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Advanced Biofuels USA Proposes Quicker, Cheaper Way to Achieve CO₂ GHG Reduction Goals
Builds on New US DOE Studies

For Immediate Release February 15, 2018—Frederick, MD  “If anyone asks what will be the economic incentive for a revised, more effective CO₂ greenhouse gas emission reduction plan that uses renewable fuels as well as technology, tell them this: Renewable ethanol is about $1.00/gallon cheaper than high octane gasoline. It’s the cheapest way to produce the octane, performance, and efficiency people want,” writes Advanced Biofuels USA’s Bob Kozak in an article published today that builds on the recent US Department of Energy studies on the superior fuel economy and emission reductions that can come from ethanol-based high octane fuels with optimized internal combustion engines.

Kozak proposes that the Environmental Protection Agency regulate actual life cycle CO₂ mobility and transportation emissions, as opposed to focusing only on tailpipe emissions and failing to factor in environmental harm from related power generation and transmission.

This week, the US DOE published two studies from the Co-Optimization of Engines & Fuels initiative (Co-Optima) that support this revised approach to emissions reduction. The study, *Fuel Blendstocks with the Potential to Optimize*
Future Gasoline Engine Performance identifies alcohols, including ethanol, as a high-octane blendstocks that could be blended into gasoline for better performance. Co-optimized with advanced gasoline engines, such blendstock has potential to improve passenger vehicle fuel economy by 10%. The other study, Efficiency Merit Function for Spark Ignition Engines, outlines a new mathematical equation to quantify the fuel efficiency potential associated with different fuel properties. Ethanol was among the blendstocks having the highest merit function values, according to this DOE study.

The results of these studies provide a foundation for Kozak's insightful reassessment of how to best achieve CO2 reduction goals. The Corporate Average Economy Standards, he notes, can be gamed and, even with more electric vehicles, have scant chance of rapidly eliminating, in a meaningful way, CO2 emissions from the transportation sector.

Instead, he proposes scrapping the current reliance on CAFE standards measures and going back to the efficient and straightforward Clean Air Act methodology based on reduction of baseline emissions in grams/mile. For the auto makers this means every car and truck that EPA specifies as needing to meet the standard has to meet the standard. There is no averaging between vehicles of different weights or with different engines.

Kozak's article, Let's Regulate CO2 Emissions, and Forget the 55.4 MPG 2025 Corporate Annual Fuel Economy Standard: The Inexpensive Way to Quickly Reduce Green House Gases includes a table comparing reduction of non-renewable CO2 GHG emissions with renewable ethanol blends (E0, E30 and E85), along with a history and analysis of Clean Air Act transportation fuel and mileage regulations, as well as current CAFE-based regulations.

He shows that reductions over gasoline, not including improved fuel mileage, could reach up to 80 percent in a decade. This would be a significant improvement over the 22 percent available from the current CAFE approach in the same timeframe.

The article is available on the Advanced Biofuels USA website.
Advanced Biofuels USA, a nonprofit educational organization advocates for the adoption of advanced biofuels as an energy security, military flexibility, economic development and climate change mitigation/pollution control solution. Our key tool for accomplishing this is our web site, www.AdvancedBiofuelsUSA.org, a resource for everyone from opinion-leaders, decision-makers and legislators to industry professionals, investors, feedstock growers and researchers; as well as journalists, teachers and students.

Advanced Biofuels USA has been involved in encouraging the optimization of fuels and engines to achieve mileage improvement, emission reduction and pollution control since 2012’s conference, Next Generation Engines And Fuels Forum. See also New Engine Technologies Could Produce Similar Mileage for All Ethanol Fuel Mixtures

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For more information about Advanced Biofuels USA, see www.AdvancedBiofuelsUSA.org

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