

Emissions charge

As conjecture over a future Euro 7 turns to reality, likely involving new NO_x, NO₂ and CO₂ emissions limits, Brian Tingham reviews meaningful measures

Whatever happens with Euro 7 emissions legislation, the industry may well have cause for concern over the EC's and local legislators' measurement and penalty choices. That observation applies not only to NO_x - widely expected to halve against Euro 6 (meaning 23mg/kWhr on the world harmonised test cycle). It also pertains to NO₂, which will probably get its own limits, forecast at around 110mg/kWhr.

Furthermore, it applies to soot particle size for PN (particle number) regulation - predicted to move from the current 23 nanometre minimum diameter down to 10 nanometres. Experts agree that is only just measurable with current technology.

However, there is also the EC's primary focus, aimed at forcing down CO₂ emissions. And, as reported in our March 2016 issue (page 10), if Europe follows the US, we can expect to see a 24% reduction in CO₂ emissions for HGVs, with 4% coming from engine upgrades - all of which must be measured and presented to fleet operators in terms relating to fuel efficiency.

So what's the problem? As Iveco product director Martin Flach puts it: "None of us wants to see a 'copy and paste' job that simply mimics the car CO₂ emissions measures. That's where van gm/km CO₂ emissions data is so wrong. It's meaningless and it's also misleading."

Flach explains that for CO₂ numbers to make any sense, the industry needs measurements to recognise a 'utility



"Legislators and politicians just don't seem to understand"

Martin Flach

factor', such as tonnes or cube of goods carried. "A small car may weigh half a tonne and show 100gm/km CO₂, but that equates to 200gm/tonne.km. A raw CO₂ figure for an artic would be worse than 100gm/km, but take account of goods carried and a realistic measure would show, say, 30gm/tonne.km."

GREENER CHOICES

That proves what we already know: moving goods in bulk on low numbers of vehicles is greener than using shed loads of small vans. And note that the EU's VECTO (Vehicle Energy consumption Calculation Tool) - aimed at helping purchasers predict vehicle CO₂ - may be of limited use. Its dependence on simulation (to handle commercial vehicles' massive numbers of permutations) inevitably means

assumptions and hence inaccuracies.

But there's another related point - and that concerns which emissions should be mandated - and where. Given the trade-off between NO_x and CO₂, surely it makes sense to think outside the box? "Legislators and politicians just don't seem to understand," argues Flach. "If you drive into London, you get a congestion charge reduction for vehicles with low CO₂ - but that's an indicator of global warming, not air quality."

So if we're serious about both issues, why not refocus penalties and incentives? For Flach and many others, favouring low NO_x and particulates in cities - as per the LEZ (Low Emission Zone) and ultimately ULEZ (Ultra Low Emission Zone) - is a sensible way to go.

But equally, low CO₂ (accepting slightly higher NO_x and particulates) ought to be the corollary for freight on motorways. Why? At the very least because mileages are high, so the impacts on fossil fuels and the ozone layer are greatest.

And by way of addendum, DAF marketing manager Phil Moon notes that extending delivery periods - taking advantage of PIEK-certified quieter truck engines and bodies - would reduce both CO₂ and pollutants. "Running large vehicles into urban environments outside peak times minimises congestion, and is the most efficient and environmentally-friendly way to deliver goods. Not only are all emissions minimised, because vehicles don't get stuck in traffic, but also congestion is reduced." **TE**