

With Russia's attack on Ukraine in February 2022 resulting in gas prices skyrocketing in the following months, hauliers who had chosen trucks that could run on CNG or LNG might have been forgiven for wondering if they had made a huge blunder. But prices have now fallen, reports Steve Banner



DOWN TO EARTH

Reports abounded of operators deciding to park up their CNG/LNG vehicles and rent diesels if they possibly could, despite diesel price hikes.

"Last year was really crazy," observes well-known alternative fuels consultant Martin Flach. "Once gas ended up costing more than the equivalent litre of diesel, the payback for opting for gas trucks began to stretch into infinity."

"Gas price volatility was a big issue in 2022 and we saw significant spikes," says James Westcott, chief commercial officer at bio-CNG and bio-LNG refuelling specialist Gasrec. "However, it is now back at levels that are competitive with diesel."

Volvo markets 4x2 and 6x2 LNG tractor units in the UK alongside 18- and 26-tonne LNG rigid. It has made a firm commitment to bio-LNG and has just launched a 493bhp engine for its FH and FM models that will run on the fuel. That joins existing 414bhp and 454bhp engines. Recalls a Volvo executive: "Back in 2017, LNG hovered at around 65p to 70p a kilo. At one point in 2022, however, it hit £3.00 a kilo, so our sales of LNG trucks dropped off quite a bit. That's changed now the price has come

back down, though. Sales are picking up again, and Asda took on over 100 over Christmas."

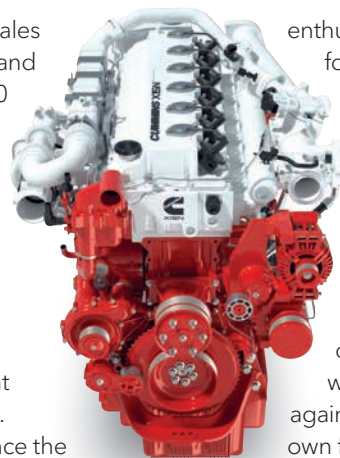
STABILITY RETURNS

Gas prices are now on a downward trajectory, says Peter Eaton, sales and business development director at CNG Fuels. "They've collapsed since the start of the year," he remarks. "We've gone back to a 30% to 40% saving over diesel, even though diesel prices have fallen, too."

A major supplier of biomethane, CNG Fuels has 10 CNG fuel stations in operation, and aims to be running around 40 by 2026; all of which will be publicly accessible. The gas futures market offers good grounds for continued optimism, he believes.

Adds Westcott: "While it's hard to know where prices will eventually end up, we're clearly in a more settled place now."

The dramatic price spikes of last year do not appear to have dented the



enthusiasm of some operators for gas. Arla Foods, the UK's biggest dairy co-operative, took delivery of seven Volvo FM LNG 6x2 tractor units earlier this year. Says Arla inbound logistics director, Richard Wilson: "These new bio-LNG trucks will play a crucial part in our plan to hit our 2030 sustainability target, which is a 63% CO₂ reduction against our 2015 baseline for our own fleet operations."

They are being refuelled at Gasrec's open-access site at DIRFT - Daventry International Rail Freight Terminal - in Northamptonshire, and at the Gasrec-built station at Reed Boardall's depot in Boroughbridge, North Yorkshire. Hauling milk tankers, the newcomers are expected to cover around 200,000km apiece annually.

"For now, and in the medium term, we believe that trucks powered by bio-LNG represent the best route for us to achieve a significant carbon reduction," Wilson observes. "Who knows what the future holds in terms of electric and hydrogen technology?"

The difficulty with bio-CNG and bio-

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LNG is that while they may be made from sustainable resources, they are not emission-free at the tailpipe. The UK government has announced a ban on sales of all new non-zero-emission trucks grossing at up to 26 tonnes from 2035 onwards, and a complete ban from 2040 onwards.

Manufacturers have for some time attempted to pare down CNG/LNG engine emissions. Back in 2019, Cummins was extolling the cleanliness of its L9N natural gas bus engine at the Busworld Europe exhibition in Brussels. It told visitors to the Belgian show that design improvements had enabled L9N to reach the ideal stoichiometric combustion point faster than before, then maintain it more consistently across the engine operating speed range.

As a result it was able to lower NOx emissions by 80% below that of the Euro VI standard of 0.46g/kWh, said Cummins. The particulate emissions reduction was equally impressive, it contended, with levels over 90% lower than the 0.01g/kWh standard.

Tantalisingly close to zero in both cases, but just falling fractionally short; and the UK is insisting (at least for the

moment) that zero must mean zero.

That suggests that CNG and LNG will end up as short-term bridging solutions. It is an approach that could be viewed as short sighted however, especially when issues such as fuel security are raised.

The bio-LNG Arla uses, for example, comes not from distant gas fields or through pipelines subject to the whims of marauding dictators, but from material generated by its own farms. Says Wilson: “We are now turning cow poo, and food which would otherwise go to waste, into a source of renewable fuel.”

OVERREACTION?

Flach appreciates that opting for zero emission at the tailpipe and deploying electric vans and trucks may make sense in congested urban areas. Outside these areas, however, the minor emissions from gas engines are likely to have next to no impact, he contends.

“Do they really matter, given the undoubted CO₂ benefits of biogas?” he wonders. Biomethane fuels unlock the door to a well-to-wheel reduction in CO₂ emissions of anywhere from 80% to 120%, which means they can be carbon-negative.

IVECO’s UK country product manager and alternative propulsion lead, Steve Powell, makes the point that range is far less of an issue with CNG and LNG than it is with electric vehicles. Gas-powered IVECO tractor units are available today that can cover up to 500 miles before they need refuelling,

depending on which gas you pick.

“Battery-electric represents the future, but gas will play an important role on the way there,” he observes.

IVECO is developing electric and hydrogen fuel cell trucks in partnership with Nikola of the USA, but is not neglecting the development of its gas models. Last year saw it expand the total fuel tank capacity on its S-Way CNG 4x2 tractor units by 132 litres, to 1,052 litres. That means that the truck can now take 160kg of CNG, which equates to a 15% increase in range, says IVECO.

Cummins is continuing to develop CNG and LNG power plants, but is making them as flexible as possible.

Last year it introduced the 15-litre X-Series. It has cylinder heads and fuel systems which are tailored for the 523bhp X15H version to use carbon-free hydrogen (assuming it is available) and for the 503bhp X15N variant (pictured, far left) to run on renewable natural gas.

Says marketing communications director, Steve Nendick: “The X15 diesel is also capable of running on HVO or B100 biodiesel, with ratings of up to 641bhp.”

In addition, Cummins is busy developing the 430kW electric 17Xe ePowertrain. This shows that engine

manufacturers appreciate that

there is no single solution to the environmental challenges hauliers face, and that all options still need to be kept open, despite the eye-watering investment required. **TE**

