
Tier 3 Basics

EPA's Tier 3 standards for light-duty vehicles contain two components

- Vehicle Emissions standard for fleet average calculations of emissions directly emitted particulate matter (PM), nitrogen oxides (NO_x), and nonmethane organic gas (NMOG), pollutants that contribute to particulate, ozone, and other air-quality problems. The vehicle standards begin in 2017 and are fully implemented in 2025.
- Tier 3 fuels are required to gain the full benefit from Tier 3 vehicles. Tier 3 gasoline contains an annual average of 10ppm sulfur content. Large refiners were required to produce tier 3 fuels in 2017 and small refiners in 2020. The compliance obligation can be met by producing Tier 3 fuel or by averaging within the refineries owned by a refiner or by banking and trading with other refiners who produce lower sulfur content fuels than required by the standard.

Tier 3 vehicles using Tier 3 fuels are between 70 and 80 percent cleaner than tier 2 vehicles



Tier 3 Status Update

- All five refineries have now made commitments to produce and sell Tier 3 fuel in Utah
 - Chevron, Marathon, and Silver Eagle refineries are already producing Tier 3 fuel
 - On April 2, HollyFrontier announced their intention to begin producing Tier 3 fuel in two phases:
 - Phase 1: Fuel availability to Wasatch Front (i.e., North of Santaquin, UT) in approximately 6 months (perhaps delayed due to COVID-19-related developments)
 - Phase 2: All product from Woods Cross refinery



Tier 3 Status Update

- Big West has committed to producing Tier 3 fuel in 2024
 - Every 4.5 years they have a turnaround cycle for equipment maintenance and upgrades, so their plan is to do the work at the next turnaround node
- Sinclair (located in Wyoming) is also producing and supplying Tier 3 fuel to Utah



Tier 3 and second phase of light-duty vehicle greenhouse gas (GHG) standards (CAFE)

- On March 31, 2020, EPA and NHTSA announced a final rule revising the GHG/CAFE standards. The SAFE Vehicles Rule applies to model years 2021-2026. As indicated, the final rule not only revised the existing GHG/CAFE standards for MY 2021-2025, but also finalized a new standard for MY 2026 as well. The final rule GHG and CAFE estimated requirements are summarized in Table 2 below with the revised and new standards shaded in blue.

Vehicle Category & Standard		Model Year									
		2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Passenger cars	CO ₂ , g/mi	220	209	197	187	178	175	171	168	167	165
	CAFE mpg	39	40.4	41.9	43.6	44.2	44.9	45.6	46.3	47	47.7
Light trucks	CO ₂ , g/mi	306	293	281	268	257	253	250	248	245	240
	CAFE mpg	29.4	30	30.5	31.1	31.6	32.1	32.6	33.1	33.6	34.1
Combined Cars & Trucks	CO ₂ , g/mi	261	248	236	224	214	211	207	204	202	199
	CAFE mpg	33.8	34.8	35.7	36.8	37.3	37.9	38.5	39.1	39.8	40.4

Tier 3 and second phase of light-duty vehicle greenhouse gas (GHG) standards (CAFE)

Does this impact Tier 3 vehicle standards?

- While the Phase 2 GHG standards cover the same MY 2017-2025 time period as the Tier 3 vehicle standards, they are, in fact, **separate standards with different aims**. The GHG standards address carbon dioxide (CO₂) emissions, with targets expressed in grams/mile. These targets coincide with CAFE fuel economy requirements, which are expressed in miles per gallon (mpg).
- By contrast, [the Tier 3 vehicle standards](#) are aimed at reducing **non-GHG emissions**, such as directly emitted particulate matter (PM), nitrogen oxides (NO_x), and nonmethane organic gas (NMOG), pollutants that contribute to particulate, ozone, and other air-quality problems. The Tier 3 vehicle standards, like the GHG standards, establish emission limits for these pollutants in grams/mile. The Tier 3 standards, shown in Table 3 below, are between 70 and 80 percent cleaner than the Tier 2 standards that came before them.