

TITLE 13. CALIFORNIA AIR RESOURCES BOARD

NOTICE OF PUBLIC HEARING TO CONSIDER THE ADOPTION OF A PROPOSED REGULATION FOR IN-USE OFF-ROAD DIESEL VEHICLES

The Air Resources Board (ARB or Board) will conduct a public hearing at the time and place noted below to consider adopting a regulation to reduce emissions of diesel particulate matter (diesel PM) and oxides of nitrogen (NOx) from in-use off-road diesel vehicles that operate in California. This notice summarizes the proposed regulation. The staff report and technical support document present the regulation and information supporting the adoption of the regulation in greater detail.

DATE: May 24, 2007

TIME: 9:00 a.m.

PLACE: San Diego Marriot Del Mar
Grand Ballroom
11966 El Camino Real
San Diego, CA 92130

This item will be considered at a two-day meeting of the Board, which will commence at 9:00 a.m., May 24, 2007 and will adjourn at 6:00 p.m. The meeting will then continue at 8:00 a.m., May 25, 2007. This item may not be considered until May 25, 2007. Please consult the agenda for the meeting, which will be available at least 10 days before May 24, 2007, to determine the day on which this item will be considered.

For individuals with sensory disabilities, this document is available in Braille, large print, audiocassette or computer disk. Please contact ARB's Disability Coordinator at 916-323-4916 by voice or through the California Relay Services at 711, to place your request for disability services. If you are a person with limited English and would like to request interpreter services, please contact ARB's Bilingual Manager at 916-323-7053.

INFORMATIVE DIGEST OF PROPOSED ACTION AND POLICY STATEMENT OVERVIEW

Sections Affected:

Proposed adoption of new section 2449, title 13, California Code of Regulations (CCR).

Background:

Over 90 percent of Californians breathe unhealthful air at times. To improve air quality and human health, ARB establishes requirements to reduce emissions from new and in-use motor vehicles and engines, as well as other sources. To reduce emissions from off-road vehicles, ARB has adopted a series of regulations since 1992 requiring that

new 1996 and subsequent model year off-road compression-ignition (diesel) engines comply with increasingly stringent emission standards. The United States Environmental Protection Agency (U.S. EPA) has established similar regulations for new off-road engines in the same time frame. On December 9, 2004, the Board adopted a fourth phase of emission standards (Tier 4) that are nearly identical to those finalized by U.S. EPA on May 11, 2004, in its Nonroad Diesel Rule.¹ Engine manufacturers are now required to meet aftertreatment-based exhaust standards for particulate matter and NOx starting in 2011 that are at least 90 percent more stringent than current levels, putting off-road engines on a virtual emissions par with on-road heavy-duty diesel engines. However, significant opportunities exist to further reduce emissions from the nearly 180,000 in-use off-road vehicles that operate in the State.

Control of Toxic Air Contaminants

California's Air Toxics Program, established under California law by Assembly Bill 1807 (Stats. 1983, Ch. 1047) and set forth in Health and Safety Code (HSC) sections 39650 through 39675, mandates the identification and control of air toxics in California. The identification phase of the Air Toxics Program requires ARB, with the participation of other state agencies, such as the Office of Environmental Health Hazard Assessment, to evaluate the health impacts of, and exposure to, substances and to identify those substances that pose the greatest health threat as toxic air contaminants (TACs). The ARB's evaluation is made available to the public and is formally reviewed by the Scientific Review Panel (SRP) established under HSC section 39670. Following the ARB's evaluation and the SRP's review, the Board may formally identify a TAC at a public hearing. Following identification, HSC sections 39658, 39665, 39666, and 39667 require ARB, with the participation of the air pollution control and air quality management districts (districts), and in consultation with affected sources and interested parties, to prepare a report on the need and appropriate degree of regulation for that substance and to adopt airborne toxic control measures (ATCMs).

In 1998, the Board identified diesel PM as a TAC with no Board-specified threshold exposure level. A needs assessment for diesel PM was conducted between 1998 and 2000, which resulted in ARB staff developing and the Board approving a Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles (Diesel RRP) in 2000. The Diesel RRP presented information that identified the available options for reducing diesel PM and recommended regulations to achieve further reductions. The scope of the Diesel RRP was broad, addressing all categories of engines, both mobile and stationary, and included control measures for private and public fleets of off-road diesel vehicles, such as those covered by the proposed regulation. The ultimate goal of the Diesel RRP is to reduce California's diesel PM emissions and associated cancer risks from 2000 baseline levels by 85 percent by 2020.

¹ ARB's emission standards for new off-road compression ignition engines are codified at title 13, CCR, sections 2420-2427. U.S. EPA's final Nonroad Diesel Rule is set forth at 69 FR 38958 (June 29, 2004). The California term "off-road" and the federal term "nonroad" refer to the same sources and are used interchangeably.

Attainment of Ambient Air Quality Standards

The federal Clean Air Act (CAA) requires U.S. EPA to establish National Ambient Air Quality Standards (Standards) for pollutants considered harmful to public health, including fine particulate matter (PM_{2.5}) and ozone. Set to protect public health, the Standards are adopted based on a review of health studies by experts and a public process. Ambient PM_{2.5} is associated with premature mortality, aggravation of respiratory and cardiovascular disease, asthma exacerbation, chronic and acute bronchitis and reductions in lung function. Ozone is a powerful oxidant. Exposure to ozone can result in reduced lung function, increased respiratory symptoms, increased airway hyper-reactivity, and increased airway inflammation. Exposure to ozone is also associated with premature death, hospitalization for cardiopulmonary causes, and emergency room visits for asthma.

Areas in the State that exceed the Standards are required by federal law to develop State Implementation Plans (SIPs) describing how they will attain the standards by certain deadlines. NO_x emission reductions are needed because NO_x leads to formation in the atmosphere of both ozone and PM_{2.5}; diesel PM emission reductions are needed because diesel PM contributes to ambient concentrations of PM_{2.5}. The South Coast and San Joaquin Valley air basins are both required to attain the PM_{2.5} standard by 2015. The U.S. EPA further requires that all necessary emission reductions be achieved one calendar year sooner – by 2014 – in recognition of the annual average form of the standard. By contrast, San Joaquin Valley and South Coast air basins are expected to have until 2023 to attain the federal ozone standard, by invoking the “bump-up” provision in the CAA.

The ozone and PM_{2.5} SIPs are due to the U.S. EPA by June 2007 and April 2008, respectively. Air quality modeling indicates that significant reductions of NO_x are crucial to help meet both these standards. At this time, staff estimates that a 60 percent reduction in NO_x emissions from 2006 levels (i.e., a total reduction of hundreds of tons per day) and a 12 percent reduction in direct PM_{2.5} emissions will be necessary for attainment of the PM_{2.5} standards in the South Coast Air Basin. Emission reduction targets have not yet been set for achieving the PM_{2.5} standard in the San Joaquin Valley Air Basin, but are expected to be significantly lower.

While all sources of NO_x emissions are important, off-road diesel vehicles are one of four major categories that will determine whether California is able to meet the 2014 deadline for PM_{2.5} attainment in the South Coast Air Basin. The remaining emission source categories with the most impact on California’s attainment prospects are in-use on-road heavy-duty diesel vehicles, line-haul locomotives, and marine vessels.

Authority

ARB has authority under California law to adopt the proposed regulation. HSC sections 43000, 43000.5, 43013(b) and 43018 provide broad authority for ARB to adopt emission standards and other regulations to reduce emissions from new and in-use vehicular and

other mobile sources. Under HSC sections 43013(b) and 43018, ARB is directly authorized to adopt emission standards for off-road vehicular sources, as expeditiously as possible, to meet state ambient air quality standards. ARB is further mandated by California law under HSC section 39667 to adopt ATCMs for new and in-use vehicular sources, including off-road diesel vehicles, for identified TACs, such as diesel PM.

Emission Reductions and Public Health Benefits Projected

The regulation is expected to significantly reduce emissions of diesel PM from in-use off-road diesel vehicles. Diesel PM emission reductions are needed to reduce premature mortality, cancer risk, and other adverse impacts from exposure to this TAC. The regulation would achieve the 2020 goal set forth in the 2000 Diesel RRP of reducing diesel PM by 85 percent from 2000 baseline levels. Staff projects that the regulation would reduce in-use off-road vehicle diesel PM emissions from the 2000 baseline by 37 percent in 2010 and 92 percent in 2020.

The regulation would also reduce diesel PM and NOx emissions that contribute to exceedances throughout the State of ambient air quality standards for both PM2.5 and ozone. In 2020, the rule is expected to reduce diesel PM emissions by 5.2 tons per day and NOx emissions by about 48 tons per day statewide, which represents a 74 percent reduction in diesel PM and a 32 percent reduction in NOx from emission levels anticipated in the absence of the rule.

The emission reductions from the regulation are expected to prevent approximately 4,000 premature deaths over the course of the regulation (1,100 to 6,800, 95% confidence interval).

Although some actions required by the rule would result in a fuel economy penalty, slightly increasing carbon dioxide (CO₂) greenhouse gas emissions, other actions required by the rule would reduce idling, increase the use of electric vehicles, and reduce emissions of black carbon (a likely contributor to global warming), and are expected to offset any fuel penalty effect. On the whole, staff expects the rule to have a negligible effect on global warming.

While the public health benefits of this rule are substantial, as noted above, the proposed rule is currently not sufficient to demonstrate full attainment of the federal PM2.5 standard by 2014. As a consequence, the Board may consider whether the proposal can be strengthened – either at the May 25-26 public hearing or at a subsequent meeting.

Comparable Federal Regulations

As noted above, U.S. EPA has promulgated federal emission standards for new nonroad engines. Presently, no federal standards have been promulgated addressing emission reductions from in-use diesel vehicle engines. Under CAA section 213, U.S. EPA is without authority to adopt in-use standards for nonroad engines. California

is the only governmental entity in the United States authorized by the CAA, in the first instance, to adopt emission requirements for in-use off-road engines.²

While CAA section 209(e)(1) conclusively preempts states, including California, from adopting requirements for new off-road engines less than 175 horsepower that are used in farm or construction equipment, the proposed regulation addresses in-use rather than new off-road engines. Under section 209(e)(2), California may adopt and enforce emission standards and other requirements for off-road engines and equipment not conclusively preempted by section 209(e)(1), so long as California applies for and receives authorization from the Administrator of U.S. EPA. To obtain authorization, the Board must make a finding that the California adopted standards will be, in the aggregate, at least as protective of public health and welfare as applicable federal standards.³ The Administrator must grant a request for authorization from California unless he finds that ARB's protectiveness finding is arbitrary and capricious, that California does not need the standards to meet compelling and extraordinary conditions, or that the standards and accompanying enforcement procedures are not consistent with CAA section 209.

Staff Report and Further Information

The ARB staff has prepared two separate documents, an Initial Statement of Reasons (Staff Report) for the proposed regulation and a Technical Support Document that, together with the needs assessment (i.e., the Diesel RRP), serve as the report on the need and appropriate degree of regulation for in-use off-road diesel vehicles.

Description of the Proposed Regulatory Action

Applicability

The fleet requirements of this regulation would apply to any person, business, or government agency that owns vehicles with affected engines in California. Affected engines include diesel-fueled engines with maximum power of 25 horsepower (hp) or greater that are used to provide motive power in a workover rig or to provide motive power in any other motor vehicle that (1) cannot be registered and driven safely on-road, and (2) is not an implement of husbandry or recreational off-highway vehicle. The proposed regulation only addresses engines that drive self-propelled vehicles (i.e., does not apply to stationary equipment or portable equipment like generators).

Industries such as construction, mining, landscaping, airlines, retail, wholesale, equipment rental, ski, oil and gas drilling, recycling, utilities, telephone and cable, and many others would be subject to the regulation. Government agencies engaged in road maintenance, park maintenance, and other activities that operate covered vehicles would also be affected.

² See *Engine Manufacturers Association v. U.S. EPA* (D.C. Cir. 1996) 88 F.3d 1075.

³ CAA section 209(e)(2)(A). Other states may subsequently opt into the California program, but their regulations must be identical to California's requirements. CAA section 209(e)(2)(B).

The regulation contains different requirements for fleets of differing sizes. A fleet consists of one or more vehicles. Fleets are defined in the regulation as either small, medium, or large. Small fleets include: (1) fleets with total horsepower of less than or equal to 1,500 hp that are owned by a small business (as defined in Government Code section 11342.610) or by a governmental entity that is not a state or federal agency; and (2) all fleets of low population county local municipalities irrespective of total horsepower. Medium fleets are defined as those with total horsepower less than or equal to 5,000 hp that are not small fleets. Large fleets are defined as those with total horsepower greater than 5,000 hp. All state and federal agencies would be considered large fleets.

The proposed regulation also would impose requirements on sellers of new and in-use vehicles to disclose the regulation's potential applicability to buyers of the vehicles.

Fleet Requirements

In general, the rule would require owners to modernize their fleets by replacing engines with newer, cleaner ones (repowering), replacing vehicles with newer vehicles equipped with cleaner engines, retiring older vehicles, operating higher emitting vehicles less often (designating them as low-use vehicles) and applying exhaust retrofits that capture and destroy pollutants before they are emitted into the atmosphere.

The rule would establish fleet average emission rate targets for both diesel PM and NO_x. By the applicable compliance date each year, the rule would require each fleet to demonstrate either that it meets the fleet average emission rate target for diesel PM or that it has applied the highest level verified diesel emission control system (VDECS) to 20 percent of the total horsepower of its fleet in the past year. The highest level VDECS is only required if a system has been verified by ARB to be effective and durable for the engine on which it will be installed, and if the system can be used safely. The rule would not penalize fleets if an appropriate VDECS is not available for a given engine or vehicle. The ARB's verification program, previously adopted by the Board,⁴ is intended to ensure that an emission control system for in-use diesel engines achieves the advertised emission reductions and has been evaluated for durability. Also, to receive ARB verification, the device manufacturer is required to warrant the VDECS and warrant against any engine damage caused by the device.

For NO_x, the rule would also require large and medium fleets to demonstrate that they meet the fleet average emission rate target for NO_x or to turn over a certain percent of the fleet's total horsepower by the applicable compliance date each year. Small fleets are exempt from this provision. The mandatory turnover rate until 2015 is eight percent per year. Then, after 2015, it is 10 percent per year. If retrofits that reduce NO_x emissions become available, they may be used in lieu of turnover.

⁴ Title 13, CCR, sections 2700-2710.

The targets decline over time, requiring fleets to reduce their emissions further as time goes on. As stated, to meet the diesel PM or NOx fleet averages, fleets may retrofit their vehicles' exhaust systems with verified emission control devices to reduce PM and/or NOx emissions, repower existing vehicles with cleaner engines, retire higher-emitting vehicles and/or replace them with newer, cleaner vehicles, or designate high-emitting vehicles as low-use vehicles. Under the regulation, vehicles designated as low-use would not be included in calculating the fleet average and are exempt from the retrofit, turnover and fleet average requirements.

Fleets would have the option of satisfying either the fleet average requirements or the mandatory retrofit and/or turnover requirements each year. Satisfying either would be an acceptable way to demonstrate compliance with the regulation.

Finally, the regulation would require that operators of off-road diesel vehicles shut down their vehicles rather than operate them in idle mode for more than 5 minutes, unless such idling is necessary for the proper or safe operation of the vehicle.

Labeling, Recordkeeping, and Reporting Requirements

All fleet owners would be required to report their affected equipment and associated engine and retrofit data to ARB in 2009. Annually thereafter, fleets would need to report any changes made in the prior year. Fleet owners would also be required to label all affected equipment with a unique equipment identification number assigned by ARB. They would be required to keep records of all data reported, as well as any changes made since their last reporting, until 2030, or as long as the owner still owns the fleet.

Schedule

The reporting requirements would begin for all fleets subject to the regulation in 2009. The first fleet average targets would take effect in 2010 for the largest fleets and in 2013 for medium fleets. Small fleets would have until 2015 to comply with the PM retrofit or PM fleet average requirements.

Exemptions, Compliance Extensions and Special Circumstances

The regulation contains special, less strict provisions for all fleets in counties that currently are in attainment with the federal ambient air quality standards for ozone and particulate matter, as well as less strict provisions for public fleets in rural counties with low populations. The regulation would also exempt low-use vehicles (vehicles used less than 100 hours per year), emergency equipment, and vehicles used only to remove snow from public roads from all requirements but recordkeeping and reporting.

The following vehicles would be exempt from the mandatory turnover requirements:

- All vehicles in small fleets,
- Vehicles less than 10 years old,
- Specialty vehicles for which no used equipment or repowers are available,

- Vehicles retrofit with best available technology in the past 6 years, and
- Tier 4 and interim Tier 4 engines.

The following engines would be exempt from the retrofit requirements:

- Engines in vehicles less than 5 years old,
- Engines for which there is no retrofit available or for which a retrofit cannot be safely installed.
- New engines that come with a diesel particulate filter, and
- Engines already retrofit with the best available control at the time of installation.

The regulation would provide that fleet owners are subject to penalties for noncompliance consistent with the penalty provisions set forth in the Health and Safety Code. However, fleet owners would not be liable for noncompliance caused by manufacturer delays in the availability of retrofits, repowers, or new engines needed for compliance with the regulation.

At the hearing, the Board may consider other elements that may provide additional flexibility to affected fleets.

AVAILABILITY OF DOCUMENTS AND AGENCY CONTACT PERSONS

The Board staff has prepared a Staff Report for the proposed regulatory action, which includes a summary of the economic and environmental impacts of the proposal. The report is entitled, "Staff Report: Initial Statement of Reasons for the Proposed Rulemaking – Regulation for In-Use Off-road Diesel Vehicles."

Copies of the Staff Report and the full text of the proposed regulatory language may be obtained from the Public Information Office, Air Resources Board, 1001 I Street, Visitors and Environmental Services Center, 1st Floor, Sacramento, CA 95814, (916) 322-2990. They will be made available at least 45 days prior to the scheduled May 24, 2007 hearing.

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 ARB's web site listed below.

Inquiries concerning the substance of the proposed regulations may be directed to the designated agency contact persons, Tony Brasil, Manager of the In-Use Control Measures Section, at (916) 323-2927, or by email at abrasil@arb.ca.gov, or Kim Heroy-Rogalski, Staff Air Pollution Specialist, at (916) 327-2200, or by email at kheroyro@arb.ca.gov.

Further, the agency representative and designated back-up contact persons to whom nonsubstantive inquiries concerning the proposed administrative action may be directed

are Alexa Malik, Manager, Board Administration & Regulatory Coordination Unit, (916) 322-4011, and Amy Whiting, Regulations Coordinator, (916) 322-6533. The Board has compiled a record for this rulemaking action, which includes all the information upon which the proposal is based. This material is available for inspection upon request to the contact persons.

This notice, the Staff Report and all subsequent regulatory documents, including the FSOR, when completed are also available on the ARB Internet site for this rulemaking at <http://www.arb.ca.gov/regact/2007/ordiesl07/ordiesl07.htm>

COSTS TO PUBLIC AGENCIES AND TO BUSINESSES AND PERSONS AFFECTED

Costs to Businesses and Private Individuals

The determinations of the Board's Executive Officer concerning the costs or savings necessarily incurred by public agencies and private persons and businesses in reasonable compliance with the proposed regulations are presented below.

The total cost of the regulation is expected to be between \$3.0 and 3.4 billion in 2006 expenditure equivalent dollars (2006 dollars). This represents the total cost of the regulation if all money required to comply with the proposed regulation were spent today. This cost would be spread over the years 2009 to 2030, with the majority of costs occurring in the first 12 years. On an annual basis, the cost would vary between \$229 million and \$257 million per year, averaging \$243 million per year. The total cost would include the expected cost of retrofit devices and engine repowers, as well as the cost of accelerating turnover to newer, cleaner vehicles. About half of this cost is expected to be incurred by the construction industry, nearly 15 percent by the rental industry, and about 10 percent by the mining industry. Government fleets would be expected to incur about five percent of the total cost. The remaining costs, approximately 20 percent, would be paid by other industries such as utilities, recycling, landfills, landscaping, and airlines.

Costs to individual fleet owners would vary depending on the size of each fleet, its initial vehicle composition and vehicle age, and its normal purchasing practices. Costs also would vary depending on the compliance strategy chosen by each fleet (retrofit, repower, retire, buy new, and/or buy used). For a typical fleet, total costs are expected to be \$111 per hp (in 2006 dollars). Fleets could incur costs anywhere from \$0 to \$170 per hp, depending on their initial composition and vehicle age. For a typical medium-sized fleet with total fleet horsepower of 3,000 hp, the total cost of the regulation is expected to be about \$333,000 (in 2006 dollars).

The Executive Officer has made an initial determination that the proposed regulatory action may have a significant statewide adverse economic impact directly affecting businesses, including the ability of California businesses to compete with businesses in other states, or on representative private persons. ARB staff has considered proposed alternatives that would lessen any adverse economic impact on business and invites

you to submit proposals. Submission may include the following approaches for consideration:

- (i) The establishment of differing compliance or reporting requirements or timetables that take into account the resources available to businesses.
- (ii) Consolidation or simplification of compliance and reporting requirements for businesses.
- (iii) The use of performance standards rather than prescriptive standards.
- (iv) Exemption or partial exemption from the regulatory requirements for businesses.

Alternatives that staff considered are described in more detail in the Staff Report.

In developing this regulatory proposal, ARB staff evaluated the potential economic impacts on representative private persons or businesses. Because the proposed regulation does not apply to vehicles used only for personal, residential, or non-commercial purposes, ARB is not aware of any cost impacts that a representative person would necessarily incur in his or her private capacity in reasonable compliance with the proposed action. Businesses such as construction firms typically pass some of the cost of compliance on to their customers. Accordingly, ARB anticipates that businesses would similarly pass on some of the costs incurred by this regulation. As a result, staff anticipates a representative individual may incur small additional costs (less than one percent) because of a possible rise in the cost of construction. (See *Effect on Housing Costs* below.)

Overall, most affected businesses will be able to absorb or pass on the costs of the proposed regulation with no significant adverse impacts on their profitability. This finding is based on ARB staff's analysis of the estimated change in "return on owner's equity" (ROE) for fleets within each industry type affected by the regulation. A 10 percent decline in ROE has traditionally been used by ARB to indicate a significant impact on profitability. For fleets that do not pass through any of the cost of compliance to their customers, the ROE analysis found that between about 60 and 80 percent of fleets would still be expected to be able to absorb the cost of the regulation without incurring more than a 10 percent change in ROE. Owners of small fleets are more likely to be able to absorb the cost of the regulation without exceeding 10 percent change in ROE because their exemption from the regulation's mandatory turnover provisions would result in significantly lower costs relative to medium and large fleets. The 20 to 40 percent of fleet owners for which the regulatory costs exceed a 10 percent change in ROE will have to pass through at least some of the costs to their customers in the form of higher prices for their services to maintain their profitability.

Most construction firms, rental companies, airlines, and landscaping services companies are expected to be able to pass on their costs to customers. Rental companies may actually see an increase in revenue as many affected fleets downsize, retire less-used vehicles, and consider rental as a more attractive alternative to owning vehicles.

In accordance with Government Code section 11346.3, the Executive Officer has determined that the proposed regulatory action may lead to the creation and elimination of some jobs within the State of California, the creation of new businesses and elimination of some existing businesses within the State of California, or the expansion of businesses currently doing business within the State of California. A detailed assessment of the economic impacts of the proposed regulatory action can be found in the Staff Report.

Because of the significant cost imposed by this regulation, it is possible that some businesses with affected fleets will be eliminated. It is also possible that some businesses will choose to consolidate (or merge), change owners, or relocate due to this regulation. However, this regulation would increase the use of VDECS in off-road diesel vehicles in the State. Staff estimates that over its course, the regulation will require the installation of over 126,000 VDECS. It is very likely that additional businesses will be created or existing businesses expanded to aid in the making, distribution, cleaning, and maintenance of these VDECS through the duration of the regulation.

The regulation would likely cause many jobs to be created due to the increase in demand for VDECS, newer engines, and newer vehicles, as well as for the need for fleets to plan for compliance. Staff expects new jobs to be created for the production, sales, installation, and maintenance of VDECS, the installation of repowers, and consulting to assist fleets in finding the most cost-effective path to compliance. It is expected that some jobs will also be consolidated (i.e., the employees of one company being absorbed by another) or modified (i.e., a muffler mechanic may be reassigned to VDECS maintenance and installation).

As structured, the proposed regulation would affect out-of-state businesses that operate vehicles in California just as it affects the California-based businesses that operate here. However, some large out-of-state businesses may find it less costly to comply because they can opt to move the cleaner portions of their fleets to California rather than pursuing retrofits or repowers. Fleets operated solely within California will not have this ability. The regulation may also have some adverse impacts on the ability of some California businesses that regularly use their California equipment to compete for projects outside the State. This is because to cover compliance costs, California businesses may need to bid higher than firms who are not subject to the rule. Similarly, the regulation may have some adverse impacts on manufacturing or mining businesses that operate in a very competitive national market and compete with firms outside California. However, staff expects that off-road vehicle use in manufacturing represents a smaller percentage of the company's total operating expense and that the increase in cost attributable to the regulation will only be a small portion of the operating expense. Thus, many owners of manufacturing fleets are expected to be able to absorb the costs without a significant impact on profitability.

The Executive Officer has also determined, pursuant to title 1, CCR, section 4, that the proposed regulatory action will affect small businesses. The total cost for a small business to comply with the in-use emission standards of the regulation (e.g., initial reporting and purchasing of retrofits, repowers and vehicles) is expected to be approximately \$48/hp. Typical ongoing costs for small businesses, including retrofit maintenance (e.g., maintenance, fuel penalties, and electricity costs for active filters) and reporting costs will be approximately \$2/hp per year from 2014 until 2026. A typical small business with 1,000 horsepower could expect the total cost of the regulation over its lifetime to be \$48,000 (2006 dollars), with annual costs of \$2,000 per year during that period.

In accordance with Government Code sections 11346.3(c) and 11346.5(a)(11), the 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 of California. The reporting requirements are necessary for the enforcement of the regulation, and enforcement of the regulation is necessary to ensure the emission reductions and public health benefits associated with the regulation occur.

Before taking final action on the proposed regulatory action, the Board must determine that no reasonable alternative considered by the board or that has otherwise been identified and brought to the attention of the board 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.

Fiscal Impact on State Government

The Executive Officer has determined that the proposed regulatory action will create costs or savings, as defined in Government Code sections 11346.5(a)(6) for a state agency or in federal funding to the state, as discussed in the "Fiscal Impact on State Government" section below. State agencies will incur costs if they own vehicles covered by the regulation.

Two separate fiscal effects may pertain at the state government level: costs to state agencies that own affected diesel vehicles for compliance and costs for ARB to implement and enforce the regulations. The proposed regulatory action will not affect federal funding to the state.

The total cost to state agencies for compliance is expected to be between \$84 million and \$90 million (2006 dollars). Annual costs are expected to be about \$7 million per year (until 2030). Initial costs to state agencies will occur in fiscal year (FY) 2008-2009 for the initial reporting, with the initial costs for compliance actions such as installing retrofits or repowering engines occurring in FY2009-2010. The California Department of Transportation (CalTrans) is the State agency with the largest fleet and the State agency expected to incur the greatest cost impact. Compliance costs for CalTrans are expected to be \$1.2 million on average annually from FY2009-2010 until FY2029-2030 and to total \$11 million to \$13 million over the course of the regulation (2006 dollars). It

is anticipated that affected agencies will be able to plan ahead for and budget adequately to cover the costs of compliance with the regulation.

The regulation will also impose additional staffing costs to ARB. ARB staff has identified a need for additional resources to aid in implementation, outreach, education, and enforcement of the regulation.

Fiscal Impact on Local Government

The Executive Officer has determined that the proposed regulatory action will result in nondiscretionary costs for local agencies or school districts (if they own affected vehicles), and may impose a mandate, as defined in Government Code section 11346.5(a)(5). However, the mandate is not reimbursable by the state pursuant to part 7 (commencing with section 17500), division 4, title 2 of the Government Code, because the costs would apply to all owners of affected vehicles, not just local agencies.

The regulation will impose costs on local agencies that own affected vehicles. The total cost to local agencies for compliance is expected to be between \$95 million and \$106 million (2006 dollars). Total annual costs for all affected agencies are expected to be about \$8 million per year.

Local government fleets that are in low-population counties should expect lower annual costs of approximately \$3.60/hp to \$4.20/hp per year.

Local government agencies captive to attainment areas similarly should expect lower annual costs of \$4/hp to \$5/hp per year.

Total compliance costs for a typical local agency with 1000 hp would be \$83,000 (2006 dollars), or \$6,000 per year on average from FY2014-2015 through FY2029-2030.

The initial cost to local agencies would be in FY2008-2009 for reporting, with the first costs for compliance actions such as installing retrofits or repowering engines in FY2009-2010 for the largest local agency fleets, in FY2012-2013 for medium local agency fleets, and FY2014-2015 for small local agency fleets and those in low-population counties.

Effect on Housing Costs

The Executive Officer has determined that the proposed regulation would have an effect on housing costs. It has been estimated that the proposed regulation would potentially increase the costs of newly constructed housing approximately \$1000 per unit. The ARB will make available to the public, upon request, the agency's evaluation of the effect of the proposed regulatory action on housing costs.

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 **no later than 12:00 noon, May 23, 2007**, and addressed to the following:

Postal mail: Clerk of the Board, Air Resources Board
1001 I Street, Sacramento, California 95814

Electronic submittal: <http://www.arb.ca.gov/lispub/comm/bclist.php>

Facsimile submittal: (916) 322-3928

The Board requests but does not require that 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 board encourages members of the public to bring to the attention of staff in advance of the hearing any suggestions for modification of the proposed regulatory action.

STATUTORY AUTHORITY AND REFERENCES

This regulatory action is proposed under the authority granted to the ARB in Health and Safety Code sections 39002, 39515, 39516, 39600, 39601, 39602, 39650, 39656, 39658, 39659, 39665, 39667, 39674, 39675, 40000, 41511, 42400, 42400.1, 42400.2, 42402.2, 43000, 43000.5, 43013, 43016, and 43018. This action is proposed to implement, interpret, or make specific Health and Safety Code sections 39002, 39515, 39516, 39600, 39601, 39602, 39650, 39656, 39657, 39658, 39659, 39665, 39667, 39674, 39675, 40000, 41511, 42400, 42400.1, 42400.2, 42402.2, 43000, 43000.5, 43013, 43016, and 43018.

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 Board may adopt the regulatory language as originally proposed, or with non substantial or grammatical modifications. The Board may also adopt the proposed regulatory language with other modifications if the text as modified is 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 such event 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, Air Resources Board, 1001 I Street, Visitors and Environmental Services Center, 1st Floor, Sacramento, CA 95814, (916) 322-2990.

CALIFORNIA AIR RESOURCES BOARD

Catherine Witherspoon
Executive Officer

Date: