

Iowa Renewable



Fuels Association

April 2, 2026

Aaron Szabo
Assistant Administrator
Environmental Protection Agency
Office of Air and Radiation (OAR) 6101A
1200 Pennsylvania Avenue, N.W.
Washington, D.C. 20460

RE: Comments on Proposed EPA Guidance – Development of Guidance for Alternative Fuel Vehicles and Fueling Infrastructure Deployment Under the Clean School Bus Funding Programs, Docket (EPA-HQ-OAR-2025-1806-0001)

Mr. Szabo,

Thank you for the opportunity to comment on EPA's proposed new funding opportunity under the Clean School Bus (CSB) Program.

IRFA is an independent trade association whose members have the capacity to produce 5.8 billion gallons of corn-starch ethanol, cellulosic ethanol, biodiesel, renewable diesel, renewable natural gas, and sustainable aviation fuel across the country. Our members' abilities to produce bioproducts from a diverse array of feedstocks (including corn, corn stover, distillers' corn oil, corn kernel fiber, soybean oil, canola oil, used cooking oil, and other fats and greases) uniquely position IRFA to assist the Agency in better understanding the benefits of biodiesel for cleaner school buses.

I. Introduction

At the outset, it should be noted that EPA stated in its 2024 Clean School Bus Rebate Program Guide that biofuels would not be included as an eligible replacement technology for CSB program funding. This was allegedly for two reasons, with the first being that it is difficult to ensure that biodiesel blends of a certain percentage were used in a school bus, since current diesel buses can run on a mix of regular diesel and biodiesel. Second, EPA argued that biodiesel did not result in emissions improvements over conventional diesel; therefore, incentivizing

districts to switch would not provide significant environmental benefits.¹ IRFA is grateful that this unscientific position has been reversed, and we appreciate biodiesel's inclusion as an eligible fuel under the CSB Program.

IRFA strongly recommends allocating a substantial amount of the available funding for the CSB Program to biodiesel infrastructure, fuel "buy-down" programs, and school bus engine modification technologies that would enable school districts to utilize 20% or higher biodiesel blends in their bus fleets.

II. Biodiesel Is a Drop-In Solution That Works Today

Under the previous program, American taxpayers were being asked not just to change the propulsion system of school buses, but rather to buy a new chassis, axles, wheels, windows, roof, and seats for every bus. Making the switch to electric buses means not only buying a new motor, but all the components that make up an entirely new bus. In other words, a huge amount of taxpayer money was being devoted to purchasing things that had nothing to do with actually improving emissions. This is a waste of funding if better solutions are available. Luckily, they are.

Unlike electric buses, which require significant capital investment both in terms of new vehicles and charging infrastructure, biodiesel blends of up to B20 can be used in every diesel school bus operating in America today.² These fuels require no engine modifications, no new vehicles, and no specialized training. By encouraging biodiesel adoption, EPA has an opportunity to create immediate emissions reductions across existing school bus fleets that zero-emission technologies would take years or decades to reach.

Despite claims to the contrary in past funding opportunities, it would be very simple for EPA to ensure that the proper biodiesel blends are being purchased by school districts that receive CSB Program funding. School districts generally preserve similar records already, so a basic system of random audits for purchase orders, sales receipts, or other documentation to prove that B20 or higher blends are being delivered to the district's centralized fueling centers would not be difficult or onerous.

IRFA recommends allocating CSB Program funding toward biodiesel fueling infrastructure, including onsite storage tanks for school districts. While B20 is a drop-in fuel option, providing

¹ <https://nepis.epa.gov/Exe/ZyPDF.cgi?Dockey=P101BLI8.pdf>

² <https://afdc.energy.gov/vehicles/diesel/>

support for the initial capital investments required to install biodiesel-specific infrastructure, school districts will be more likely to try B20 or even higher blends.

Higher Blends and Concerns about Cold Weather

Higher blends of biodiesel up to B100 can also be used after making relatively inexpensive engine modifications that can easily be implemented in school buses.

This modification technology is currently enabling the use of year-round B100 in some of the United States' coldest cities. Ames, Iowa; Madison, Wisconsin; and Washington, D.C. have all adopted these engine modification systems for their heavy-duty public works vehicles, including snowplows, demonstrating that concerns about biodiesel in cold weather can be addressed with affordable solutions.³

It should be noted that B100 does need to be stored in a heated location. As such, school districts that receive funding for B100 modification technology should also be eligible to apply for funds to add heating capabilities to their fuel storage facilities.

EPA should strongly consider allowing school districts to apply for CSB Program funding for the purpose of adding such modification systems to their existing buses, as well as heating systems for their fueling locations, allowing districts to use blends as high as B100 even in cold weather – the time of year when children are most likely to be exposed to harmful emissions from buses burning conventional diesel.

III. Benefits of Biodiesel

Emissions and Health Improvements

Studies have consistently shown that biodiesel is a simple and effective way to reduce tailpipe emissions from heavy-duty engines. Pure biodiesel contains zero aromatics, unlike conventional diesel. Aromatics can be harmful to human health, which is especially concerning for children on school buses who may be exposed to these chemicals for extended periods of time.⁴ Specifically, a June 2015 study found that, among tested alternatives such as diesel oxidation catalysts, ultralow-sulfur diesel, and biodiesel, only biodiesel was associated with lower in-cabin particle-bound polycyclic aromatic hydrocarbon (pb-PAH) concentrations, a reduction of approximately 40%.⁵ These chemicals are considered to be very hazardous to human health and

³ <https://worldbiomarketinsights.com/three-us-cities-embrace-biodiesel-for-snowplows/>

⁴ <https://afdc.energy.gov/fuels/biodiesel-benefits>

⁵ <https://pmc.ncbi.nlm.nih.gov/articles/PMC4476560/>

potentially carcinogenic, but by switching to B20 or even higher blends, children's exposure to such chemicals on school buses can be dramatically reduced.^{6 7}

When implementing programs like the CSB Program, which has a finite amount of funding, a key metric to consider ought to be the amount of emissions reductions that can be achieved per dollar spent. Compared to replacing an entire bus, as would be required under a transition to electric school buses, the emissions reduction per taxpayer dollar is much higher by simply dropping B20 into existing buses, or potentially making the relatively small investments required to adopt B100 modification technology. If the goal is to protect as many children as possible from potentially harmful tailpipe emissions, while working within the funding currently available, biodiesel is a far more effective option.

Humboldt Community School District Pilot Study

In 2020, Humboldt Community School District, in Humboldt, Iowa, participated in a joint pilot study with Iowa Renewable Fuels Association and New Century FS, using a brand-new IC Bus CE Series School Bus to assess the possible benefits of switching its fleet from conventional diesel to B11.

The bus operated on conventional diesel fuel for two years, until August 2022. From then on, it switched to B11. Additional buses of different ages were added the following year to verify results across a larger sample size.

The full study is included as an attachment, with key findings highlighted below.

Fuel Economy Improvements

The pilot study found that the bus got 8.58 miles per gallon over nearly 17,000 miles while operating on conventional diesel, while it saw 8.87 miles per gallon over nearly 21,000 miles while operating on B11 – a 3.4% increase in fuel economy. Removing idling, PTO, and aftertreatment fuel use, the bus still maintained a 3.1% improvement in fuel economy while driving on B11 as compared with conventional diesel.

Maintenance Improvements

Diesel Particulate Filters (DPF) require fuel for regenerations to burn off soot. The pilot study found that the bus used 11.2% less fuel for DPF regeneration with B11 than with conventional diesel, meaning it had either fewer or shorter regeneration cycles.

⁶ <https://www.mdpi.com/2071-1050/13/10/5465>

⁷ <https://www.ncbi.nlm.nih.gov/books/NBK138709/>

Consistent Results

In 2023, two other buses were added: a 2008 bus with 196,000 miles at the time of switching, and a 2017 bus with 23,000 miles. Both saw fuel savings without any change in routine maintenance or filter issues.

IRFA recommends that EPA allocate CSB grant funds toward helping “buy down” higher biodiesel blends for participating school districts. They may be interested and willing to make the switch to blends such as B20, but making any kind of change can be a risky decision, especially for districts with limited budgets. As demonstrated by the Humboldt pilot study, school districts that are incentivized to compare biodiesel blends with conventional diesel will see benefits, making continued adoption more likely. While such a mechanism could take several different forms, including a per-gallon incentive to offset costs or a one-time grant, IRFA believes this would substantially improve adoption and improve emissions.

V. Conclusion

IRFA strongly supports EPA making CSB Program funding available for onsite biodiesel storage tanks and heating infrastructure, fuel "buy-down" programs, and engine modification technologies that enable school districts to utilize higher biodiesel blends year-round. Biodiesel is a clean-burning solution that can reduce emissions exposure for children, improve fuel economy, and reduce maintenance needs across existing school bus fleets.

Sincerely,

Colin Gorton
Policy Director
Iowa Renewable Fuels Association

Title:

Biodiesel in School Bus Fleets: Results from the Humboldt Fleet Pilot Project

Prepared by:

Humboldt Community School District | New Century FS | Iowa Renewable Fuels Association

Introduction

School bus fleets are always searching for practical ways to reduce fuel costs, lower emissions, and keep buses operating reliably for students and families. Biodiesel is one solution that requires no major engine modifications yet offers immediate operational benefits.

To evaluate these benefits, the Humboldt Community School District partnered with the Iowa Renewable Fuels Association and New Century FS to conduct a pilot project comparing standard #2 diesel with a B11 biodiesel blend (11% biodiesel). This white paper summarizes the data collected and the clear advantages found.

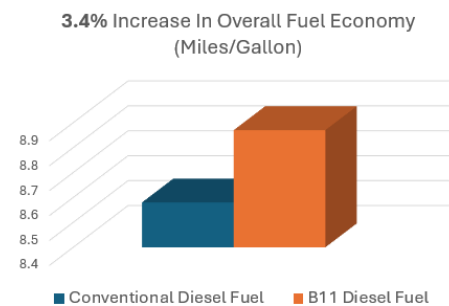
Fleet Overview

An IC Bus CE Series school bus, new in August 2020, operated on conventional diesel fuel until August 2022. From then on, it switched to B11 biodiesel blend, with performance data tracked using the bus’s onboard computer. Additional buses of different ages were added in 2023 to verify results across a wider fleet.

Key Findings

1. Improved Fuel Economy

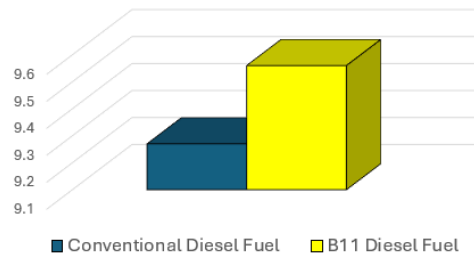
- **Overall Fuel Economy:**
 - On conventional diesel: 8.58 miles per gallon (mpg) over 16,977 miles.
 - On B11 biodiesel: 8.87 mpg over 20,900 miles — a **3.4% increase**.
- **Moving Fuel Economy:**
 - Removing idling, PTO, and aftertreatment fuel use, the bus showed a **3.1% fuel economy gain** while driving.



2. Reduced Aftertreatment Fuel Use

Diesel Particulate Filters (DPFs) need extra fuel for regenerations that burn off soot. The trial found an **11.2% reduction** in fuel used per hour for DPF regeneration after switching to B11 — meaning fewer or shorter regeneration cycles.

3.1% Increase In Moving Fuel Economy
(Miles/Gallon)

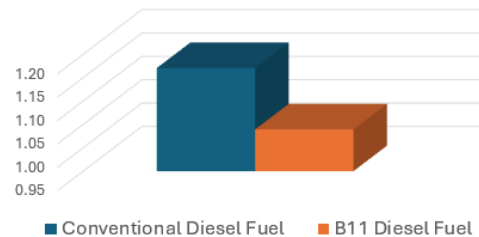


3. Consistent Results Across Buses

To confirm that benefits weren't unique to one bus, two more buses were added:

- **2008 Bus (196,000 miles at switch):**
 - Saved 4 gallons of fuel weekly — about **\$460.80 saved per year** — with no extra maintenance or fuel filter issues.
- **2017 Bus (23,000 miles at switch):**
 - Saved 1.5 gallons of fuel weekly — about **\$172.80 saved per year** — with no changes to routine maintenance.

11.2% Reduction In Aftertreatment Gallons Used
(Gallons/100 Hours)



Conclusion

The Humboldt Fleet Pilot Project demonstrates that switching to a B11 biodiesel blend can boost fuel economy, reduce aftertreatment demands, and save fuel costs without causing maintenance headaches. For school bus fleets, this is a straightforward way to meet sustainability goals, cut expenses, and keep buses running smoothly — with no expensive equipment upgrades.

Contact Information

For more information about bringing biodiesel to your fleet:

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