

2010 EPA regulations will add to economic challenges for specialized transport operators. Is “green transport” the viable solution? **Kevin Cunningham** reports

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# Green costs green

**T**here is virtually no doubt that getting diesel trucks to comply with the 2010 emission regulations will add more expense to the entire transport industry.

Still, truck manufacturers say that despite some uncertainties, meeting 2010 requirements shouldn't be nearly as challenging as meeting the 2007 regulations.

The government is concerned that diesel trucks on America's highways are still polluting too much. Therefore, they are putting new emission standards into effect starting January 1, 2010.

The new law will say that any engine for a truck produced after January 1, 2010 will need to comply with the new standards. All trucks made before that date are exempt. The EPA's goal is to get the older polluting trucks off the road by 2020.

By 2010, new diesel engines will be required to emit no more than 0.2 grams per brake horsepower (g/bhp-hr) of nitrogen oxide (NOx) and 0.14 (g/bhp-hr) of non-methane hydrocarbons (NMHC). And these new EPA regulations came at a time when specialized transport operators are still absorbing the impact from the 2007 regulatory changes.

The physical impacts from the 2007 rules on the truck itself were really huge and most specialized transport operators are still dealing with them. That shouldn't be the case however for the 2010 regulations.

## SRC solutions

Several truck manufacturers, including Volvo, Mack trucks, Detroit Diesel and Paccar, have decided to use selective catalytic reduction (SCR) systems to comply with 2010 requirements.

One of the biggest issues for transport operators in meeting the recent 2007 emissions standards revolved around the cooling they needed for their engines. With an SCR system, a transport operator can reduce heat loads on their engines. This should help reduce the cooling needs and improve fuel economy as well.

One of the positive features of SCR is

that it can be tuned in to handle higher emissions of NOx easily, meaning you can relax the NOx controls on the engine which gets cleaned up in the exhaust stream, resulting in up to 5 percent increase in fuel economy.

## Cleaner air timeline

Truck regulations have come in stages. In 2002, the EPA required new heavy duty diesel engines to emit no more than 0.1 grams per brake horsepower of particulate matter (PM), 2g per brake horsepower oxides of nitrogen (NOx), and between 0.4 and 0.5 per brake horsepower of non-methane hydrocarbons (NMHC). In 2004, the rules were expanded to include medium and light duty diesel truck engines.

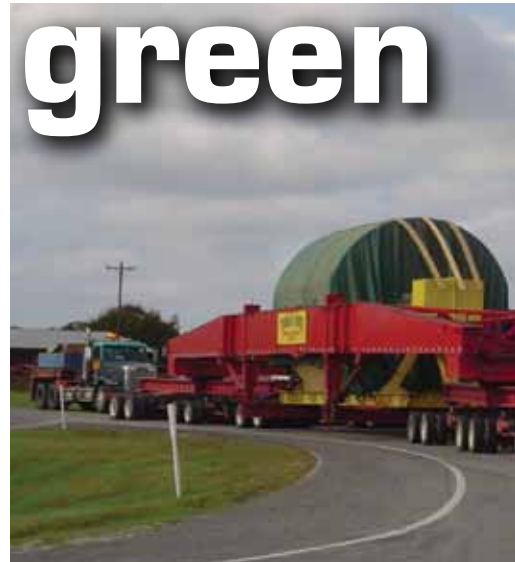
This year, emission level requirements became even stricter. PM emission levels decreased to 0.01 g/bhp-hr, NOx to 0.2 and NMHC to 0.14. The PM requirement was implemented fully, while the NOx and NMHC requirement will be phased in between now and 2010. As a result, new diesel engines in 2010 will produce less than 10 percent of 2001 models.

To meet the 2007 rules, the sulfur content of diesel has been reduced. In 2006, diesel sulfur dropped to 15 parts per million (ppm) from 500ppm. The EPA requires terminals to offer ultra low sulfur diesel (ULSD) fuel. The agency will also be requiring that by 2010, 100 percent of the diesel sold in the country must meet the 15ppm standard.

With new standards that started back in the 1990's, the EPA estimates that nearly three million tons of smog causing nitrogen oxide will be reduced, as well as 110,000 tons of soot. The EPA also estimates that by combining these new revelations, it could prevent up to 8,300 premature deaths in children alone.

## Current trends

We all recognize that freight transportation is invaluable to overall commerce in the US and all across the world today but it is not without significant challenges and



According to the EPA, diesel trucks on America's highways are still polluting too much. Tougher emission standards will go into effect starting January 1, 2010

rising costs. Of all the energy consumed in the transportation sector, moving freight accounts for approximately 20 percent of all energy consumed today. Together, rail and truck transport consume over 35 billion gallons of diesel fuel per year in the U.S. alone and when translated to emissions, this represents over 350 million metric tons of carbon dioxide annually... and growing.

As the economy grows (albeit much reduced today), and the technology improves, the numbers become more staggering. Just-in-time manufacturing, faster delivery services, and increased internet shopping has increased mileage and emissions from ground freight transportation. By 2012, ground freight transport will consume over 45 billion gallons of diesel fuel. Freight transport is expected to produce over 450 million metric tons of carbon dioxide. These (2) growth trends represent a 25 percent increase over today's levels.

While burning fuel is necessary to move loads efficiently by truck and rail, some of that fuel is wasted due to inefficient practices. Wasted fuel translates to wasted money (which hurts even more in today's difficult economy) as well as increased emissions of air pollutants.

Is "green technology" a solution?

Well, one highly respected Michigan based hauler of heavy and specialty freight is attempting to do their part to cut down on emissions and improve fuel usage in the process. Robinson Cartage of Grand Rapids, MI has begun the journey to lead the specialized transport industry



in ecologically smart transportation and is driven by a goal to continuously reduce emissions and create a "greener footprint."

According to a recent article in "Bridging 96," a Crains Detroit Business publication, Robinson Cartage president David Scripps has taken two major steps recently to attempt the transition from "carbon footprint" to "greener footprint" in his heavy and specialized transport operations. First, he worked with Aquinas College's Sustainable Business program to develop a Microsoft Excel based multi-modal calculator for measuring their "carbon footprint," and fuel utilization while idling, which involves a combination of fuel usage and efficiency estimates in their review of trucking company quality control practices.

Then he became the first heavy-specialized hauler to join the EPA's "Smartway Transport Partnership," a new program aimed to help logistics and transport operators reduce emissions, improve fuel usage, and cut down on pollutants. Scripps commented that "his company has always looked for progressive approaches to stay ahead of competition and the Smartway and the Aquinas College

programs have helped in that regard through the practical measurement of truck idle time to reduce emissions and improve fuel utilization."

Scripps said he cares about the environment but is not "an environmentalist."

Do savings speak?

According to the EPA, the Smartway Transport Partnership project will produce a projected savings of between 3.3 and 6.6 billion gallons of diesel fuel per year, which represents a savings of as much as 150 million barrels of oil per year. So if we can trust the EPA's estimates, this is the equivalent of taking approximately 12 million cars off the road which could generate nearly \$10 Billion in operating costs savings for transport operators.

The only problem is that the EPA works for the same administration that promised 3.5 million new jobs from the stimulus package...and we all know how that turned out.

But if there can be more progressive business thinkers like Robinson Cartage's David Scripps, we will all be better off just by trying. **act**



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