***Question of the Month**: What are the federal emissions and fuel economy standards for current and future on-road vehicles? Have any related emissions and fuel regulations been passed recently?*

**Answer:** Corporate Average Fuel Economy (CAFE) standards and the associated greenhouse gas (GHG) emissions standards set requirements for new light-, medium-, and heavy-duty vehicle models with the goal of improving the overall fuel efficiency and environmental impact. Fuel economy standards for light-duty vehicles were introduced in the Energy Policy and Conservation Act (EPCA) of 1975; regulations were established for on-road vehicles beginning with Model Year (MY) 1978. EPCA grants the U.S. Department of Transportation's National Highway Traffic Safety Administration (NHTSA) the authority to regulate CAFE standards, with the requirement that new standards may not be proposed more than five model years at a time.

In 2010, NHTSA partnered with the U.S. Environmental Protection Agency (EPA) to issue the first joint program that includes both fuel economy requirements under NHTSA's CAFE program and emissions standards under EPA's GHG emissions program. Starting with MY 2012 vehicles, manufacturers are required to improve fleet-wide fuel economy and reduce fleet-wide GHG emissions by approximately 5% each year. By 2016, vehicles must meet an estimated combined average emissions level of no more than 250 grams of carbon dioxide per mile. If the industry met this carbon dioxide standard solely through fuel economy improvements, vehicles would have an average fuel economy of 35.5 miles per gallon (mpg). For more information, see the EPA fact sheet: http://www.epa.gov/otaq/climate/regulations/420f10014.pdf.

NHTSA and EPA established the CAFE and GHG emissions standards for MY 2017 through MY 2025 passenger cars and light-duty trucks in 2012 in two phases, which are broken down as follows:

| | **Model Years** | **Average Fleet-Wide Fuel Economy** |
|---|---|---|
| **Phase 1** | MY 2017-MY 2021 | 40.3-41.0 mpg (by MY 2021) |
| **Phase 2*** | MY 2022-MY 2025 | 48.7-49.7 mpg (by MY 2025) |

*Proposed, pending final rule

For more information, refer to the EPA fact sheet:
http://www.epa.gov/oms/climate/documents/420f12051.pdf.

In 2011, NHTSA and EPA set the first-ever standards to reduce GHG emissions and improve fuel efficiency of medium- and heavy-duty vehicles (vehicles with a gross vehicle weight rating greater than 10,000 pounds). The standards cover MY 2014 through MY 2018 on-road vehicles and are tailored to each of three main regulatory subcategories:

- Combination tractors (also known as semi trucks);
- Heavy-duty pickup trucks and vans; and
- Vocational vehicles (such as delivery, refuse, and tow trucks; transit, shuttle, and school buses; and emergency vehicles).

The requirements provide flexibility through an emissions and fuel consumption credit system to help reduce the overall costs of the program and to allow manufacturers time to make necessary technological improvements.

For more information on fuel economy and GHG emissions standards, refer to the NHTSA CAFE – Fuel Economy (http://www.nhtsa.gov/fuel-economy/), EPA Transportation and Climate

(http://www.epa.gov/otaq/climate/regulations.htm), and FuelEconomy.gov (http://fueleconomy.gov/) websites.

On March 29, 2013, EPA announced their Tier 3 Vehicle Emission and Fuel Standards Program, which includes more stringent tailpipe emissions standards for non-methane organic gas (NMOG), nitrogen oxides (NOx), and particulate matter (PM); more stringent evaporative vehicle emissions; and lower sulfur content of gasoline. This proposal aligns vehicle standards with the GHG emissions standards outlined above, as well as the California Low Emission Vehicle Program (http://www.afdc.energy.gov/laws/law/CA/6493), allowing automakers to sell the same vehicle models in every state. The standards would apply to light-duty trucks, medium-duty passenger vehicles, and some heavy-duty vehicles and include different phase-in schedules based on vehicle class from MY 2017 to MY 2025. The proposed gasoline sulfur standard would make emission control systems more effective for both existing and new vehicles. For more information, refer to the proposed rule (http://www.epa.gov/otaq/documents/tier3/tier3-nprm-20130329.pdf) and the EPA Tier 3 Vehicle Emission and Fuel Standards Program website (http://www.epa.gov/otaq/tier3.htm).

For more up-to-date information about federal and state vehicle standards, refer to the Alternative Fuels Data Center (AFDC) Federal Incentives and Laws website (http://www.afdc.energy.gov/laws/fed_summary).