

Alliance of Automobile Manufacturers
American Petroleum Institute
Association of International Automobile Manufacturers
Boat Owners Association of the United States
Engine Manufacturers Association
International Snowmobile Manufacturers Association
Motorcycle Industry Council
National Association of Convenience Stores
National Association of Truck Stop Operators
National Marine Manufacturers Association
National Petrochemical and Refiners Association
Outdoor Power Equipment Institute
Petroleum Marketers Association of America
Society of Independent Gasoline Marketers of America

January 6, 2010

The Honorable Lisa Jackson
Environmental Protection Agency
Ariel Rios Building
1200 Pennsylvania Avenue, N.W.
Washington, DC 20460

The Honorable Steven Chu
US Department of Energy
1000 Independence Ave., SW
Washington, DC 20585

The Honorable Carol Browner
The White House
1600 Pennsylvania Ave., NW
Washington, DC 20500

Subject: EPA's Pending Decision on the Use of E15, and DOE's Ethanol Research Program

As a diverse group of stakeholders who want biofuels to succeed in the U.S. and who remain committed to finding the right market solutions for sustainable biofuel use, we are writing to express our concern that EPA may decide to allow E15 based on limited or inadequate data, as implied in its November 30 letter to Growth Energy. We urge EPA to base its decision on a complete and sound scientific record, and we urge DOE to help provide this science by spending all the \$15 million targeted for expanding and accelerating mid-level ethanol blends research in the 2010 appropriations bill, as directed by Congress and signed by the President on October 28, 2009. Moreover, EPA should reopen the E15 waiver comment period to allow public review of new test data prior to making a final decision on the waiver request.

We represent, in part, more than 90% of retail gasoline providers, almost all automobile manufacturers and a large majority of motorcycle, marine, and non-road equipment manufacturers in the U.S. market. With the participation of EPA and DOE, many of us have voluntarily shared our technical expertise in the Mid-Level Ethanol Blends Research Coordination Group to develop a thorough research program designed to assess the effects of higher blends of ethanol on the existing

fleet of automobiles, motorcycles and nonroad equipment, and retail gasoline station infrastructure. Completion of this testing will provide EPA with statistically meaningful and defensible results that will enable reliable judgments about the effects of higher ethanol blends, including on emissions, and a sound decision about whether to allow higher ethanol blends in the U.S. market.

As you proceed with important decisions that could affect the long term success of ethanol and possibly other biofuels in the U. S. market, it is imperative that those decisions be based on a complete understanding of the potential impacts of increased levels of ethanol on all segments of the end-user market. This approach is critical for satisfying both the national goals expressed in the Energy Independence and Security Act of 2007 and the needs of American consumers.

Sincerely,

Dave McCurdy, President and CEO
Alliance of Automobile Manufacturers

Henry Armour, President and CEO
National Association of Convenience Stores

Jack Gerard, President and CEO
American Petroleum Institute

Lisa Mullings, CEO
National Association of Truck Stop Operators

Michael J. Stanton, President and CEO
Association of International Automobile
Manufacturers

Thomas J. Dammrich, President
National Marine Manufacturers Association

Nancy Michelman, President
Boat Owners Association of the United States

Charlie Drevna, President
National Petrochemical and Refiners Association

Jed R. Mandel, President
Engine Manufacturers Association

Kris Kiser, Executive Vice-President
Outdoor Power Equipment Institute

Ed Klim, President
International Snowmobile Manufactures
Association

Dan Gilligan, President
Petroleum Marketers Association of America

Tim Buche, President
Motorcycle Industry Council

Kenneth Doyle, Executive Vice-President,
Society of Independent Gasoline Marketers of
America

Attachment: Summary of the Research Coordination Group's recommended research program

Cc: The Honorable Tom Vilsack, Secretary of USDA

Summary of Required Mid-Level Ethanol Tests

Light Duty Vehicle Tests

These tests were developed based on stakeholder global experience with ethanol. They look at the durability aspects of known failure modes that affect systems that are important to gaseous and liquid emissions

- **Fuel Storage and Handling (vehicle perspective)**
 - Fuel pumps, level senders, and associated fuel system components are not designed for mid-level ethanol blend exposure
 - CRC program AVFL-15 (co-funded by NREL) is a screening program to identify sensitive fuel system components and vehicles.
 - A program to build on this screening program is required.
- **On-Board Diagnostics Evaluation**
 - There are several diagnostic tests that are affected by increasing the oxygen in the fuel.
 - Excessive oxygen can cause MILs (malfunction indicator lights) to set when no problem exists.
 - Conversely, excessive oxygen can prevent MILs from setting when real problems exist
 - CRC pilot program E-90 looks at the effect of mid-level ethanol blends on the On-Board Diagnostic (OBD) system.
 - Many states use OBD as part of their in-use monitoring programs
 - The goal is to document the effects of increased fuel oxygen on the OBD system.
 - The CRC E-90 report is being written
 - A follow-on to this pilot study will likely be needed
- **Base Engine Durability**
 - Experience has shown that ethanol blends can affect engine durability and that engine deterioration can trigger OBD faults and catalyst damage
 - CRC program CM 136-09-1 (Co-funded by API) looks at the effects of mid-level ethanol blends on engine durability, whether directly or through the engine control system
 - The goal is to document the composition threshold and extent of engine damage due to mid-level ethanol blends
- **Catalyst Durability & Degradation**
 - The study done for the Australian Department of the Environment documented that mid-level ethanol blends caused significant catalyst deterioration in some vehicles through an interaction with the vehicles' control systems
 - CRC program E87-1, screening to identify sensitive vehicles, found that over half of the vehicles investigated had similar control system architectures, confirming recent DOE studies.
 - CRC Program E-87-2 (co-funded by ORNL) looks at the durability effects of mid-level ethanol blends, directly and through the engine control system, on catalyst durability

- **Evaporative Emissions – Useful Life**
 - CRC programs E-65 and E-65-3 documented ethanol’s short term evaporative emissions effects. However there is no data on ethanol’s durability effects on evaporative emissions.
 - CRC program E-91 looks at the effects of mid-level ethanol blends on evaporative emissions durability. The test plan is built using the California regulations regarding evaporative emissions durability testing

- **Tailpipe Emissions for SULEV and Cold Ambient Operation**
 - The most rigorous emissions standards emphasize minimization of cold start emissions. For most manufacturers ethanol levels are not recognized during cold start and emissions compliance is at risk
 - CRC program E-92 looks at the effects of mid-level ethanol blends on tailpipe emissions, both the 20F MSAT NMHC requirement being phased in with 2010 model year vehicles, and the longstanding SULEV (Tier 2 Bin 2) standards
 - Testing will initially not use appropriately aged catalysts and will thus be only a snap shot or “Quick Look”

- **Exhaust Emissions**
 - The effects of long term exposure need to be determined for vehicles likely to be exposed to mid-level ethanol blends
 - This will be done as part of the other portions of the mid-level ethanol blend test program

- **Emission Inventory and Air Quality Modeling**
 - EPA has stated that overall inventory impacts will be paramount in a waiver decision
 - These projects will incorporate mid-level ethanol exhaust and emission impacts into MOVES and ultimately provide an emission inventory analysis
 - CRC E-68a Follow-on (MOVES Emission Factor Model Evaluation)
 - A-67 (Estimating Ozone from Fuel Reformulation)
 - A-73 (Emissions Modeling and Air Quality Modeling)
 - These projects can begin once EPA validates their MOVES model and the data from the other portions of the CRC program is available

- **Vehicle Driveability & Fuel Volatility**
 - Ethanol has significant impact on fuel volatility & vehicle driveability. Data is needed on driveability effects and to develop specifications in the event these blends prove viable
 - CRC Project CM-138-09 is planned for 2009/2010 to evaluate high altitude hot fuel handling in partnership with NREL and RFA
 - CRC Project CM-138-06 (Hot Fuel Handling) and CRC Project CM-138-08 (Cold Start & Warmup) have already been conducted

Motorcycle and non-road equipment testing

- **Motorcycle/ATV testing**
 - Exhaust Emissions over useful life period
 - Evaporative Emissions
 - Durability
 - Driveability
- **Marine testing**
 - Recreational marine includes both the oldest legacy fleet and the most diverse technologies of any category
 - Exhaust Emissions testing using the SAE E4/ICOMIA weighted test cycle with NTE.
 - Engine Durability testing using the 300 hour WOT test.
 - Driveability testing using the engine/vessel protocols including idle quality, steady states, cruise, acceleration, etc.
 - Initiate and complete limited NREL testing on three outboard marine engines and one inboard engine for durability and exhaust emissions testing.
- **Small handheld**
 - Clutch Engagement safety study
 - Exhaust Emissions over useful life period
 - Durability
- **Small non-handheld**
 - Exhaust Emissions over useful life period
 - Durability
 - Generator performance
- **Snowmobile**
 - Exhaust Emissions over useful life period
 - Durability
 - Driveability

Infrastructure Testing

- **Underground Storage Tanks**
 - Fiberglass Reinforced Plastic (FRP) tanks manufactured prior to 1981 were not intended to store any blend of ethanol. FRP tanks manufactured in the 80s and early 90s were built to store up to E10 only.
 - Steel tanks are not required to prove compatibility via the UL process. Compatibility is proven by the manufacturer.
- **Dispensers**
 - The dispenser testing being done by DOE is incomplete. There are too many different dispensers installed across the country for the DOE testing to be sufficient.
- **Enhanced Vapor Recovery (EVR) Equipment**
 - EVR equipment is required in many non-attainment areas across the country. The equipment is certified only by the California Air Resources Board which will not

research compatibility or functionality of existing equipment. Only limited equipment is included in DOE's testing program.

- **Spill containment/Overflow Prevention**

- DOE is testing many of the materials used to make the various components included under this heading. However, these components are important enough to the environment to warrant functionality testing as well.

- **Adhesives/Seals**

- Seals and adhesives bind all pipe connections throughout retail infrastructure. The compatibility of seals and adhesives is of the utmost importance to prevent releases. DOE is testing some types of seals and adhesives, but many manufacturers have made many different types of these materials over the years and DOE's testing is not sufficient to model them.

- **Sensors**

- These electronic devices prevent releases only when functional. DOE did not include these items in its testing program. They must be tested to prove functionality.