

Viewpoint article for Motor Transport from John Pettitt, CEO of Clean Air Power

"Lets clean up our act"

The environment has finally made it onto the agenda of most European nations and the British Government has already committed to reducing carbon dioxide emissions by 60% by 2050.

2050 is a long way off for most people and the politicians making this bold commitment are likely to be leaving someone else to pick up the pieces when our targets haven't been met.



Road transport is seen as one of the biggest targets to help meet these commitments. According to Government statistics, road freight accounts for the second highest level of transport greenhouse emissions in the UK after air travel.

At the heart of the Budget was the announcement of a review to examine the vehicle and fuel technologies which over the next 25 years could help decarbonise road transport, but by then it might be too late.

The Government's current approach is to tax its way towards reducing emissions with operators paying more for Fuel and Vehicle Excise Duty, rather than develop and encourage green initiatives to help reduce emissions on a wholesale level.

One of the great 'green' hopes is Bio Diesel which Brown extended the 20p per litre duty differential through to 2010. Bio diesel is seen by many as the great environmental hope, but its major disadvantage is that in current production volumes it's more expensive to produce than petroleum diesel. This is mainly because it takes a lot of manpower to plant, cultivate, harvest and transport the crops to produce the fuel.

It's also less economical than diesel, but the most serious consideration for green fuels like Biodiesel is the CO₂ emissions associated with all aspects of producing and then using the fuel.

When taking alternative fuels into account, we believe the Government should recognise the energy efficiency of all fuels by using the 'Well to Wheel' formula. It provides a more honest figure of the total energy and emissions used to produce a fuel and power a vehicle.

'Well to Wheel' takes into consideration the energy efficiency of producing the fuel, delivering it to tank, and finally powering the vehicle, rather than just the emissions produced by a moving vehicle. For instance, with an electric vehicle, it takes into account the energy used to produce the electricity from original source.

On this basis, Ethanol produced from wheat is bottom of the 'Well to Wheel' efficiency table at 12%. Diesel is still the second most efficient at 36%, with Dual-Fuel™ CNG/Diesel applications topping the charts at 37%

Hydrogen comes out strongly from a 'Well to wheel' perspective but realistically, can we rely on hydrogen power being a genuine contender by 2050 to help

address our global warming in the car fraternity, let alone it being a genuine option to power a 44-tonne truck? So as we see it there is only one genuine option which is readily available now to make an immediate, positive impact on emissions and that's gas.

As a supplier of Dual-Fuel™ technology to the global transport industry you would expect Clean Air Power to recommend gas power. But it's when you look at those 'Well to Wheel' statistics we've already touched upon, this route makes even more sense, especially when our "Genesis" Dual-Fuel™ installation reduces CO₂ emissions by 8.4 tonnes per annum on a typical UK truck and a manufacturer integrated solution would be near to 30t of CO₂ per annum, the equivalent of removing over 10 cars off the road.

Gas power, whether it is Compressed Natural Gas (CNG) or Liquefied Natural Gas (LNG) is in plentiful supply and burns with virtually no particulate matter emission and almost zero toxic emission. Bio Methane is another option taking advantage of gas generated from cattle and food waste which can be legitimately used as a road transport fuel.

To give you some of idea of its viability, one company is soon to start processing gas from a landfill site in Surrey which will generate sufficient energy to power 110 HGVs covering 100,000 miles per annum for the 15 year duration of its licence.

Gas is an immediate and genuine route to helping reduce emissions within the transport sector. LNG has been recently claimed as the fastest growing energy commodity across the globe and predictions are that nearly 100 million tonnes of the stuff will be used in 2008.

Countries like Italy already have half a million gas vehicles on the road, while the German Government are investing heavily in its infrastructure to make gas more readily available as it looks at reducing its carbon output. Countries like Argentina, India and Indonesia have all adopted it, while Australia and the US are taking it very seriously.

Unless Government, fuel companies, van and truck manufacturers and the road transport associations make a commitment to gas, we will see one of the world's most successful economies missing out on doing its immediate bit for the environment. We'll also miss out on the chance to reduce fuel costs at a time when margins in our industry are continuing to be squeezed.

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