

**Opening Statement of Margo T. Oge
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**Subcommittee on Energy and the Environment
Committee on Science, Space, and Technology**

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Written Statement**

Chairman Harris, Ranking Member Miller, and Members of the Committee, I appreciate the opportunity to appear before you today to testify on various transportation fuel-related programs under the Clean Air Act (CAA), as amended by the Energy Independence and Security Act of 2007 (EISA). As requested, I will discuss three different fuels issues: the renewable fuel standards; partial waivers allowing the introduction into commerce of gasoline containing up to fifteen percent ethanol (E15) for use in MY2001 and newer light-duty motor vehicles (which includes passenger cars, light-duty trucks and medium-duty passenger vehicles), and potential future controls on vehicles and fuel quality, known as “Tier 3” standards.

Renewable Fuel Standards

On March 26, 2010, the Environmental Protection Agency (EPA) finalized regulations to implement the updated national renewable fuel standard program (RFS) required by Congress under EISA in 2007. These provisions established new year-by-year specific volume standards for the amount of renewable fuel that must be used in transportation fuel, with the standards requiring a total of 36 billion gallons by 2022. This total includes 21 billion gallons of advanced biofuels, comprised of 16 billion gallons of cellulosic biofuel, 4 billion gallons of "other" advanced biofuels, and a minimum of 1 billion gallons of biomass-based diesel. The new requirements also include new definitions and criteria for both renewable fuels and the feedstocks used to produce them, including new greenhouse gas emission (GHG) thresholds. EPA applied

the best available science, and conducted extensive analyses to implement these complex and challenging statutory provisions. The regulatory requirements went into effect on July 1, 2010 and apply to domestic and foreign production of renewable fuels used in the United States.

We estimate the RFS program, when fully implemented, would displace about 13.6 billion gallons of petroleum-based gasoline and diesel fuel, which represents about 7 percent of expected annual gasoline and diesel consumption in 2022. We also estimate that the fully implemented program would decrease oil import expenditures by \$41.5 billion dollars, result in additional energy security benefits of \$2.6 billion, and reduce GHG emissions by an average annualized rate of 138 million metric tons of CO₂ equivalent per year.

EPA supports expanded use of advanced biofuels, especially cellulosic biofuels, which must achieve at least a 50% and a 60 % reduction, respectively, in lifecycle greenhouse gases. As directed, each year EPA publishes the annual volumetric requirements for total, advanced, biomass based diesel, and cellulosic renewable fuels that refiners must meet the following year. As part of this effort, EPA must determine the projected volume of cellulosic biofuel production for the following year and, if this is less than the volume specified in the statute, EPA must lower the standard accordingly. In developing proposed annual volume standards, we conduct a rigorous investigation of the cellulosic industry, including one-on-one discussions with each producer to determine their production potential for the following year. EPA also consults directly with the Department of Agriculture and the Department of Energy, including the Energy Information Administration (EIA) to determine the status of production capacity and capabilities of the cellulosic sector. These evaluations are based on evolving information about emerging segments of the biofuels industry, and may result in applicable volumes that are different from those in the statute. We propose the annual volume standards through a transparent rulemaking process, allowing for public review and comment, prior to finalizing the standards. This process ensures the most robust determination possible at the time the standards are set.

In 2010 and 2011, as a result of limited production capacity, we found it necessary to reduce the cellulosic standard to about 6.5 and 6 million gallons, respectively, substantially below the CAA targets of 100 and 250 million gallons for those years. For 2012, we proposed a range of 3.5 to 12.9 million gallons. We will finalize the volume standards later this fall. Under the statute, if we lower the cellulosic standard, EPA has discretion to reduce the total advanced and total renewable fuel standards. Thus far, we have not found cause to reduce the overall advanced and renewable standards.

EPA also recognizes the importance of evaluating and qualifying new biofuels for use in the RFS program. We already have a long list of qualified advanced and cellulosic biofuels approved in the current RFS, including biodiesel and renewable diesel from certain feedstocks, ethanol from sugarcane, diesel from algal oil, ethanol and diesel from approved cellulosic feedstocks, and jet fuel and heating oil from certain feedstocks. In addition, we have established a process to evaluate new biofuel pathways for approved use in the RFS program and are using this process to qualify new fuel pathways that can support meeting the future standards. Many of the feedstocks or biofuels undergoing evaluation are under consideration as new advanced biofuels. These include ethanol, diesel and gasoline produced from renewable feedstocks like energy cane, camelina, and arundo donax, to name only a few.

E15 Waiver

Under the Clean Air Act, companies that produce fuels cannot increase the concentration of ethanol in gasoline for use in gasoline-fueled vehicles unless the Administrator waives this restriction by determining that the increased concentration will not cause or contribute to the failure of vehicles or engines to meet emissions standards. E10 (gasoline with 10% ethanol by volume) was granted a waiver by operation of law under a previous version of CAA section 211(f)(4) more than 30 years ago. It is now ubiquitous in the marketplace, with E10 blends now accounting for over 90 percent of the total U.S. gasoline market.

In 2010, EPA granted in part and denied in part an application from Growth Energy and 54 ethanol producers requesting a waiver that would increase the permissible concentration of ethanol in gasoline to 15 percent. Based on the available evidence, including extensive test data developed by the Department of Energy (DOE) and other researchers, EPA determined that the CAA criterion in section 211(f)(4) was met for allowing E15 to be introduced into commerce for use in model year (MY) 2001 and newer light-duty motor vehicles, which includes passenger cars, light-duty trucks and medium-duty passenger vehicles. EPA also found that E15 did not meet the statute's criterion in the case of motor vehicles older than MY2001 and other types of vehicles and gasoline-powered equipment. As a result, EPA granted partial waivers raising the permissible concentration of ethanol in gasoline to 15 percent for use in MY 2001 and newer light-duty motor vehicles, but not for use in any other gasoline-powered vehicles or engines such as lawnmowers and boats.

EPA placed several conditions on the waivers to reduce the potential for misfueling with E15. As a result, fuel producers that decide to introduce E15 into commerce must take a number of steps designed to reduce misfueling, including labeling pumps dispensing E15, tracking E15 distribution on product transfer documents and conducting retail station surveys. To further mitigate the potential for misfueling, EPA also issued regulations that apply more broadly, to fuel marketers as well as fuel producers, and that prohibit anyone, including consumers, from misfueling with E15.

As a new gasoline, E15 must be registered under the Clean Air Act before it may be introduced into commerce for use in MY2001 and newer light-duty motor vehicles. Earlier this year, ethanol industry representatives submitted emissions and health effects information for use in completing registration applications for E15. They are now developing additional information for that purpose. Once complete, the information will be helpful to fuel producers in submitting registration applications for E15. Until such time as EPA approves a complete registration application, E15 may not be lawfully sold for use in MY2001 and newer light-duty motor vehicles.

Tier 3

The last topic I will cover is development of what is commonly referred to as the “Tier 3” vehicle and fuel standards. Emissions from motor vehicles and their fuels contribute to ozone, particulate matter (PM), nitrogen dioxide (NO₂), and carbon monoxide (CO), which are all pollutants for which EPA has established health-based National Ambient Air Quality Standards (NAAQS). In 2008, over 120 million people lived in counties that exceeded the health-based standards then in effect.

Motor vehicles are an important source of the compounds that form this air pollution. We project that in many nonattainment areas, cars and light trucks will contribute 15-45% of total nitrogen oxides emissions; 10-25% of total volatile organic compound emissions, and 5-10 percent of total emissions of fine particulate matter. When a revised health-based standard for ozone was set in 2008, the Regulatory Impact Analysis for the new standard included potential Tier 3 standards as part of an overall assessment of measures that would help States meet the ozone standard.

The Clean Air Act authorizes EPA to establish emissions standards for motor vehicles to address air pollution that may reasonably be anticipated to endanger public health or welfare. EPA also has authority to establish fuel controls where emissions products of gasoline may reasonably be anticipated to endanger public health or welfare or where they significantly impair motor vehicle emissions control devices or systems.

In the decade since we set the Tier 2 vehicle and fuel standards, there have been advancements in vehicle catalyst technology and computer control technology that should enable significant, cost-effective reductions in motor vehicle tailpipe emissions. Tier 3 vehicle and fuel standards have the potential to cost-effectively reduce NO_x, PM and VOCs by hundreds of thousands of tons.

As we develop this proposal, we are considering the vehicle and its fuel as an integrated system, which would enable technologically feasible and cost-effective emission reductions beyond what would be possible looking at vehicle and fuel standards in isolation. We first applied such an approach with our Tier 2 vehicle/gasoline sulfur

standards, finalized in 2000. We believe that a similar approach in the Tier 3 proposal would be a cost-effective way to achieve substantial additional emissions reductions.

There is extensive data showing that gasoline sulfur degrades the performance of catalytic systems that are key to reducing emissions from gasoline vehicles. Lowering the sulfur content of gasoline would make emission control technologies more effective for both existing and new vehicles. Gasoline sulfur reductions would be a key factor in enabling manufacturers to comply across the vehicle fleet with the new standards, while also achieving immediate significant benefits by reducing emissions from the existing vehicles.

The Agency has been talking to diverse stakeholders as we develop a proposal for Tier 3 vehicle and fuel standards that would reduce emissions from passenger cars and light-duty trucks. The Alliance of Automobile Manufacturers has urged the Agency to harmonize vehicle emissions standards with the State of California's program, thus allowing manufacturers to design a single vehicle for nationwide sales. New Tier 3 vehicle and fuel standards would create a comprehensive program for regulating motor vehicles and fuels that would provide regulatory certainty and compliance efficiency for auto manufacturers. The Tier 3 proposal will also address a number of requests from fuel industry representatives to streamline fuels regulations during the retrospective regulatory review process conducted in response to the President's Executive Order on January 18, 2011.

The Clean Air Act

These fuel programs are part of, or would continue, the 40-year Clean Air Act success story. For 40 years, the Clean Air Act has allowed steady progress to be made in reducing the threats posed by pollution and allowing us all to breathe easier. In the last year alone, programs implemented pursuant to the Clean Air Act Amendments of 1990 are estimated to have reduced premature mortality risks equivalent to saving over 160,000 lives; spared Americans more than 100,000 hospital visits; and prevented

millions of cases of respiratory problems, including bronchitis and asthma.¹ They also enhanced productivity by preventing 13 million lost workdays; and kept kids healthy and in school, avoiding 3.2 million lost school days due to respiratory illness and other diseases caused or exacerbated by air pollution.²

However, few of the emission control standards that gave us these huge gains in public health were uncontroversial at the time they were developed and promulgated. Most major rules have been adopted amidst claims that that they would be bad for the economy and bad for employment.

Some may find it surprising that the Clean Air Act also has been a good economic investment for our country. In contrast to doomsday predictions, history has shown, again and again, that we can clean up pollution, create jobs, and grow our economy all at the same time. Over that same 40 years since the Act was passed, the Gross Domestic Product of the United States grew by more than 200 percent.³

Some would have us believe that “job-killing” describes EPA’s regulations. It is misleading to say that enforcement of the Clean Air Act is bad for the economy and employment. It isn’t. Families should never have to choose between a job and healthy air. They are entitled to both.

¹ USEPA (2011). The Benefits and Costs of the Clean Air Act from 1990 to 2020. Final Report. Prepared by the USEPA Office of Air and Radiation. February 2011. Table 5-5. This study is the third in a series of studies originally mandated by Congress in the Clean Air Act Amendments of 1990. It received extensive peer review and input from the Advisory Council on Clean Air Compliance Analysis, an independent panel of distinguished economists, scientists and public health experts.

² Ibid.

³ Bureau of Economic Analysis, National Economic Accounts, “Table 1.1.5. Gross Domestic Product,” <http://bea.gov/national/index.htm#gdp>

The EPA's updated public health safeguards under the Clean Air Act will encourage investments in labor-intensive upgrades that can put current unemployed or under-employed Americans back to work. Environmental spending creates jobs in engineering, manufacturing, construction, materials, operation and maintenance. For example, EPA vehicle emissions standards directly sparked the development and application of a huge range of automotive technologies that are now found throughout the global automobile market. The vehicle emissions control industry employs approximately 65,000 Americans with domestic annual sales of \$26 billion.⁴ Likewise, in 2008, the United States' environmental technologies and services industry 1.7 million workers generated approximately \$300 billion in revenues and led to exports of \$44 billion of goods and services⁵, larger than exports of sectors such as plastics and rubber products.⁶ The size of the world market for environmental goods and services is comparable to the aerospace and pharmaceutical industries and presents important opportunities for U.S. Industry.⁷

Conclusion

Thank you for the opportunity to testify today.

⁴ Manufacturers of Emissions Control Technology
(http://www.meca.org/cs/root/organization_info/who_we_are)

⁵ DOC International Trade Administration. "Environmental Technologies Industries: FY2010 Industry Assessment."
[http://web.ita.doc.gov/ete/eteinfo.nsf/068f3801d047f26e85256883006ffa54/4878b7e2fc08ac6d85256883006c452c/\\$FILE/Full%20Environmental%20Industries%20Assessment%202010.pdf](http://web.ita.doc.gov/ete/eteinfo.nsf/068f3801d047f26e85256883006ffa54/4878b7e2fc08ac6d85256883006c452c/$FILE/Full%20Environmental%20Industries%20Assessment%202010.pdf) (accessed February 8, 2011)

⁶ U.S. Census Bureau, Censtats Database, International Trade Data--NAICS,
http://censtats.census.gov/naic3_6/naics3_6.shtml (accessed September 6, 2011)

⁷ Network of Heads of the European Environment Protection Agencies, 2005. "The Contribution of Good Environmental Regulation to Competitiveness." http://www.eea.europa.eu/about-us/documents/prague_statement/prague_statement-en.pdf (accessed February 8, 2011).