



NEXT GENERATION FUELS ACT OF 2023

To promote low-carbon, high-octane fuels, to protect public health, and to improve vehicle efficiency and performance.

Burning fossil fuels in vehicles generates nearly 2 billion metric tons of carbon dioxide emissions in the United States each year, making the transportation sector our country's largest source of heat-trapping greenhouse gas (GHG) pollution. Our transportation system's over-reliance on fossil fuels also leads to volatile prices at the pump and energy security risks for American consumers. To reduce GHG emissions, enhance energy security, and reduce fuel prices for consumers, our nation must simultaneously improve vehicle fuel efficiency *and* reduce the carbon intensity of our transportation fuels. **That's exactly what the *Next Generation Fuels Act* would do.**

This ground-breaking, bipartisan legislation has been introduced in the 118th Congress by Sens. Chuck Grassley (R-IA), Amy Klobuchar (D-MN), Joni Ernst (R-IA), and Tammy Duckworth (D-IL) in the Senate, and by Reps. Mariannette Miller-Meeks (R-IA), Angie Craig (D-MN), Darin LaHood (R-IL) and Nikki Budzinski (D-IL) in the House.

By requiring the use of low-carbon, high-octane fuels in future vehicles, the legislation takes a bold and innovative approach to reducing GHG emissions, improving engine efficiency and performance, reducing pump prices, and protecting human health. The bill also removes the arcane regulatory roadblocks that have hindered the expansion of cleaner, greener liquid fuels.

Enabling Greater Fuel Efficiency Through Higher Octane

According to automakers, government laboratory researchers, and other experts, one of the fastest and most economical ways of improving fuel efficiency is to raise the minimum octane level of gasoline. A fuel's octane rating is simply a measure of its combustion efficiency and ability to resist premature ignition. Higher octane fuels enable the use of engines with higher compression, turbocharging, and other advanced technologies that significantly improve fuel efficiency.

- *The Next Generation Fuels Act compels the use of gasoline with a minimum research octane number (RON) of 95, increasing over time to 98 RON—an 8 percent octane improvement over today's regular grade gasoline, which typically has an octane rating of 91 RON.*
- *Begins with 95 RON standard in 2028 with increase to 98 RON standard by model year 2033.*

Using Clean Octane Sources to Reduce the Carbon Intensity of Liquid Fuels

While higher octane means higher fuel efficiency, not all sources of octane are created equal in terms of environmental performance. In fact, conventional methods for boosting octane—such as increasing the level of aromatic hydrocarbons in gasoline—can *increase* emissions and worsen air quality. On the other hand, clean octane sources, like renewable ethanol, can simultaneously boost engine efficiency and reduce emissions of both GHG and tailpipe pollutants like carbon monoxide and particulate matter.

- *The Next Generation Fuels Act requires that the octane boost for 98 RON gasoline comes from clean, low-carbon octane sources. Octane boosters must reduce lifecycle GHG emissions by at least 40 percent compared to gasoline.*
- *The Act also limits the average aromatic hydrocarbon content of gasoline to no more than 17.5 percent by 2027.*

Streamlining Fuel Regulations that Insulate Fossil Fuels from Competition

In order to allow the cleanest and most economical fuel sources to be used in future low-carbon, high-octane fuels, a number of existing regulatory provisions must be streamlined and harmonized. In many cases, existing fuel regulations have insulated petroleum fuels from competition and protected the oil industry's market share. Numerous regulatory adjustments are needed to level the playing field.

- *The Next Generation Fuels Act provides parity in fuel volatility (RVP) limitations for all gasoline blends containing more than 10 percent ethanol.*
- *The bill corrects fuel economy testing calculations and procedures that are currently biased against low-carbon, high-octane renewable fuels like ethanol.*
- *The Act requires the Environmental Protection Agency to replace its flawed vehicle emissions simulator model ("MOVES") with a model based on appropriate test fuels and methods.*

Allowing Ethanol to Reach its Full Potential

Because ethanol offers an incredibly high octane rating (120-130 RON) and reduces lifecycle GHG emissions by 40-50 percent compared to gasoline, it is an excellent candidate to serve as the clean octane booster necessary for 98 RON gasoline. However, if not addressed, current regulatory and market barriers would limit ethanol's ability to serve as the primary ingredient in future low-carbon high-octane fuels.

- *The Next Generation Fuels Act opens the market to more clean octane options by compelling EPA to approve the use of gasoline containing 20-30 percent ethanol (E20/E30). Research shows E30 is the most economical pathway for reaching 98 RON.*
- *The bill requires automakers to optimize vehicles for 95 RON with E20 by model year 2028 and ensure compatibility with 98 RON E30 starting in model year 2033.*
- *The Act requires that new retail fuel dispensers must be compatible with at least E40.*
- *The legislation restores more meaningful credit toward compliance with Corporate Average Fuel Economy (CAFE) and GHG standards for automakers who produce flex fuel vehicles (FFVs).*

RFA Strongly Supports the Next Generation Fuels Act of 2023

The Renewable Fuels Association strongly supports and endorses the Next Generation Fuels Act, and we thank visionary leaders in Congress for their efforts to introduce this landmark legislation.

- *RFA began advocating for the creation of a national low-carbon high-octane fuel standard in early 2018, specifically calling for a 98 RON requirement, limitations on aromatics content, numerous regulatory fixes, and other measures that would "assure air quality improvements, carbon emissions reduction, and consumer savings for decades to come."*
- *A survey of nearly 2,000 registered voters by Morning Consult in March 2023 demonstrates clear public support for this legislation across all demographics, with 64 percent of respondents backing the bill, and only 14 percent opposing.*

What about Electric Vehicles?

Even with increased sales of electric vehicles in the future, it is broadly understood and accepted that our light-duty transportation fleet will continue to rely heavily on liquid fuels and internal combustion engines for decades to come. As such, we should be pursuing policy solutions that compel improvements in the environmental performance and efficiency of those liquid fuels and internal combustion engines. The *Next Generation Fuels Act* is complementary to—not in conflict with—policies and efforts designed to drive decarbonization of our transportation sector over the long term.

