

FACT SHEET

FINAL EMISSION STANDARDS OF PERFORMANCE FOR STATIONARY SPARK IGNITION INTERNAL COMBUSTION ENGINES; AND FINAL AIR TOXICS STANDARDS FOR RECIPROCATING INTERNAL COMBUSTION ENGINES

ACTION

- On December 20, 2007, the Environmental Protection Agency (EPA) issued a rule that will reduce emissions of criteria and air toxic pollutants from stationary internal combustion 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 final standards are in two parts. These two sets of regulations are being finalized under one notice of final rulemaking because the industries being addressed, stationary spark ignition engines, and stationary reciprocating internal combustion engines, are practically identical.
- The first part, known as New Source Performance Standards (NSPS), will limit emissions of nitrogen oxides (NO_x), carbon monoxide (CO), and volatile organic compounds (VOC) from new stationary spark ignition internal combustion engines.
 - A new stationary spark ignition engine is one that is manufactured or ordered after the date this proposal is published in the Federal Register and manufactured after July 1, 2007, for engines greater than or equal to 500 horsepower, and after July 1, 2008, for engines less than 500 horsepower. Stationary spark ignition engines that begin modification or reconstruction after June 12, 2006 also are subject to the rule.
- The second part, known as technology-based air toxics standards, will limit air toxics emissions from new and reconstructed stationary reciprocating internal combustion engines that either are located at smaller-emitting sources of air toxics emissions called areas sources, or that have a site rating of less than or equal to 500 horsepower and are located at larger emitting, or major sources of air toxics emissions.
 - Area sources are smaller commercial and industrial operations that release lesser quantities of toxic pollutants into the air. Area sources emit less than 10 tons per year of a single air toxic, or less than 25 tons per year of a combination of air toxics. Sources that emit more than these amounts are characterized as "major" sources.

- Existing engines are not being addressed in this final rule. However, EPA plans to propose air-toxic standards for existing engines located at major and area sources in early 2009 in a separate regulatory action.
- Owners/operators have several options to demonstrate compliance with the final rule. For the most part, owners/operators will purchase an engine certified for stationary use by the manufacturer. The final rule will require owners/operators of certified engines to follow emission-related maintenance of the engine according to the manufacturer's instructions.
- If a non-certified engine is purchased, then the owners or operators will be required to develop and follow a maintenance plan and perform emission testing to demonstrate compliance.
- This rule is being finalized as part of a consent decree with Environmental Defense, which requires the EPA Administrator to complete a final rule by December 20, 2007.

HEALTH and ENVIRONMENTAL BENEFITS

- The final rule will provide improvements in protecting human health and the environment by reducing pollutant emissions.
 - For spark ignition engines, EPA estimates that the final rule will reduce NO_x emissions by 77,000 tons per year (tpy), CO emissions by about 45,000 tpy, VOC emissions by about 2,000 tpy, and air toxics emissions by approximately 800 tpy in the year 2015.
 - Stationary reciprocating internal combustion engines are already well controlled as a result of other standards. As such, emissions reductions from this standard will be less than for spark ignition engines.
- The total national capital cost for the final rule is estimated to be approximately \$44 million in the year 2015, with a total national annual cost of \$19 million in the year 2015.
- Benefits associated with the expected emission reductions will be significantly higher than the costs. It is estimated that the benefits will be as high as \$200 million in 2015.
- Air toxics emissions are known to cause, or contribute significantly to air pollution, which may reasonably be anticipated to endanger public health or welfare. The air toxic emitted from stationary reciprocating internal combustion engines include formaldehyde, benzene, 1-3 butadiene, acrolein, xylene and others.
- Pollutants such as NO_x 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_x 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. Particle pollution also contributes to haze, which reduces visibility in cities and in our national parks and wilderness areas.

- NO_x reacts with moisture in the atmosphere to form acid rain, which, when deposited, causes acidification of soil and surface waters.
- NO_x 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 VOC are considered harmful to human health and the environment and are linked to various negative health conditions in humans.

FOR MORE INFORMATION

- The final rule is posted at: <http://www.epa.gov/ttn/oarpg/t3pfpr.html>
- Today's final rule and other background information are also available either electronically at <http://www.regulations.gov>, 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. EPA-HQ-OAR-2005-0030). 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.
- 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>.