U.S. DEPARTMENT of ENERGY | Office of Energy Efficiency and Renewable Energy

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State and Alternative Fuel Provider Fleet Program, Model Year 2023 Annual Report

Program Overview

The Energy Policy Act of 1992 (EPAct) was enacted in part to reduce the nation's dependence on imported petroleum. Provisions of EPAct require certain fleets to acquire alternative fuel vehicles (AFVs).[1] The U.S. Department of Energy administers these requirements through its State and Alternative Fuel Provider Fleet Program, Federal Fleet Requirements, and Alternative Fuel Designation Authority.

The State and Alternative Fuel Provider Fleet Program (Program) regulates state and alternative fuel provider fleets, pursuant to EPAct, as amended. Under Standard Compliance (SC), state and alternative fuel provider fleets covered by the Program are required to acquire AFVs as a certain percentage of their total light-duty vehicle (LDV) acquisitions. This requirement is 75% for state fleets and 90% for alternative fuel provider fleets. Alternative fuel provider fleets are required to certify use of alternative fuel in their AFVs when the fuel is available.

Fleets may also elect to comply with the Program requirements using Alternative Compliance (AC), which focuses on reducing petroleum use in new or existing vehicles. Under AC, fleets are required to calculate their petroleum reduction requirement by estimating the expected petroleum use in their Alternative Compliance Vehicle Inventory, submit a plan outlining their petroleum reduction strategy, and report on their actual petroleum reduction.

Standard Compliance Strategies

- Acquire non-excluded alternative fuel LDVs
- Acquire excluded alternative fuel LDVs
- Acquire creditable vehicles that are not AFVs as defined by the Program (e.g., hybrid electric vehicles [HEVs])
- Acquire neighborhood electric vehicles (e.g., electric golf cart)
- Invest in alternative fuel infrastructure
- Invest in alternative fuel non-road equipment
- Invest in emerging technology vehicles
- Purchase biodiesel for use in medium- and heavy-duty vehicles
- Acquire medium- and heavy-duty AFVs
- Apply banked credits or trade credits

Alternative Compliance Strategies

- Alternative fuel use in vehicles
- Biodiesel use in medium- and heavy-duty vehicles
- Idling reduction (e.g., use of auxiliary power units)
- Vehicle miles traveled reduction
- Truck stop electrification
- Conventional vehicle fuel economy

[1] AFVs include any dedicated or dual-fueled vehicles (i.e., any vehicle that operates solely on, or is capable of operating on, at least one alternative fuel). The following fuels are defined or designated as alternative fuels: methanol, denatured ethanol, and other alcohols; blends of 85% or more of alcohol with gasoline (E85); natural gas and liquid fuels domestically produced from natural gas; liquefied petroleum gas (propane); coal-derived liquid fuels; hydrogen; electricity; fuels (other than alcohol) derived from biological materials (including B100); and three P-series fuels.

Compliance Overview: Model Year 2023

In the Program's model year (MY) 2023, the compliance rate for the more than 304 reporting fleets was 100%.[2] Covered fleets participated in either SC or AC reporting methods.

The fleets that used SC exceeded their aggregate MY 2023 acquisition requirement (14,179 light-duty AFVs) by 26% by acquiring creditable vehicles, using biodiesel, purchasing alternative fuel infrastructure and non-road equipment, and applying or trading banked credits. Table 1 summarizes MY 2023 SC methods in comparison to MY 2022. Overall, fleets continued to use a variety of methods to achieve compliance. In the past year, there was an increase in biodiesel credits and investment credits earned to support fleets in achieving compliance (percent change from MY 2022 to MY 2023). There was a slight increase in light-duty AFV acquisitions reported and a slight decrease in earned credits through the acquisition of partially creditable vehicles (e.g., HEVs).

Fleets participating in AC meet their compliance requirements by demonstrating the use of petroleum reduction strategies, measured in gasoline gallon equivalents (GGE). The five covered fleets that used AC exceeded their aggregate MY 2023 petroleum use reduction requirements by 40% with a total of 1,317,807 GGE. In MY 2023, AC fleets generated the most petroleum reduction through the use of biodiesel fuel blends, which accounted for 80% of the total petroleum reduction, or more than 1 million GGE. Fleets also reduced idling through auxiliary power units (onboard idling reduction technology). This accounted for 15% of total petroleum reduction, or more than 197,000 GGE. The remaining 5% of GGE reductions were achieved by using alternative fuel in vehicles, replacing vehicles with those that have improved fuel economy, and reducing the vehicle miles traveled for certain vehicles.

Standard Compliance Activities	Credits	% of Total	% Change From MY 2022
Light-duty AFV acquisition	7,012	39%	6%
Biodiesel use	2,356	13%	20%
Light-duty partial-credit vehicles (HEVs, plug-in HEVs, and neighborhood electric vehicles)	1,066	6%	-9%
Investments	448	2%	23%
Medium- and heavy-duty AFVs and partial-credit vehicles (banked credits)	2,432	14%	6%
Subtotal	13,314	-	-
Applied credits	4,607	26%	38%
Total Credits	**17,921**	100%	14%
AFV Requirement	14,179		

Table 1. Model Year 2023 Standard Compliance Activities

Standard Compliance Trends

The Program affords fleets a variety of methods to meet requirements through SC. This flexibility allows them to adjust their strategy to achieve compliance through methods that are most aligned with their fleet activities in a given year, which may be driven by factors such as the availability of certain AFV models, and state or organizational requirements related to vehicle acquisition. Figure 1 summarizes the use of the available SC methods over the past 10 reporting years.

Vehicle Acquisition Credits

The primary method by which state and alternative fuel provider fleets achieve compliance under the SC option is through the acquisition of light-duty AFVs or other partially creditable LDVs, such as HEVs. In MY 2023, state fleets acquired 6,561 creditable LDVs, a very slight decrease from MY 2022, and alternative fuel provider fleets acquired 2,773 creditable LDVs, a slight increase from MY 2022. Fleets may apply credits for medium- and heavy-duty vehicles only after they have

[2] Some reporting entities represent one agency or business; others represent the fleet operations of multiple entities (e.g., a state or company that reports on behalf of all of its covered state agencies or subsidiaries). The total number of fleets whose information is submitted in annual reports is estimated to be roughly 2,000.

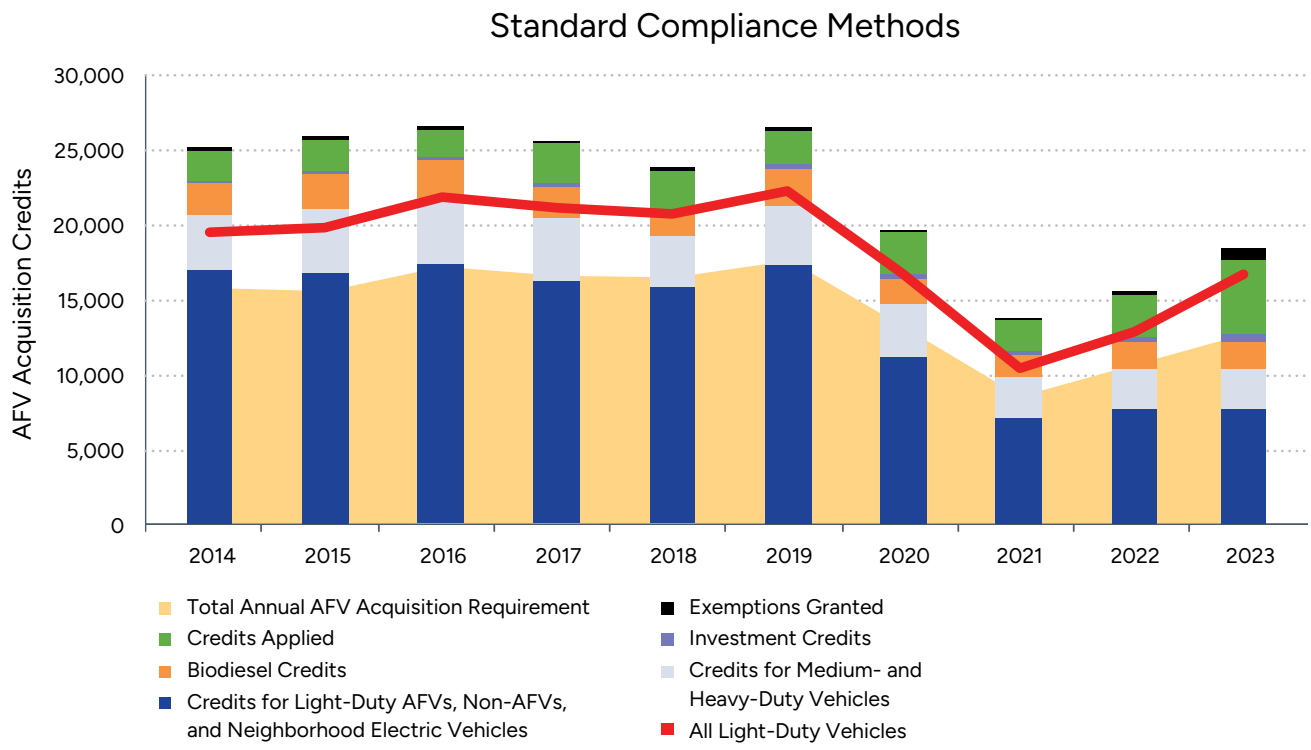

Figure 1. SC methods over past 10 years

met their LDV acquisition requirement. These credits are then banked, and fleets may apply these banked credits to achieve compliance in future reporting years. In MY 2023, state fleets and alternative fuel provider fleets respectively acquired 1,128 and 1,309 medium- and heavy-duty creditable vehicles.

Of the total 9,334 creditable LDVs, fleets acquired:

- 7,012 AFVs
- 1,910 light-duty HEVs
- 334 neighborhood electric vehicles
- 78 plug-in HEVs.

The fuel type for vehicles acquired and reported also provides insight into market changes and fleet strategies for compliance with the Program. Figure 2 shows the top four alternative fuels used for light-, medium-, and heavy-duty vehicles acquired for credit under the Program.[3] HEVs have made up an increasing percentage of vehicle acquisitions in recent years and constituted 17% of acquisitions in MY 2023. While E85 flexible-fuel vehicles have in the past comprised 90% of total vehicle acquisitions under the Program, these vehicles have dropped to about 50% of total vehicle acquisitions. This decrease is likely due to a lack of flexible-fuel vehicle model availability, resulting in fleets shifting to acquire other types of AFVs or to employ other methods of compliance. In recent years, as different model types have come to market, they have comprised a growing portion of acquisitions. For example, electric vehicle models have grown to nearly 30% of total vehicle acquisitions, an 89% increase from MY 2022, driven to some extent by state-level procurement requirements.[4] The additional alternative fuel options represent a small percentage of total vehicle acquisitions for covered fleets in MY 2023 and are therefore not included in Figure 2.[5]

[3] Non-plug-in gasoline HEVs that have a conventional gasoline engine receive half credit and are listed in the database as gasoline fueled.

[4] U.S. Department of Energy: Office of Energy Efficiency and Renewable Energy. n.d. "Alternative Fuels Data Center: State Laws and Incentives." Accessed July 10, 2025. **https://afdc.energy.gov/laws/state**.

[5] Alternative fuels reported under the Program include methanol, denatured ethanol, and other alcohols; blends of 85% or more of alcohol with gasoline; natural gas and liquid fuels domestically produced from natural gas; liquefied petroleum gas (propane); coal-derived liquid fuels; hydrogen; electricity; fuels (other than alcohol) derived from biological materials (including B100); and three P-series fuels.

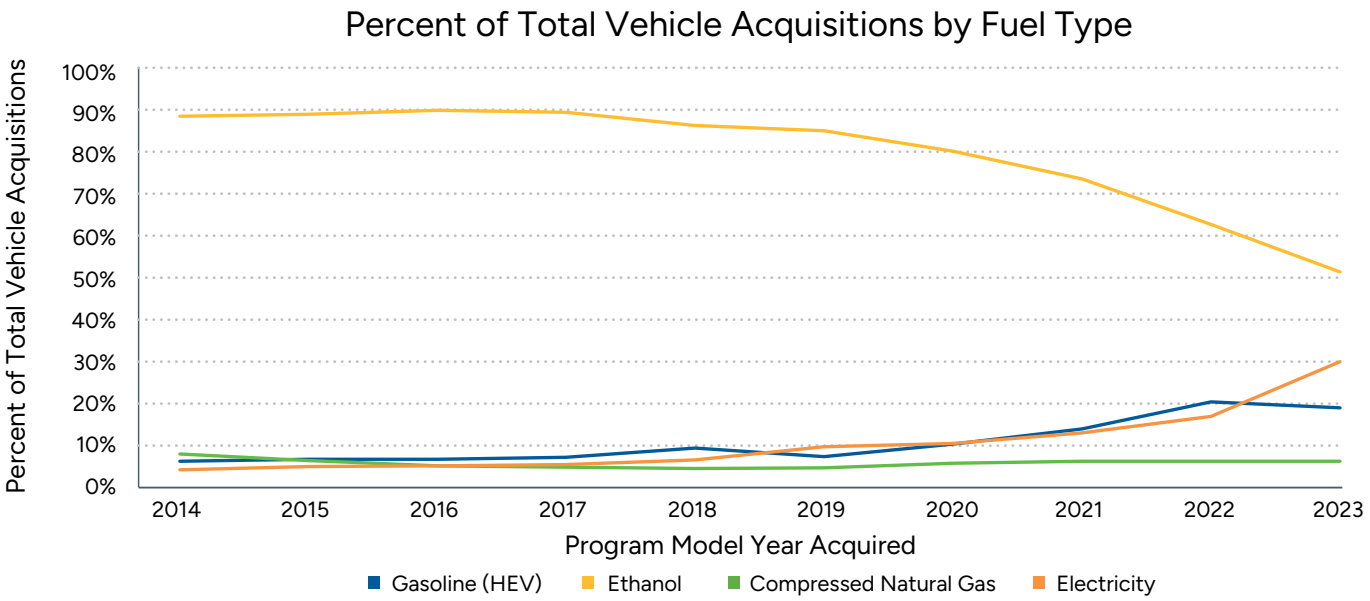

Figure 2. Percent of total vehicle acquisitions by fuel type for MY 2023

Investment, Non-Road Equipment, and Emerging Technology Vehicle Credits

Fleets operating under SC may also earn credits toward their AFV requirement by investing in alternative fuel infrastructure, purchasing alternative fuel non-road equipment, and acquiring emerging technology vehicles. Generally, fleets will earn one credit for every $25,000 invested. In MY 2023, fleets reported and earned credit for investments in E85, compressed natural gas, and electricity infrastructure. The total spent on public and nonpublic infrastructure was just under $31.5 million. Fleets earned 285 credits for these infrastructure investments in MY 2023. Fleets additionally earned 153 credits for investing a total of $216,000 in alternative fuel non-road equipment. The non-road equipment was fueled by compressed natural gas, liquefied petroleum gas, electricity, and bio-derived fuels. Finally, covered fleets reported more than $557,000 invested in emerging technology vehicles, which earned covered fleets 10 credits. Figure 3 shows the array of alternative fuel infrastructure investment and non-road equipment, and the increasing investments in electricity as an alternative fuel. This matches the upward growth in electric vehicle acquisitions noted in vehicle acquisitions by fuel type data (see Figure 2). This is a shift compared to the fuel composition for investments five years ago (MY 2018), where 80% of alternative fuel infrastructure investment was compressed natural gas infrastructure and the remaining 20% was electricity infrastructure. Compare this to MY 2023, where 99% of the infrastructure investment is in electricity. To a lesser extent, in MY 2018, 55% of non-road equipment reported was electric, and in MY 2023, 87% of non-road equipment reported is electric.

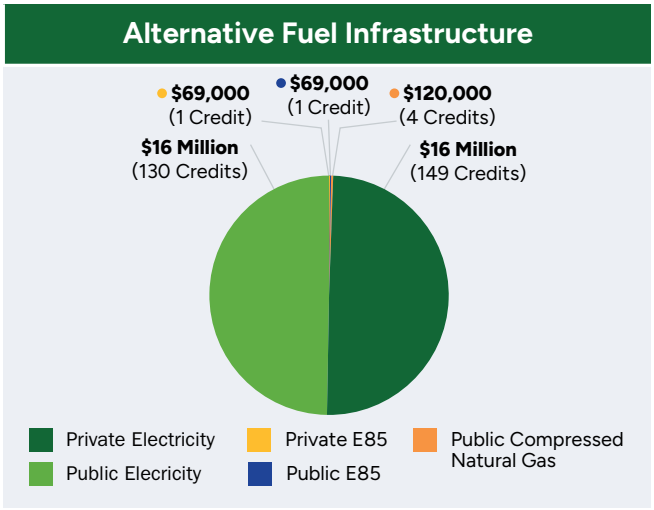

Figure 3. Alternative fuel infrastructure investments

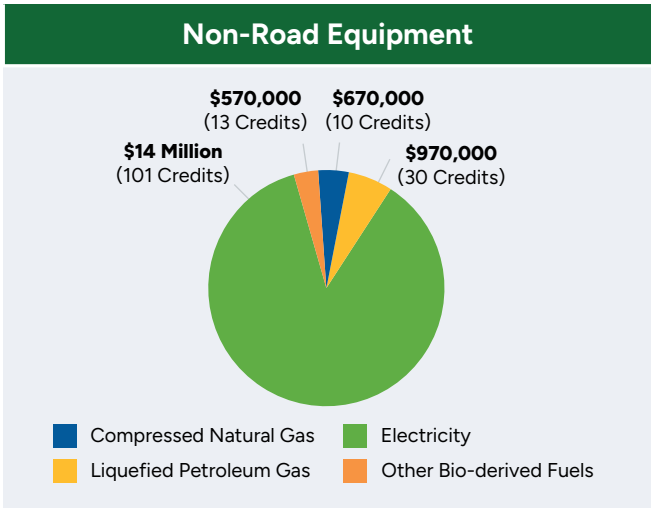

Figure 4. Investments in non-road equipment

Biodiesel Fuel Use Credits

Covered fleets complying under SC may earn one biodiesel fuel use credit for every 450 gallons of pure biodiesel (B100) or 2,250 gallons of 20% biodiesel blends (B20) they purchase for use in medium- and heavy-duty vehicles, for up to half of their AFV acquisition requirement.[6] Many fleets use more biodiesel than what they may earn credit for. In MY 2023, 62 fleets earned 2,356 credits for more than 13.6 million gallons of biodiesel reported. This is a 7.6% increase in total biodiesel reported from MY 2022. Since 2000, covered fleets have reported 162.4 million gallons of biodiesel use. Some fleets also earn biodiesel fuel use credits for renewable diesel use.

Credit Use and Acquisition

Fleets participating in SC may apply banked credits or traded credits to meet their AFV acquisition requirement. In MY 2023, fleets applied 4,607 credits to achieve compliance, a 63% increase from last year. As a group, other fleets banked 4,686 credits total for future use. Figure 6 shows the trends for earned and used banked credits each year since 2014. While the number of credits used is growing and the number of credits earned is decreasing, covered fleets hold a large number of cumulative net credits.

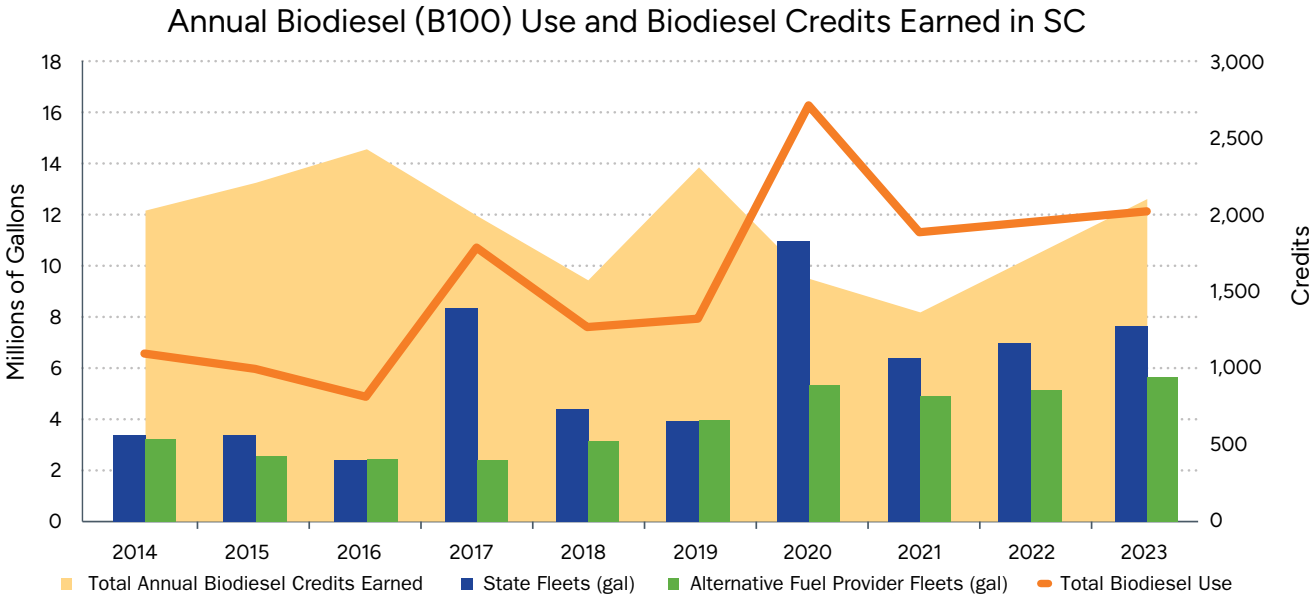

Figure 5. Annual biodiesel use and credits earned in SC

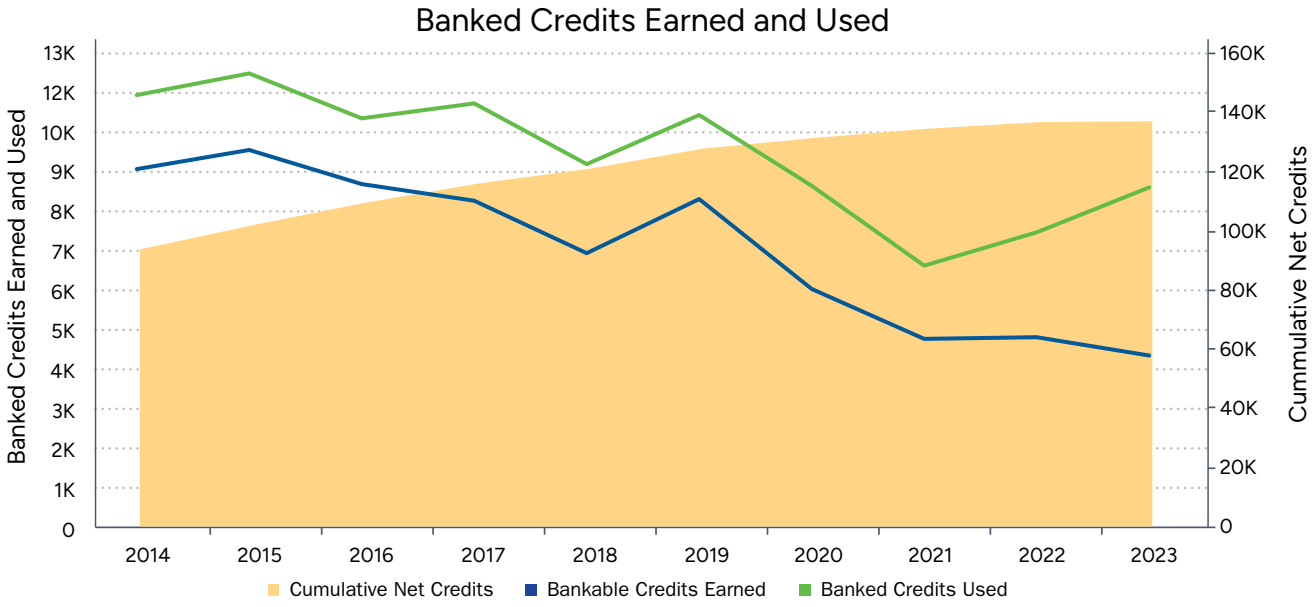

Figure 6. Banked credits earned and used over the past 10 years

[6] U.S. Department of Energy. 1999. "Biodiesel Fuel Use Credit." 10 CFR 490.701–702. To learn more about calculating biodiesel fuel use credits, visit **epact.energy.gov/pdfs/biodiesel_guidance.pdf**.

Exemptions

Overall, granted exemptions represented 4% of covered fleets' overall compliance methods. In MY 2023, six out of the 304 reporting fleets filed for exemptions. This matches the trend over the past 10 years in which very few fleets (fewer than 10) have requested exemptions each year. The six fleets filing exemption requests requested a total of 676 exemptions and were granted 624. While this is an increase in the number of exemptions requested, the number of fleets requesting exemptions is the same as MY 2022. A lack of available vehicle models that met the fleet mission and procurement requirements was the primary reason that fleets requested exemptions in MY 2023.

Alternative Compliance Trends

MY 2023 marked the 15th year that covered state and alternative fuel provider fleets could choose the U.S. Department of Energy's AC option in lieu of complying with EPAct via SC. In MY 2023, five fleets participated in the AC method, one less than in MY 2022. In AC, fleets must employ one or more strategies, outlined below, to meet or exceed their petroleum reduction requirement. Overall, the fleets exceeded their total petroleum reduction requirement of 926,074 GGE by 42%, reaching a total of 1.32 million GGE reduced. To achieve this GGE reduction, fleets used the following strategies (percentages based on the 1.32 million GGE total petroleum reduction reported):

- Using biodiesel blends (80%)
- Reducing onboard idling (15%)
- Using alternative fuels (4%)
- Reducing vehicle miles traveled and improving fuel economy (1%).

Over the duration of the Program, fleets participating in AC have reached a total petroleum reduction of 36.15 million GGE.

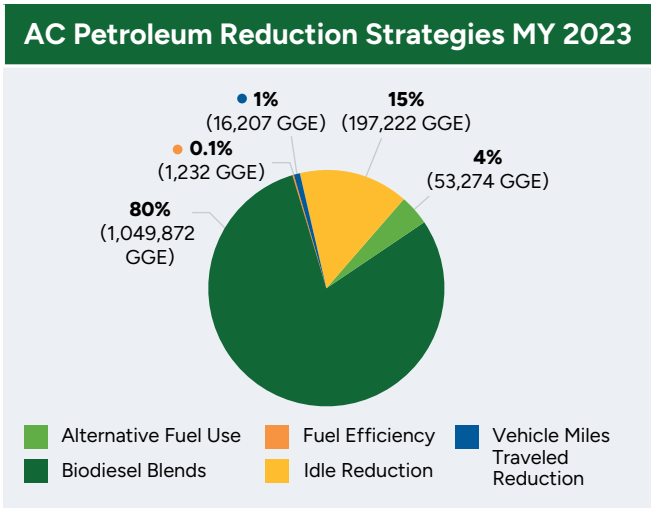

Figure 7. AC petroleum reduction strategies for MY 2023 reporting fleets

Notices of Intent

In March 2023, the U.S. Department of Energy received eight notices of intent to apply for a waiver from SC, a necessary step to participate in AC for MY 2024. However, only four fleets submitted a waiver plan and were approved for AC in MY 2024, one less than the number of fleets participating in AC in MY 2023. ■

For More Information

Learn more about the State and Alternative Fuel Provider Fleet Program and Standard and Alternative Compliance at **epact.energy.gov**, or contact the Regulatory Information Line at **202-586-9171** or **regulatory.info@nrel.gov**.