

CLEAN DIESEL PROGRAM FOR LOCOMOTIVES AND MARINE ENGINES

May 2004

The U.S. Environmental Protection Agency (EPA) is inviting comment from all interested parties on a plan to propose more stringent emission standards and other provisions for new and existing locomotives, and new marine diesel engines. EPA is issuing an advance notice of proposed rulemaking (ANPRM) to gather information and determine how to proceed.

Engines Addressed in the ANPRM

Locomotives: EPA is considering more protective standards for new and existing locomotives. This approach would address the long service life of locomotive engines.

Marine Diesel Engines: EPA is considering standards for new marine diesel engines with per cylinder displacement below 30 liters. The standards would apply to marine diesel engines used in all applications: commercial (excluding ocean vessels), recreational, and auxiliary. They would also apply to engines at or below 37 kW, which were previously included in the nonroad standards.

Exhaust Emission Standards

EPA is considering emission standards modeled after our 2007/2010 clean highway and nonroad diesel engine program, with an emphasis on achieving large reductions in PM emissions as early as possible through the use of advanced emission control technology. These standards, which could apply as early as 2011, would be based on the application of high-efficiency catalytic aftertreatment enabled by the availability of clean diesel fuel with a sulfur content capped at 15 parts per million. The low-sulfur fuel is already being produced in some U.S. markets, and its availability is expected to readily available for locomotive and marine engines by 2012.

In EPA's Clean Diesel Truck and Bus Program and Clean Air Nonroad Diesel program, EPA estimated that NO_x and PM emissions could be reduced by 90 percent. EPA expects that similar levels of NO_x and PM reductions could be achieved by applying similar technologies to locomotives and marine diesel engines.

In addition to standards for new engines, EPA is interested in ideas for voluntary provisions and initiatives that could encourage cleaner engines and retrofits, or accelerate replacement of existing engines.

Locomotive and Marine Diesel Engines Emissions Need to be Reduced

Locomotive and marine diesel engines are significant contributors to air pollution in many of our nation's cities and ports. Locomotive and marine diesel engines produced today are required to meet relatively modest emission standards. This means that they continue to emit large amounts of nitrogen oxides (NO_x) and particulate matter (PM), which contribute to serious public health problems. The relative contribution of these diesel engines is expected to grow due to the expected future growth in the use of these engines. By 2030, EPA estimates that, without new controls, locomotives and marine diesel engines will contribute about 27 percent of mobile source NO_x and 45 percent of mobile source fine diesel particulate matter (PM_{2.5}) emissions.

Millions of Americans continue to live in areas with unhealthy air quality that may endanger public health and the environment. Because of this, federal, state, and local governments are working to bring ozone and particulate levels into compliance with the new more protective health standards for ozone and particulate matter. The reductions EPA is considering in this advance notice of proposed rulemaking (ANPRM) will play a critical part in improving the air quality for states and local communities.

Exhaust from diesel engines contributes to unhealthy concentrations of fine particles and ozone which are linked to serious problems, including premature death, increased risk of lung cancer, heart disease, aggravated asthma and other respiratory conditions. In addition, PM, NO_x, and ozone adversely affect the environment in various ways including visibility impairment, crop damage, and acid rain.

Public Participation Opportunities

EPA welcomes comments on this ANPRM. For instructions on submitting written comments, please see the *Federal Register* notice. It is available from the EPA Air Docket by calling 202-566-1742; please refer to Docket No. OAR-2003-0190.

Information is also available at: <http://www.epa.gov/nonroad>

You can also contact EPA at:

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