

NGVN response to the Birmingham clean air zones consultation

The Energy and Utilities Alliance (EUA) provides a leading industry voice helping shape the future policy direction within the sector. Using its wealth of expertise and over 100 years of experience, it acts to further the best interests of its members and the wider community in working towards a sustainable, energy secure and efficient future. EUA has six organisational divisions - Utility Networks, the Heating and Hotwater Industry Council (HHIC), the Industrial & Commercial Energy Association (ICOM), the Hot Water Association (HWA), the Manufacturers' Association of Radiators and Convector (MARC) and the Natural Gas Vehicle Network (NGV Network).

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Where should a CAZ be?

We agree with the consultation suggestion that the CAZ should include all the road within the A4540 Middleway ring road, but not the Middleway itself. This is because looking at the map of the worst hotspots the worst areas are within this area. Studies show that pollution levels are often higher in city centres because they contain the busiest roads, the highest populations, with the most stop start traffic.¹ Stop start traffic and vehicle idling, where an engine is left running for extended periods causes high levels of NO_x and CO₂ emissions to concentrate in areas close to the road, and is attributable to premature deaths and breathing problems.² Due to these high concentrations of pollutants in cities, alongside higher population numbers, cities are an area where policy should be the most radically targeted to reduce emissions.

¹ <http://www.ngvnetwork.co.uk/2018/03/29/reduction-in-the-hgv-levy-for-cleaner-vehicles-marks-step-in-the-right-direction/>

² https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/612592/clean-air-zone-framework.pdf

When should a CAZ operate?

We agree that the CAZ charges should be in place all day every day because emissions are still harmful at night and will still be included in the measurement. This is in line with other clean air zones across the UK which operate for all hours of the day.

Which types of vehicle should be discouraged from travelling in the CAZ?

HGV's constitute only 5% of vehicle miles travelled and make up just 2% of vehicles on the road, yet emit 21% of total transport-derived NO_x and 16% of transport greenhouse gas emissions.³ This is a good reason to target HGVs with the heaviest charges.

Particulate matter (PM) affects health in two ways: by being toxic or by providing a surface for transporting toxic compounds to where they can do harm.⁴ PM can have short-term health impacts over a single day when concentrations are elevated, and long-term impacts from lower-level exposure over the life course. 12% of PM comes from road transport and HGVs are particularly big offenders, partly due to the fact that they have much bigger engines, require more brake power and use more diesel fuel than other vehicles.⁵

We believe that gas powered HGVs are the only alternative to Diesel HGVs, and the charge should specifically targets Diesel HGVs in order to encourage businesses to switch to gas powered HGVs. The aim of any clean air zone is to encourage a shift in behaviour and we believe this charge on HGVs should encourage companies to switch their fleet to lower emission gas powered HGVs.

A trial by coca cola of 14 Iveco Stralis 26t rigid trucks, using compressed biomethane, alongside their diesel counterparts will consume approximately 168 tonnes of biomethane saving over 300 tonnes of CO₂, 1590 kgs of NO_x and 33 kgs of PM emissions per annum.⁶ The gas vehicle operation reduced NO_x and PM emissions by 85.6% and 97.1% respectively. The gas truck consumed 34.9 kg/100 km compared to the diesel truck that consumed 31.9 litres/100 km over the CCE drive cycle. This equated to a theoretical vehicle range of 357 km.⁷ This shows the difference gas powered HGVs could make to the area, and it would minimise the disruption to business because deliveries to the inner city would still be able to be made.

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⁴ <https://consult.defra.gov.uk/environmental-quality/clean-air-strategy-consultation/>

⁵ <https://consult.defra.gov.uk/environmental-quality/clean-air-strategy-consultation/>

⁶ http://www.cenex.co.uk/wp-content/uploads/2014/02/CCE-biomethane-trial-report-1_3.pdf

⁷ http://www.cenex.co.uk/wp-content/uploads/2014/02/CCE-biomethane-trial-report-1_3.pdf

How much should drivers of polluting vehicles pay to travel in the CAZ?

London currently operates an ultra-low emissions zone on heavy vehicles, requiring them to meet Euro VI particulate matter standard, or pay a daily charge of £100. Further, vans and mini busses must meet a Euro 4 petrol or 6 Diesel standard, or pay £100. These policies target heavier vehicles, because road freight (Heavy Goods Vehicles and light vans) were responsible for one third of total greenhouse gas emissions from transport in 2015.⁸ It would seem consistent to charge HGVs in Birmingham the same £100 as they do in London and this is an amount high enough to potentially change behaviour.

⁸ EIS (2017) 'Final UK greenhouse gas emissions national statistics: 1990-2015