

State & Alternative Fuel Provider Fleets

Fleet Compliance Annual Report: Model Year 2019, Fiscal Year 2020



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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) 2019, the compliance rate with this program for the more than 310¹ reporting fleets was 100%. Fleets used either Standard Compliance or Alternative Compliance reporting methods.

Fleet Compliance at a Glance

More than 302 fleets used Standard Compliance and exceeded their aggregate MY 2019 acquisition requirements by 35% through acquisitions of creditable vehicles, biodiesel, infrastructure, and non-road equipment. The eight covered fleets that used Alternative Compliance exceeded their

aggregate MY 2019 petroleum use reduction requirements by more than 7%.

Overall, DOE saw an increase from MY 2018 in total biodiesel fuel use reported as well as an increase in fuel use credits earned via biodiesel use; 2,414 biodiesel fuel use credits were earned in MY 2019. The number of reported light-duty (LD) alternative fuel vehicles (AFVs) acquired increased,² and the number of vehicles that earned partial credit decreased. MY 2019 marked the sixth 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 2019 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 2019, fleets that used Standard Compliance:

- Acquired 18,053 creditable LD and neighborhood electric vehicles (NEV)

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.

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). 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.

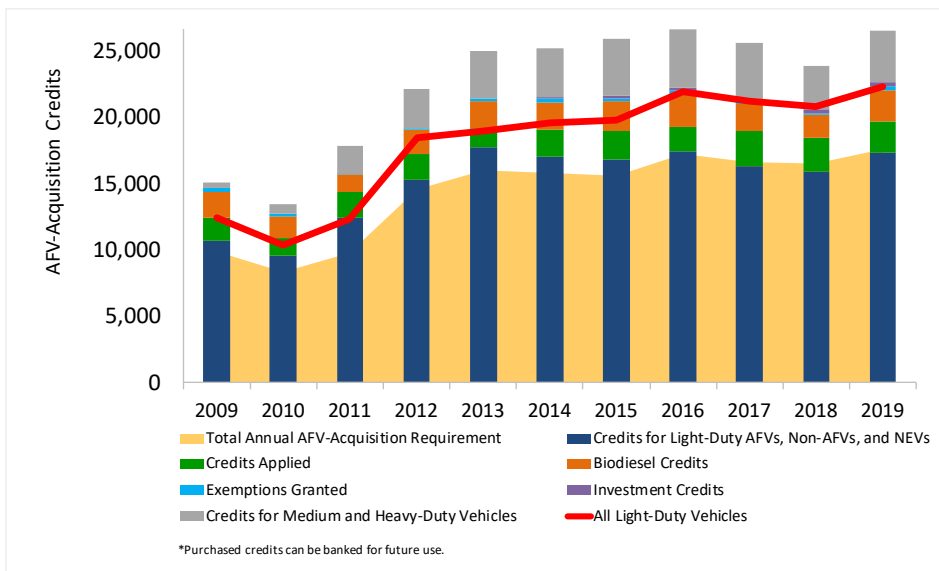


Figure 1. Standard Compliance methods.

- Earned 592 credits for the acquisition of 1,384 creditable non-AFVs (i.e., hybrid electric vehicles [HEVs], certain plug-in hybrid electric vehicles [PHEVs], MD/HD electric vehicles, and NEVs)
- Earned 2,414 biodiesel fuel use credits by purchasing more than 8.2 million gallons of B100³
- Earned 295 credits for investments of \$27.1 million in alternative fuel infrastructure and non-road equipment
- Applied 2,296 banked credits.

In addition, these state and alternative fuel provider fleets earned a total of 8,973 bankable AFV credits.

As a whole, the fleets operating under Standard Compliance went beyond compliance, exceeding their AFV-acquisition requirements (17,563) by approximately 35%.

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 the biodiesel they use.

⁴ 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.

Vehicle Acquisitions

Acquiring AFVs is typically how covered fleets comply. 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 2019, the number of creditable LDV acquisitions by covered fleets was 18,053, an increase from MY 2018 (16,747). 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,⁴ and MD/HD electric vehicles can earn a covered fleet 0.5 credit per vehicle, while the acquisition of NEVs can earn a covered fleet 0.25 credit per NEV.

Acquisition of LD non-AFVs and NEVs that earned less than a full credit each (1,303 in 2019) resulted in fleets earning a total of 17,334 credits, for acquisition of LD AFVs, non-AFVs, and NEVs in MY 2019—slightly more credits than in 2018.

The increase in the number of AFVs and creditable non-AFVs acquired is not unexpected given the increase in the number of LDVs acquired. The total number of vehicles acquired each year by covered fleets has not changed dramatically in recent years. However, the number of categories of vehicles for which credits may now be earned has expanded, resulting in fleets having additional flexibility in meeting their needs. In addition, once covered fleets have achieved compliance, they may earn bankable credits for any MD/HD vehicles they acquire. In MY 2019, covered fleets earned 3,948 credits for the acquisition of MD/HD vehicles. In total, fleets acquired 22,042 creditable vehicles of all size categories. Flexible-fuel vehicles accounted for about 84% of these acquired AFVs.

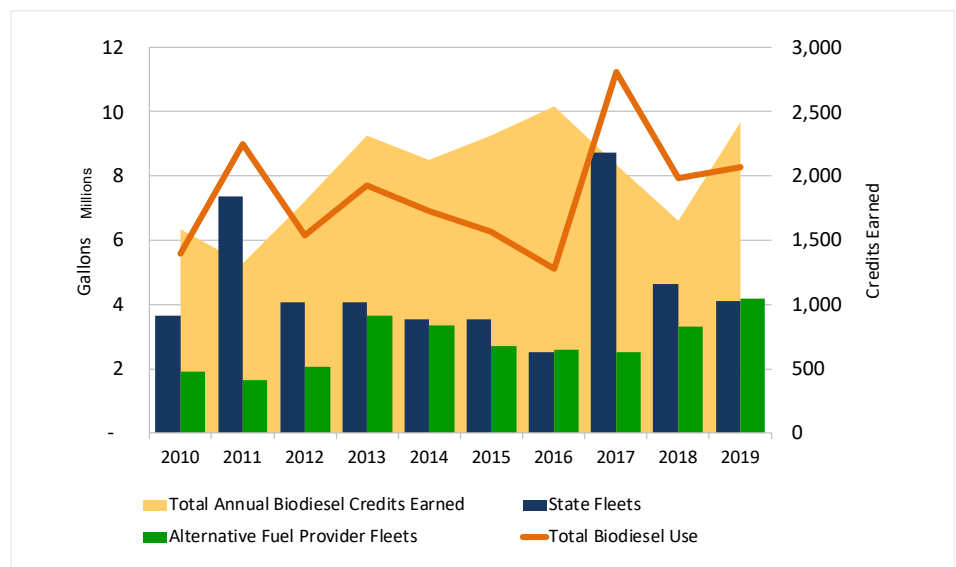


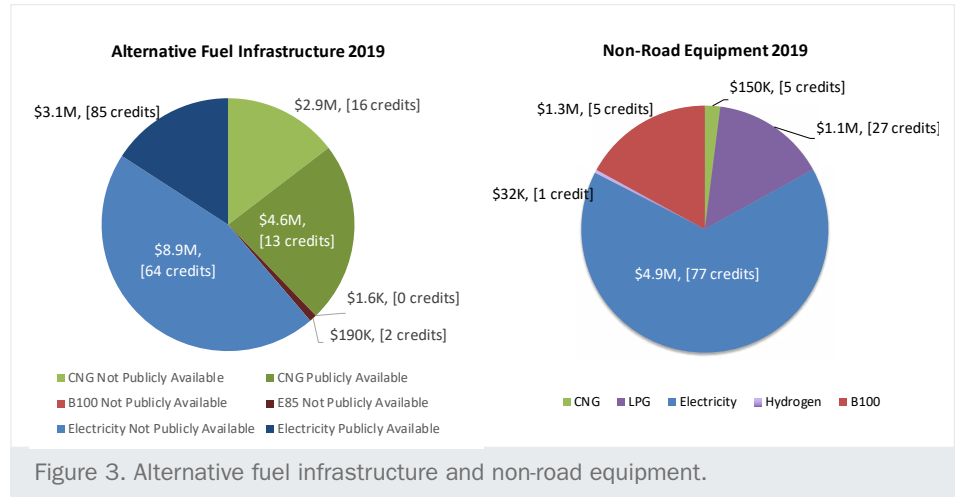
Figure 2. Annual biodiesel (B100) use and biodiesel credits earned.

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 one biodiesel fuel-use credit for every 2,250 gallons of 20% biodiesel blends (B20)⁵ they purchase for use in MD/HD vehicles (10 CFR sections 490.701-702). In MY 2019, covered fleets reported using just under 8.3 million gallons of B100 in B20 or higher blends, thus allowing these fleets to earn a total of 2,414 biodiesel fuel use credits. Some fleets have also begun to use 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 2019, fleets exceeded their AFV-acquisition requirements and earned



8,973 credits for future use. Fleets also used 2,296 banked credits to comply with EAct—somewhat less than the number of credits applied in MY 2018, when fleets used 2,570 banked credits. There were 10 transactions between covered fleets involving the transfer of a total of 1,659 banked credits. The number of credits exchanged in MY 2018 was 140, far fewer than in MY 2019. However, the number of transactions was the same in MY 2019 and MY 2018 (10).

Investments

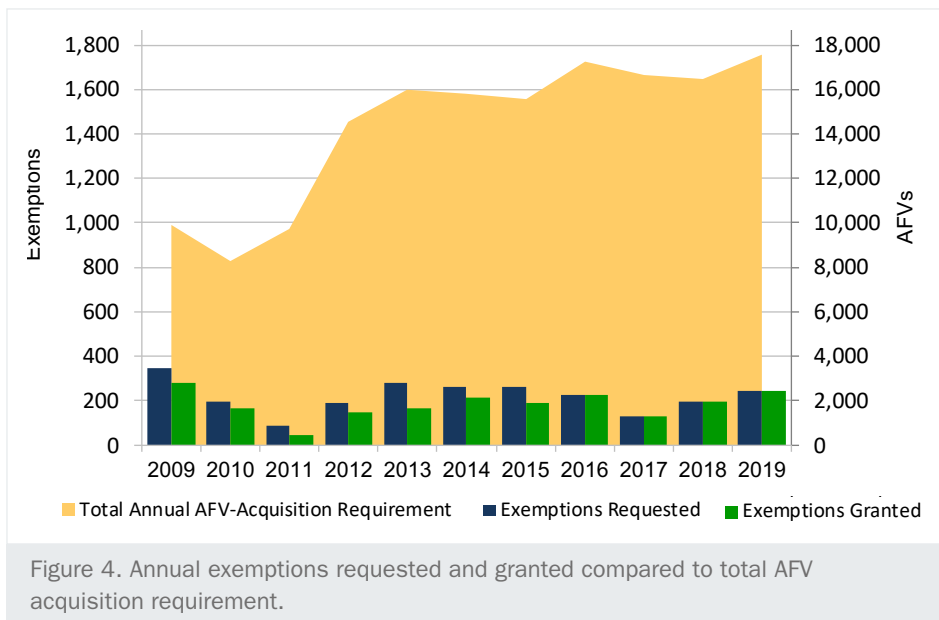
Covered fleets may earn credits for investments in non-road equipment, alternative fuel infrastructure, and emerging technologies related to electric drive

vehicles.⁶ Generally, fleets will earn one credit for every \$25,000 invested. For the alternative fuel infrastructure category—that is, investments in MY 2019 for which covered fleets reported amounts and sought credits—funds were spent for CNG, and electricity infrastructure. The total spent on public and non-public infrastructure totaled more than \$19.6 million. Fleets earned 180⁷ credits for these investments. In MY 2019, covered fleets earned 157 credits for investments in alternative-fueled, non-road equipment.

Exemptions

Overall, granted exemptions⁸ in MY 2019 represented a little over 1% (total number of exemptions granted/total AFV-acquisition requirements) of covered fleets' compliance credit activity. In MY 2019, state and alternative fuel provider fleets received a total of 247 vehicle exemptions—more than the 197 exemptions granted in MY 2018.

Only three fleets sought exemptions in MY 2019, continuing the downward trend, begun in MY 2008, in the number of fleets seeking exemptions each year.



⁵ Learn more about calculating biodiesel fuel use credits at epact.energy.gov/pdfs/biodiesel_guidance.pdf.

⁶ Learn more about investments at epact.energy.gov/pdfs/investments.pdf.

⁷ 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.

⁸ Exemptions are detailed on the EAct website at epact.energy.gov/exemptions.

MY 2007 was the peak year for fleets seeking exemptions, when 43 fleets filed for exemptions.

In MY 2019, three fleets received 247 vehicle exemptions. Over the period 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 2009 to 2019 was about 220, with an average of 182 granted. With the increased availability of AFV models (even shifting from FFVs to other alternative fuel vehicle technologies/fuels) and 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 2019 marked the twelfth 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 Act 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 2019

DOE approved waiver applications for eight fleets to participate in Alternative Compliance for MY 2019. Six of these fleets were able to meet their required petroleum fuel use reductions for MY

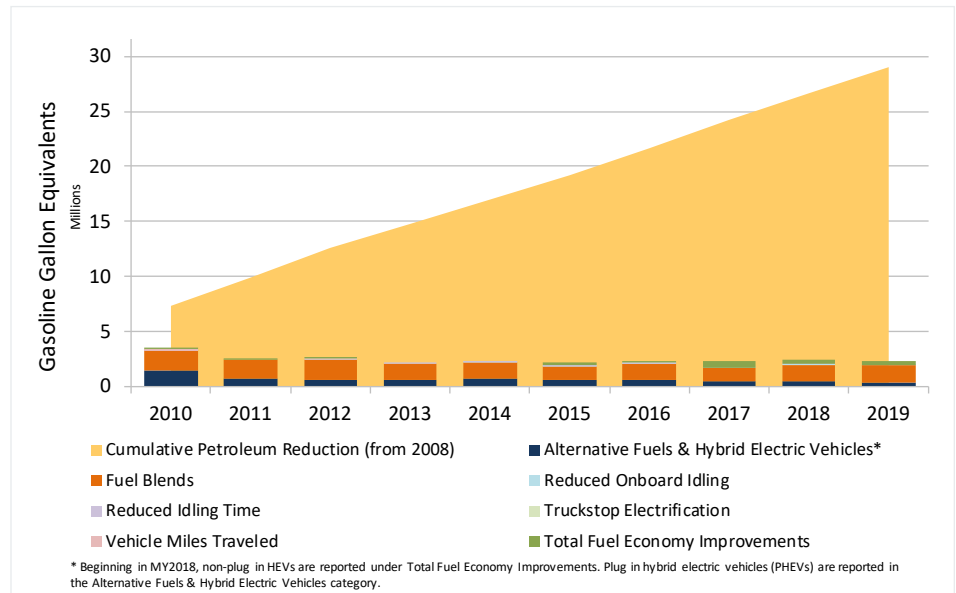


Figure 5. Petroleum reductions achieved by Alternative Compliance fleets.

2019. The remaining fleets applied banked gasoline gallon equivalents (GGEs) to meet their respective requirements. The eight fleets' total required petroleum use reduction for MY 2019 was 2,162,017 GGEs, and their total actual petroleum consumption reduction was 2,329,399 GGEs, exceeding the aggregate petroleum reduction requirement as a group by 167,382 GGEs. 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 (65%)
- Using alternative fuels (17%)
- Improving fuel economy (15%)
- Limiting engine idling time (3%).

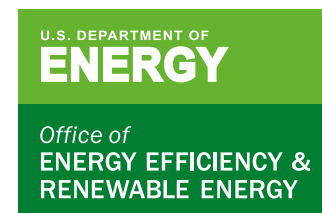
The petroleum reduction the eight fleets using Alternative Compliance achieved in MY 2019 was slightly less than the petroleum reduction the eight fleets in the same program achieved in MY 2018.

Notices of Intent

During MY 2019, DOE received eight notices of intent to apply for a waiver from Standard Compliance for MY 2020. This number of notices of intent is six fewer than the number that were received in MY 2018 for MY 2019 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