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## Putting Heavy Trucks on a Carbon Diet: New Study Shows Emissions of Heat Trapping Gases Can Be Greatly Reduced

November 19, 2009 -- Big highway trucks are among the largest and fastest-growing sources of heat-trapping greenhouse gas emissions. The U.S. EPA reports that heavy-truck greenhouse emissions grew faster than any other transportation source between 1990 and 2007 and emissions are projected to continue to increase.

The good news is we can dramatically cut those emissions with available and emerging technologies – and even cut the cost of hauling freight by truck. A new study released today by the Northeast States Center for a Clean Air Future (NESCCAF) and the International Council on Clean Transportation (ICCT) – two nonprofit groups dedicated to reducing air pollution – shows that heavy-truck greenhouse gas emissions can be reduced up to 50% with the adoption of current and developing technologies.

"This study shows that heavy truck greenhouse gas emissions and fuel consumption can be greatly reduced at a cost savings to vehicle owners" said Fanta Kamakate, Program Director at the International Council on Clean Transportation.

While heavy trucks are relatively efficient, there are still many opportunities for greater efficiency: over 55 percent of fuel energy is lost in the diesel engine (only 45 percent of the energy contained in the fuel that goes into the engine comes out as power); an additional 19 percent is lost in wind resistance; and additional losses occur in the transmission, tire resistance, and idling.

Because fuel costs are one of the largest business expenses of the trucking industry, companies have great incentive to reduce their fuel usage and, as a result, their greenhouse gas emissions. However, given the very short payback times required by industry – as short as 18 months in some cases – few truck fleet operators will invest in fuel saving technologies. Thus, while technologies are available to reduce fuel use and greenhouse gas emissions, many of those approaches are not adopted by the industry.

However, substantial reductions in heavy-truck greenhouse gas emissions can be achieved. The NESCCAF-ICCT study shows that by 2017 with the introduction of technologies in development or currently in production as much as 40 percent of fuel consumption and greenhouse gas emissions from heavy trucks hauling freight can be





reduced. If vehicle weight and length are also increased, the savings can reach 50 percent.

With aggressive introduction of these technologies and operational measures into the U.S. truck fleet, this study finds that by 2030 an estimated 8 billion gallons of diesel fuel and 97 million tons of the greenhouse gas carbon dioxide (CO<sub>2</sub>) could be saved annually, with lesser reductions being achieved as soon as 2012. This would be equivalent to removing 2 million cars from the road for one year. This is also equivalent to the amount of CO<sub>2</sub> emitted from 20 coal-fired power plants in a year. Cumulative CO<sub>2</sub> emissions avoided between now and 2030 would equal approximately 1.1 billion metric tons, or the equivalent of removing 20 million cars from the road for one year.

These measures would also increase energy security — the U.S. currently consumes more than 18 million barrels of oil a day, and imports about 60 percent of total consumption. In 2008, trucking consumed 2.35 million barrels of oil daily.

These changes will cost something. But because a vehicle owner will use less fuel, he or she will actually save money every year a cleaner vehicle is driven. Within 3 to 7 years, vehicle owners will come out ahead, even considering the upfront costs.

"The study shows that it pays to be clean" said Coralie Cooper, Transportation Program Manager at the Northeast States Center for a Clean Air Future.

In 2007, Congress passed a law requiring the U.S. Department of Transportation to establish fuel efficiency standards for heavy trucks. In 2008, the U.S. Environmental Protection Agency published an early proposal for the development of a regulation to control truck greenhouse gas emissions. If developed, these would be the first standards to control truck fuel use and greenhouse gas emissions in the U.S.

NESCCAF works to create effective solutions to critical clean air issues that harmonize environmental, public health, economic, and other societal goals through cutting-edge scientific research, policy analysis, and outreach (<u>www.nesccaf.org</u>). The goal of the International Council on Clean Transportation is to dramatically reduce conventional pollution and greenhouse gas emissions from personal, public, and goods transportation in order to improve air quality and human health, and mitigate climate change (<u>www.theicct.org</u>).