

Program Update

Introduction of Cleaner-Burning Diesel Fuel Enables Advanced Pollution Control for Cars, Trucks and Buses

The low sulfur diesel fuel portion of EPA's Heavy-Duty Highway Diesel rule (the "2007 Highway Rule"), which was finalized in January 2001, is now taking effect. Refiners will start producing the cleaner-burning diesel fuel, called Ultra-Low Sulfur Diesel (ULSD), for use in highway vehicles beginning in June 2006. This new diesel fuel costs between 4 and 5 cents per gallon to produce and distribute. ULSD enables advanced pollution control technology for heavy-duty trucks and buses so that engine and vehicle manufacturers can meet the 2007 emission standards. As a result, each new truck and bus will be more than 90 percent cleaner than current models. The introduction of ULSD will also enable light-duty passenger vehicle manufacturers to make use of similar technologies on diesel-powered cars, SUVs and light-trucks.

Overview

EPA's Clean Air Highway Diesel final rule requires a 97 percent reduction in the sulfur content of highway diesel fuel, from its current level of 500 parts per million (ppm), to 15 ppm. ULSD will be available at retail stations beginning this summer. Cars, trucks and buses with advanced pollution control will be available beginning in the autumn of 2006.

By addressing diesel fuel and engines together as a single system, this program will provide annual emission reductions equivalent to removing

the pollution from more than 90 percent of today's trucks and buses, or about 13 million trucks and buses, when the current heavy-duty vehicle fleet has been completely replaced in 2030. This is the greatest reduction in harmful emissions of soot, or particulate matter (PM), ever achieved from cars and trucks.

Public Health Benefits

Once this action is fully implemented, environmental benefits include:

- 2.6 million tons of smog-causing nitrogen oxide (NO_x) emissions will be reduced each year.
- PM will be reduced by 110,000 tons per year.

In the long term, this program will result in more than \$70 billion annually in environmental and public health benefits at a cost of \$4 billion per year.

Health benefits will include the annual prevention of:

- 8,300 premature deaths
- 5,500 cases of chronic bronchitis
- 17,600 cases of acute bronchitis in children
- 360,000 cases of respiratory symptoms in asthmatic children
- 1.5 million lost work days
- 7,100 hospital visits
- 2,400 emergency room visits for asthma

Smog causes a range of health problems related to breathing, including chest pain, coughing, and shortness of breath. Soot is deposited deep in the lungs and causes premature death, increased emergency room visits, and increased respiratory symptoms and disease. With both smog and soot, children and the elderly are most at risk. Smog and soot also adversely affect the environment in various ways, including crop damage, acid rain, and visibility impairment.

Lead Time

EPA provided significant lead time for refiners and other parties throughout the fuel production and distribution industry to ensure a smooth transition to ULSD. Although the fuel provisions go into effect in June 2006, they will be phased in through 2009. EPA also provided special hardship provisions for small refiners to minimize their economic costs.

Stakeholder Outreach

Since the standards were finalized in 2001, EPA has worked with the regulated community and other stakeholders to ensure a smooth transition. We co-sponsored and participated in numerous workshops and technology review panels, and issued progress reports, and guidance documents. Where necessary, we have also issued several technical amendments to the regulations to ensure a smooth introduction of the program.

In late 2005, EPA began participating with the Clean Diesel Fuel Alliance, a group of more than 20 industry, government, and consumer organizations that are working together to provide information on the benefits of ULSD and cleaner-burning diesel cars, trucks and buses.

For More Information

For more information on this program, please visit the following Web sites:

- 2007 Heavy-Duty Highway Rule: www.epa.gov/otaq/highway-diesel/regs/2007-heavy-duty-highway.htm
- EPA's National Clean Diesel Campaign: www.epa.gov/cleandiesel
- Clean Diesel Fuel Alliance: www.clean-diesel.org