

## FACT SHEET

### FINAL AIR TOXICS STANDARDS FOR RECIPROCATING INTERNAL COMBUSTION ENGINES

#### ACTION

- On August 10, 2010, the Environmental Protection Agency (EPA) issued a final rule that will reduce emissions of toxic air pollutants from existing gas-fired stationary reciprocating internal combustion engines (RICE). These engines also are known as spark ignition (SI) engines.
- Industrial facilities such as power plants and chemical and manufacturing plants use these engines to generate electricity for compressors and pumps. These engines are used in the oil and gas industry, both for production and transport by pipeline. They also are used in emergencies to produce electricity to pump water for flood and fire control.
- Toxic air pollutants, also known as hazardous air pollutants or air toxics, are those pollutants known or suspected of causing cancer and other serious health effects.
- This final rule applies to stationary SI engines that meet specific siting, age and size criteria. It will control emissions of formaldehyde, acetaldehyde, acrolein, methanol, benzene, and other air toxics from SI engines:
  - ◆ used at area sources of air toxics emissions and constructed or reconstructed before June 12, 2006,
  - ◆ used at major sources of air toxics emissions, have a site rating of less than or equal to 500 horsepower (HP), and constructed or reconstructed before June 12, 2006.
- Operators of existing stationary SI engines will be required to:
  - ◆ Install emissions control equipment that would limit air toxics emissions for the following engines:
    - stationary non-emergency four stroke lean burn (4SLB) engines with a site rating between 100 HP and 500 HP and located at a major source of HAP emissions, and
    - stationary non-emergency four stroke rich burn (4SRB) and 4SLB engines with a site rating greater than 500 HP and located at an area source of HAP emissions;
  - ◆ Perform work or management practices for the engines that are not required to meet numeric emission limits; and
  - ◆ Perform emissions tests to demonstrate engine performance and compliance with rule requirements for engines that are subject to numeric emission limitations.

#### BENEFITS AND COSTS

- EPA estimates that more than 330,000 of these engines generate electricity and power

equipment at industrial, agricultural, oil and gas production, and other facilities.

- When this rule is fully implemented in 2013, EPA estimates that emissions from these SI engines will drop by approximately:
  - ◆ 6,000 tons per year (tpy) of air toxics,
  - ◆ 96,000 tpy of nitrogen oxides,
  - ◆ 109,000 tpy of carbon monoxide, and
  - ◆ 31,000 tpy of volatile organic compounds
- These emissions reductions will lead to significant annual health benefits. In 2013, this rule will protect public health from exposure to fine particles by avoiding:
  - ◆ 17 to 44 premature deaths,
  - ◆ 12 cases of chronic bronchitis,
  - ◆ 33 nonfatal heart attacks,
  - ◆ 26 hospital and emergency room visits,
  - ◆ 29 cases of acute bronchitis,
  - ◆ 2,400 days when people miss work,
  - ◆ 310 cases of aggravated asthma, and
  - ◆ 14,000 minor restricted activity days.
- EPA estimates that the value of the benefits associated with reduced exposure to fine particles are \$510 million to \$1.2 billion in the year 2013. EPA did not monetize the benefits associated with reducing exposure to air toxics or other air pollutants, ecosystem effects, or visibility impairment.
- EPA estimates the total national capital cost for the final rule to be approximately \$383 million in 2013, with a total national annual compliance cost of \$253 million in 2013. The annual compliance cost includes control device operation and maintenance as well as monitoring, recordkeeping, reporting, and performance testing.
- EPA estimates that price and output changes for production from affected industries in 2013 should be less than 1 percent for most affected output.
- EPA calculated the costs and benefits of this rule based on the value of a dollar in 2009.

## **BACKGROUND**

- On June 15, 2004, EPA promulgated national emission standards for hazardous air pollutants (NESHAP) for stationary RICE that have site ratings of greater than 500 horsepower and are located at major sources of air toxics emissions.
- On January 18, 2008, EPA promulgated NESHAP for new stationary RICE that either are located at area sources of air toxics emissions or that have a site rating of less than or equal to 500 horsepower, are located at major sources of air toxics emissions, and were constructed or reconstructed after June 12, 2006.

- In March 2009, EPA proposed emissions standards to reduce air toxics from a broader group of diesel and gas-fired engines. In February 2010, EPA completed action on compression ignition (diesel) RICE. EPA determined that additional emissions data should be collected before completing this final rule for spark ignition engines.
- The schedule for completing this rule is part of a consent decree with Sierra Club, which requires the EPA Administrator to complete a final rule by August 10, 2010.

## **FOR MORE INFORMATION**

- The final rule is posted at: <http://www.epa.gov/ttn/oarpg/new.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 the EPA Docket Center's Public Reading Room.
  - The Public Reading Room is located in the EPA Headquarters Library, Room Number 3334 in the EPA West Building, located at 1301 Constitution Ave., NW, Washington, DC. Hours of operation are 8:30 a.m. to 4:30 p.m. eastern standard time, Monday through Friday, excluding Federal holidays.
  - Visitors are required to show photographic identification, pass through a metal detector, and sign the EPA visitor log. All visitor materials will be processed through an X-ray machine as well. Visitors will be provided a badge that must be visible at all times.
  - Materials for this proposed action can be accessed using Docket ID No. EPA-HQ-OAR-2008-0708.
- For further information about the final action, contact Ms. Melanie King of EPA's Office of Air Quality Planning and Standards, Sector Policies and Programs Division, Energy Strategies Group at (919) 541-2469 or by e-mail at [king.melanie@epa.gov](mailto:king.melanie@epa.gov).