U.S. DEPARTMENT OF
ENERGY

Office of
ENERGY EFFICIENCY & RENEWABLE ENERGY

State & Alternative Fuel Provider Fleets

Fleet Compliance Annual Report: Model Year 2017, Fiscal Year 2018

The U.S. Department of Energy (DOE) regulates covered state government and alternative fuel provider fleets, pursuant to the Energy Policy Act of 1992 (EPAct), as amended.

For model year (MY) 2017, the compliance rate with this program for the more than 311[1] reporting fleets was 100%. Fleets used either Standard Compliance or Alternative Compliance reporting methods.

Fleet Compliance at a Glance

More than 303 fleets used Standard Compliance and exceeded their aggregate MY 2017 acquisition requirements by 15% through acquisitions of creditable vehicles, biodiesel, infrastructure, and non-road equipment. The eight covered fleets that used Alternative Compliance exceeded their aggregate MY 2017 petroleum use reduction requirements by 20%.

Overall, DOE saw an increase from MY 2016 in total biodiesel fuel use but a slight decrease in fuel use credits earned; 2,084 biodiesel fuel use credits were earned in MY 2017. There was a decrease in the number of reported light-duty (LD) alternative fuel vehicles (AFVs) acquired,[2] but an increase in the number of LD vehicles that earned partial credit.

MY 2017 marked the fourth 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 2017 suggest a continued presence of EPAct-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 2017, the more than 303 fleets that used Standard Compliance:

- Acquired 15,714 LD AFVs
- Earned 591 credits for the acquisition of 1,237 creditable non-AFVs (i.e., hybrid electrics, certain plug-in hybrid electric vehicles [PHEVs], MD/HD electric vehicles, and neighborhood electric vehicles [NEVs])

What Is EPAct?

The Energy Policy Act of 1992 (EPAct) was passed by Congress to reduce the nation's dependence on imported petroleum. Provisions of EPAct require certain fleets to purchase 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 covered state agencies or subsidiaries).

[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.

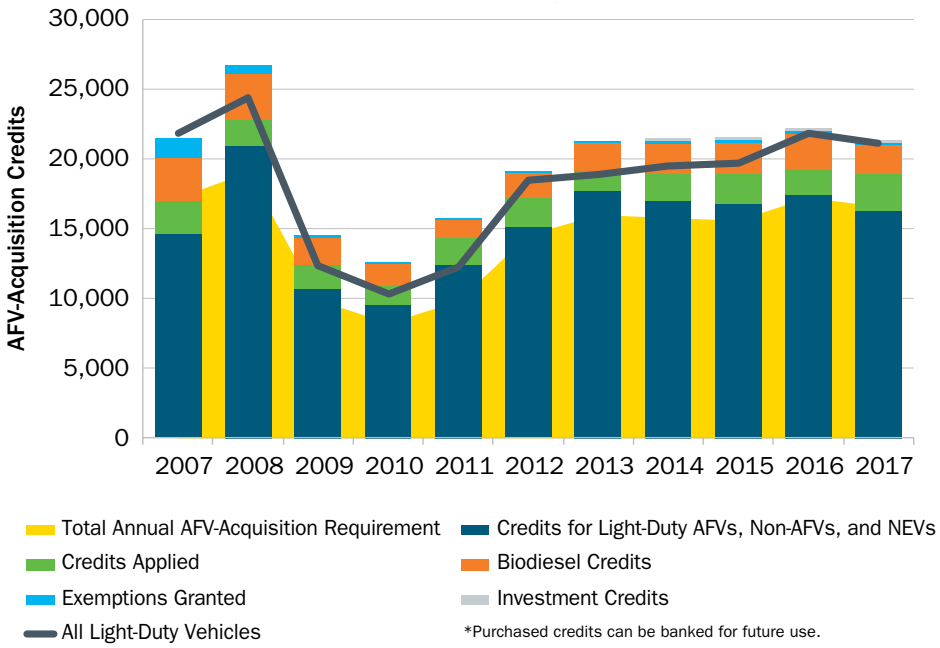

Figure 1. Standard Compliance methods.

- Earned 2,084 biodiesel fuel use credits through the purchase of about 11.2 million gallons of B100[3]
- Earned 207 credits for investments of $17.6 million in alternative fuel infrastructure and non-road equipment
- Applied 2,655 banked credits.

In addition, these state and alternative fuel provider fleets earned a total of 8,937 bankable AFV credits.

As a whole, the fleets operating under Standard Compliance went beyond compliance, exceeding their AFV-acquisition requirements (16,631) 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 2017, the number of LD AFV acquisitions by covered fleets was 15,714, a decrease from the number in MY 2016 (16,889). 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 hybrid electric vehicles (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 LDVs and NEVs that earned less than a full credit each (1,211 vehicles in 2017) resulted in fleets earning a total of 16,282 credits for acquisition of LDVs and NEVs in MY 2017— slightly less than in 2016.

The decreases in the number of AFVs and creditable non-AFVs acquired is not unexpected given the decrease 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 2017, covered fleets earned 4,179 credits for the acquisition of MD/HD vehicles. In total, fleets acquired 21,083 creditable vehicles of

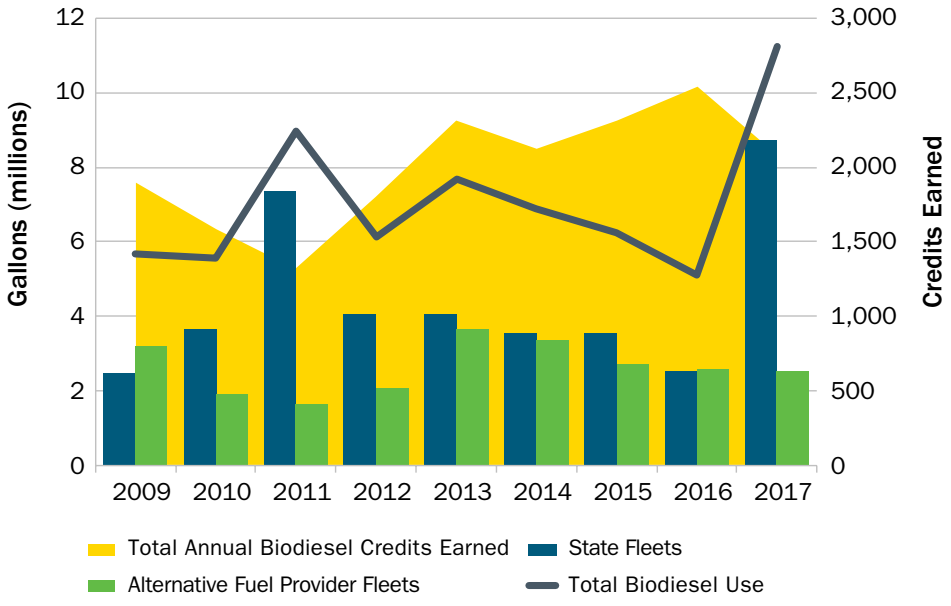

Figure 2. Annual biodiesel (B100) use and biodiesel credits earned.

[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.

[4] To be considered an AFV, the vehicle must be a dedicated vehicle or a dual-fueled vehicle. Some plug-in hybrid electric vehicles 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/investments.pdf*)

all size categories. Flexible-fuel vehicles accounted for nearly 90% of these acquired AFVs.

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 2017, covered fleets reported using just over 11.2 million gallons of B100 in B20 or higher blends, thus allowing these fleets to earn a total of 2,084 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 2017, fleets exceeded their AFV-acquisition requirements and earned 8,915 credits for future use. Fleets also used 2,656 banked credits to comply with EPAct—an increase in comparison to the number of credits applied in MY 2016, when fleets used 1,804 banked credits. There were 10 transactions between covered fleets involving the transfer of 188 banked credits. The number of credits exchanged in MY 2016 was 277, somewhat more than in MY 2017. However, the number of transactions doubled in MY 2017 (10) compared to MY 2016 (5).

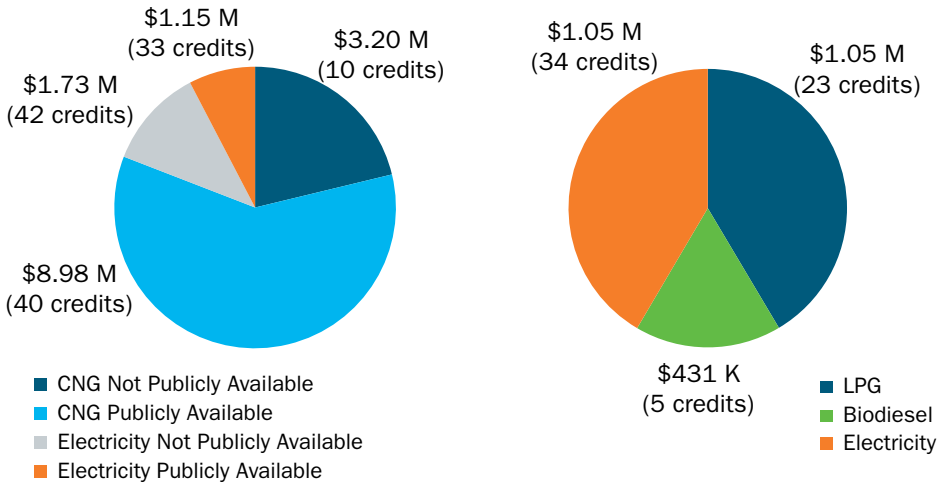

Figure 3. Alternative fuel infrastructure and non-road equipment.

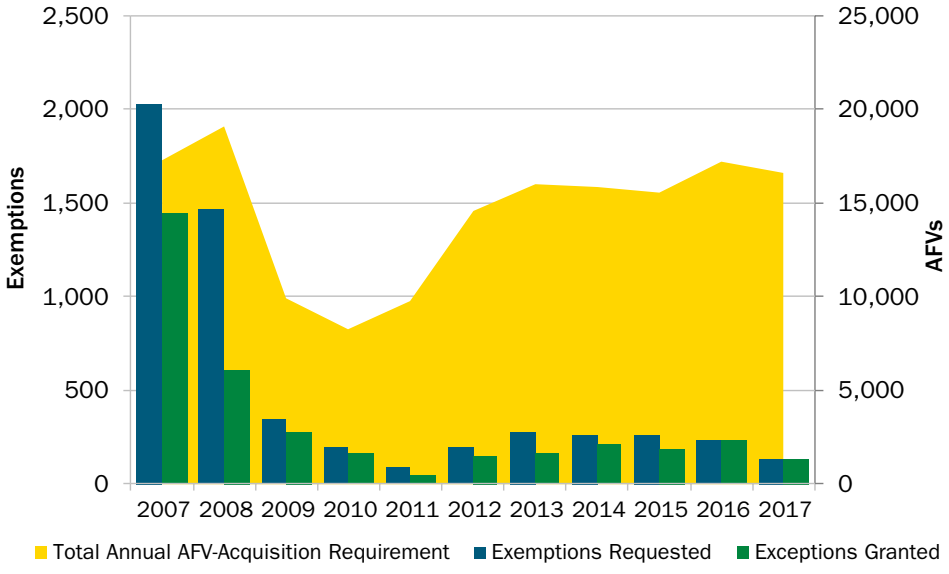

Figure 4. Annual exemptions requested and granted compared to total AFV acquisition requirement.

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 2017 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 $15 million. Fleets earned 134[7] credits for these investments. In MY 2017, covered fleets earned 737 credits for investments in alternative- fueled, non-road equipment.

Exemptions

Overall, granted exemptions[8] in MY 2017 represented less than 1% (total number of exemptions granted/total AFV-acquisition requirements) of covered fleets' compliance credit activity.

[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 EPAct website at epact.energy.gov/exemptions.

In MY 2017, state and alternative fuel provider fleets received a total of 131 vehicle exemptions—less than the 228 exemptions granted in MY 2016.

Only two fleets sought exemptions in MY 2017, continuing the downward trend, begun in MY 2008, of 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 2017, two fleets received 131 vehicle exemptions, continuing the general downward trend in the number of 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 2017 was about 220, with an average of 174 granted. With the increased availability of AFV models 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 remain low and slowly shrink further.

Alternative Compliance Results

MY 2017 marked the tenth year that covered state and alternative fuel provider fleets could choose DOE's Alternative Compliance option in lieu of complying with EPAct via Standard Compliance. EPAct 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 Figure 5. 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 that intent by filing a complete waiver application that includes a plan showing how they intend to reduce their fleets' petroleum consumption.

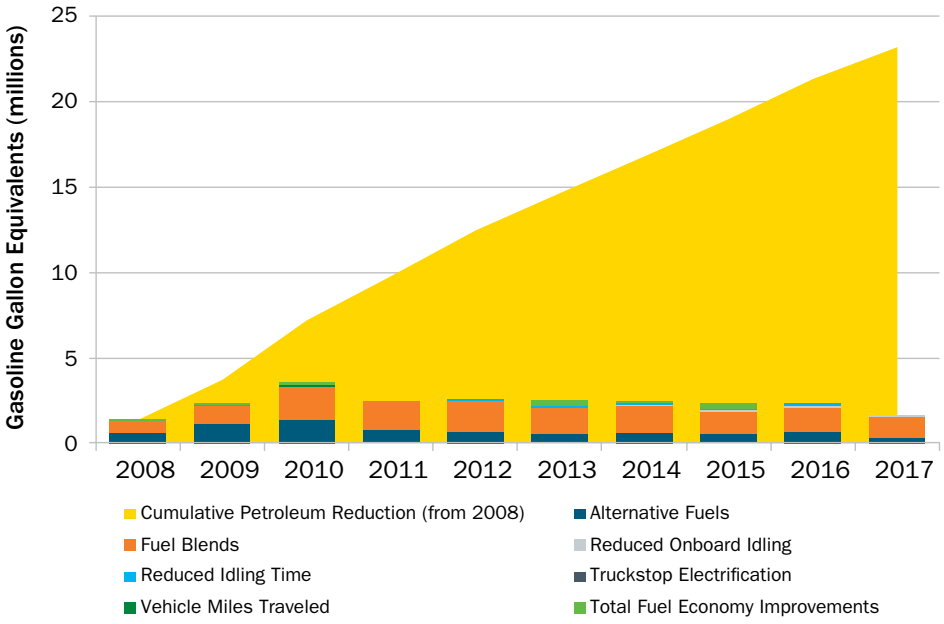

Figure 5. Petroleum reductions achieved by Alternative Compliance fleets.

Achievements in MY 2017

DOE approved waiver applications for eight fleets to participate in Alternative Compliance for MY 2017. Seven of these fleets were able to meet their required petroleum fuel use reductions for MY 2017. The remaining fleet applied banked gasoline gallon equivalents (GGEs) to meet its requirement.

The eight fleets' total required petroleum use reduction for MY 2017 was 2,006,491 GGE, and their total actual petroleum consumption reduction was 2,412,122 GGE, exceeding the aggregate petroleum reduction requirement as a group by 405,631 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 (64%)
- Using alternative fuels (21%)
- Improving fuel economy (12%)
- Limiting engine idling time (3%).

The petroleum reduction achieved in MY 2017 by the eight fleets using Alternative Compliance was slightly more than the petroleum reduction the eight fleets in the same program achieved in MY 2016.

Notices of Intent

During MY 2017, DOE received 12 notices of intent to apply for a waiver from Standard Compliance for MY 2018. This is two more notices of intent than were received in MY 2016 for MY 2017 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*. ■

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For more information, visit:
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