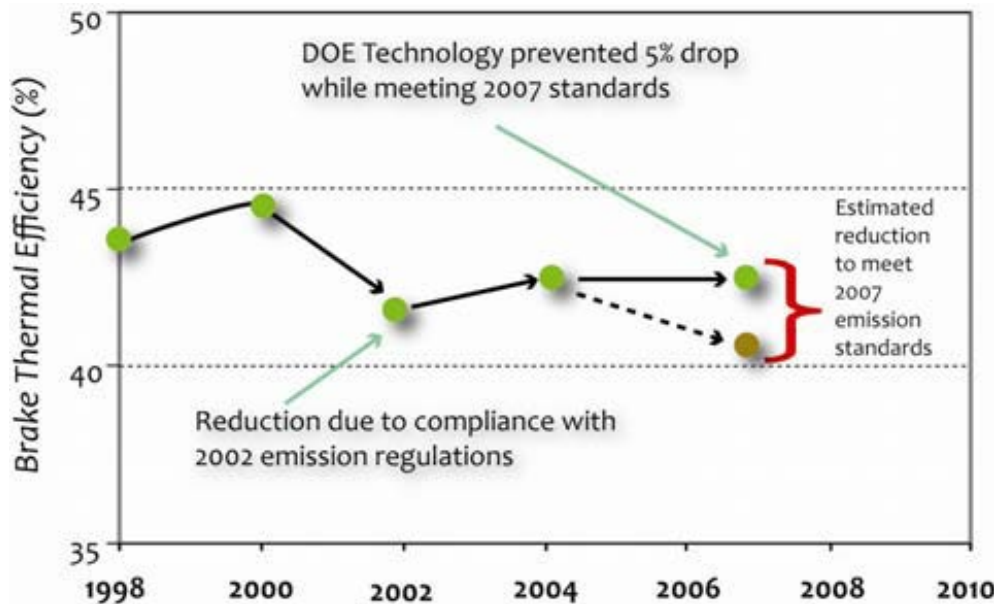


Heavy Duty Truck Engine Advancement Adoption

Historic data have shown that DOE-sponsored technologies have been quickly adopted within the heavy truck fleet. The graphic in Figure 4 shows the effects of engine and emissions technologies developed in joint DOE/industry research efforts: these technologies were adopted by all major engine manufacturers and mitigated potential efficiency reductions that could have resulted from meeting the 2007 emissions standards.



Implementing energy efficient technologies for heavy vehicles will have a significant impact on the nation's petroleum consumption. According to the DOE Energy Information Administration's Annual Energy Outlook (AEO) 2009, U.S. heavy truck fuel consumption will increase 23 percent between 2009 and 2020 (because of economic growth drivers for freight transportation), while fuel use of light-duty vehicles will increase only 1 percent over the same period (because of corporate average fuel economy regulations and other factors driving light-duty vehicle fuel efficiency gains). This will make heavy trucks a more significant portion of the total transportation fuel use picture, and will mean that heavy truck fuel efficiency will be even more important in the future.

Trucking is critical to the domestic economy. Trucks haul 69 percent of all freight tonnage, and collect 84 cents of every dollar spent on domestic freight transportation. There are almost 9 million people in trucking-related jobs, including over 3 million truck drivers. Many of these drivers are not part of large fleets, but are independent owner-operators (87 percent of fleets operate less than 6 trucks).

About 15 percent of trucking jobs are in manufacturing, in plants across North America. The market for the products resulting from this manufacturing effort is changing, as Caterpillar announced its withdrawal from the on-highway engine market effective in 2010, but PACCAR is entering the engine market with its own engines to be produced at a new plant in Mississippi.

Also, Navistar is expanding its own engine offerings to sizes up to 15 liters (appropriate for Class 8 over-the-road trucks).

Lastly, it should be noted that most trucks used in the U.S. are designed for the North American market, in contrast to the light-duty market. At present, there is very little competition from imported vehicles because of differing regulations and customer needs.