Regulatory Announcement

EPA Proposes Tier 3 Motor Vehicle Emission and Fuel Standards

The U.S. Environmental Protection Agency (EPA) is issuing a proposed rule designed to reduce air pollution from passenger cars and trucks. Starting in 2017, Tier 3 would set new vehicle emissions standards and lower the sulfur content of gasoline, considering the vehicle and its fuel as an integrated system.

- The proposed vehicle standards would reduce both tailpipe and evaporative emissions from passenger cars, light-duty trucks, medium-duty passenger vehicles, and some heavy-duty vehicles.
- The proposed gasoline sulfur standard would make emission control systems more effective for both existing and new vehicles, and would enable more stringent vehicle emissions standards. Removing sulfur allows the vehicle's catalyst to work more efficiently. Lower sulfur gasoline also facilitates the development of some lower-cost technologies to improve fuel economy and reduce greenhouse gas (GHG) emissions, which reduces gasoline consumption and saves consumers money.
- The proposed tailpipe standards include different phase-in schedules that vary by vehicle class but generally phase in between model years 2017 and 2025. In addition to the gradual phase-in schedules, other proposed flexibilities include credits for early compliance and the ability to offset some higher-emitting vehicles with extra-clean models.
- The proposed fuel sulfur standards include an averaging, banking, and trading (ABT) program that would allow refiners and importers to spread out their investments through an early credit program and rely on ongoing nationwide averaging to meet the sulfur standard. EPA is also proposing flexibilities such as hardship provisions for extenuating circumstances, as well as flexibility provisions for small businesses (small manufacturers of Tier 3 vehicles and small refiners), small volume manufacturers, and small volume refineries.

EPA United States Environmental Protection Agency

Office of Transportation and Air Quality
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- The Tier 3 program continues the successful transition that began with EPA's Tier 2 program, finalized in 2000, in which EPA treated vehicles and fuels as a system to reduce both gasoline sulfur and vehicle emissions. While there were claims at the time that the program would cause fuel prices to increase far in excess of EPA's estimates and would result in closures and fuel supply shortages, the Tier 2 program was a success and resulted in gasoline sulfur reductions of up to 90 percent and enabled the use of new emission control technologies in cars and trucks with no serious negative impacts on the refining industry. EPA's Clean Diesel Program similarly utilized a systems approach to reducing sulfur emissions from diesel fuels and enabling cleaner diesel technologies with the Highway Diesel Rule (finalized in 2001) and the Nonroad Diesel Rule (finalized in 2004) again with no serious negative impacts. Now that the U.S. refining industry routinely produces lower sulfur fuel products, new market opportunities for international fuel exports have opened up.

EPA is proposing the Tier 3 standards to address public health issues that exist currently and are projected to continue in the future as requested in a May 21, 2010 Presidential memorandum.

- Over 158 million Americans are currently experiencing unhealthy levels of air pollution which are linked with adverse health impacts such as hospital admissions, emergency room visits, and premature mortality. Motor vehicles re a particularly important source of exposure to air pollution, especially in urban areas.

- The proposed vehicle emission standards combined with the proposed reduction of gasoline sulfur content would significantly reduce motor vehicle emissions, including nitrogen oxides (NOX), volatile organic compounds (VOC), direct particulate matter (PM2.5), carbon monoxide (CO) and air toxics.

- Compared to current standards, the proposed non-methane organic gases (NMOG) and nitrogen oxides (NOX), presented as NMOG+NOX, tailpipe standards for light-duty vehicles represent approximately an 80% reduction from today's fleet average and a 70% reduction in per-vehicle particulate matter (PM) standards. Proposed heavy-duty tailpipe standards represent about a 60% reduction in both fleet average NMOG+NOX and per-vehicle PM standards. EPA is also proposing to extend the regulatory useful life period during which the standards apply from 120,000 miles to 150,000 miles.

- EPA is also proposing that federal gasoline contain no more than 10 parts per million (ppm) of sulfur on an annual average basis by January 1, 2017. In addition, EPA is proposing to either maintain the current 80-ppm refinery gate and 95-ppm downstream caps or lower them to 50 and 65 ppm, respectively. The proposed Tier 3 gasoline sulfur standards are similar to levels already being achieved in California, Europe, Japan, South Korea, and several other countries.

- Emission reductions from the Tier 3 program would lead to immediate air quality improvements that are critically important for states to attain and maintain the existing health-based National Ambient Air Quality Standard (NAAQS). In the absence of

additional controls such as the Tier 3 standards, many areas would continue to have air pollution levels that exceed the NAAQS in the future.

- Tier 3 would also reduce exposure to vehicle pollution for the millions of people living, working, and going to school near major roads.

Tier 3 is among the most highly cost-effective air quality control measures available.

- The program would cost about a penny per gallon of gasoline, and about $130 per vehicle. The annual cost of the overall program in 2030 would be approximately $3.4 billion; however, EPA estimates that in 2030, the annual monetized health benefits of the proposed Tier 3 standards would be between $8 and $23 billion.

- By 2030, the Tier 3 standards would annually prevent:
  - Between 820 and 2,400 premature deaths
  - 3,200 hospital admissions and asthma-related emergency room visits
  - 22,000 asthma exacerbations
  - 23,000 upper and lower respiratory symptoms in children
  - 1.8 million lost school days, work days and minor-restricted activities

The proposed Tier 3 program is part of a comprehensive approach to reducing the impacts of motor vehicles on air quality and public health.

- The Tier 3 proposal is harmonized with the California Air Resources Board (CARB) Low Emission Vehicle (LEV III) program so automakers could sell the same vehicles in all 50 states.

- The Tier 3 proposal is aligned with and designed to be implemented over the same timeframe as EPA's program for reducing greenhouse gas (GHG) emissions from light-duty vehicles starting in model year 2017.

- Together, the Tier 3, light-duty GHG, and LEV III standards would maximize reductions in GHGs, criteria pollutants and air toxics from motor vehicles while streamlining programs and providing regulatory certainty and compliance efficiency.

EPA has had extensive outreach and input from stakeholders during the development of the proposed Tier 3 standards. These stakeholders included auto manufacturers, oil refiners, manufacturers of vehicle emission control systems, fuel distributers, state/local governments and organizations, and environmental and public health groups.

EPA welcomes your comments on this proposed rule. Further information on the public comment period may be found on EPA's website (see For More Information below). All comments

should be identified by Docket ID No. EPA-HQ-OAR-2011-0135 and submitted by one of the following methods.

You should consult the Federal Register notice for this proposal for more information about how to submit comments, when the comment period will close, and about where and when public hearings will be held. A copy of the Federal Register notice can be found on our website listed below:

Internet: www.regulations.gov
E-mail: A-and-R-Docket@epa.gov
Mail:
Environmental Protection Agency
Air and Radiation Docket and Information Center (6102T)
1200 Pennsylvania Avenue NW
Washington, DC 20460
Hand Delivery:
EPA West building
EPA Docket Center (Room 3340)
1301 Constitution Avenue NW
Washington, DC

For More Information

You can access the rule and related documents on EPA's Office of Transportation and Air Quality (OTAQ) Web site at:

www.epa.gov/otaq/tier3.htm

For more information on this rule, please contact the U.S. Environmental Protection Agency, Office of Transportation and Air Quality at:

E-mail: otaq@epa.gov