

State & Alternative Fuel Provider Fleets

Fleet Compliance Annual Report: Model Year 2020, Fiscal Year 2021

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) 2020, 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 2020 acquisition requirements by 28% through acquisitions of creditable vehicles, biodiesel, infrastructure, and non-road equipment. The eight covered fleets that used Alternative Compliance exceeded their aggregate MY 2020 petroleum use reduction requirements by more than 22%.

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.



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Overall, DOE saw an increase from MY 2019 in total biodiesel fuel use reported, although the number of fuel use credits earned via biodiesel use fell; 1,655 biodiesel fuel use credits were earned in MY 2020. In comparison, 2,414 biodiesel fuel use credits were earned in MY 2019. The number of reported light-duty (LD) alternative fuel vehicles (AFVs) acquired decreased,² but the number of vehicles that earned partial credit increased. MY 2020 marked the seventh 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 2020 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

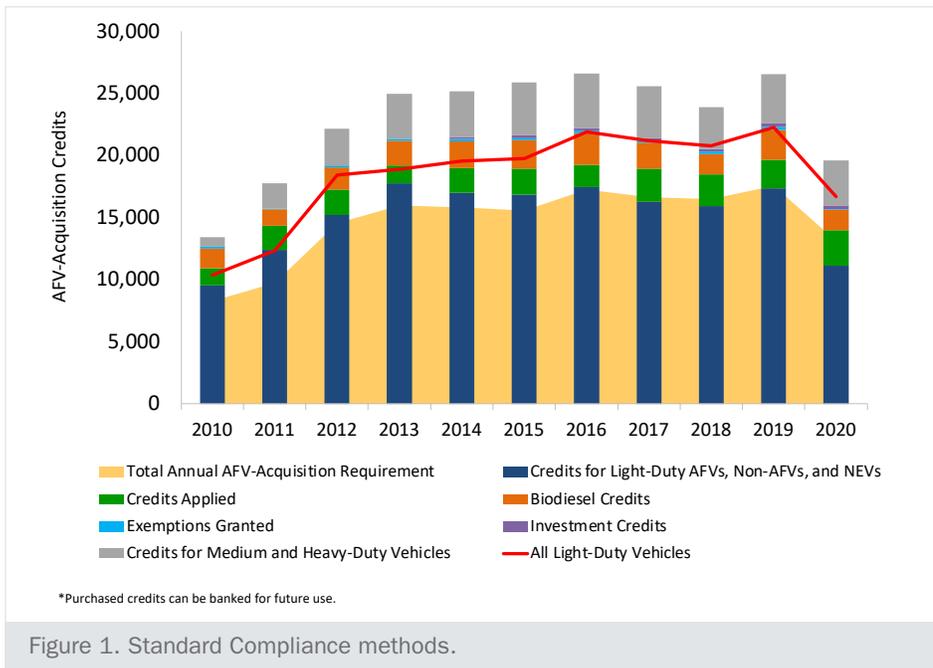
(10 CFR Part 490, Subpart C or D) achieved compliance by acquiring AFVs and certain non-AFVs; purchasing biodiesel for use in medium- or heavy-duty (MD/HD) vehicles; investing in alternative fuel infrastructure, non-road equipment, and emerging technology; and/or applying banked credits earned previously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

In MY 2020, fleets that used Standard Compliance:

- Acquired 12,015 creditable LD and neighborhood electric vehicles (NEVs).
- Earned 730 credits for the acquisition of 1,621 creditable non-AFVs (i.e., hybrid electric vehicles [HEVs], certain plug-in hybrid electric vehicles [PHEVs], MD/HD electric vehicles, and NEVs).

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.



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 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 earn less than a full credit each (1,618 in 2020) resulted in fleets earning a total of 11,124 credits, for acquisition of LD AFVs, non-AFVs, and NEVs in MY 2020—far fewer credits than in 2019.

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 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 2020, covered fleets earned 3,600 credits for the acquisition of MD/HD vehicles. In total, fleets acquired 15,617 creditable vehicles of all size categories. Flexible fuel vehicles accounted for about 80% of these acquired AFVs.

- Earned 1,655 biodiesel fuel use credits by purchasing more than 17 million gallons of B100.³
- Earned 299 credits for investments of \$27.7 million in alternative fuel infrastructure and non-road equipment.
- Applied 2,834 banked credits.

In addition, these state and alternative fuel provider fleets earned a total of 6,456 bankable AFV credits.

As a whole, the fleets operating under Standard Compliance went beyond compliance, exceeding their AFV acquisition requirements (13,086) by approximately 28%.

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 2020, the number of creditable LDV acquisitions by covered fleets was 12,015, a decrease from MY 2019 (18,053). Changes to the program effective in MY 2014 allow covered fleets to earn partial AFV acquisition credits for

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 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).

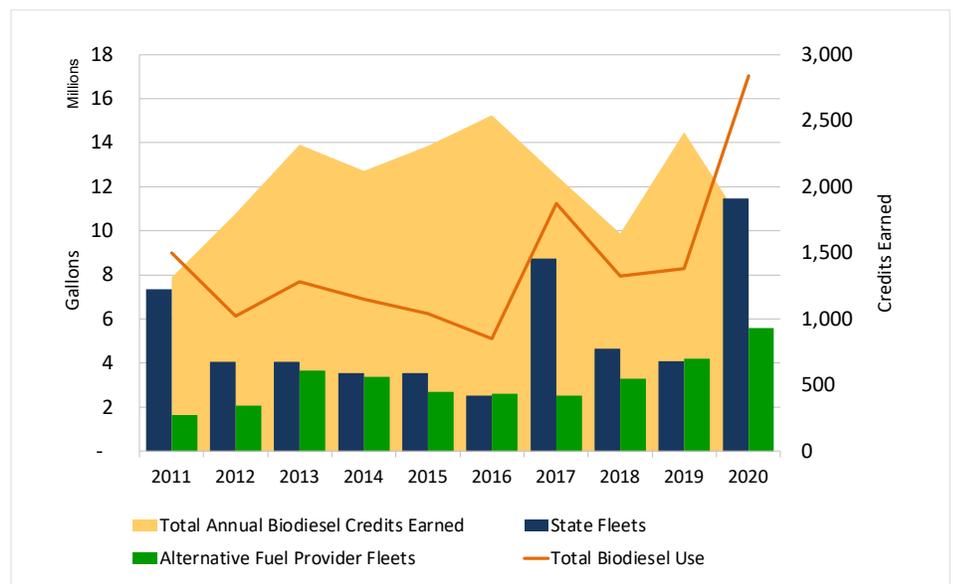


Figure 2. Annual biodiesel (B100) use and biodiesel credits earned.

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 2020, covered fleets reported using over 17 million gallons of B100 in B20 or higher blends, thus allowing these fleets to earn a total of 1,655 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 2020, fleets exceeded their

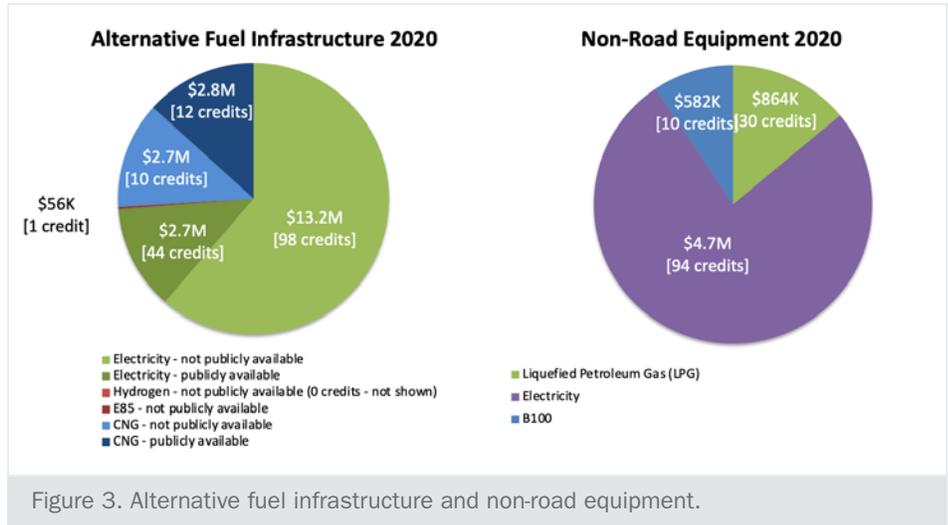


Figure 3. Alternative fuel infrastructure and non-road equipment.

AFV acquisition requirements and earned 6,517 credits for future use. Fleets also used 2,834 banked credits to comply with EAct—somewhat more than the number of credits applied in MY 2019, when fleets used 2,296 banked credits. There were seven transactions between covered fleets involving the transfer of a total of 186 banked credits. The number of credits exchanged in MY 2019 was 1,659, far more than in MY 2020. However, the number of transactions was only a few less than in MY 2019 (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 2020 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 \$21.5 million. Fleets earned 165 credits for these investments.⁷ In MY 2020, covered fleets earned 134 credits for investments in alternative- fueled, non-road equipment.⁷

Exemptions

Overall, granted exemptions⁸ in MY 2020 represented under 0.5% (total number of exemptions granted divided by the total AFV acquisition requirements) of covered fleets' compliance credit activity. In MY 2020, state and alternative fuel provider fleets received a total of 51 vehicle exemptions—well fewer than the 247 exemptions granted in MY 2019.

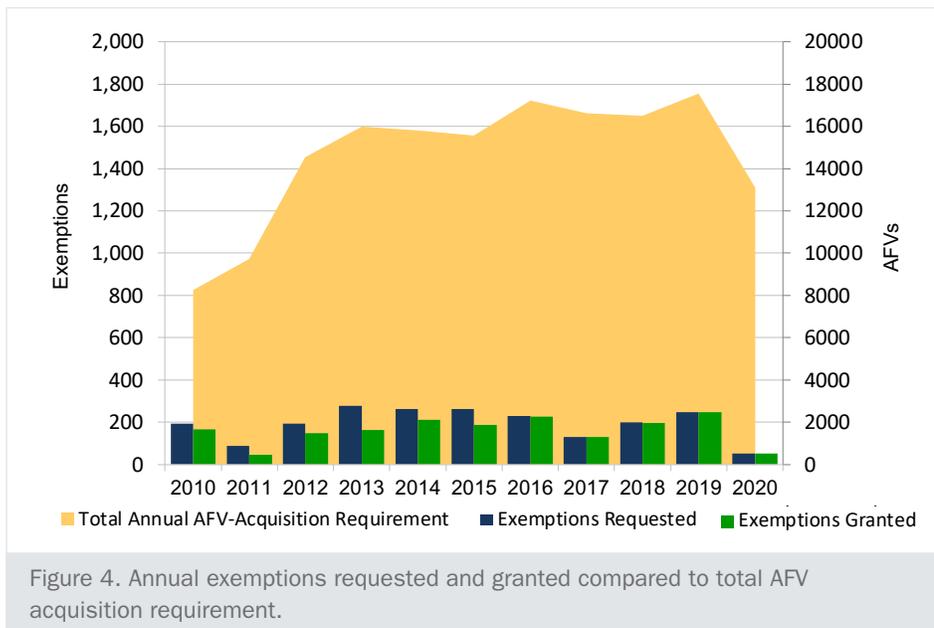


Figure 4. Annual exemptions requested and granted compared to total AFV acquisition requirement.

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.

Only five fleets sought exemptions in MY 2020, 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.

In MY 2020, the five fleets seeking exemptions received 51 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 2010 to 2020 was about 194, with an average of 162 granted. With the increased availability of AFV models (even shifting from flexible fuel vehicles to other alternative fuel vehicle technologies/fuels) and opportunities to earn AFV acquisition credits under the program, as well as 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 2020 marked the thirteenth 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 must first 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.

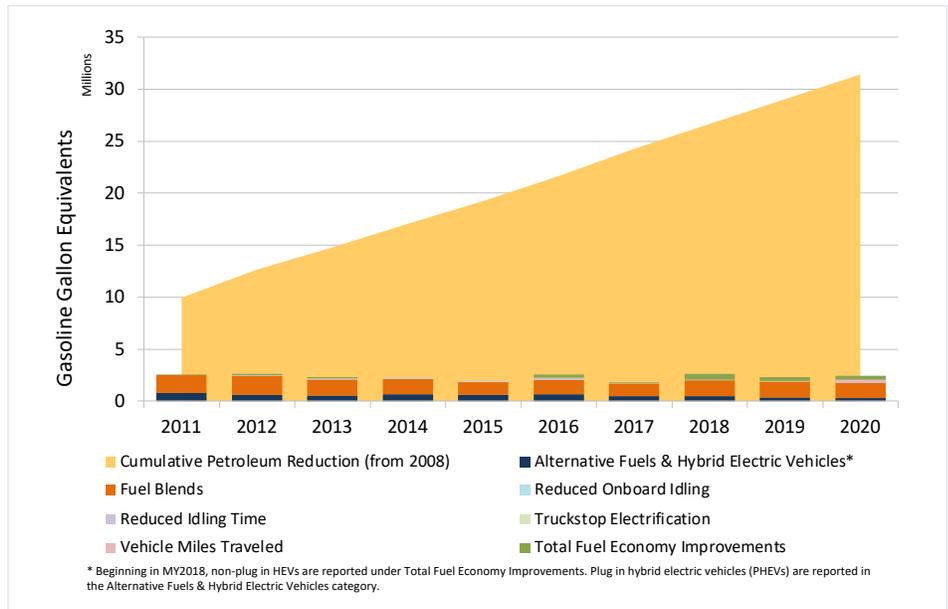


Figure 5. Petroleum reductions achieved by Alternative Compliance fleets.

Achievements in MY 2020

DOE approved waiver applications for eight fleets to participate in Alternative Compliance for MY 2020. Seven of these fleets were able to meet their required petroleum fuel use reductions for MY 2020. The remaining fleet applied banked gasoline gallon equivalents (GGEs) to meet its respective requirements. The eight fleets' total required petroleum use reduction for MY 2020 was 1,970,949 GGEs, and their total actual petroleum consumption reduction was 2,412,309 GGEs, exceeding the aggregate petroleum reduction requirement as a group by 441,360 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 (59%).
- Using alternative fuels (14%).
- Reducing vehicle miles traveled (13%).
- Improving fuel economy (10%).
- Limiting engine idling time (4%).

The petroleum reduction achieved by the eight fleets using Alternative Compliance in MY 2020 was slightly more than the

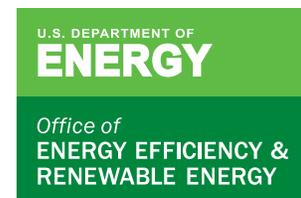
petroleum reduction the eight fleets in the same program achieved in MY 2019.

Notices of Intent

During MY 2020, DOE received 12 notices of intent to apply for a waiver from Standard Compliance for MY 2021. This is four more than the number received in MY 2019 for MY 2020 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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