

## TITLES 13 AND 17. CALIFORNIA AIR RESOURCES BOARD

### **NOTICE OF PUBLIC HEARING TO CONSIDER THE ADOPTION OF A PROPOSED REGULATION TO REDUCE EMISSIONS FROM IN-USE ON-ROAD DIESEL VEHICLES, AND AMENDMENTS TO THE REGULATIONS FOR IN-USE OFF ROAD VEHICLES, DRAYAGE TRUCKS, MUNICIPALITY AND UTILITY VEHICLES, MOBILE CARGO HANDLING EQUIPMENT, PORTABLE ENGINES AND EQUIPMENT, HEAVY DUTY ENGINES AND VEHICLE EXHAUST EMISSIONS STANDARDS AND TEST PROCEDURES AND COMMERCIAL MOTOR VEHICLE IDLING**

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), oxides of nitrogen (NOx), and greenhouse gases from in-use on-road diesel vehicles that operate in California. The proposed regulation would also establish requirements for any in-state or out-of-state motor carrier, California-based broker, or any California resident who hires or dispatches vehicles subject to the regulation. The Board will also consider amendments to several existing regulations to ensure that these regulations and the proposed regulation work together effectively, to clarify a number of issues with the existing regulations to provide additional compliance flexibility, and to improve enforceability in general. Specifically, the proposal would amend existing regulations for in-use off-road diesel vehicles, mobile cargo handling equipment at ports and intermodal rail yards, in-use on-road diesel-fueled heavy-duty drayage trucks, on-road heavy-duty diesel-fueled vehicles owned or operated by public agencies and utilities, reducing idling emissions from new and in-use trucks, heavy duty engines and vehicle exhaust emissions standards and test procedures, the airborne toxic control measure (ATCM) for portable diesel-engines rated at 50 horsepower and greater, and the portable equipment registration program.

This notice summarizes the proposed regulatory action, including the regulation proposed for adoption and the regulations proposed for amendment. The staff report (Initial Statement of Reasons) and a technical support document present the proposed regulations and information supporting the adoption or amendment of the regulations in greater detail.

DATE: December 11, 2008

TIME: 9:00 a.m.

PLACE: California Environmental Protection Agency  
Air Resources Board  
Byron Sher Auditorium  
1001 I Street  
Sacramento, California 95814

This item will be considered at a two-day meeting of the Board, which will commence at 9:00 a.m., December 11, 2008, and may continue at 8:30 a.m., December 12, 2008. This item may not be considered until December 12, 2008. Please consult the agenda for the meeting, which will be available at least ten days before December 11, 2008, to determine the day on which this item will be considered.

During the course of the Board's consideration of this proposal, it may adjourn to allow the public and interested parties to view new and emerging technologies that are being developed for use in complying with the proposed rulemaking.

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If you are a person with limited English and would like to request interpreter services to be available at the Board meeting, please contact ARB's Bilingual Manager at 916-323-7053.

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

**A. Sections Affected:** Proposed adoption to California Code of Regulations (CCR), title 13, new section 2025, entitled "Regulation to Reduce Emissions of Diesel Particulate Matter, Oxides of Nitrogen and Other Criteria Pollutants from In-Use Heavy-Duty Diesel-Fueled Vehicles;" Proposed amendments to CCR, title 13, section 2020, "Purpose and Definitions of Diesel Particulate Matter Control Measures;" Proposed amendments to CCR, title 13, sections 2022 and 2022.1, "Diesel Particulate Control Measure for Municipality or Utility On-Road Heavy-Duty Diesel-Fueled Vehicles;" Proposed amendments to CCR, title 13, section 2027, "Regulation to Control Emissions from In-Use On-Road Diesel-Fueled Heavy-Duty Drayage Trucks;" Proposed amendments to CCR, title 13, sections 2449 and 2449.3, "Regulation for In-Use Off-Road Diesel-Fueled Fleets;" Proposed amendments to CCR, title 13, sections 2451, 2452, 2453, 2455, 2456, 2458, 2461, and 2462 of the "Statewide Portable Equipment Registration Program;" Proposed amendments to CCR, title 13, section 2479, "Regulation for Mobile Cargo Handling Equipment at Ports and Intermodal Railyards;" Proposed amendments to CCR, title 13, section 2485, "Airborne Toxic Control Measure to Limit Diesel Fueled Commercial Motor Vehicle Idling;" Proposed amendments to CCR, title 13, section 1956.8, "Exhaust Emissions Standards and Test Procedures – 1985 and Subsequent Model Heavy-Duty Engines and Vehicles;" and Proposed amendment to CCR, title 17, sections 93116.1, 93116.2 and 93116.3 of the "Airborne Toxic Control Measure for Diesel Particulate Matter from Portable Engines Rated at 50 Horsepower and Greater."

## **B. Background: Proposed Regulation to Reduce Emissions of Diesel PM and NOx from In-Use On-Road Diesel Vehicles**

Over the past 30 years, as part of its mission to protect public health, the Board has established requirements to reduce emissions from new and in-use on-road motor vehicles and engines, and other sources. Since 1990, ARB and the United States Environmental Protection Agency (U.S. EPA) have worked together to harmonize emission control requirements for new heavy-duty diesel engines. In 2001, ARB adopted amendments that aligned the California exhaust emission standards for heavy-duty diesel engines with those promulgated by the U.S. EPA for 2007 and subsequent model year engines. The standards represented a 90 percent reduction of NOx emissions, 72 percent reduction of non-methane hydrocarbon, and 90 percent reduction of particulate matter (PM) emissions compared to 2004 model year standards. When fully implemented, it is anticipated that the emissions reductions from the new emissions standards will only be achieved with diesel particulate filters and NOx exhaust aftertreatment.<sup>1</sup> Because of the long useful lives of diesel engines, through normal replacement of older vehicles, these newer lower emitting engines will be introduced into the state and national fleets relatively slowly. Consequently, contribution of these emissions reductions in meeting national ambient air quality standards (NAAQS) for fine particulate matter (PM2.5) and ozone will be slow to materialize. The proposed regulation would provide the necessary emissions reductions by the mandatory deadlines for meeting the NAAQS for PM2.5 and ozone by requiring the installation of retrofits for PM exhaust emissions control on existing engines and by accelerating the introduction of cleaner engines into fleets operating in California.

### *Control of Toxic Air Contaminants*

The California Toxic Air Contaminant Identification and Control Program (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, requires ARB to identify and control toxic air contaminants (TAC) 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 TACs. 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 ARB's evaluation and the SRP's review, the Board, pursuant to section 39662, 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 (ATCM).

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<sup>1</sup> NOx is a precursor to both PM2.5 and ozone.

In 1998, the Board identified particulate matter emitted from diesel engines (diesel PM) as a TAC and in 2001, adopted the Risk Reduction Plan to Reduce Particulate Matter Emissions from Diesel-Fueled Engines and Vehicles (Diesel Risk Reduction Plan or diesel RRP). The diesel RRP identified ATCMs and regulations that would set more stringent exhaust emission standards for new diesel-fueled engines and vehicles, establish retrofit requirements for existing engines, vehicles, and equipment, and require the sulfur content of diesel fuel to be reduced to no more than 15 parts per million by weight (ppmw). The new sulfur standard was needed to enable the performance of the emission control technologies. 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 on-road and off-road diesel vehicles. The ultimate goal of the Diesel RRP was to reduce California's diesel PM emissions and associated cancer risks from 2000 baseline levels by 85 percent by 2020.

### *Attainment of Ambient Air Quality Standards*

The federal Clean Air Act (CAA) requires U.S. EPA to establish NAAQS for pollutants considered harmful to public health, including fine particulate matter (PM<sub>2.5</sub>) and ozone. The standards are based on a review of health studies by experts and a public process and are set at levels which are protective of public health. Ambient PM<sub>2.5</sub> 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 and exposure to this pollutant 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.

The existing fleets of heavy-duty diesel trucks are among the largest contributors to PM<sub>2.5</sub> and ozone forming emissions. The vehicles affected by the proposed regulation produce approximately 40 percent of the statewide emissions of oxides of nitrogen (NO<sub>x</sub>) and about 32 percent of the statewide PM emissions generated by diesel mobile sources.

Fifteen areas in California are designated nonattainment of the federal ozone standard, including the South Coast Air Basin, the San Joaquin Valley, the Sacramento region, San Diego, Ventura, and a number of air districts downwind of urban areas. In addition, the South Coast Air Basin and the San Joaquin Valley are designated nonattainment of the federal PM<sub>2.5</sub> standard. Federal law mandates the development of State Implementation Plans documenting the actions the state will take to attain the federal air quality standards in these areas.

In September 2007, ARB adopted a State Implementation Plan (SIP) committing the State to develop measures to achieve emission reductions from sources under State regulatory authority. The reductions are needed to attain the NAAQS for ozone and PM<sub>2.5</sub>. While multiple areas across the State exceed federal air quality standards, the air quality in the South Coast and the San Joaquin Valley poses the greatest challenge and defines the amount of reductions needed. Reductions are needed by 2014 to meet

the PM2.5 attainment deadline and by 2023 to meet the ozone attainment deadline. An interim target date of 2017 was adopted by ARB for the San Joaquin Valley to meet the ozone NAAQS as part of an effort to accelerate progress toward attainment before 2023.

The largest share of new emission reductions in the 2007 SIP is expected from trucks. In 2014, reductions from both NOx and PM2.5 are needed to meet the federal air quality standard for PM2.5. To meet the emission reduction targets necessary to meet the ozone NAAQS in 2017 and 2023, the focus of emission reductions is on NOx. Accordingly, in its SIP submittals to U.S. EPA, ARB has adopted 2014 reduction commitments for both NOx and PM2.5, and further NOx reduction commitments in 2017, 2020 and 2023. As part of the overall SIP commitment, ARB staff is also obligated to bring measures to the Board for its consideration. This rule is one of these commitments. ARB staff has used the targeted reductions estimated in the SIP as the goal for this rulemaking.

#### *The California Global Warming Solutions Act of 2006*

The California Global Warming Solutions Act of 2006 established requirements for a comprehensive program of regulatory and market mechanisms to achieve real, quantifiable, cost-effective reductions of greenhouse gases (GHG).<sup>2</sup> The legislation gave ARB responsibility for monitoring and reducing GHG emissions. The statute requires ARB to adopt regulations and other requirements that would reduce by 2020 statewide GHG to the equivalent of 1990 levels.

### **C. Background: The Proposed Amendments to Existing Regulations**

*Purpose and Definitions of Diesel Particulate Matter Control Measures:* This regulation (section 2020 of title 13, CCR) defines terms that apply generally to the regulations that control diesel PM emissions from on-road vehicles. It was adopted by the Board in July 2003 and modified in February 2005.

*Municipality or Utility On-Road Heavy-Duty Diesel-Fueled Vehicles:* ARB adopted this regulation in December 2005 to reduce public exposure to diesel PM emissions from on-road heavy-duty diesel fueled vehicles owned or operated by public agencies or utilities. The regulation requires municipalities and utilities to apply best available control technology (BACT) to on-road heavy-duty diesel-fueled vehicles with a 1960 to 2006 model year medium heavy-duty or heavy heavy-duty engine having a manufacturer's gross vehicle weight rating (GVWR) greater than 14,000 pounds. BACT can be an alternative fuel engine, a diesel engine certified to a 0.01 grams per brake

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<sup>2</sup> Established under California law by Assembly Bill 32 (Stats. 2006, ch. 488) and set forth in HSC § 38500 et seq. Greenhouse gases are those that tend to increase average global temperatures through absorption of infrared radiation or other mechanisms. These include, but are not limited to, carbon dioxide (CO2) and methane (CH4)

horsepower-hour (g/bhp-hr) PM standard, or application of the highest level ARB verified diesel emission control strategy (DECS) to a diesel engine. A municipality or utility may receive credit toward their BACT requirement by retiring a vehicle.

The rule divides these engines into three model year groups: Group 1 (1960-1987), Group 2 (1988-2002), and Group 3 (2003-2006). BACT must be applied according to a specified implementation schedule that sets compliance deadlines and the percentage of the fleet that must be equipped with BACT by each deadline.

*Regulation for In-Use On-Road Diesel-Fueled Heavy-Duty Drayage Trucks:* In December 2007, ARB adopted a regulation to reduce emissions from diesel-fueled drayage trucks – described as trucks that transport containers, bulk, and break-bulk goods to and from ports and intermodal rail yards. The regulation applies to owners and operators of diesel-fueled drayage tractors having a GVWR greater than 33,000 pounds that operate at California ports, intermodal rail yards, or both. There are approximately 100,000 drayage tractors of which nearly 20,000 frequently service ports and rail yards.

The requirements of the regulation will be implemented in two phases. In Phase 1, by December 31, 2009, all drayage trucks must be equipped with a 1994 to 2003 model year engine and a level 3 verified DECS for PM emissions or they must be equipped with a 2004 model year or newer engine. In Phase 2, all drayage tractors are required to meet the 2007 model year engine standard by December 31, 2013. All drayage trucks involved in work at affected ports and rail yards must be registered in the ARB's drayage truck registry (DTR) by late 2009.

*Regulation for In-Use Off-Road Diesel Vehicles:* In July 2007, ARB adopted a regulation to reduce diesel PM and NOx emissions from in-use off-road heavy-duty diesel-fueled engines with maximum power of 25 horsepower (hp) or greater. These engines are used to provide motive power in a workover rig or any other motor vehicle that cannot be registered and driven safely on-road, and is not an implement of husbandry or recreational off-highway vehicle. The regulation applies only to engines that drive self-propelled vehicles (that is, it does not apply to stationary equipment or portable equipment like generators). Examples include loaders, crawler tractors, skid steers, backhoes, forklifts, and airport ground support equipment.

The regulation establishes fleet average emission rate targets for PM and NOx for all off-road vehicles operating in the State. By the applicable compliance date for each year, the regulation requires each fleet to meet the fleet average emission rate targets for PM or apply the highest level verified DECS to 20 percent of its horsepower. Each year, the regulation also requires large and medium fleets to meet the fleet average emission rate targets for NOx or to turn over a certain percent of their horsepower (8 percent in early years, and 10 percent in later years). "Turn over" means repowering with a cleaner engine, rebuilding the engine to a more stringent emissions configuration, retiring a vehicle, replacing a vehicle with a new or used piece, or designating a dirty

vehicle as a low-use vehicle. If retrofits that reduce NOx emissions become available, they may be used in lieu of turnover as long as they achieve the same emission benefits.

Large fleets are subject to the PM and NOx requirements beginning in 2010. Medium fleets are subject to the PM and NOx requirements beginning in 2013. Small fleets are subject only to the PM requirements beginning in 2015.

*Regulation for Mobile Cargo Handling Equipment at Ports and Intermodal Rail Yards:* In December 2005, ARB adopted the Regulation for Mobile Cargo Handling Equipment at Ports and Intermodal Rail Yards to reduce emissions of diesel PM and NOx from these vehicles. Mobile cargo handling equipment includes any motorized vehicle equipped with a diesel-cycle engine that is used primarily off road at a port or intermodal rail yard to handle cargo or to perform scheduled or predictable maintenance or repair activities. The regulation includes requirements, based on BACT, for equipment newly added to a fleet on or after January 1, 2007, as well as for in-use equipment. Vehicles such as mobile cranes and sweepers were required to comply beginning December 31, 2007, for the oldest engines, and compliance is phased in through 2013, depending on the number of vehicles in the fleet and the age of a vehicle's engine.

*Statewide Portable Equipment Registration Program:* In March 1997, the Board adopted a regulation establishing the Statewide Portable Equipment Registration Program (PERP) which became effective on September 17, 1997. The Board has since approved amendments to the Statewide Regulation on December 11, 1998, February 26, 2004, June 22, 2006, and March 22, 2007. The regulation includes record keeping and reporting requirements and sets fee schedules for registration and inspection of the portable engines and equipment that have registered in the program. Most of the engines associated with portable equipment are diesel fueled, making these engines also subject to the requirements of the Portable Engine ATCM.

*Portable Engine ATCM:* In February 2004, ARB adopted an ATCM that requires a phase-in of cleaner technologies that would result in the reduction and eventual elimination of high-emission engines. The ATCM requires most portable engines larger than 50 hp that were permitted by local air quality management or air pollution control districts (air districts) or registered in PERP as of December 31, 2005, to be certified to Tier 1, 2, or 3 U.S. EPA/ARB new off-road engine emission certification standards by January 1, 2010. Uncertified diesel engines that are designated as emergency use or low use may operate beyond 2010 if they will be replaced with Tier 4 engines within two years of such engines becoming available. In addition, starting in 2013, all fleets of portable engines would have to meet diesel PM emission averages that become progressively more stringent in 2017 and 2020. In March 2007, the ATCM was amended to allow statewide registration and district permitting of Tier 1 and Tier 2 engines that had been operating in California between March 1, 2004 and October 1, 2006. These amendments also allowed local air districts to permit resident uncertified engines at their discretion. In order to be registered in PERP after January 1, 2010, the ATCM requires that the engines must be certified to the most

stringent ARB or U.S. EPA off-road emission certification standards in effect at the time of application. The current ATCM does not have a time limit for when a district must stop issuing new permits for uncertified engines

*ATCM to Limit Diesel-Fueled Commercial Motor Vehicle Idling:* The ARB adopted the Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling in July 2004 and amended it in October 2005. The ATCM requires diesel-fueled vehicles over 10,000 pounds GVWR to comply with a five-minute idling restriction at all times and at any location. Starting with the 2008 model year, new truck engines are also required to either be equipped with a non-programmable and tamper-resistant engine shutdown system that automatically shuts down the engine after 5 minutes of idling or optionally to meet a NOX idling standard of 30 grams per hour. The engine shutdown system could be overridden when the engine is operating power take-off (PTO) equipment. Operators of pre-2008 model year trucks are required to manually shut down the vehicle's engine after five minutes of continuous idling. The idling limitations would not apply when idling is necessary to perform work for which the vehicle was designed.

*Exhaust Emissions Standards and Test Procedures – 1985 and Subsequent Model Heavy-Duty Engines and Vehicles:* Section 1956.8 of the CCR specifies exhaust emissions standards and test procedures applicable to 1985 and subsequent model year heavy-duty engines and vehicles. With the adoption of the sleeper berth idling provisions of the Commercial Motor Vehicle Idling ATCM, section 1956.8 regulation was modified to add new engine requirements for new 2008 and subsequent model year on-road diesel engines with a GVWR greater than 14,000 pounds to be equipped with an engine shutdown system that automatically shuts down the engine after five minutes of continuous idling. In lieu of the engine shutdown system requirement, manufacturers may optionally certify their engines to a NOx idling emission standard of 30 grams per hour under loaded, low and high idle operating conditions. The engine requirements of section 1956.8 would have to be amended as necessary to be consistent with any modifications to the Commercial Motor Vehicle Idling ATCM.

#### **D. DESCRIPTION OF THE PROPOSED REGULATORY ACTION – PROPOSED REGULATION TO REDUCE EMISSIONS OF DIESEL PM AND NOX FROM IN-USE ON-ROAD DIESEL VEHICLES**

##### *Applicability*

The proposed new regulation would apply to any person, business, or federal government agency that owns or operates affected vehicles in California. Affected vehicles include heavy-duty diesel-fueled vehicles with a GVWR greater than 14,000 pounds, yard trucks with off-road certified engines and diesel-fueled shuttle vehicles of any GVWR that have a capacity of 10 or more passengers and routinely drive an average of 10 trips per day to or from airport terminals, marine terminals, and rail based stations. Drayage trucks and utility owned vehicles would be subject to the regulation beginning January 1, 2021. The proposed regulation would be applicable regardless of where the vehicle is registered. The proposed regulation would also

establish requirements for any in-state or out-of-state motor carrier, California-based broker, or any California resident who hires or dispatches vehicles subject to the regulation. California sellers of a vehicle subject to the proposed regulation would have to disclose the regulation's potential applicability to buyers of the vehicles. The proposed regulation would not apply to military tactical support vehicles, authorized emergency vehicles, and private motor homes not used for commercial purposes.

### *Performance Requirements*

In general, the regulation would require owners to reduce PM and NOx emissions from their fleet by upgrading the vehicles to meet BACT standards for PM and NOx. The BACT standard for PM is an engine equipped with the highest level verified DECS for PM or an engine originally equipped with a diesel particulate filter by the engine manufacturer. The BACT standard for NOx is an engine newly manufactured in 2010 or later or a 2010 emissions equivalent engine.

A fleet may meet these performance requirements by retrofitting a vehicle with a verified DECS<sup>3</sup> that will achieve PM or NOx reductions or both as required, replacing an engine with a newer cleaner one, or replacing a vehicle with one having a cleaner engine.

The regulation provides three options for complying with the performance requirements. First, a fleet would be able to comply with a prescribed BACT schedule that would determine the number of verified DECS that must be installed and the required vehicle replacements based on the vehicle's engine model year. Second, a fleet could meet a BACT percent limit option that sets the minimum number of verified DECS to be installed and the minimum number of engines required to meet the 2010 engine requirements each year. Third, a fleet could meet a fleet average option. The owner would use PM and NOx emission factors established by the regulation to calculate the average emissions of the fleet. By the applicable compliance date each year, the owner would have to demonstrate that the fleet met the PM and NOx fleet average emission rate targets set by the regulation. The targets would decline over time, requiring fleets to reduce their emissions further as time goes on.

During the first two years of the regulation, starting January 1, 2011, fleets would be required to install PM verified DECS for certain engine model years. The regulation would then require owners to reduce both PM and NOx emissions from the fleet by accelerating engine or vehicle replacement between January 1, 2013 and the end of 2022 so that by January 1, 2023, all engines would be the cleanest available – that is, having a 2010 or later model year engine or be retrofitted to achieve equivalent emission reductions.

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<sup>3</sup> A retrofit device that has been verified under ARB's Verification Procedure, Warranty and In-Use Compliance Requirements for In-Use Strategies to Control Emissions from Diesel Engines, title 13, CCR, sections 2700 et seq.

In coordination with changes being made to other regulations regarding dual engine street sweepers, the auxiliary engine on the street sweepers would be required to meet the PM performance requirements on the same schedule as that of the propulsion engine. The operation of Tier 0 auxiliary engines on dual engine street sweepers would be limited to a maximum of 250 hours per year until January 1, 2014 and then lowered to a maximum of 100 hours per year thereafter.

#### *Special Provisions for Small Fleets*

Fleets with one to three vehicles would be exempt from the 2010 and 2011 PM exhaust retrofit requirements. By January 1, 2013, small fleets would need to show they consist of at least one vehicle equipped with a 2004 model year or newer engine and a PM exhaust retrofit. By January 1, 2018 that vehicle would need to meet the PM and NOx performance requirements. The second vehicle in a fleet with two vehicles would be required to meet the PM and NOx performance requirements by January 1, 2014. A fleet of three vehicles could comply in one of two ways: (1) by having its two remaining vehicles meet the PM and NOx performance requirements by January 1, 2014 or (2) electing to have its second vehicle meet the 2010 engine emissions requirements by January 1, 2014 and the third vehicle meet the PM and NOx performance requirements by January 1, 2016.

#### *Exemptions, Compliance Extensions and Special Circumstances*

The proposed regulation would exempt all vehicles operated less than 1000 miles and 100 hours per year (low-use vehicles) from the regulation's PM and NOx performance requirements. These vehicles would still, however, be subject to the regulation's reporting requirements.

Schoolbuses would be exempt from any NOx performance requirements. The regulation would also exempt the following vehicles from the NOx performance requirements until the dates listed below:

- January 1, 2018
  - o Cab-over-engine truck tractors exclusively pulling 57 foot trailers
- January 1, 2021
  - o Unique vehicles;
  - o Vehicles that operate exclusively in counties that the regulation identifies as attainment of the federal ozone and PM ambient air quality standards and do not contribute to downwind exceedances of the state ozone standard;
  - o Vehicles with a GVWR less than 33,000 pounds that are operated less than 5000 miles. Those using power take off (PTO) to perform work while stationary must also operate the engine less than 175 hour per year; and
  - o Truck tractors and vehicles with a GVWR greater than 33,000 pounds that are operated less than 7500 miles. Those using PTO to perform work while stationary must also operate less than 250 hours per year;

- o Yard tractors that operate less than 250 hours per year.

The regulation would also provide a compliance extension for fleets that take action to comply early. If a fleet installs the highest level verified DECS on one or more vehicles by January 1, 2010, the vehicle would be exempt from the NOx performance requirements until January 1, 2014 for each of those vehicles.

The proposed regulation would also allow a fleet to use hybrid vehicles for credit toward compliance with the fleet average as long as the fleet can demonstrate that the fuel economy of the hybrid vehicle is at least 20 percent better than an equivalent vehicle. The credit would expire January 1, 2018. The proposed regulation would allow the fleet to double count the number of hybrid vehicles in the fleet that may be used to calculate the PM and NOx indices and fleet average target rates or for determining the percent limit requirements.

Credit would also be granted for fleets using vehicles equipped with alternative fuel or heavy-duty pilot ignition engines in calculating the NOx and PM fleet average target rates for determining compliance with the fleet average option. The PM emission factor would be zero and the NOx emission factor would be based on the engine model year to which the engine has been certified.

The proposed regulation would also provide fleets with effective compliance extensions if the retrofits, repowers, or new engines needed for compliance with the regulation are not available because of manufacturer delays.

#### *Special Provisions for Agricultural Vehicles*

The proposed regulation would provide certain heavy-duty on-road diesel vehicles used in agricultural operations (agricultural vehicles) with additional time to meet the PM and NOx performance requirements. Agricultural vehicles are those vehicles that are used exclusively in agricultural and forest operations, those used exclusively to transport agricultural products to the first point of processing after harvest, and certain heavy-duty vehicles that exclusively deliver fertilizer or crop protection products from a distribution center to farms.

The regulation would allow agricultural vehicles that operate below specified mileage thresholds to delay compliance with the performance requirements provided they remain below the specified thresholds. Agricultural vehicles that operate over the thresholds would be required to meet the same requirements as other on-road vehicle fleets. The mileage thresholds to qualify for exemption and the period of exemption are as follows:

- for vehicles that operate below 10,000 miles annually until January 1, 2023;
- for vehicles with engine model year 1995 and older that operate up to 15,000 miles annually until January 1, 2017;
- for vehicles with engine model year 1996 through 2005 operate below 20,000 miles until January 1, 2017;

- for vehicles with engine model year 2006 and newer that operate below 25,000 miles until January 1, 2017.

The regulation would also define a limited number of specialty agricultural vehicles that would be exempt from the NOx and PM performance requirements until January 1, 2023.

By January, 2010, the proposed regulation would require an agricultural vehicle fleet owner to designate the agricultural vehicles in its fleet that qualify for exemption. Once the fleet owner has identified and designated the agricultural vehicles in its fleet that qualify for compliance under a specific mileage threshold category, it cannot add any further vehicles to that category. By January 1, 2023 all heavy-duty on-road diesel agricultural vehicles would be required to meet 2010 model year engine emissions requirements regardless of annual mileage driven.

#### *Record Keeping and Reporting Requirements*

Fleet owners who chose the BACT compliance schedule would not be required to report on their fleets. Under the proposed regulation, all other fleets would be required to report their affected vehicles and associated engine data annually to ARB starting in 2010. These fleets would also be required to keep records of all data reported, as well as any changes made to their respective fleets since the last report filed until December 31, 2022, or as long as the owner owns the vehicles.

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

#### *Penalties*

Under the proposed regulation, fleets that fail to comply with the regulation's requirements would be subject to penalties consistent with the penalty provisions set forth in the Health and Safety Code.

### **E. Effect of Proposed Regulation to Reduce Emissions Of Diesel PM and NOx from In-Use On-Road Diesel Vehicles**

The proposed regulation would provide diesel PM and NOx emissions reductions that would have a substantial positive air quality impact throughout California. By reducing emissions of pollutants that contribute to elevated ambient levels of particulate matter and ozone, the regulation would help achieve attainment of the NAAQS for PM and ozone. Significant additional health benefits would also be obtained with the reductions of ambient levels of diesel PM.

The proposed regulation would not achieve the 2010 or the 2020 goals set forth in the 2000 Diesel RRP of reducing diesel PM by 75 percent and 85 percent, respectively from 2000 baseline levels. Staff projects that the proposed regulation would reduce in-use on-road vehicle diesel PM emissions from the 2000 baseline by 16 percent in 2010 and

80 percent in 2020. However, the proposed regulation would achieve the maximum achievable reductions of diesel PM emissions from in-use on-road diesel vehicles.

The regulation would also reduce diesel PM and NOx emissions that contribute to exceedances in the State of the NAAQS for both PM2.5 and ozone. In 2020, the regulation is expected to reduce diesel PM emissions by 5.6 tons per day and NOx emissions by about 79 tons per day statewide, which represents a 43 percent reduction in diesel PM and a 23 percent reduction in NOx from emission levels that would be anticipated in the absence of the regulation.

The proposed regulation would meet or exceed the combined NOx and PM2.5 SIP fleet rule targets in both the South Coast and San Joaquin Valley air basins for all years. In 2014, in the South Coast Air Basin, the SIP target would be met by achieving slightly more PM2.5 reductions and slightly less NOx than expected. The proposed regulation would also help achieve the SIP reduction goals in 2020 for attainment in regions downwind of the South Coast and the San Joaquin Valley air basins.

The emission reductions from the regulation are expected to prevent approximately 9400 premature deaths over the course of the regulation (2800 to 17000, 95 percent confidence interval), and would result in about 150,000 fewer asthma-related cases and 950,000 fewer lost work days. The economic valuation of the health impacts are estimated to range from \$48 to \$68 billion.

The net climate change effect of the proposed regulation would be slightly positive. Staff's analysis of the climate change impact of the proposed regulation addresses only the direct emissions from the affected vehicles. Some actions to comply with the proposed regulation could increase carbon dioxide (CO<sub>2</sub>) emissions by increasing fuel consumption, whereas other actions would reduce fuel consumption. For example, a vehicle owner who complies with the regulation by retrofitting the vehicle with a diesel particulate filter (DPF) could potentially experience a decrease in the vehicle's fuel economy of about 2 percent. However, as the fleet is modernized to comply with the regulation, selective catalytic reduction (SCR) is expected to replace exhaust gas recirculation (EGR) as the primary NOx emissions control technology. SCR for 2010 model year engines permits operation of the engine at more optimal combustion temperatures to provide better power and fuel efficiency improvements as well as lower PM generation. The expected improvements in fuel economy of 3 to 5 percent would offset the potential climate change impacts of the widespread installation of DPFs on the overall fuel economy of the fleet. The proposed regulation would also reduce emissions of black carbon – a component of diesel PM and a likely contributor to global warming – which would further reduce climate change impacts attributed to the overall impact on fuel economy.

## **F. DESCRIPTION AND EFFECT OF PROPOSED AMENDMENTS TO EXISTING REGULATIONS**

The staff is proposing amendments to the regulations identified above in section C. to clarify a number of issues with the existing regulations, to provide additional compliance flexibility as it relates to the existing regulations and to the proposed new regulation for in-use on-road diesel vehicles, and to generally improve enforceability of the existing regulations. For example, the amendments will clarify that mobile cranes are not subject to multiple regulations with different compliance dates and requirements.

*Purpose and Definitions of Diesel Particulate Matter Control Measures:* The proposed amendment would modify the definition of “municipality”. Under the current definition, agencies of the United States of America are subject to the regulation for municipality and utility heavy-duty diesel vehicles. The proposed amended definition would exclude federal agencies and consequently fleets owned by the federal government would not be subject to the municipality and utility fleet regulation. This modification became necessary after it was determined that CAA section 118 did not require federal fleet operators to comply with the municipality and utility fleet regulation because the regulation did not generally apply to nongovernmental entities. Tribal reservations and rancherias would also be excluded in the revised definition of “municipality”. Fleets owned and operated by these entities would be subject to the proposed regulation for heavy-duty diesel vehicles.

*Municipality and Utility Diesel-Fueled Vehicles:* Staff is proposing modifications that would expand the scope of this regulation and would add new language to address ambiguities and omissions in the regulation when initially adopted. Among other things, the proposed amendments would add requirements to ensure that retirement credit is properly granted to fleets. Staff is also proposing changes for utility fleets to improve compatibility with actions needed to comply with the In-Use On-Road Heavy-Duty Vehicle regulation.

Staff’s proposed revision of section 2022(a) would expand the scope and applicability of the regulation to include light heavy-duty engines that were inadvertently omitted from the original scope of the regulation. Staff is also proposing to expand the scope to include 2007 model year and newer engines certified under Averaging Banking and Trading (ABT) provisions at PM levels greater than the 2007 model year standard of 0.01 g/bhp-hr. This revision is consistent with the original intent of the regulation to require upgrades of all engines that did not meet the PM BACT standard of 0.01 g/bhp-hr.

A proposed compliance extension provision (section 2022.1(d)(7)) would allow municipalities and utilities to apply for a one-year extension of the intermediate 2009 compliance deadline for light heavy-duty engines. The municipality or utility would be required to document that the addition of light heavy-duty engines to the scope of the regulation would have prevented the fleet from meeting the 2009 compliance deadline.

Staff is proposing an optional extension for privately-owned utilities (utility) that would provide a two-year delay of the intermediate and final BACT PM deadlines, accompanied by requirements that, by December 31, 2013, thirty percent of a utility's vehicles meet the 2010 engine emission standards, and an additional twenty percent meet the 2007 or newer engine emission standards.

Staff is proposing amendments that would also provide a means of ensuring that owners get BACT credit for vehicles sold out of state and vehicles sold out of state for retirement credit could not be re-sold in California unless they met the BACT requirements. The proposed new language in section 2022.1(f)(1)(k) would establish a process for qualifying a vehicle that requires the municipality or utility to obtain a Department of Motor Vehicle (DMV) registration hold or "VIN Stop". Proposed language in section 2022.1(h) establishes contract requirements for out-of-state sales through a third party vehicle seller. The contract language would ensure that the seller informs buyers of the prohibitions against re-registering or operating retired vehicles in the State.

Staff is also proposing to modify the definition of "retirement" in section 2022(b)(8) to grant credit for the sale within California of dual-engine street sweepers with 2004 – 2006 model year engines, provided that, in the case of private-sector buyers, they comply with the newly proposed on-road diesel vehicles regulation described in section D. above. This would make used street sweepers available for purchase by private fleets and help to reduce the cost of the proposed regulation for these private fleets.

The proposed amendments would add new definitions for "lease", "operate", "sold outside of the State of California", "third party vehicle seller", and "VIN stop" to support the changes being proposed. The definition of "total fleet" was revised to make it consistent with the revised scope of the regulation.

*Drayage Trucks:* Staff is proposing modifications to the drayage truck regulation to add a phase one requirement for drayage trucks with 2004 – 2006 model year engines, a change in liquefied natural gas (LNG) fueled truck applicability, and clarifications on the applicability of alternative and dual-fueled diesel trucks.

Staff is proposing to require that 2004 model year engines be equipped with the highest level verified DECS for PM by January 1, 2012, and that 2005 model year-2006 model year engines be equipped with the highest level verified DECS for PM by January 1, 2013. This requirement would align the drayage truck regulation with the proposed in-use on-road diesel vehicle regulation. This would help meet the State's PM emission reduction commitments, and would ensure uncontrolled trucks won't cycle into the drayage fleet to avoid the in-use on-road diesel vehicle regulation requirements.

Staff is also proposing additional changes to be consistent with the proposed In-Use Heavy Duty Diesel Vehicle Regulation. Staff is proposing to define pilot injection LNG fueled trucks consistent with the Alternative Fueled vehicle definition. The proposed

change would exempt subject pilot injected LNG fueled trucks from the emission requirements. Staff also is proposing to include 'alternative diesel-fueled and dual-fueled' trucks in the applicability section (b)(1).

Finally, staff is proposing to add or modify the following definitions: "Dual-Fueled Engine", "Alternative Diesel Fuel", "Compression Ignition Engine", and "Diesel-Fueled". All definition additions or changes would not modify the applicability or intent of the drayage truck regulation.

*In-Use Off-Road Diesel Fueled Fleets:* Staff is proposing to change the scope of the regulation for in-use off-road diesel fueled vehicles to include both the drive engine and the secondary engine of all two-engine cranes operated in California. The drive engine would be included regardless of whether it is certified as an on-road engine or as an off-road engine. Two-engine cranes are currently subject to a number of regulations. The upper engine is subject to the requirements of the portable engine registration program and ATCM for portable engines. The drive engines are subject to the in-use off-road diesel vehicle and would be potentially subject to the proposed in-use heavy-duty diesel vehicle regulation. The drive engine on cranes operating at ports or intermodal rail yards are subject to the requirements of the mobile cargo handling equipment regulation.

Staff is also proposing to modify section 2449.3(b)(2)(c) to exclude the horsepower in two-engine cranes from a fleet's maximum horsepower. This would be consistent with the intent of the existing in-use off-road diesel-fueled regulation that two engine cranes, which were never previously a part of the regulation and never considered that they would be used in determining fleet size and eligibility for the Surplus Off-Road Opt-in for NOx (SOON) program.

New language is proposed in section 2449(e)(15) that would clarify the repower requirements for workover rigs. The regulation would require that any replacement engine must be an on-road engine if the workover rig is to be registered and driven on public roadways.

Staff is proposing to modify section 2449 (e)(7) to clarify the exemption provision for low-use vehicles. The current regulatory language in the section exempts the low-use vehicles from all of the performance requirements in section 2449(d). The proposed modifications would require low-use vehicles to comply with the requirements for adding vehicles to the fleet and with the idling requirement.

*Mobile Cargo Handling Equipment at Ports and Intermodal Rail Yards:* Staff is proposing to exclude sweepers and mobile cranes from the scope of the regulation. No changes would be made regarding rubber-tired gantry cranes. This change would provide consistency for owners and operators who would only be required to comply with one regulation. This proposal in combination with other changes to address cranes would also address other issues such as safety certification, and would provide more compliance flexibility. Many owners of these vehicles only provide service to the ports

on a limited basis and, if not excluded from the mobile cargo handling regulation would have to segregate their vehicles into two separate groupings – those required to comply with the mobile cargo handling regulation and those that would be required to comply with either the in-use off-road regulation or the proposed in-use on-road regulation.

*Portable Engine ATCM:* Staff is proposing amendments to the Portable Engine ATCM as it applies to two-engine cranes and dual-engine street sweepers. Until now, the auxiliary engines on these vehicles have been registered in PERP or permitted by local air districts. Under the Portable Engine ATCM, these engines must be replaced by December 31, 2010, if they do not meet U.S. EPA or ARB emission certification standard. In many cases, it is infeasible, if not impossible, to repower these vehicles with new engines; the only alternative would be to replace the entire vehicle, with a new vehicle having a certified engine. To address this, staff is proposing to amend the portable engine ATCM to exclude the secondary engines on two-engine cranes and privately owned sweepers from the requirements of the ATCM. The ATCM would also be amended to delete the diesel PM standards and fleet requirements of title 17, CCR, section 93116.3(b)(4) for lattice boom cranes. Lattice boom cranes would be included in the proposed definition of two-engine cranes that would be added to the in-use off-road diesel-fueled vehicles regulation.

Additionally, staff is proposing that two new sections be added to the Portable Engine ATCM. New section 93116.1(b)(8), would require the secondary engine on a two-engine crane to comply with the requirements of the regulation for in-use off-road diesel-fueled vehicles, and new section 93116.1(b)(9) would require the secondary engine on a dual-engine sweeper to comply with the requirements of the proposed regulation for in-use on road diesel vehicles.

Staff is also proposing to amend the portable engine ATCM by adding a new definition for “crane” which would cross-reference to the proposed definition of “two-engine crane,” which staff is proposing to add to the regulation for in-use off-road diesel vehicles at title 13, CCR, section 2449(c)(56). The portable engine ATCM adds a new definition “street sweeper” which would cross-reference to the proposed definition of “dual-engine street sweeper,” which staff is proposing to add to title 13, CCR, section 2022(b)(2) of the regulation for municipality and utility vehicles.

*Statewide Portable Equipment Registration Program:* Staff is proposing an amendment of the PERP regulation that would be consistent with the proposed changes to the portable engine ATCM. As with the ATCM, staff is proposing to add new definitions for “crane” and “street sweeper” that would respectively cross-reference to the in-use off-road diesel-fueled vehicles regulation and the municipality and utility fleets regulation.

The proposed amendments would also exempt the secondary engines on two-engine cranes and dual-engine street sweepers from all of the emission requirements of the PERP regulation, except the limits on opacity specified in section 2456(f)(5). Proposed new language would require that the secondary engine on a crane comply with the applicable requirements of title 13, CCR, section 2449 of the regulation for in-use off-

road diesel-fueled vehicles, and that the secondary engine on dual-engine street sweepers comply with the applicable requirements of title 13, CCR, section 2025 of the regulation proposed for in-use on-road diesel vehicles.

Under the proposed amendments, if the secondary engine of a crane or street sweeper is registered in PERP, it would be exempt from the recordkeeping and reporting requirements of the PERP regulation, but would be respectively required to comply with the applicable recordkeeping, reporting and other administrative requirements of the regulation for in-use off-road diesel vehicles and those proposed for the regulation for in-use on-road diesel vehicles.

Secondary engines on cranes and sweepers registered under the statewide PERP would remain subject to the inspection requirements and fees listed in the PERP regulation.

*Regulations to Limit Motor Vehicle Idling:* Staff is proposing changes to title 13, CCR, section 2485 (Airborne Toxic Control Measure to Limit Diesel-Fueled Commercial Motor Vehicle Idling) and section 1956.8 (Exhaust Emissions Standards and Test Procedures – 1985 and Subsequent Model Heavy-Duty Engines and Vehicles) to exempt armored cars and workover rigs from the vehicle idling limits. When an armored car is at a pick-up location at least one guard must stay onboard. Since the environment inside of an enclosed armored car can become extremely uncomfortable, idling of the engine for climate control is essential to the health and safety of the guard onboard. For this reason, staff is proposing to add new section 2485(d)(2)(M) to exempt armored cars idling while providing services for which the vehicle was designed.

Staff is also proposing that the idling requirements for workover rigs be amended. Typically, in vehicles with power take off (PTO), the engine shutdown system is normally overridden when in PTO mode. For most vehicles this occurs when a truck's engine is idling and the engine's power is used to perform certain specialized non-mobile functions. However, unlike other vehicles, workover rigs use PTO to propel the vehicle and do not use PTO to power the specialized work while stationary. Staff is proposing to add a new provision in section 2485(d)(2)(N) to exempt workover rigs from the motor vehicle idling limit while they are performing the work for which the vehicle was specially designed. This proposal would allow a workover rig to carry out its specialized function when the vehicle is stationary and the engine is working.

Staff is proposing to modify the engine requirements of title 13, section 1956.8 of the CCR to be consistent with the change proposed to the Commercial Vehicle idling limit ATCM for workover rigs and armored cars. The proposed changes to these engine requirements would add armored cars and workover rigs to the list of exempted vehicles in section 1956.8(a)(6)(B).

## **G. COMPARABLE FEDERAL REGULATIONS**

Pursuant to its authority under CAA section 202(a), U.S. EPA has established emission standards for new diesel, alternative fuel, and gasoline on-road heavy-duty engines (Title 40, Code of Federal Regulations, Part 86). U.S. EPA, however, does not have authority to establish emission standards for in-use on-road motor vehicles. Although California must obtain a waiver of federal preemption under CAA section 209(b) before implementing new engine emission standards for new motor vehicles sold in California, no federal preemption exists for requirements regarding in-use motor vehicles and engines adopted by the State.

CAA section 209(e)(2) allows California, upon obtaining authorization from U.S. EPA, to adopt and enforce emission standards and other requirements related to the control of emissions for new and in-use off-road engines not expressly preempted (i.e., as set forth in CAA section 209(e)(1), new off-road engines under 175 hp used in farm and construction equipment and vehicles and new locomotives and locomotive engines). To the extent that the amendments to ARB's off-road regulations require authorization, ARB will request that U.S. EPA grant such authorization.

There are no federal regulations comparable to the proposed regulation to reduce emissions of diesel PM and NOx from in-use on-road diesel vehicles that operate in California. Similarly, there are no federal regulations comparable to the existing California on-road regulations that are being proposed to be amended: the regulations to reduce diesel PM emissions from diesel engines owned by municipal and utility fleets, emissions of diesel PM and NOx from drayage trucks that operate at ports and intermodal rail yards in California, and that portion of the mobile cargo handling regulation that applies to vehicles that may operate on road.

Presently, there are also no comparable federal on-road regulations to California's heavy-duty vehicle idling requirements. The amendments to the California idling requirements do not require a waiver in that the amendments modify an in-use operational control for which states are not preempted. (See CAA section 209(d).) This exception has also been applied to off-road engine idling requirements. (See *Engine Manufacturers Association v. EPA* (D.C. Cir. 1996) 88 F.3d 1075.)

There are also no federal regulations comparable to California's in-use off-road regulations that are being proposed to be amended. Those regulations include the mobile cargo handling regulation, the in-use off-road diesel regulation, the portable ATCM and PERP proposed amended regulation to reduce emissions of diesel PM and NOx from in-use off-road diesel engines that operate in California, including those that operate at ports and intermodal rail yards.

## **AVAILABILITY OF DOCUMENTS AND AGENCY CONTACT PERSONS**

The ARB staff has prepared two documents for the proposed regulatory action: a Staff Report: Initial Statement of Reasons (ISOR) for the proposed regulatory action, which includes a summary of the economic and environmental impacts of the proposed action

and a Technical Support Document (TSD) that describe the basis of the proposed action in more detail. The Staff Report is entitled: "Staff Report: Initial Statement of Reasons for Proposed Rulemaking – Regulation to Control Emissions from In—Use On-Road Diesel Vehicles." The Technical Support Document is entitled: Technical Support Document: Proposed Regulation to Control Emissions from In—Use On-Road Diesel Vehicles." Together with the needs assessment (i.e., the Diesel RRP), these two documents serve as the report on the need and appropriate degree of regulation for in-use on-road diesel vehicles operating in California.

Copies of the ISOR with the full text of the proposed regulatory language, in underline and strikeout format to allow for comparison with the existing regulations, where applicable, and the Technical Support Document may be accessed on the ARB's website listed below, or may be obtained from the Public Information Office, Air Resources Board, 1001 I Street, Visitors and Environmental Services Center, First Floor, Sacramento, California, 95814, (916) 322-2990, at least 45 days prior to the scheduled hearing.

Upon its completion, the Final Statement of Reasons (FSOR) will be available and copies may be requested from the agency contact person in this notice, or may be accessed on the ARB's website listed below.

Inquiries concerning the substance of the proposed regulation may be directed to the designated agency contact persons, Tony Brasil, Manager of the In-Use Control Measures Section, at (916) 323-2927, or Gloria Lindner, from the Heavy Duty Diesel In-Use Strategies Branch, at (916) 323-2803.

Further, the agency representative and designated back-up contact persons, to whom nonsubstantive inquiries concerning the proposed administrative action may be directed, are Lori Andreoni, Manager, Board Administration & Regulatory Coordination Unit, (916) 322-4011, or Trini Balcazar, Regulations Coordinator, (916) 445-9564. 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 ISOR, TSD, and all subsequently issued regulatory documents, including the FSOR, when completed, are and will be available on the ARB website for this rulemaking at [www.arb.ca.gov/regact/2008/truckbus08/truckbus08.htm](http://www.arb.ca.gov/regact/2008/truckbus08/truckbus08.htm).

### **COSTS TO PUBLIC AGENCIES AND TO BUSINESSES AND PERSONS AFFECTED**

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

### *Costs to State Government and Local Agencies*

Pursuant to Government Code sections 11346.5(a)(6), the Executive Officer has prepared an estimate in accordance with instructions adopted by the Department of Finance, of the cost or savings to any state agency, the cost to any local agency or school district that is required to be reimbursed under Government Code, title 2, division 4, part 7 (commencing with section 17500), other nondiscretionary cost or savings imposed on local agencies, and the cost or savings in federal funding to the state.

The Executive Officer has determined that while ARB would incur costs to implement and enforce the proposed new regulation to reduce emissions from in-use on-road diesel vehicles, and the amendments to the existing regulations, the adopted regulatory actions will not affect federal funding to the State.

The proposed regulation would also impose additional costs to ARB. ARB staff has identified a need for additional staff and other resources for outreach and education and for the implementation, and enforcement of the proposed regulation. The Executive Officer has further determined that the proposed regulatory action would not create any additional costs or savings for other state agencies. Vehicles owned by state agencies would not be subject to the proposed regulation. State agency vehicles are subject to the existing regulation for municipality or utility fleets. One of the proposed changes to the regulation for municipality or utility fleets would add light heavy-duty engines to the engines currently subject to the regulation. State agencies have already counted these engines in their fleets as was the original intent of the regulation when it was adopted, and had already accounted for them in the cost of compliance with the regulation for municipality and utility fleets. Therefore, State agencies are not expected to incur additional cost as a result of the proposed regulatory action.

Pursuant to Government Code sections 11346.5(a)(5) and (6), the Executive Officer has further determined that the proposed regulatory action would create costs for school districts, and may impose a mandate that would not be reimbursable by the State, pursuant to Government Code, title 2, division 4, part 7 (commencing with section 17500). The mandate which would require schoolbus engines to be retrofitted engines with the best available verified diesel emission control strategy is not reimbursable because the costs would apply to all schoolbus owners, not just school districts, as well as all other heavy-duty vehicles that operate in the State. To the extent that the proposed regulation would require school districts to remove all schoolbuses manufactured before April 1, 1977, that requirement also applies to all schoolbus owners and not to school districts alone. Additionally, school districts qualify for public funding grants under the California Clean School Bus Program (HSC section 4299.90) for replacement of all pre-1997 school buses that were in operation as of December 31, 2005. It is estimated that the direct regulatory cost of the proposed regulation for public school districts is \$27 million from 2010 through 2017 based on 2008 dollars.

### *Costs to Businesses and Private Individuals*

In developing this regulatory proposal, the ARB staff evaluated the potential economic impacts on representative private persons or businesses. The determinations of the Board's Executive Officer, pursuant to Government Code section 11346.5(a)(9), concerning the costs or savings necessarily incurred by representative private persons and businesses in reasonable compliance with the proposed regulations are presented below.

The total cost of the regulation is expected to be \$5.5 billion in 2008 dollars. Approximately \$4.5 billion is attributable to California based vehicles and approximately \$1.0 billion is attributable to vehicles registered out of state. The cost would be spread over the years 2010 to 2030, with the highest costs occurring in the years 2012 and 2013 and the lowest costs occurring in 2014. The total cost is the result of early replacement with newer, cleaner vehicles, cost of retrofit devices, and other annual costs. The cost impact of the in-use on-road heavy-duty diesel vehicle regulation would vary with the different business sectors. A detailed analysis is available in the Staff Report.

Costs to individual fleet owners would vary depending on the size of the fleet, the vehicle types, vehicle age, and normal vehicle replacement practices. Costs also would vary depending on the compliance strategy chosen by each fleet. The average increased cost for in-state heavy heavy-duty vehicles is \$15,800 per vehicle.

Staff has determined that the regulatory action would not have a significant cost impact on a representative private person, above and apart, from a person's occupation as a fleet owner.

Pursuant to Government Code section 11346.5(a)(7)(C), 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.

ARB staff has considered proposed alternatives that would lessen any adverse economic impact on businesses 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 accordance with Government Code section 11346.3, the Executive Officer has determined that the proposed regulatory action would likely have an effect on the creation or elimination of jobs within the State of California, the creation of new businesses or elimination of 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 potential cost imposed by this regulation, it is possible that some businesses with affected fleets would be eliminated. It is also possible that some businesses would choose to consolidate (or merge), change owners, rent vehicles (rather than own), or relocate due to this regulation. It is also very likely that additional businesses would be created or existing businesses expanded to aid in the making, distribution, cleaning, and maintenance of these verified DECS through the duration of the regulation. Overall, staff expects that most affected businesses would be able to absorb or pass on the costs of the proposed regulation with no significant adverse impacts on their profitability.

This regulation would increase the use of verified DECS and accelerate vehicle modernization. It is therefore likely that the regulation would cause many jobs to be created due to this increase in demand for verified DECS, newer engines, and newer vehicles. Staff expects new jobs to be created for the production, sales, installation, and maintenance of verified DECS. Staff estimates that over its course, the regulation would require the installation of over 150,000 verified DECS. Additional businesses could be created to aid in the manufacture, distribution, and maintenance of verified DECS through the duration of the regulation.

The Executive Officer has also determined, pursuant to CCR, title 1, section 4, that the proposed regulatory action would affect small businesses. The proposed regulation defines a small fleet as three or fewer vehicles and allows additional time for compliance. Staff has estimated that 48 percent of all medium heavy-duty and heavy heavy-duty vehicles registered in California are in small fleets. Staff expects that small fleets will, in general, be small businesses. Some small fleets would experience no increased costs while other would experience higher costs. The total estimated cost over the lifetime of regulation for small fleets is approximately \$1.7 billion in \$2008 dollars.

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. Without effective enforcement, the emission reductions and public health benefits associated with the proposed regulation cannot be achieved.

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.

### **SUBMITTAL OF COMMENTS**

Interested members of the public may also present comments orally or in writing at the meeting, and in writing or by e-mail before the meeting. To be considered by the Board, written comments submissions not physically submitted at the meeting must be received **no later than 12:00 noon, December 10, 2008**, 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

Please note that under the California Public Records Act (Government Code §6250 et seq.), your written and oral comments, attachments, and associated contact information (e.g., your address, phone, email, etc.) become part of the public record and can be released to the public upon request. Additionally, this information may become available via Google, Yahoo, and any other search engines.

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 ten 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 that authority granted in Health and Safety Code, sections 39600, 39601, 39650, 39658, 39659, 39665, 39666, 39667, 39674, 39675, 40000, 41511, 41752, 41754, 41755, 42400, 42400.1, 42400.2, and 42402.2, 42410, 43000, 43000.5, 43013, 43016, 43018, 43023, 43600. This action is proposed to implement, interpret, or make specific Health and Safety Code sections 39600, 39601, 39650, 39658, 39659, 39666, 39667, 39674, 39675, 40000, 41511, 41752, 41754, 41755, 42400, 42400.1, 42400.2, and 42402.2, 42410, 43013, 43016, 43018, 43023, and 43600.

### **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).

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, and 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, First Floor, Sacramento, California, 95814, (916) 322-2990.

## CALIFORNIA AIR RESOURCES BOARD

James N. Goldstene  
Executive Officer

Date: October 14, 2008

*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 website at [www.arb.ca.gov](http://www.arb.ca.gov).*