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State and Alternative Fuel Provider Fleet Program, Model Year 2024 Annual Report

Program Overview

The Energy Policy Act of 1992 (EPAAct) was enacted in part to reduce the nation's dependence on imported petroleum and to increase national security and affordability. Provisions of EPAAct 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 Program, and Alternative Fuel Designation Authority.

The State and Alternative Fuel Provider Fleet Program (Program) regulates state and alternative fuel provider fleets, pursuant to EPAAct, 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's requirements using Alternative Compliance (AC), which focuses on petroleum savings in new or existing vehicles. Under AC, fleets are required to estimate the expected petroleum use in their Alternative Compliance Vehicle Inventory, submit a plan outlining their petroleum savings, and report on their results.

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 2024

In the Program’s model year (MY) 2024, there was a 100% compliance rate for the more than 303 reporting fleets.² Covered fleets participated in either SC or AC reporting methods.

The fleets that used SC exceeded their aggregate MY 2024 acquisition requirement (16,135 light-duty AFVs) by 31% by acquiring creditable vehicles, using biodiesel, purchasing alternative fuel infrastructure and non-road equipment, and applying or trading banked credits. Table 1 summarizes MY 2024 SC methods and compares them to MY 2023. Overall, fleets continued to use a variety of methods to achieve compliance. In MY 2024, there was an increase in credits earned for light-duty partial-credit vehicles, credits earned for investments, and credits earned for medium- and heavy-duty vehicle acquisitions to support fleets in achieving compliance (percent change from MY 2023 to MY 2024). There was a slight increase in light-duty AFV acquisitions reported and a slight decrease in biodiesel credits.

Fleets participating in AC meet their compliance requirements by demonstrating the implementation of petroleum savings strategies, measured in gasoline gallon equivalents (GGE). The four covered fleets that used AC exceeded their aggregate MY 2024 petroleum savings requirements by 61% with a total of 1,338,069 GGE. In MY 2024, AC fleets generated the most credits toward their requirements through the use of biodiesel fuel blends, which accounted for 78% of the total savings, or more than 1 million GGE. Fleets also achieved GGE requirements by using alternative fuel in vehicles, including battery electric vehicles and plug-in-HEVs. This accounted for 9% of total petroleum savings, or more than 118,000 GGE. The remaining 13% of petroleum savings was achieved by using onboard idle reduction technologies, such as auxiliary power units, accounting for around 172,000 GGE.

Standard Compliance	Credits	% of Total	% Change From MY 2023
Light-duty AFV acquisition	7,131	34%	2%
Biodiesel use	2,338	11%	-1%
Light-duty partial-credit vehicles (HEVs and neighborhood electric vehicles)	1,325	6%	24%
Investments	526	2%	17%
Medium- and heavy-duty AFVs and partial-credit vehicles (banked credits)	3,582	17%	47%
Subtotal	14,902	-	-
Applied credits	6,175	29%	34%
Total Credits	21,077	100%	18%
AFV Requirement	16,135		

Table 1: Model Year 2024 Standard Compliance Activities

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.

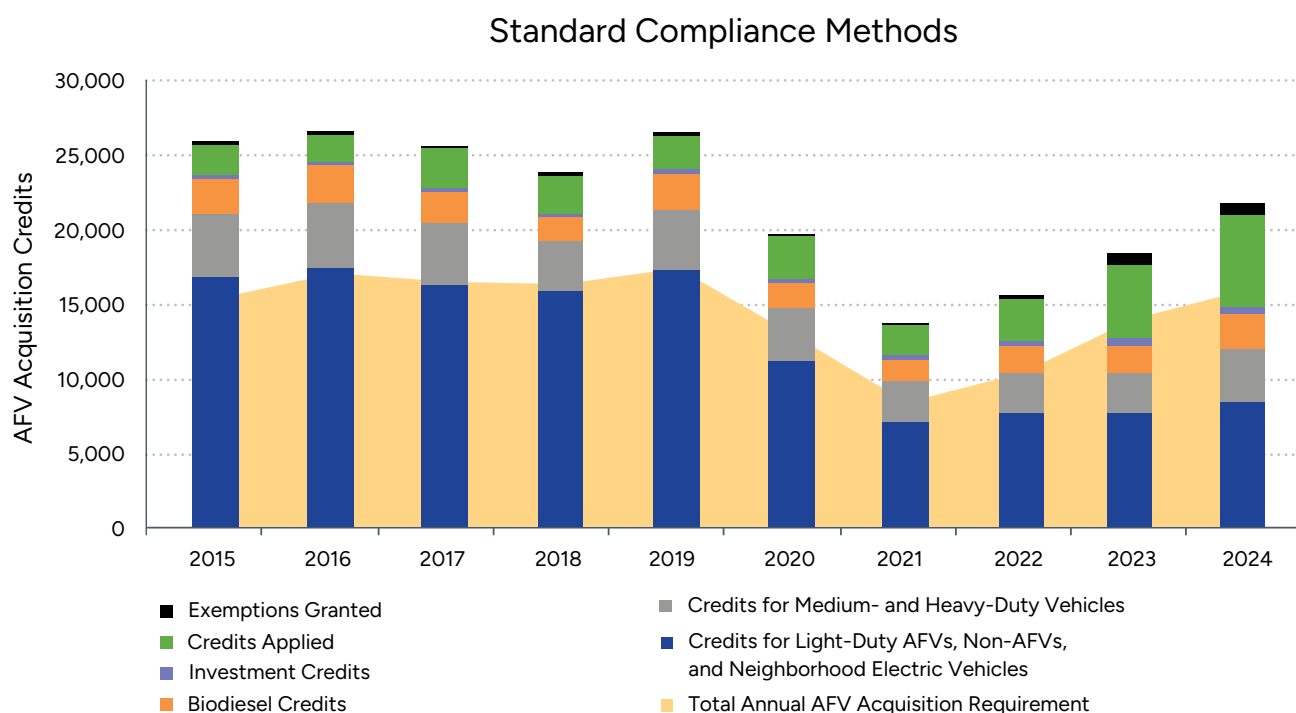


Figure 1. SC methods over past 10 years

Standard Compliance Trends

The Program offers fleets a variety of methods to meet requirements through SC. This flexibility allows them to adjust their strategy and achieve compliance through methods that best align with their fleet activities each year. This might be driven by factors such as the availability of certain AFV models and state or organizational requirements related to vehicle acquisition. Figure 1 summarizes 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 creditable LDVs including both AFVs and other partially creditable vehicles, such as HEVs. In MY 2024, state fleets acquired 6,977 creditable LDVs, a slight increase from

MY 2023 (6,561), and alternative fuel provider fleets acquired 2,969 creditable LDVs, also a slight increase from MY 2023 (2,773). Fleets may apply credits for medium- and heavy-duty vehicles only after they meet 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 2024, state fleets and alternative fuel provider fleets respectively acquired 1,456 and 2,134 medium- and heavy-duty creditable vehicles.

Of the total 9,946 creditable LDVs in MY 2024, fleets acquired:

- 7,131 AFVs
- 2,490 light-duty HEVs
- 325 neighborhood electric vehicles.

Percent of Total Vehicle Acquisitions by Fuel Type

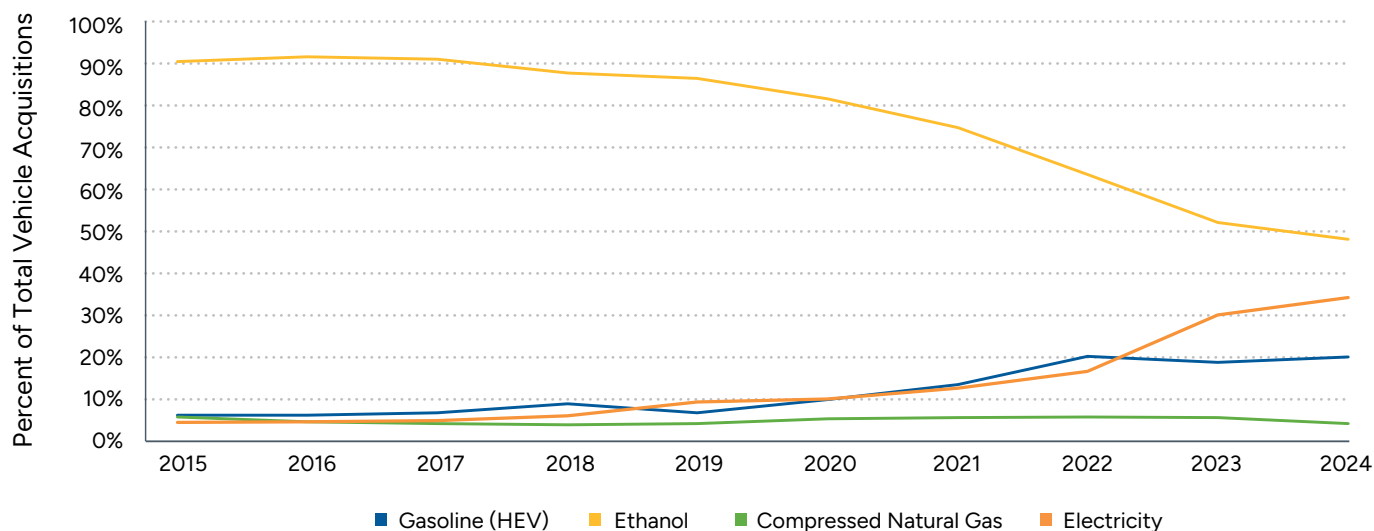


Figure 2. Percent of total vehicle acquisitions by fuel type over the last 10 model years

The fuel type for vehicles acquired and reported also provides insights 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 Notable trends included:

- E85 flexible-fuel vehicles (FFVs) dropped to just under half (46%) of the total vehicle acquisitions but remained the most common LDV acquisition for covered fleets. E85 FFVs decreased slightly in overall percentage of LDV acquisitions, but the total number of E85 FFVs acquired (6,269) increased slightly from MY 2023 (5,874).
- HEVs maintained a consistent percentage of vehicle acquisitions compared to previous years, accounting for 18% of acquisitions in MY 2024.
- Electric vehicle models, including plug-in HEVs, grew to 32% of total LDV acquisitions. This was slower growth than MY 2023 but still demonstrated growth as additional model types came into the market.
- Compressed natural gas vehicles continued to represent a small portion of LDV acquisitions (2% or 335), decreasing slightly from MY 2023 (4% or 461).

- Additional alternative fuel options represented a small percentage of total vehicle acquisitions for covered fleets in MY 2024 and are therefore not included in Figure 2.⁴

Additionally, Figure 3 details the distribution of electric drive vehicles acquired, including HEVs, plug-in HEVs, and battery electric vehicles.

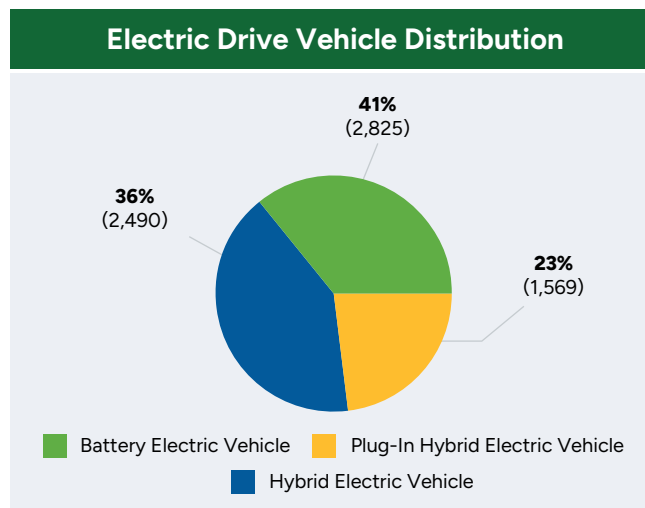


Figure 3. Types of electric drive vehicle acquisitions for MY 2024

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

⁴Alternative 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.



Photo by Joanna Allerhand, National Laboratory of the Rockies 105217

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 2024, fleets reported approximately \$48.7 million invested in alternative fuel infrastructure for public and private (e.g., fleet access only) electric vehicle charging stations, an increase in total alternative fuel infrastructure investment from MY 2023 (\$31.5 million). One fleet also reported an investment for a compressed natural gas station; however, the amount of the investment was insufficient to earn credit. Allowable alternative fuel infrastructure investment costs include the equipment and integral non-hardware installation costs. Fleets earned 317 credits for these infrastructure investments in MY 2024 (see Figure 4).

Fleets additionally earned 203 credits for investing nearly \$13.7 million in alternative fuel non-road equipment, a substantial increase from MY 2023 (\$216,000). A higher variety of fuels are represented in the alternative fuel non-road equipment investments (see Figure 5) than the infrastructure investments. New non-road equipment operates on electricity (most common), propane (second-most common), natural gas, and bioderived fuels.

Fleets did not report any investments in emerging technologies in MY 2024.

Alternative Fuel Infrastructure Investments and Credits Earned

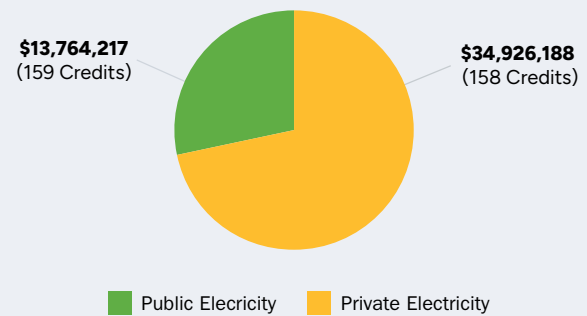


Figure 4. Alternative fuel infrastructure investments and credits earned. Some fleets exceeded the number of credits they could earn through investments reported. Therefore, credits earned by private electricity infrastructure investments appear proportionally much lower than credits earned by public electricity infrastructure investments when compared to the investment cost.

Alternative Fuel Non-Road Equipment Investments and Credits Earned

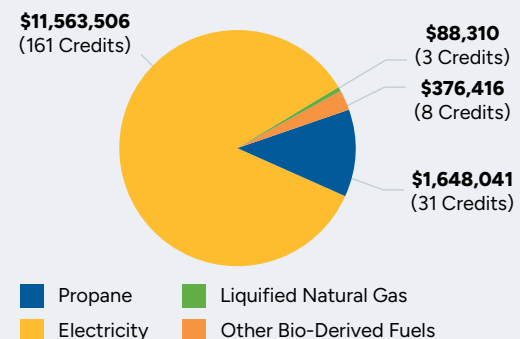


Figure 5. Investments in alternative fuel non-road equipment and credits earned

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, though they can only earn credits for up to half of their total AFV acquisition requirement.⁵ Many fleets use and report more biodiesel than they may earn credit for. Figure 6 shows that in MY 2024, the 62 fleets reporting biodiesel use earned 2,338 credits for more than 15.1 million gallons of biodiesel. This is an 11% increase in total biodiesel reported from MY 2023 (13.6 million). Since 1999, covered fleets have reported 190.3 million gallons of biodiesel use. Some fleets also earn biodiesel fuel use credits for renewable diesel use.

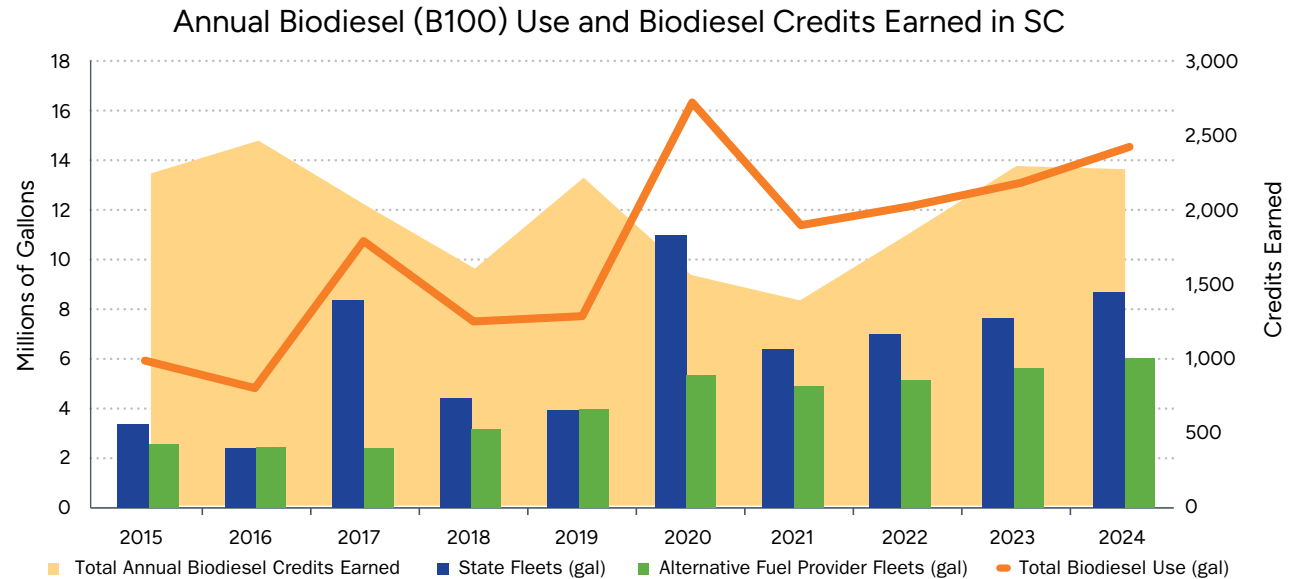


Figure 6. Annual biodiesel use and credits earned in SC

Credit Use and Acquisition

Fleets participating in SC may apply banked credits or traded credits to meet their AFV acquisition requirement. In MY 2024, fleets applied 6,175 credits to achieve compliance, a 34% increase from the previous year (4,607 credits applied in MY 2023). As a group, other fleets banked 5,752 credits total for future use. Figure 7 shows the trends for earned and used banked credits each year since 2015. 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.

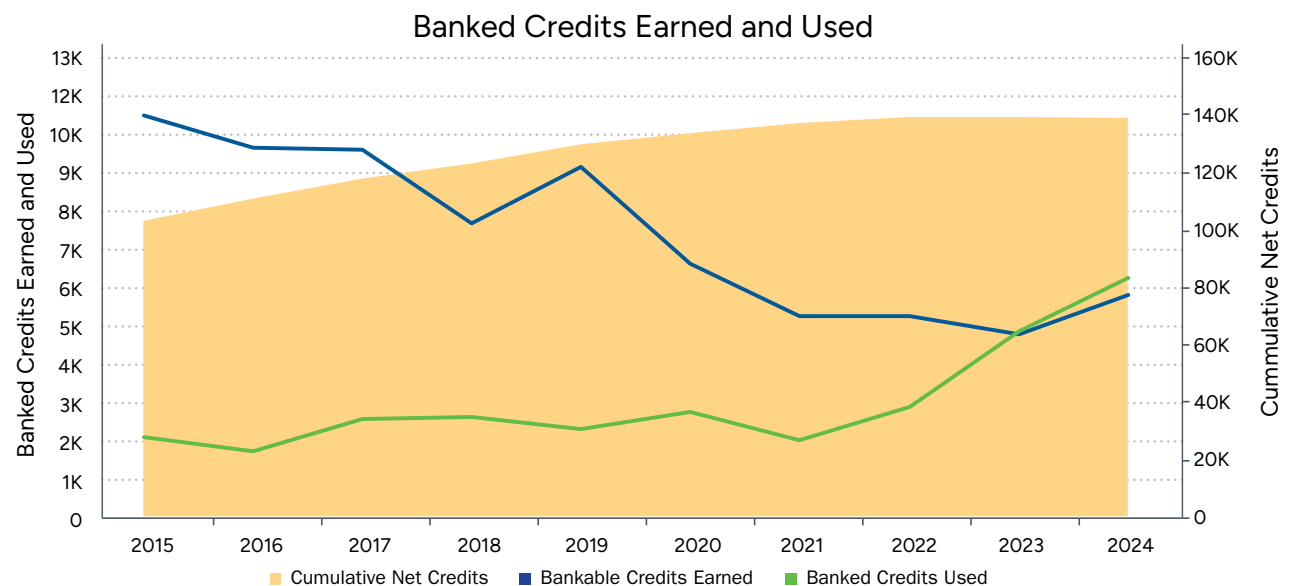


Figure 7. Bankable credits earned and used over the past 10 years

⁵U.S. Department of Energy. 1999. "Biodiesel Fuel Use Credit." 10 CFR 490.701–702. To learn more about calculating biodiesel fuel use credits, visit epect.energy.gov/pdfs/biodiesel_guidance.pdf.

Exemptions

Overall, granted exemptions represented 5% of covered fleets' credits needed to demonstrate compliance. In MY 2024, nine out of the 303 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 nine fleets that filed for exemptions requested a total of 870 exemptions and were granted 822. This is a slight increase from MY 2023 in both the number of exemptions requested (624) and the number of fleets requesting exemptions (six). A lack of available vehicle models that met fleet mission and procurement limitations were the primary reasons fleets requested exemptions in MY 2024.

Alternative Compliance Trends

Since 2014, covered state and alternative fuel provider fleets could choose the U.S. Department of Energy's AC option in lieu of complying with EPCa via SC. In MY 2024, four fleets participated in the AC method, one fewer than in MY 2023. In AC, fleets must employ one or more petroleum savings strategies, outlined below, to meet or exceed their requirement. Overall, the fleets exceeded their total petroleum savings requirement of 831,866 GGE by around 61%, achieving a total of 1.34 million GGE. They did this by using the following strategies (percentages based on the 1.34 million GGE total petroleum savings reported):

- Using biodiesel blends (78%)
- Reducing onboard idling (13%)
- Using alternative fuels (9%).

Alternative Compliance Strategies MY 2024

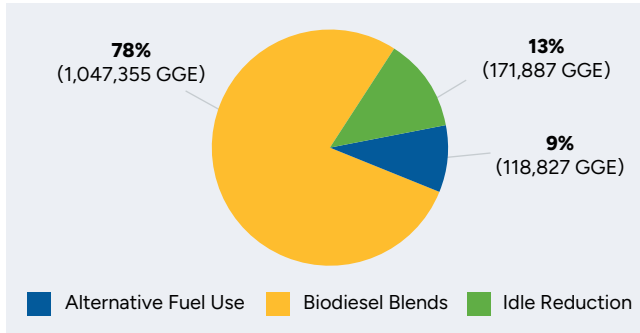


Figure 8. AC petroleum savings strategies for MY 2024 reporting fleets

Notices of Intent

In March 2024, the U.S. Department of Energy received five notices of intent to apply for a waiver from SC, a necessary step to participate in AC for MY 2025. However, only four fleets chose to proceed by submitting a waiver plan, and those four fleets were approved for AC in MY 2025. These are the same four fleets that participated in AC in MY 2024. ■

For More Information

Learn more about the State and Alternative Fuel Provider Fleet Program and Standard and Alternative Compliance at epact.energy.gov.

