meet all requirements applicable to model year 2007 engines. If the engine complies only with the PM requirements, the offsets may be used only for PM compliant engine credits. Engines that can meet one half of the proposed NO_x emission standard, or 0.10 grams per brake horsepower-hour, earlier than the phase-in period in addition to all other requirements applicable to model year 2007 engines will be classified as "Blue Sky Series" engines. These engines will receive a credit of 2.0 times the number of "Blue Sky Series" engines. For example, two "Blue Sky Series" engines will reduce the number of required phased-in engines by four.

2. *Test Procedures*

The U.S. EPA's 2004 Final Rule adopted supplemental certification test procedures that apply to 2007 and subsequent model year heavy-duty diesel-cycle engines certified to the 2.4 gram per brake horsepower-hour NO_x plus NMHC standard. These test procedures are slightly different compared to those in the federal consent decrees and California settlement agreements, and those adopted by the Board.

The U.S. EPA's 2007 Final Rule included several changes to the 2004 Final Rule test procedures that will apply to all 2007 and subsequent model year heavy-duty diesel-cycle engines. This proposal will adopt identical revisions to the 2004 Final Rule test procedures.⁶ The major revisions that were adopted federally and are therefore proposed for modification to the California test procedures are detailed below.

Due to the more stringent emission standards proposed, the MAEL test and the three "mystery points" are proposed to be removed from the test procedures for engines with a NO_x family emission limit (FEL) less than 1.5 grams per brake horsepower-hour. Further, the NO_x NTE cap is proposed to be increased from 1.25 to 1.5 times the FTP-based standard for engines with a NO_x FEL less than 1.5 grams per brake horsepower-hour. The PM NTE cap is proposed to be increased from 1.25 to 1.5 times the FTP-based standard. There is no proposed change to the CO and NMHC NTE cap. Note that MAEL test requirements and a NTE cap of 1.25 times the FTP-based standard still apply to engines with a NO_x family emission limit (FEL) of 1.5 grams per brakehorsepower-hour, or greater.

In addition to the increased NO_x NTE emissions cap for phased-in engines, NO_x and NMHC aftertreatment devices are allowed warm-up time. When the exhaust temperature at the outlet of the aftertreatment device is less than 250 degrees C, the NTE NO_x and NMHC caps do not apply.

Another change is the elimination of the PM carve-out areas of the NTE control zone. Due to the expected effectiveness of advanced diesel PM filters, relief from the NTE through the PM carve-out areas is not necessary. However, relief to the NTE test is provided, if necessary, by allowing manufacturers to exclude certain regions of the NTE control zone. This is allowed if the vehicle is not capable of operating at the specific conditions or where operation is minimal. The ARB staff is also proposing that the sampling time for the NTE test be modified to account for aftertreatment regeneration events. The sampling time for the NTE test is proposed to be at least 30 seconds. If regeneration of the aftertreatment device occurs during the NTE test, the averaging period is proposed to be at least as long as the time between the regeneration events multiplied by the number of complete regeneration events that occur in the sampling period. This revised sampling period is only proposed for engines that send an electronic signal indicating the start of the regeneration event. In

⁶ The amendments of California's test procedures on July 25, 2001 included the U.S. EPA's 2004 Final Rule test procedure amendments.

addition, up to three deficiencies from the NTE test may be approved per engine family for model years 2010 through 2013.⁷

Due to manufacturer concerns, the proposal will also include amendments to the test procedures adopted in the U.S. EPA's 2007 Final Rule that improve the precision of emission measurements. There are three general changes to the emission measurement requirements. One change involves the type of PM filters that are used, improvements to the method of weighing PM filters, and requirements for more precise microbalances. Another change allows lower dilution ratios during emission measurements. The final change adopts a new NOx calibration procedure that provides more precise and continuous measurements of low NOx concentrations. Additional allowances are proposed to provide manufacturers the option of using their current test procedures if they are more convenient or cost-effective in the short term.

3. *Certification Test Fuel Specifications*

To ensure that the proper fuel is used for emissions testing and service accumulation, the certification test fuel sulfur content specification is proposed to range from 7 to 15 parts per million. Manufacturers will continue to have the option to use an alternative certification test fuel provided there is sufficient evidence indicating that this test fuel will be the predominant in-use fuel.

4. *ABT*

The staff is proposing an ABT program identical to the federal ABT program as revised through the U.S. EPA's 2007 Final Rule. By adopting most of the 2007 Final Rule as California's, the basic structure of the proposed ABT program will be similar to the ARB's existing program. Manufacturers will continue to be allowed to certify engine families such that the aggregate average does not exceed the emission standard. Additionally, manufacturers may bank excess emission credits for later use or trade these credits to other manufacturers.

Due to the phase-in of the NOx emission standard, engines are classified as either "phased-out" or "phased-in." The phased-out engines are those subject to the previously adopted 2.5 gram per brake horsepower-hour NOx plus NMHC emission standard. The phased-in engines are those subject to the proposed 0.2 gram per brake horsepower-hour NOx emission standard. Credits generated from phased-out engines may be used for phased-in engines. However, NOx plus NMHC credits will be subject to a 20% discount when converted to NOx only credits.

⁷ Criteria for deficiencies occurring during 2007 through 2009 model years, including phased-in engines, is detailed in the U.S. EPA's 2004 Final Rule. Deficiencies during this time period are approved on an engine model and/or horsepower rating basis within an engine family. Additionally, deficiencies are applicable for one model year at a time.

Identical to the U.S. EPA's ABT program adopted in the 2007 Final Rule, averaging is proposed to be allowed between different service class averaging sets. This allowance is proposed for only the phase-in period. For example, emissions from heavy heavy-duty diesel-cycle engines may be averaged with emissions from medium heavy-duty diesel-cycle engines.

To be included in the proposed ABT program, engine families must not exceed the proposed maximum FELs. For phased-in engines subject to the 0.2 gram per brake horsepower-hour emission standard during the 2007 through 2009 model years, the proposed maximum NOx FEL cap is 2.00 grams per brake horsepower-hour. After all engines have been phased-in for the 2010 and subsequent model years, the proposed maximum NOx FEL cap is 0.50 grams per brake horsepower-hour. The proposed maximum PM FEL cap is 0.02 grams per brake horsepower-hour for all engines beginning in the 2007 model year.

AVAILABILITY OF DOCUMENTS AND AGENCY CONTACT PERSONS

The Board staff has prepared a Staff Report: Initial Statement of Reasons (ISOR) for the proposed regulatory action, which includes a summary of the potential environmental and economic impacts of the proposal, if any. The Staff Report is entitled, "Public Hearing to Consider Amendments Adopting More Stringent Emission Standards for the 2007 and Subsequent Model Year Heavy-Duty Diesel Engines."

Copies of the Staff Report, and the full text of the proposed regulatory language, in underline and strikeout format to allow for comparison to existing regulations, may be obtained from the Public Information Office, Air Resources Board, 1001 "I" Street, Environmental Services Center, 1st Floor, Sacramento, CA 95814, (916) 322-2990 at least 45 days prior to the scheduled hearing (October 25, 2001).

Upon its completion, the Final Statement of Reasons (FSOR) will be available and copies may be requested from the agency contact persons in this notice, or may be accessed on the world wide web (Internet) site listed below.

Inquiries concerning the substance of the proposed regulations may be directed to the designated agency contact persons: Mr. Gregory Ushijima, Air Resources Engineer, On-Road Heavy-Duty Diesel Section, at (626) 459-4365, or Mr. Michael Carter, Branch Chief, Emission Research and Regulatory Development Branch, at (626) 575-6632.

Further, the agency representative and designated back-up contact persons to whom non-substantive inquiries concerning the proposed administrative action may be directed are Artavia Edwards, Manager, Board Administration & Regulatory Coordination Unit, (916) 322-6070, or Amy Whiting, Regulations Coordinator, (916) 322-6533. The Board staff has compiled a record which includes all information upon which the proposal is based. This material is available for inspection upon request to the agency contact persons identified above.

If you are a person with a disability and desire to obtain this document or the ISOR in an alternate format, please contact the Air Resources Board's ADA Coordinator at (916) 323-4916, TDD (916) 324-9531, or (800) 700-8326 for TDD calls from outside the Sacramento area. This notice, the ISOR, and all subsequent regulatory documents, including the FSOR, are made available on the ARB's Internet site for this rulemaking at: [http:// www.arb.ca.gov/regact/HDDE2007/HDDE2007.htm](http://www.arb.ca.gov/regact/HDDE2007/HDDE2007.htm).

COSTS TO PUBLIC AGENCIES AND TO BUSINESSES AND PERSONS AFFECTED

The determinations of the Board's Executive Officer concerning the costs or savings necessarily incurred in reasonable compliance with the proposed regulations are presented below.

The Executive Officer has determined that the proposed regulatory action will not create costs or savings, as defined in Government Code section 11346.5(a)(6), to any state agency or in federal funding to the state, costs or mandate to any local agency or school district whether or not reimbursable by the state pursuant to part 7 (commencing with section 17500), division 4, title 2 of the Government Code, or other non-discretionary savings to local agencies.

The Executive Officer has also made an initial determination that adoption of the proposed regulatory action will not have a significant statewide adverse economic impact directly affecting businesses, including the ability of California businesses to compete with businesses in other states. While not significant, the ARB has identified the following potential cost impacts that a representative private person or business may necessarily incur in reasonable compliance with the proposed action.

The businesses affected by the proposed supplemental test procedures are the manufacturers of heavy-duty and medium-duty diesel engines sold in California. Based on previous sales data, there are 21 companies that manufacture these types of engines. Since the proposed emission standards and test procedures harmonize ARB requirements with the U.S. EPA, there may be a net decrease in costs to the engine manufacturers. The cost decrease would be due to reduced manufacturing costs from the manufacturing of one national line of engines rather than two lines of engines. The decreased costs are expected to be passed on to the consumers or purchasers of heavy-duty vehicles with a gross vehicle weight rating of 8,501 pounds and greater.

Any increase in costs to engines and vehicles would be due to adoption of federal requirements. If the entire costs, due to the federal requirements, are passed on to the consumer, heavy-duty vehicle retail prices would increase by approximately \$3,400 per heavy heavy-duty vehicle, \$2,700 per medium heavy-duty vehicle, and \$2,100 per light heavy-duty vehicle after full implementation in the 2010 model year. The U.S. EPA estimates that average vehicle costs are \$108,000 per heavy heavy-duty vehicle, \$52,000 per medium heavy-duty vehicle, and \$25,000 per light heavy-duty vehicle. Based on the U.S. EPA's estimated vehicle costs, the estimated price increase would represent a 3-8 percent price increase. The potential cost increase could be greater if the proposed ARB requirements and federal requirements are not harmonized. Consequently, the impact to manufacturers and dealers of heavy-duty vehicles due

solely to the amendments in this proposal are not expected to be significant. The expected price increase is also not expected to impact California employment, business expansion, creation and elimination, or the ability of California businesses to compete with businesses from other states.

Due to the additional emission control technologies that may be required by the U.S. EPA's 2007 Final Rule, manufacturers of those technologies may experience higher sales volume. The higher sales volume may also increase employment for those businesses that supply parts between the related businesses. Compared to overall California employment, this effect is expected to be minor. Additionally, to the extent that manufacturers use contract laboratories located in California for testing or other research and development efforts, there is a potential increase in contract laboratory employment. No other associated businesses are expected to be affected by the proposed regulatory action.

The estimated statewide emissions expected to be reduced due to the proposed emission standards and supplemental test procedures is 48.7 tons per day of NO_x, 1.5 tons per day of NMHC, and 2.7 tons per day of PM in 2010. In addition, there will be an expected 0.1 tons per day increase of CO emissions in 2010 due to the harmonization of the ARB medium-duty emission standard. This estimate is for both California registered and out-of-state vehicles. Based on the costs due to the federal requirements described above, the cost effectiveness is estimated to range from \$0.29 to \$0.63 per pound of NO_x plus NMHC reduced and from \$3.03 to \$6.65 per pound of PM reduced. The range depends upon the weight class of the heavy-duty vehicle. Based on current sales distribution of the three weight classes, overall cost effectiveness is estimated at \$0.42 per pound of NO_x plus NMHC reduced and \$3.42 per pound of PM reduced. These values compare favorably to the cost effectiveness of other, recently adopted emission control measures.

In accordance with Government Code sections 11346.3(c) and 11346.5(a)(11), the ARB's Executive Officer has found that the reporting requirements of the regulation which apply to businesses are necessary for the health, safety, and welfare of the people of the State.

The Executive Officer has also determined that the proposed regulatory action will affect small businesses. Furthermore, the Executive Officer's initial assessment is that the proposed regulatory action will not adversely affect the creation or elimination of jobs within the State of California, the creation of new businesses or elimination of existing businesses within California, or the expansion of businesses currently doing business within California. A full assessment of the economic impact of the proposed regulatory action can be found in the Staff Report.

Before taking final action on the proposed regulatory action, the ARB must determine that no reasonable alternative considered by the agency, or that has otherwise been identified and brought to the attention of the agency, would be more effective in carrying out the purpose for which the action is proposed, or would be as effective and less burdensome to affected private persons than the proposed action.

SUBMITTAL OF COMMENTS

The public may present comments relating to this matter orally or in writing at the hearing, and in writing, or by e-mail before the hearing. To be considered by the Board, written submissions not physically submitted at the hearing must be received by no later than **12:00 noon October 24, 2001**, and addressed to the following:

Postal Mail is to be sent to:

Clerk of the Board
Air Resources Board
1001 "I" Street, 23rd Floor
Sacramento, California 95814

Electronic mail is to be sent to: hdde2007@listserv.arb.ca.gov and received at the ARB by no later than **12:00 noon October 24, 2001**.

Facsimile submissions are to be transmitted to the Clerk of the Board at (916) 322-3928 and received at the ARB no later than **12:00 noon, October 24, 2001**.

The Board requests, but does not require, 30 copies of any written statement be submitted and that all written statements be filed at least 10 days prior to the hearing so that ARB staff and Board Members have time to fully consider each comment. The ARB encourages members of the public to bring any suggestions for modification of the proposed regulatory action to the attention of staff in advance of the hearing.

STATUTORY AUTHORITY

This regulatory action is proposed under that authority granted in California Health and Safety Code sections 39600, 39601, 43013, 43018, 43101, 43104, 43105, and 43806, and Vehicle Code section 28114. This action is proposed to implement, interpret and make specific California Health and Safety Code sections 39002, 39003, 39500, 43000, 43013, 43018, 43100, 43101, 43101.5, 43102, 43104, 43106, 43202, 43203, 43204, 43206, 43210-43213, and 43806, and Vehicle Code section 28114.

HEARING PROCEDURES

The public hearing will be conducted in accordance with the California Administrative Procedure Act, title 2, division 3, part 1, chapter 3.5 (commencing with section 11340) of the Government Code. Following the public hearing, the ARB may adopt the regulatory language as originally proposed or with nonsubstantial or grammatical modifications. The ARB may also adopt the proposed regulatory language with other modifications if the modifications are sufficiently related to the originally proposed text that the public was adequately placed on notice that the regulatory language as modified could result

from the proposed regulatory action. In the event that such modifications are made, the full regulatory text, with the modifications clearly indicated, will be made available to the public for written comment at least 15 days before it is adopted. The public may request a copy of the modified regulatory text from the ARB's Public Information Office, Environmental Services Center, 1001 "I" Street, First Floor, Sacramento, California 95814, (916) 322-2990.

CALIFORNIA AIR RESOURCES BOARD

MICHAEL P. KENNY
EXECUTIVE OFFICER

Date: August 28, 2001

The energy challenge facing California is real. Every Californian needs to take immediate action to reduce energy consumption. For a list of simple ways you can reduce demand and cut your energy costs see our Web-site at www.arb.ca.gov.