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IRTE
engineering success

Heavy-duty diesels set for gas-fuelled transformation

A quarter of a century after the initial dash for gas – when the UK's then newly privatised electricity companies were falling over themselves to build gas turbine electricity generation plants – the transport industry may be on the brink of a similar transformation.

According to advocates of LNG and CNG (liquefied and compressed natural gas), we're on the cusp of a sea change in diesel engine transport fuel. And that's despite the decline in North Sea natural gas production. So, why?

Well, we're seeing a perfect storm. First, cheap gas availability is surging, both from around the world – as shale gas forces conventional producers to seek new markets – and here in the UK, with biogas projects seeing huge growth. So the supply side is going through the roof. Secondly, the oil and gas industry is cottoning on to transport as a major new outlet, and starting to invest heavily in a gas infrastructure around the UK to sell it. Hence the outlook for LNG/CNG refuelling stations, served by dedicated LNG tanker fleets, already appears very impressive.

Thirdly, the government is actively supporting development, not only by funding the industry-wide, two-year Technology Strategy Board low-carbon truck trials (page 23), but also by freezing the favourable duty differential between diesel and gas. Taken together, these will serve to instill confidence in a technically robust and economically attractive future for gas, which, in turn, fuels investment. And finally, modern dual-fuel conversion technologies are universally working well on unmodified diesel engines, with truck OEMs not only increasingly happy to maintain warranties intact, but even starting to develop their own variants alongside the pioneering converters.

Nevertheless, it's still hard to believe that dual-fuel and gas – seen by the vast majority of operators as a niche market serving the environmentally-concerned and wealthy few, running long-distance, back-to-base or sensitive operations – is set to transform itself potentially from a few hundred trucks nationwide to 35,000, or even more, in the next 10 years.

So what's in the way? First up is price: few operators are willing or able to stump up, say, £20,000 extra for a converted tractor, in the hope of a three-year payback. But that's today's stereotype. There's little doubt that, as OEMs – with R&D budgets now unshackled by the next Euro number – move into this market, confidence in both the return on investment and the technology will rise as fast as prices fall, reflecting demand-driven economies of scale.

Next, Euro 6 emissions legislation has yet to catch up with dual-fuel conversions. That means, short of resorting to converting Euro 5 trucks, there's a hiatus in supply, with no new trucks available for conversion Europe-wide. But that won't last. Rest assured, with so much at stake – financially and environmentally – this will soon be resolved. Certainly within the next few months.

And finally, there's the load penalty, which, for most isn't an issue, but on 3.5-tonne vans forces them up a notch into 'O' licence territory and a requirement for more costly 'C1' driving licence holders, not the usual 'B' category. In other European countries that bureaucratic stumbling block has been resolved simply by allowing gas vans at 3.8 tonnes gvw to be treated as 3.5 tonners.

This revolution does look set to happen. The future's bright: the future's cooking on gas.



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