

Proposed CAFE Standards – Medium/Heavy-Duty Vehicles

Sunil Kumar

TAC

November 9, 2010

Proposed CAFE Standards

- ❖ EPA & National Highway Traffic Safety Administration (NHTSA) – Joint proposal to reduce GHG emissions and improve fuel efficiency of medium- and heavy-duty vehicles (“HD National Program”)
- ❖ Contribution of Heavy-Duty vehicles –
 - ❖ 20% of transportation GHG emissions
 - ❖ 17% of transportation oil consumption

❖ Three classes of vehicles covered (≥ 8500 lbs*) -

- ❖ Heavy-duty pickup trucks and vans
- ❖ Combination tractors/Semi trucks
- ❖ Vocational vehicles (Wide variety of buses, trucks, RVs, motor homes)



* Except a few MY 2012-16 vehicles already covered under current CAFE

Proposed CAFE Standards

- ❖ Proposed standards cover not only engine but also the complete vehicle. Take into account vehicle's pay-load factor.
- ❖ Two types of standard metrics proposed:
 - ❖ Gram per mile (and gallon per 100-mile) standards for pickups and vans
 - ❖ Gram per ton-mile (and gallon per 1,000 ton-mile) standards for vocational vehicles and combination tractors.

Proposed CAFE Standards

- ❖ **Combination Tractors – Standard based on weight & cab type.**
(7 to 20 reduction in emissions and fuel consumption over the 2010 baselines.)
- ❖ **Heavy-Duty Pickup Trucks and Vans – Standard based on a “work factor” that combines a vehicle’s payload, towing capabilities, and whether or not it has 4-wheel drive. Avg per-vehicle GHG reduction of 17% for diesel vehicles and 12 % for gasoline vehicles.**
- ❖ **Vocational Vehicles – Standard based on weight**
(7% to 10 % reduction in emissions over the 2010 baselines)

Table 1: Proposed MY 2017 Combination Tractor Standards

	EPA Emissions Standards (g CO ₂ /ton-mile)			NHTSA Fuel Consumption Standards (gal/1,000 ton-mile)		
	Low Roof	Mid Roof	High Roof	Low Roof	Mid Roof	High Roof
Day Cab Class 7	103	103	116	10.1	10.1	11.4
Day Cab Class 8	78	78	86	7.7	7.7	8.5
Sleeper Cab Class 8	64	69	71	6.3	6.8	7.0

Table 2: Proposed MY 2017 Vocational Vehicle Standards

	EPA Full Useful Life Emissions Standards (g CO ₂ /ton-mile)	NHTSA Fuel Consumption Standards (gal/1,000 ton-mile)
Light Heavy Class 3-5	344	33.8
Medium Heavy Class 6-7	204	20
Heavy Heavy Class 8	107	10.5

Program Flexibility & Optional Credits

- ❖ Compliance flexibilities to manufacturers thro'
 - ❖ Engine averaging, banking, and trading (ABT) program
 - ❖ Vehicle ABT program
- ❖ Three additional optional credits –
 - ❖ Early credit for manufacturers demonstrating improvements in excess of a proposed standard prior to the model year that it becomes effective.
 - ❖ Credit to promote advanced technologies, such as hybrid powertrains, Rankine cycle engines, and electric or fuel cell vehicles.
 - ❖ Credit for new and innovative technologies with non-quantifiable benefits reducing CO₂ emissions and fuel consumption.