

# PROPOSED EMISSION STANDARDS OF PERFORMANCE FOR STATIONARY COMPRESSION IGNITION INTERNAL COMBUSTION ENGINES

## FACT SHEET

### ACTION

On June 29, 2005, the Environmental Protection Agency (EPA) proposed a rule that would reduce emissions of air pollutants from stationary compression ignition (CI) internal combustion engines (stationary diesel engines). These engines are used at facilities such as power plants and chemical and manufacturing plants to generate electricity and power pumps and compressors. They are also used in emergencies to produce electricity and pump water for flood and fire control. The proposed rule is posted at <http://www.epa.gov/ttn/atw/nsps/cinsps/cinspspg.html>.

The proposed standards, known as New Source Performance Standards (NSPS), would limit emissions of nitrogen oxides (NO<sub>x</sub>), particulate matter (PM), sulfur dioxide (SO<sub>2</sub>), carbon monoxide (CO), and hydrocarbons (HC) from stationary diesel internal combustion engines to the same stringent levels required by EPA's nonroad diesel engine regulations.

New, modified and reconstructed stationary diesel engines would have to comply with the proposed rule. A new stationary diesel engine is one that is manufactured or ordered, after the date this proposal is published in the Federal Register and manufactured after April 2006. Stationary diesel engines that start modification or reconstruction after that date also are subject to the rule.

This proposed rule also contains fuel requirements that limit the amount of sulfur in the diesel fuel used to run these engines.

The rule would take effect in three, increasingly stringent stages:

The first is a transition period to control emissions from diesel engines built after this rule is proposed but before the 2007 model year. Owners or operators would comply with this regulation by purchasing an appropriate engine and by operating and maintaining the engine according to the manufacturers' instructions. In most cases, the owner/operator would purchase a certified nonroad engine for stationary use and that would be sufficient to comply with the regulatory requirement.

In less likely cases, the owner/operator would purchase a non-certified engine and would have several options (using manufacturers emissions data or previous test results on a similar engine, or stack test data) to demonstrate compliance with the pre 2007 emission limits.

In all cases, the information which demonstrates new engine compliance and the appropriate maintenance records must be kept on site.

Beginning in model year 2007: Engine manufacturers would be required to certify that all new, modified or reconstructed stationary diesel engines meet the stringent emissions levels for NO<sub>x</sub>, PM, CO, and HC that are required for the same size engine and model year for nonroad diesel engines in the categories known as Tiers 1 through 4, with a few exceptions.

Stationary emergency diesel engines would be required to be certified to meet emissions limits through Tier 3 and also Tier 4, however, Tier 4 requirements for them do not require add-on controls.

Beginning with 2011 model year engines, add-on controls would be required to achieve the emission limits for non-emergency engines.

By 2015, EPA estimates that 81,500 new stationary diesel engines would be subject to the rule.

EPA will accept comments on this proposed rule for 60 days following publication of the proposed rule in the Federal Register.

#### HEALTH and ENVIRONMENTAL BENEFITS

The proposed rule would provide improvements in protecting human health and the environment by reducing pollutant emissions. EPA estimates that the total pollutant reductions will be over 68,000 tons per year in 2015. The proposed rule would reduce NO<sub>x</sub>, PM, SO<sub>2</sub>, CO, and HC emissions gradually from 2005 to 2015, with overall reductions of 90 percent or more from baseline levels in some cases.

EPA estimates the total nationwide annual costs for the rule, as proposed, to be 57 million in the year 2015.

Pollutants such as NO<sub>x</sub> and SO<sub>2</sub> may cause both temporary and long-term respiratory symptoms, such as shortness of breath, changes in airway responsiveness, and increased susceptibility to respiratory infection.

NO<sub>x</sub> and SO<sub>2</sub> also can form fine particle pollution. Exposure to fine particle pollution is associated with significant adverse health effects including shortness of breath, bronchitis, asthma attacks, heart attacks, and premature death. Diesel PM is likely carcinogenic and also contribute to a number of non-cancer health effects. Particle pollution also contributes to haze which reduces visibility in cities and in our national parks and wilderness areas.

Both NO<sub>x</sub> and SO<sub>2</sub> react with moisture in the atmosphere to form acid rain, which, when deposited, causes acidification of soil and surface waters.

NO<sub>x</sub> can react in the air to form ground-level ozone. Ozone can cause coughing, shortness of breath, and aggravate asthma and other chronic lung diseases such as

emphysema and bronchitis. Ozone can lead to reduced lung function in both children and adults.

CO and HC are considered harmful to human health and the environment and are linked to various negative health conditions in humans.

## BACKGROUND

The Clean Air Act (CAA) requires EPA to promulgate NSPS for stationary diesel engines. The standards must consider emission control technologies available and costs of control.

NSPS are a statutory requirement under section 111 of the CAA. The original NSPS for stationary diesel engines were proposed in 1979 but never finalized.

The schedule for completing this rule is part of a consent decree with Environmental Defense which requires the EPA Administrator complete a final rule by June 28, 2006.

## FOR MORE INFORMATION

The proposed rule is posted at: <http://www.epa.gov/ttn/atw/nsps/cinsps/cinspspg.html>.

Today's proposed rule and other background information are also available either electronically in EDOCKET, EPA's electronic public docket and comment system, or in hardcopy at EPA's Air and Radiation Docket and Information Center, Environmental Protection Agency, Room B102, 1301 Constitution Avenue, NW, Washington, DC (Docket ID No. OAR-2005-0029). The Public Reading Room is open from 8:30 a.m. to 4:30 p.m., Monday through Friday, excluding legal holidays. The telephone number for the Public Reading Room is (202) 566-1744, and the telephone number for the Air and Radiation Docket and Information Center is (202) 566-1742.

**HOW TO COMMENT.** Comments should be identified by Docket ID No. OAR-2005-0029 and submitted by one of the following methods: online through the Federal eRulemaking Portal ( <http://www.regulations.gov/> );

by e-mail ( [a-and-r-docket@epa.gov](mailto:a-and-r-docket@epa.gov) );

by fax to (202) 566-1741;

by mail to (Air and Radiation Docket and Information Center, Environmental Protection Agency, Mailcode: 6102T, 1200 Pennsylvania Avenue, NW, Washington, DC 20460); or

by hand-delivery to (Air and Radiation Docket and Information Center, Environmental Protection Agency, Room B102, 1301 Constitution Avenue, NW, Washington, DC).

For further information about the proposed rule, contact Mr. Sims Roy at EPA's Office of Air Quality Planning and Standards at 919-541-5263.

EPA's Office of Air and Radiation (OAR) home page on the Internet contains a wide range of information on the air toxics program, as well as many other air pollution programs and issues. The OAR home page address is: <http://www.epa.gov/oar>.