



Owner-Operator's Business  
Association of Canada

Association professionnelle des  
routiers autonomes du Canada

*...from the  
director's chair*

## Gauging Fuel Efficiency

Whenever some government or another proposes standards and targets for improvements or reductions, I get a little nervous. All too often, it's the old 'day late and a dollar short' scenario. Take our failed commitment to the Kyoto Protocol. Canada was one of the first countries to sign on to Kyoto, agreeing to reduce greenhouse gas emissions by 6% over 1990 levels by 2012. But by 2006, four years after formally ratifying the Protocol, our GHG emissions were up by 24%.

So much for targets. When Stephen Harper's newly-elected Conservatives tabled their first budget that same year, it contained no mention of the Kyoto Protocol. It pledged instead to develop a "made-in-Canada" climate change program, and there's been little meaningful progress to report in the intervening four years.

But just a few weeks ago, our Environment Minister, Jim Prentice, announced that Canada would introduce mandatory vehicle emissions reductions – fuel economy standards – for passenger vehicles and light-duty trucks. These rules would mirror regulations recently unveiled in the US, so we'll effectively have North American fuel economy standards for cars. Yahoo!

And Prentice, like the Americans, has said he'll also introduce plans to set fuel economy standards for heavy-duty trucks – possibly within the next couple of months. Whoa!

While there would be certain benefits to building cars to a continental standard, Prentice and his standard-setters need to understand that what passes for suitable fuel economy standards (GHG reductions) for American heavy trucks might not be achievable in Canada.

But there's a much larger question that would need to be addressed first: how can you possibly set a fuel economy standard for a vehicle population as diverse as this industry's? Could Prentice be foolhardy enough to adopt US heavy truck fuel economy standards as our own – and

in such a ridiculously short timeframe?

That's why I get nervous when I hear governments are about to start setting standards. The problem lies in the measurement. Fuel economy standards for cars – the typical X mpg, or X L/100km – cannot be applied to trucks because of the tremendous variation in vehicle size, weight, power requirements, and the number of different applications. An 80,000-lb, five-axle combo would do well to get 7 mpg US. But you'd never see a number like that with a tri-axle, a quad, or a Super B-train.

A better way to measure truck fuel economy is load-specific fuel consumption or gallons per tonne-mile. With this method, you're measuring the amount of work done per gallon of fuel.

Another method of measuring "fuel economy" would be to rate engines on their thermal efficiency, or their competency at turning diesel fuel into useful energy. But the technology to increase the thermal efficiency of today's best engines by even 10% is at least a decade away, certainly not within Prentice's time frame of "later this spring."

Other possibilities for improving heavy-truck fuel efficiency would be wide-scale adoption of energy-saving technologies such as aerodynamic fittings on trucks and trailers, reducing or eliminating idling through truck stop electrification and anti-idle equipment, and using more fuel-efficient wide-base single tires.

Were Prentice and his provincial counterparts to think in practical terms like these – or of lifting weights and dimensions restrictions, or letting trucks be as efficient as they can be like, say, opening up HOV lanes to trucks – we might get somewhere on the fuel economy front. Or – here's a novel idea – how about freeing up some money to help fleets and owner/operators overcome the capital cost hurdles of going green? There's little money left in industry's pockets; we're still reeling from the \$15,000 upcharge resulting from EPA07 and 2010.

The other dilemma that Prentice will have to



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resolve is who to regulate: truck maker, engine maker, or end user? The auto consumer has a choice between, say, a Prius and a Lincoln Navigator. Either will get you to work and back, but at what cost? When it comes to trucks, it's not that simple. With trucks, would we be forced into a ProStar with an 11-litre engine when we really need (or want?) a W900 with a 600-hp ISX? A genuine need exists for the high output engines in some applications, but is it government's place to determine that need? And by what criteria? Would truck makers be held to the CAFE standards (Corporate Average Fuel Economy), where compliance is determined by the number of fuel-efficient vehicles offered and sold? Or would carriers be required to have a percentage of high efficiency vehicles in the fleet?

Or how about the owner/operator whose truck is overpowered for a particular application? Maybe the last job was hauling lumber on Super-Bs, but the current carrier hauls mattresses in dry vans. Would the owner/op be penalized for running too big a truck for the job? Setting so-called fuel economy standards for heavy trucks is no simple matter, and given that Prentice's ministry has done no consultation with industry up to now, I'm thinking that whatever emerges "before summer" should get tossed right back at him before Canada Day. I think it would be to this industry's advantage to have some means of gauging efficiency, where the smart operators are credited for their efforts and ingenuity. But simple fuel economy standards aren't the way to go – especially if the measurement tools aren't even our own. □