

State & Alternative Fuel Provider Fleets

Fleet Compliance Annual Report: Model Year 2021, Fiscal Year 2022

The U.S. Department of Energy (DOE) regulates covered state government and alternative fuel provider fleets, pursuant to the Energy Policy Act of 1992 (EPAAct), as amended. For model year (MY) 2021, the compliance rate with this program for the more than 317 reporting fleets was 100%.¹ Fleets used either Standard Compliance or Alternative Compliance reporting methods.

Fleet Compliance at a Glance

More than 310 fleets used Standard Compliance and exceeded their aggregate MY 2021 acquisition requirements by 37% through acquisitions of creditable vehicles, biodiesel, infrastructure, and non-road equipment. The seven covered



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fleets that used Alternative Compliance exceeded their aggregate MY 2021 petroleum use reduction requirements by more than 32%.

Overall, DOE saw a decrease from MY 2020 in total biodiesel fuel use reported and the number of fuel use credits earned via biodiesel use; 1,426 biodiesel fuel use credits were earned in MY 2021. The number of reported light-duty (LD) alternative fuel vehicles (AFVs) acquired decreased,² as did the number of vehicles that earned partial credit. MY 2021 marked the eighth year that fleets complying via Standard Compliance could earn credits for the acquisition of certain non-AFV electric-drive vehicles, as well as investments in alternative fuel non-road equipment, alternative fuel infrastructure, and emerging technologies. The data for MY 2021 suggest a steady presence of EPAAct-covered state and alternative fuel provider fleets in the AFV, alternative fuel, and advanced technology vehicle markets.

Standard Compliance Results

Covered state and alternative fuel provider fleets operating under Standard Compliance (10 CFR Part 490, Subpart C or D) achieved compliance by acquiring AFVs and certain non-AFVs; purchasing biodiesel for use in medium- or heavy-duty (MD/HD) vehicles; investing in alternative fuel infrastructure, non-road equipment, and emerging technology; and/or applying banked credits earned previously or acquired from other covered fleets.

In MY 2021, fleets that used Standard Compliance:

- Acquired 7,905 creditable LD and neighborhood electric vehicles (NEVs).
- Earned 681 credits for the acquisition of 1,467 creditable non-AFVs (i.e., hybrid electric vehicles [HEVs], certain plug-in hybrid electric vehicles [PHEVs], MD/HD electric vehicles, and NEVs).
- Earned 1,426 biodiesel fuel use credits by purchasing more than 11 million gallons of B100.³
- Earned 344 credits for investments of \$37.6 million in alternative fuel infrastructure and non-road equipment.⁴
- Applied 1,997 banked credits.

1 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.

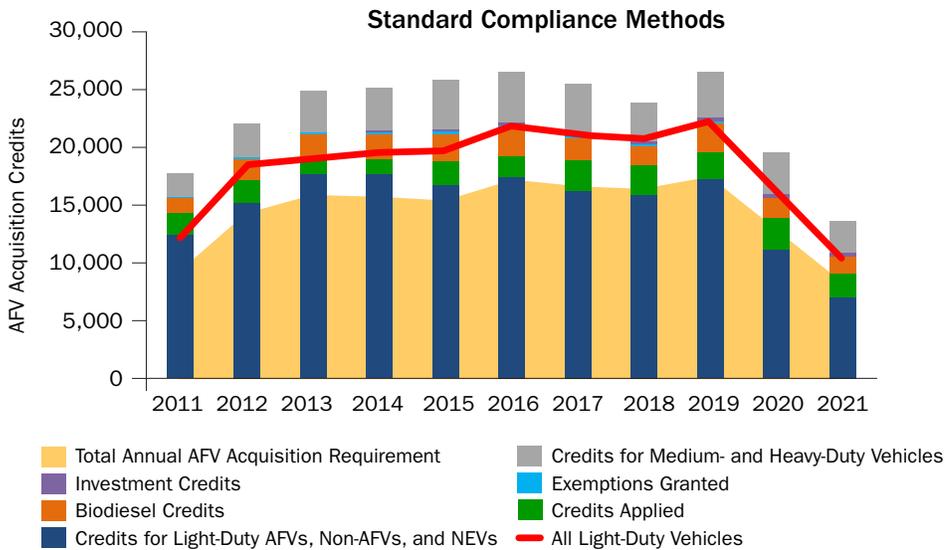
2 AFVs include any dedicated or dual-fueled vehicle (i.e., any vehicle that operates solely on, or is capable of operating on, at least one alternative fuel). The following fuels are defined or designated as alternative fuels: methanol, denatured ethanol, and other alcohols; blends of 85% or more of alcohol with gasoline; 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 pure biodiesel [B100]); and three P-series fuels.

3 The credits awarded for biodiesel purchase and use do not necessarily reflect the total amount of biodiesel purchased because each fleet may apply its biodiesel fuel use credits to meet no more than 50% of its annual AFV acquisition requirements, and so many fleets do not report the full amount of biodiesel they use.

4 Including 341 direct credits for infrastructure and non-road equipment and 3 pooled credits.

What Is EPAAct?

The Energy Policy Act of 1992 (EPAAct) was passed by Congress to reduce the nation's dependence on imported petroleum. Provisions of EPAAct require certain fleets to acquire AFVs. DOE administers these requirements through its State and Alternative Fuel Provider Fleet Program, Federal Fleet Requirements, and Alternative Fuel Designation Authority.



In addition, these state and alternative fuel provider fleets earned a total of 5,145 bankable AFV credits.

As a whole, the fleets operating under Standard Compliance went beyond compliance, exceeding their AFV acquisition requirements (8,481) by approximately 37%.

Vehicle Acquisitions

Acquiring AFVs is typically how covered fleets comply with EPAct. Under Standard Compliance, 75% of the non-excluded light-duty vehicles (LDVs) that state fleets acquire must be AFVs, while 90% of the non-excluded LDVs that alternative fuel provider fleets acquire must be AFVs.

AFV acquisition requirements are determined by multiplying a fleet’s number of newly acquired, non-excluded LDVs by the applicable percentages. In MY 2021, the number of creditable LDV acquisitions by covered fleets was 7,905—a 34% decrease from MY 2020 (12,015). Changes to the program effective in MY 2014 allow covered fleets to earn partial AFV acquisition credits for the acquisition of some vehicles that are not AFVs.

Specifically, acquiring HEVs, PHEVs that are not AFVs,⁵ and MD/HD electric vehicles can earn a covered fleet 0.5 credits per vehicle, while the acquisition of NEVs can earn a covered fleet 0.25 credits per NEV.

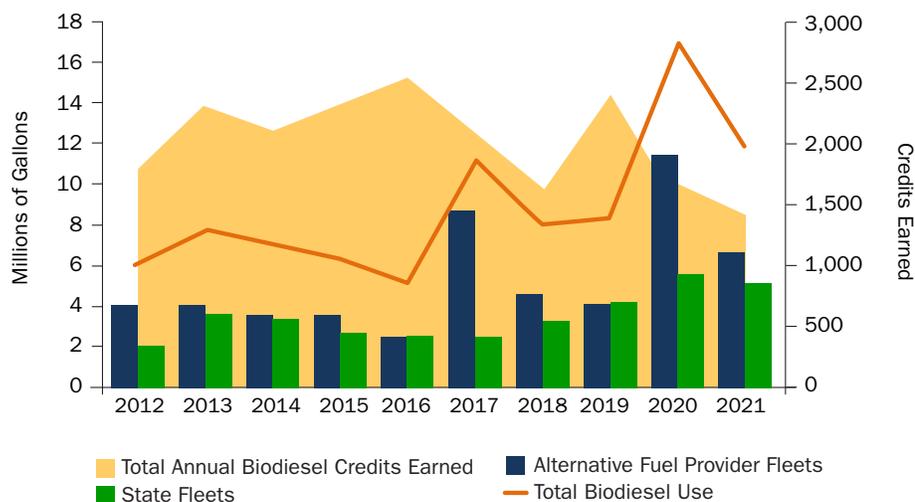
Acquisition of LD non-AFVs and NEVs that earned less than a full credit each (1,457 in 2021) resulted in fleets earning a total of 7,127 credits for acquisition of LD AFVs, non-AFVs, and NEVs in MY 2021—36% fewer credits than in 2020.

The decrease in the number of AFVs and creditable non-AFVs acquired is not unexpected given the decreased availability of LD flex-fuel vehicle models available and acquired. The total number of vehicles acquired each year by covered fleets has decreased in recent years. In 2021, the total number of LDVs acquired was the lowest value since 2010, resulting in a corresponding decrease in the annual AFV acquisition requirement. Lingering budget and supply chain problems could be contributing to the reduction. The number of categories of vehicles for which credits may now be earned was expanded in 2014, resulting in fleets having additional flexibility to meet their needs. In addition, once covered fleets have achieved compliance, they may earn bankable credits for any MD/HD vehicles they acquire. In MY 2021, covered fleets earned 2,677 credits for the acquisition of MD/HD vehicles. In total, fleets acquired 10,582 creditable vehicles of all size categories. Flexible-fuel vehicles accounted for about 73% of these acquired AFVs. Electric vehicles made up about 11%.

Biodiesel Fuel Use

Covered state and alternative fuel provider fleets 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 MD/HD vehicles (10 CFR § 490.701–702).⁶ In MY 2021, covered fleets reported using almost 12 million gallons of B100 in B20 or higher blends, thus allowing these fleets

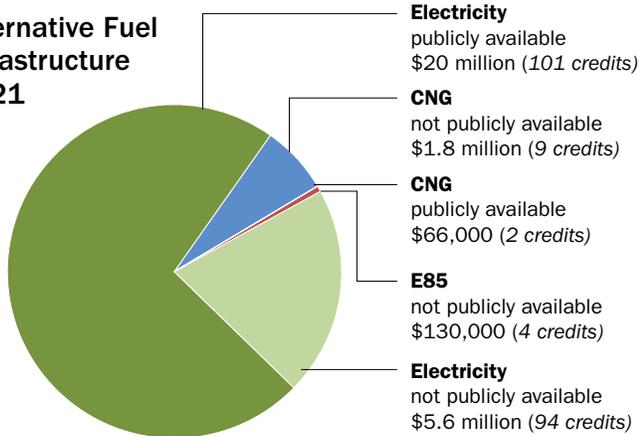
Annual Biodiesel (B100) Use and Biodiesel Credits Earned



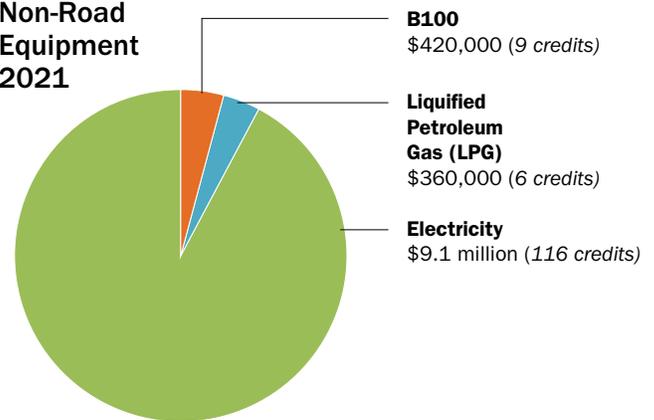
⁵ To be considered an AFV, the vehicle must be dedicated or dual-fueled. Some PHEVs are considered AFVs and others are not, depending on whether the vehicle in question meets the “dual-fueled vehicle” definition. For additional information, please review program guidance (epact.energy.gov/pdfs/plug-in_hybrid_electric_vehicles.pdf).

⁶ Learn more about calculating biodiesel fuel use credits at epact.energy.gov/pdfs/biodiesel_guidance.pdf.

Alternative Fuel Infrastructure 2021



Non-Road Equipment 2021



to earn a total of 1,426 biodiesel fuel use credits. Some fleets are also using renewable diesel, which is counted as B100. The credits awarded likely do not reflect the total amount of biodiesel purchased because each fleet may apply biodiesel fuel use credits to meet no more than 50% of its annual AFV acquisition requirements. It is likely that some fleets are reporting only the amount of biodiesel that will earn them those credits rather than reporting all of their biodiesel use.

Credit Use and Acquisition

Covered fleets earn bankable credits by acquiring more AFVs than are required in a given model year. Fleets may then use these credits to address future AFV acquisition requirements, or they may sell the credits to fleets that have acquired an insufficient number of AFVs in a particular model year. In MY 2021,

fleets exceeded their AFV acquisition requirements and earned 5,145 credits for future use. Fleets also used 1,997 banked credits to comply with EPAAct—somewhat fewer than the number of credits applied in MY 2020 (2,834). There were nine transactions between covered fleets involving the transfer of a total of 33 banked credits. There were more credits exchanged in MY 2020 (186), but the number of transactions was fewer (seven).

Investments

Covered fleets may earn credits for investments in non-road equipment, alternative fuel infrastructure, and emerging technologies related to electric-drive vehicles.⁷ Generally, fleets will earn one credit for every \$25,000 invested. For the alternative fuel infrastructure category—i.e., investments in MY 2021

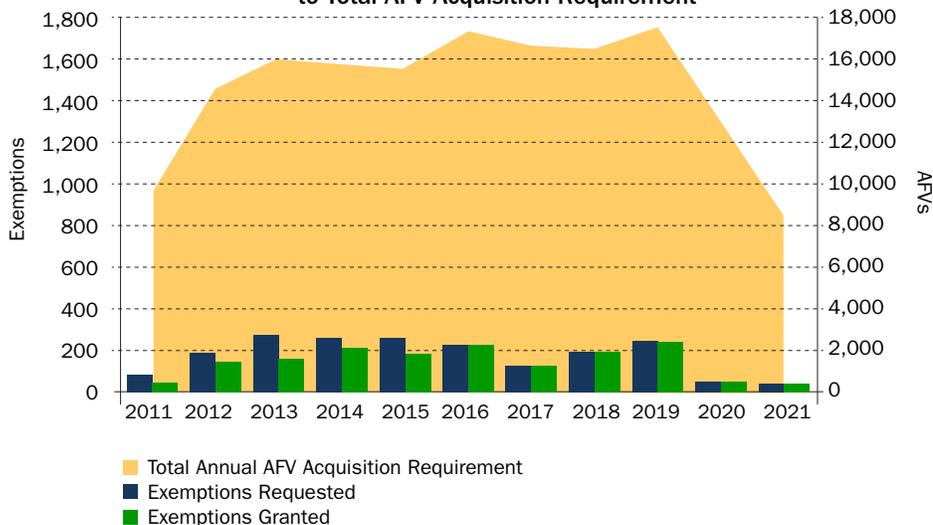
for which covered fleets reported amounts and sought credits—funds were spent for compressed natural gas (CNG) and electricity infrastructure. The total spent on public and non-public infrastructure totaled more than \$27.7 million. Fleets earned 210 credits for these investments. In MY 2021, covered fleets earned 131 credits for investments in alternative-fueled, non-road equipment.⁸

Exemptions

Overall, granted exemptions in MY 2021 represented 0.5% (total number of exemptions granted divided by total AFV acquisition requirements) of covered fleets' compliance credit activity.⁹ In MY 2021, state and alternative fuel provider fleets received a total of 42 vehicle exemptions—similar to the 51 exemptions granted in MY 2020.

Only four fleets sought exemptions in MY 2021 continuing the downward trend begun in MY 2008 in the number of fleets seeking exemptions each year. MY 2007 was the peak year for fleets seeking exemptions, when 43 fleets filed for exemptions.

Annual Exemptions Requested and Granted Compared to Total AFV Acquisition Requirement



⁷ Learn more about investments at epact.energy.gov/pdfs/investments.pdf.

⁸ Fleets also earned credits for pooling of infrastructure and non-road equipment investments that were individually less than \$25,000 but exceeded the threshold when aggregated. These pooled credits are not shown on the figure.

⁹ Exemptions are detailed on the EPAAct website at epact.energy.gov/exemptions.

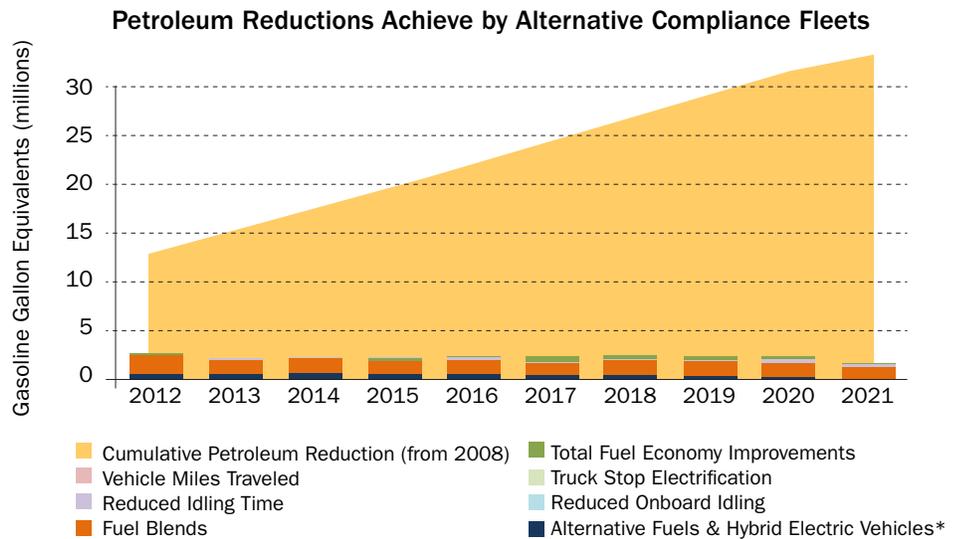
From 2000 to 2008, the average yearly number of exemptions requested was over 1,400, and the average number granted was over 1,000. In contrast, the average yearly number of exemptions requested from 2011 to 2021 was about 190, with an average of 161 granted. With the increased availability of AFV models (even shifting from flexible-fuel vehicles to other AFV technologies/fuels), opportunities to earn AFV acquisition credits under the program, and increased availability of alternative fueling infrastructure across the nation, the number of exemption requests and granted requests should continue to be low.

Alternative Compliance Results

MY 2021 marked the 13th year that covered state and alternative fuel provider fleets could choose DOE’s Alternative Compliance option in lieu of complying with EPA’s Act via Standard Compliance. EPA’s 2005 established Alternative Compliance, and the option was put in place by DOE’s final rulemaking in March 2007 for initial application in MY 2008. Under Alternative Compliance, fleets employ petroleum reduction measures in lieu of acquiring AFVs under Standard Compliance. Examples of these petroleum reduction measures are included in the chart above. Fleets must obtain a waiver from DOE for the upcoming model year. To receive a waiver, fleets first must submit an intent to apply for a waiver to DOE; they then must follow up with that intent by filing a complete waiver application that includes a plan showing how they intend to reduce their fleets’ petroleum consumption.

Achievements in MY 2021

DOE approved waiver applications for seven fleets to participate in Alternative Compliance for MY 2021. Six of these fleets were able to meet their required petroleum fuel use reductions for MY 2021. The remaining fleet applied banked gasoline gallon equivalents (GGE) to meet its respective requirements. The



*Beginning in MY 2018, non-plug-in HEVs are reported under Total Fuel Economy Improvements. PHEVs are reported in the Alternative Fuels & Hybrid Vehicles categories.

seven fleets’ total required petroleum use reduction for MY 2021 was 1,185,470 GGE, and their total actual petroleum consumption reduction was 1,572,768 GGE, exceeding the aggregate petroleum reduction requirement as a group by 387,298 GGE. The fleets met and exceeded their petroleum reduction goals using the following methods (percentages based on the total petroleum reduction reported [amount required plus additional achieved]):

- Using biodiesel blends (79%)
- Limiting engine idling time (15%)
- Using alternative fuels (4%)
- Reducing vehicle miles traveled and improving fuel economy (~1% each).

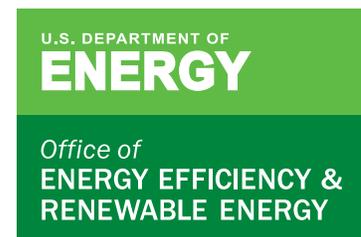
The petroleum reduction the seven fleets using Alternative Compliance achieved in MY 2021 was slightly less than the petroleum reduction the eight fleets in the same program achieved in MY 2020.

Notices of Intent

During MY 2022, DOE received seven notices of intent to apply for a waiver from Standard Compliance for MY 2023—five fewer than the number received in MY 2021 for MY 2022 compliance.

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.



For more information, visit: epact.energy.gov

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