
**TESTIMONY OF KELLY DAVIS
VICE PRESIDENT REGULATORY AFFAIRS, RENEWABLE FUELS ASSOCIATION**

U.S. ENVIRONMENTAL PROTECTION AGENCY
PUBLIC HEARING

RE: Request for Comment - Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for
Model Years 2021-2026 Passenger Cars and Light Trucks
(Docket No. EPA-HQ-OAR-2018-0283 and/or NHTSA-2018-0067)

Pittsburgh, PA
September 26, 2018

Good morning. My name is Kelly Davis and I am Vice President for Regulatory Affairs at the Renewable Fuels Association, or “RFA.” RFA is the leading trade association for America’s ethanol industry. Its mission is to advance the development, production, and use of fuel ethanol by strengthening America’s ethanol industry and raising awareness about the benefits of renewable fuels.

We appreciate the opportunity to share our thoughts on the Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Trucks. If properly designed and implemented, we believe future Corporate Average Fuel Economy and Green House Gas standards can work in tandem with programs like the Renewable Fuel Standard (RFS) to advance the important policy objectives of reducing fossil fuel consumption and decreasing transportation-related emissions.

RFA was actively involved in the previous administration’s public process surrounding the mid-term review of 2022-2025 standards, and we were disappointed by the premature and seemingly predestined outcome of that process. It was apparent that the previous administration disregarded comments from RFA and many other stakeholders—including the automakers—that encouraged EPA to evaluate engines *and fuels* as integrated systems when assessing the efficacy of model year 2022-2025 fuel economy and GHG standards. Indeed, the fuels that we put in our engines can have as much impact on fuel economy and GHG emissions as the engine technologies themselves.

Thus, we were very pleased that the SAFE Vehicles proposal considers the important role that fuels play in determining engine efficiency and emissions. We believe this rulemaking offers a critical opportunity to advance fuel economy standards and reduce emissions by enabling the

increased production and use of higher octane, carbon reducing liquid fuel options. The most recent science and research clearly shows that high octane, low carbon fuels-- especially midlevel ethanol blends containing 20-40 percent ethanol--can enable auto manufacturers to meet more stringent CAFE and GHG standards, while providing consumers with affordable fuel choices.

We are encouraged that EPA and NHTSA have solicited comment on the “*potential benefits... of considering the impacts of increased fuel octane levels available to consumers...*” Further, we fully agree with the proposal’s statement that “Higher octane gasoline could provide manufacturers with more flexibility to meet more stringent standards by enabling opportunities for use of lower CO2 emitting technologies.” Consensus is building around the need for High Octane Low Carbon fuels to enable greater engine efficiency and reduced emissions. Automotive engineers and executives, government scientists, expert panels, and university researchers have called for a higher minimum octane rating for future fuels. These experts have clearly demonstrated that HOLC fuels would enable High Compression Ratio engines and other advanced internal combustion engine technologies, which in turn would improve engine efficiency and reduce emissions.

It is broadly understood that internal combustion engines will continue to serve as the predominant propulsion technology for light duty vehicles through 2025 and beyond. It is also well understood that there is significant room for further technology advances and efficiency gains in internal combustion engine technology.

That’s where the importance of fuel properties comes into play. Most of the engine technologies that lead to greater efficiency and lower emissions are enabled by higher octane fuels. As stated by Dan Nicholson, GM’s vice president of global propulsion systems, “Higher octane is necessary for better engine efficiency. It is a proven low-cost enabler to lower CO2; 100 RON fuel is the right fuel for the 2020-2025 timeframe.” For example, high-compression ratio technology (which EPA estimates will comprise 44% of the market by 2025) *demand*s higher octane fuel to limit premature fuel ignition in the cylinder (otherwise known as “engine knock”).

Research by the Department of Energy and others has demonstrated that ethanol is an ideal source of octane for such high-octane fuel blends. Not only does ethanol offer an extremely high-octane number (109 RON, 108-119 “blending octane”), but it also features an unrivaled heat of vaporization temperature and extremely high octane sensitivity. These attributes make ethanol a highly attractive component for the high-octane fuel blends of the future.

Clearly, pairing advanced internal combustion engine technologies like high compression ratio and turbocharging with high-octane low carbon fuels would result in far greater fuel economy

and emissions benefits than previously contemplated by EPA and NHTSA. Further, research shows that using a high-octane low carbon mid-level ethanol blend in optimized engines would be the lowest cost means of achieving compliance with CAFE and GHG standards for MY2022-2025 and beyond.

A high-octane fuel (98-100 RON) could be produced *today* simply by blending 25-30% ethanol with existing gasoline blendstocks. However, due to the inertia of fuel and vehicle markets, this transition will not occur on its own. Action by the EPA is necessary to catalyze the development and introduction of high octane low carbon fuels into the consumer market, just as EPA action was required to eliminate lead, limit benzene, and reduce the sulfur content of our gasoline and diesel fuel.

In closing we respectfully ask that EPA and NHTSA use this rulemaking as an opportunity to establish the roadmap for increasing the required minimum octane rating of gasoline to 98 RON and ensure that automakers are afforded credit toward compliance with CAFE and GHG requirements for building engines that require these higher-octane fuels.

Thank you.