

OVERVIEW OF THE

Proposed Regulation to Reduce Emissions from In-Use Off-Road Diesel Vehicles

new rules to achieve significant emission reductions and protect public health

On May 25, 2007, the California Air Resources Board (ARB) will consider a regulation to reduce toxic emissions from existing off-road diesel vehicles used in California in construction, mining, and other industries.

Why is ARB staff proposing this regulation?

Most off-road vehicles today have no emission controls and can last 30 years or longer. As a result, the vehicles covered by the proposed rule emit large amounts of soot or particulate matter (PM) and oxides of nitrogen (NOx), accounting for nearly a quarter of statewide diesel mobile source PM and NOx. These emissions are toxic, currently causing about 1,100 premature deaths per year. Reducing emissions from in-use off-road diesel vehicles is also necessary to meet federally imposed clean air standards. Failure to meet federal clean air standards could result in the imposition of sanctions that could impact the State's infrastructure improvement efforts.

Who would have to comply with the regulation?

Any person, business, or government agency that owns or operates diesel-powered off-road vehicles in California (except for agricultural purposes or at ports or intermodal railyards) with engines with maximum power of 25 horsepower (hp) or greater would be subject to the regulation. The proposed regulation would apply to vehicles commonly used in construction, mining, rental, airport ground support and other industries. Out-of-state companies doing business in California would also be subject to the regulation.

What types of vehicles would be subject to the proposed regulation?

The proposed regulation applies to self-propelled diesel-fueled vehicles that cannot be registered and licensed to drive on-road. Examples include loaders, crawler tractors, skid steers, backhoes, forklifts, and airport ground support equipment. The regulation would not apply to stationary equipment or portable equipment such as generators.

What would the proposed regulation require?

The proposed regulation would require fleets to apply exhaust retrofits that capture pollutants before they are emitted to the air, and to accelerate turnover of fleets to newer, cleaner engines.

The proposed regulation establishes fleet average emission rates for PM and NOx that decline over time. Each year, the regulation requires each fleet to meet the fleet average emission rate targets for PM or apply the highest level verified diesel emission control system to 20 percent of its horsepower. In addition, large and medium fleets would be required each year 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, 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.

When would the proposed regulation take effect?

The proposed regulation would take effect earliest for the largest fleets, those with over 5,000 horsepower of affected vehicles. (The fleet size excludes vehicles operated less than 100 hours per year.) For these large fleets, the first fleet average compliance dates would be in 2010.

For medium fleets, those with 1,501 to 5,000 hp, the first fleet average compliance dates would be in 2013.

The requirements would be delayed until 2015 for fleets of 1,500 hp or less that are either small businesses or municipalities. These fleets would be subject only to the PM fleet average, and thus would not have to accelerate turnover of their vehicles.

What would be the estimated benefits of the regulation?

The regulation would be expected to significantly reduce emissions of NO_x and PM. In total, the proposed regulation is expected to reduce 187,000 tons of NO_x emissions and 33,000 tons of PM emissions between 2009 and 2030.

The regulation would achieve the 2020 goal of reducing PM 85 percent from 2000 baseline levels set forth in ARB's 2000 Diesel Risk Reduction Plan. It is also projected to reduce PM emissions 37 percent from the 2000 baseline by 2010, and 92 percent by 2020. NO_x is expected to be about 13 percent lower in 2015 as a result of the regulation, and by 2020, NO_x emissions would be 32 percent lower than would occur in the absence of the regulation.

The regulation would be expected to prevent about 4,000 premature deaths over its course, while the associated health benefits would translate to significant health cost savings, an expected \$18 to \$26 billion in total. Finally, the proposed regulation's expected emissions reductions would help us meet federal clean air standards.

What are the estimated costs?

The total cumulative cost of the regulation between 2009 and 2030 would be between \$3.0 and 3.4 billion (2006 dollars), with the majority of these costs occurring between 2010 and 2021. For perspective, the total cost of the regulation will be less than 0.3% of the total annual construction revenue generated in California in 2005.

Where can I find more information about the proposed regulation?

The staff report and technical support document for the proposed rule are posted at <http://www.arb.ca.gov/regact/2007/ordiesl07/ordiesl07.htm>

Further information, including a spreadsheet fleet average calculator for compliance planning, is available on the off-road rule website at <http://www.arb.ca.gov/msprog/ordiesel/ordiesel.htm>

How can I submit my comments on the proposed regulation?

Comments may be submitted electronically at <http://www.arb.ca.gov/lispub/comm/bclist.php> by clicking on ordiesl07 or mailed to the *Clerk of the Board* at the address below. Comments will be accepted until noon on May 23, 2007.

For additional general information

Please contact ARB's diesel hotline at (866) 6DIESEL (634-3735). You may also obtain this document in an alternative format by contacting ARB at: (916) 322-4505 (voice); (916) 324-9531 (TDD, Sacramento area only); or (800) 700-8326 (TDD, outside Sacramento). TTY/TDD/Speech-to-Speech users may dial 711 for the California Relay Service.