

Clean Air Strategy 2018

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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Q1. What do you think about the actions put forward in the understanding the problem chapter? Please provide evidence in support of your answer if possible.

Research often uncovers problems with inhaling pollutants that we did not know about before. Subsequently, this can and should lead to stronger measures to combat pollution. We welcome the proposal to increase transparency by bringing together local and national monitoring of air quality in order to catalyse public engagement through citizen science. This is good news because the public deserves to be kept informed about levels of pollution, given the massive effect they are shown to have on their health. An essential aspect of democracy is for the general public to have an active role in shaping policies which affect them, therefore public engagement will be key to fighting dirty air.

Q2. How can we improve the accessibility of evidence on air quality, so that it meets the wide-ranging needs of the public, the science community, and other interested parties?

In some European countries, air quality data is displayed digitally on signs along the road and pedestrian areas, changing colour when it exceeds dangerous levels, alerting the public to the issue. This would be a good way to inform the public and other interested parties, as it is very accessible. As well as this, obligating local weather reports to also include air quality data and warnings could help to inform the public of the data. Making the evidence available from the proposal to bring national data together into a single portal would be effective if it was turned into a website and displayed in a manner that is suitable for both experts and non-experts.

Q3. What do you think of the package of actions put forward in the health chapter? Please provide evidence in support of your answer if possible.

The actions say that goals to reduce public exposure to PM levels will be backed up with a comprehensive set of new powers, designed to enable targeted action in areas with air pollution problems. In order for these powers to be meaningful, we suggest that local authorities should be obligated to introduce measures to prevent diesel HGVs entering the zone if PM levels regularly exceed 10ug/m³. HGVs 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; therefore strong action on them would reduce harmful emissions. Such measures should encourage business owners to switch their fleet to lower emission HGVs, such as gas powered, in turn, this would provide a boost to the industry and as gas powered HGVs become more widespread, the prices would come down as well. Such a policy would be in line with the Government's goals of investing in lower emission vehicles and improving air quality.

Due to the fact the government keeps having to come back with amended plans on air quality, we think that stronger action is needed than 'guidance' to put the issue to bed. After meeting with local authorities, they complained that the previous guidelines were too vague and that clearer, stronger rules were needed. Moreover, applying a degree of uniformity in clean air zones would provide certainty to business, such as freight, because rules would be the same from zone to zone, rather than having to look at each individual zone they might have to drive through. This doesn't mean that every single zone has to be exactly the same in every aspect, just that where there are problem areas there should clearly defined responses.

Government could take action by introducing guidelines for public procurement and lead by example. The NHS Supply Chain could for example stop using diesel HGV's in favour of the cleaner and cheaper natural gas alternative. Guidelines should require consideration of alternative fuel vehicles and that low carbon and low emission alternatives are accepted if there are no major reasons for not doing so.

In addition to this, the government should ban certain domestic fuels, like coal, or the burning of certain types of wood. For example, burning painted wood, or wood from construction sites can emit toxic chemicals that are detrimental to public health. This would be a proportionate response to a dangerous public health issue, it is unfortunate that it has subsequently been ruled out by Michael Gove. Having said this, it is welcome that the Government are introducing safer woods to burn and increasing the standard of what can be sold in shops, although this does not stop people burning wood for other sources.

We welcome the proposal to deliver a personal air quality messaging system to inform the public about the air quality forecast and provide health advice. This is a good idea because keeping the public in the dark about an issue that can be so detrimental to their health is not only unfair but also dangerous. Following this, the government must deliver information about air quality effectively to the public, alongside health advice. We suggest that public health information should also be delivered by the NHS in the form of posters, leaflets and social media posts so that the public can make informed decisions about their health, particularly those most vulnerable to the effects of dirty air.

We, therefore, welcome the actions to equip health professionals to play a stronger role by working with the medical royal colleges and general medical council to embed air quality into their education and training. Moreover, working with the NHS, GPs and local authorities to gather better information on where and how patients report and are treated for air quality related health conditions, to help evaluate the effectiveness of actions to improve air quality should be a good way to meet the recommendations outlined in the recent chief medical officer report on air pollution.

Finally, we welcome the proposal to publish a new set of appraisal tools to enable the health impacts of air pollution to be considered in every relevant policy decision that is made. We maintain concerns that the government is prioritising cost over health, as statements made by officials suggested that whilst in favour of green technology and low emission fuels, they must be as cheap, or cheaper than current fuel and technology. We hope that the Government is serious about assessing the health impacts of every relevant policy decision, and not prioritising money over health.

Q4. How can we improve the way we communicate with the public about poor air quality and what people can do?

We welcome the proposal to deliver targeted information to the public about poor air quality, but we also think there should be local signs displaying the data, which alert people to dangerous

levels. A joint information campaign with the NHS about the dangers of poor air and what people can do to mitigate the risks will also be effective in informing the public.

Q7. What do you think of the package of actions put forward in the clean growth and innovation chapter? Please provide evidence in support of your answer if possible.

We support the drive to maximise the advantages for UK industry from the global shift to clean growth – through leading the world in the development, manufacture, and use of technologies, systems and services that tackle air pollution. As well as the action to seek ways to support further investment in Clean Air innovation to enable the development of novel technologies and solutions that tackle emissions from industry, vehicles, products, combustion, and agriculture and support both improvements in air quality and decarbonisation. As previously mentioned, we hope the government drops the notion that new technology and fuels should cost the same or less than existing technology and fuels in order to allow them to truly embrace green technologies. Phasing out coal-fired power stations and moving to cleaner energy sources is a welcome proposal, but we believe the all-electric pathway outlined is misguided.

Instead, the government must recognise the gas grid can play a key role - rather than rip out heating systems and make the grid obsolete, it makes sense to decarbonise the gas we use; using green gases such as Biomethane and bio SNG in addition to hydrogen, will deliver affordable and sustainable solutions to the challenges the UK face. Green gas is now being recognised as the preferred solution to meet UK heat demand, which is seasonal and demands a flexible supply.

Minimising the air quality impacts of the Renewable Heat Incentive Scheme (RHI), for example by tackling non-compliance and consulting on excluding biomass from the RHI if installed in urban areas which are on the gas grid is a key action that will make the RHI more efficient.

We are also supportive of the annual green Great Britain conference, focused on climate and air quality, however, we hope the public engagement aspect is prominent, rather than just announcing policy.

Q8. In what areas of the air quality industry is there potential for UK leadership?

One area the UK could lead is in tighter regulations for the car industry. A super-inquiry by four committees of MPs has called on the Government to force the car industry to contribute to a new clean air fund, following the 'polluter pays' principle, to help tackle the 'national health emergency' of air pollution.¹ Evidence from the Royal College of Physicians suggests that the health impact of air pollution costs the UK £20bn a year while transport experts at the Local Government Technical Advisers Group suggest road transport currently constitutes 34% of NOx emissions and this increases in areas currently in exceedance of legal limits.²

If the UK government is serious about improving air quality, then ultimately some tighter regulation is going to be needed, as companies are unlikely to voluntarily clean up their act. Further, the government could bring forward the end date of sales of diesel and petrol engines to 2030 from 2040, like many other countries have, this would have a measurable effect on NOx emissions if there are fewer vehicles that can emit the fumes.

In addition, we believe the air quality industry could lead on lower emission HGVs, given the fact that electric powered HGVs are not market ready, and even the cleanest Diesel versions emit harmful levels of NOx, gas powered versions are promising. If the government were to support gas

¹ <https://www.transport-network.co.uk/Make-car-industry-cough-up-over-air-pollution-super-inquiry-says/14904>

² <https://www.transport-network.co.uk/Make-car-industry-cough-up-over-air-pollution-super-inquiry-says/14904>

powered HGVs and create incentive structures or lower business rates for research into them, this could help more enter the market. Further, the government could consider a charge on Diesel HGVs entering city zones to encourage the uptake of gas powered fleets. As previously mentioned, Diesel HGVs emit proportionally the most NO_x, however, they contribute 17 per cent of surface access CO₂ emissions, despite making up only 5 per cent of road vehicles.³

Q9. In your view, what are the barriers to the take-up of existing technologies which can help tackle air pollution? How can these barriers be overcome?

Currently, existing lower emission technologies are likely to be more expensive than higher emission technologies, therefore the government is going to have to provide either an incentive structure, or subsidy to level the playing field. For example, if the council had a goal to reduce the amount of polluting traffic on their roads, they could offer free parking spaces for electric vehicles, lower taxes for taxi drivers who drive EVs and subsidise bus companies which purchase gas powered buses. Although EVs have been used as an example here, there are many barriers associated with their use. After speaking with local authorities we have learned that providing charging points is extremely complicated and expensive for councils, and some have even been forced to turn down funding for them, as whilst they do receive some initial funding, they do not get the maintenance costs for them.

Additionally, EV charging points and especially fast charge points places a strain on the grid, and especially in more rural areas, this is a very costly problem, which puts local authorities off installing them. In order to overcome this, much more funding is going to be required, along with national guidelines on how to battle the issues they cause with the grid because currently, local authorities have to rely on their often limited own expertise, in order to figure out how to install them.

With regard to lower emission HGVs, such as gas powered, they are still a relatively new technology, therefore cost more than standard technology and the supporting infrastructure in its infancy. Government through duty differentials with diesel has already acted to support the take up of this clean technology. An action that Government could take at no cost but with a potentially dramatic impact is to challenge Boards of major logistics companies to consider and adopt alternative fuelled vehicles wherever possible. Board commitment to low emission, low carbon alternatives would give procurement teams permission to act differently.

Q10. In your view, are the priorities identified for innovation funding the right ones?

At the launch of South 2 East LEP it was argued that the reason some European countries are ahead of the UK in clean air and renewables is because the government does not fret about the costs of cleaner fuels, instead it just acts early and now comparatively it has secured lower prices, due to early investment and research. Although, we do also argue that when the public is concerned price is going to be a major concern that needs to be taken seriously.

Q11. What do you think of the package of actions put forward in the transport chapter? Please provide evidence in support of your answer if possible.

The UK Plan for Tackling Roadside Nitrogen Dioxide Concentrations identifies 28 local authorities in England that are required to develop local plans to address exceedances on their roads in the shortest possible time. Whilst we endorse the need to develop local plans, we believe the guidance on these plans should be strengthened, with more radical, mandated solutions. Instances, where

³ Source DfT Rail Freight Strategy September 2016

road side emissions are at dangerously high levels, should automatically require the introduction of a charge on the most polluting diesel HGVs.

Heavy goods vehicles (HGVs) are currently estimated to account for around 17% of UK GHG emissions from road transport and around 21% of road transport NOx emissions, while making up just 5% of vehicle miles⁴. This is a good reason to target HGVs with fines, although we recognise targeting cars and vans is politically unpopular and punitive to the general public. This is particularly relevant since on Thursday 17th May, the government suffered another legal blow, with the UK referred to Europe's highest court over its failure to tackle NOx pollution, which mostly comes from diesel vehicles. Given this failure, the government should firm up its actions on the most polluting diesel vehicles, which are HGVs.

Q13. What do you think of the package of actions put forward to reduce the impact of domestic combustion? Please provide evidence in support of your answer if possible.

We think the actions outlined to reduce the impact of domestic combustion do not go far enough and put public health at risk. Firstly, there is no nationwide ban on coal, which emits a lot more NOx and PM than even the most polluting diesel engine, this would have been a good step towards improving air quality. Secondly, there is no nationwide ban on open fires, the furthest the actions go is no burn days for local authorities, which in the grand scheme of things does not amount to much. On an equivalent hourly operational basis, a domestic stove is likely to emit a much higher mass of PM than a diesel vehicle meeting EURO 4/IV standards or above and greater than 50% of the PM emissions from a large Euro III HGV.⁵

It would seem too much consideration has been given to the interests of coal manufacturers, putting their profits ahead of the air we breathe. Further, wet wood is far more polluting than dry wood and there is also no nationwide ban on the sale or burning of it. A single log burning stove permitted in smokeless zones emits more PM 2.5 per year than 1000 petrol cars and has estimated health costs in urban areas of thousands of pounds per year.⁶ A worrying theme throughout the framework so far is that it lacks teeth, and instead amounts to a range of options local authorities can take, instead of a firm nationwide policy. The UN environment programme and world health organisation recommended phasing out log burning stoves in developed countries to reduce global warming as well as improve health.⁷ Wood stoves last much longer than cars, therefore allowing the installation of new open fires could mean they are emitting harmful levels of NOx and PM for up to 30 years.

New stoves pollute less than old stoves, but a recent paper found limits for eco-design wood burners allow 6 times more particulate pollution than the exhausts of HGVs and 18 times more than new diesel cars.⁸ Following on from this, we would welcome a review into the real world emissions of new stoves, as often they are much higher than when tested under lab conditions. After speaking to local authorities, they were concerned that government is purposefully vague on guidance towards clean air zones, and the result is local authorities are blamed for issues, rather than central government.

Q25. What do you think of the package of actions put forward in the leadership chapter? Please provide evidence in support of your answer if possible.

⁴ Source DfT Rail Freight Strategy September 2016

⁵ https://uk-air.defra.gov.uk/assets/documents/reports/cat11/1708081027_170807_AQEG_Biomass_report.pdf

⁶ <http://www.bmj.com/content/350/bmj.h2757/rapid-responses>

⁷ <http://www.bmj.com/content/350/bmj.h2757/rapid-responses>

⁸ <https://www.theguardian.com/environment/2017/oct/08/pollutionwatch-log-fires-are-cosy-but-their-days-may-be-numbered>

The framework states that the UK government will bring forward primary legislation at the earliest opportunity in order to secure a more coherent legislative framework for action to tackle air pollution. This is very much needed, as previously mentioned the local authorities that we have spoken to have all said the current framework is unclear.

There are 28 local authorities taking accelerated action under the Air Quality Plan to help other local authorities learn from their activities. This is a welcome initiative, however, a more joined up approach is needed, with more specific guidelines, whereby a local authority must take stronger action if air quality levels regularly exceed set limits.

Additionally, 33 local authorities that have NO₂ exceedances (2018 to 2021) have been required by the government to assess if there are measures they could take to bring forward the point when they comply with NO₂ concentration limits. Instead of assessing what measures they could take, we think there should be regulations to ensure they must take radical measures because ultimately public health should trump any economic concerns. This would only be in instances where problem areas repeatedly exceed safe levels.

Q26. What are your views on the England wide legislative package set out in section 9.2.2? Please explain, with evidence where possible.

We welcome the new clean air legislation that will enable the Transport Secretary to compel manufacturers to recall vehicles and machinery for any failures in their emissions control system and make tampering with an emissions control system a legal offence. It is this sort of legislation which will be most effective against tackling clean air, rather than just optional guidance. The government says it 'will update outmoded legislation on dark smoke' from chimneys and underused provisions on Smoke Control Areas to bring them into the 21st century with more flexible, proportionate enforcement powers'. Instead of greater flexibility of power, we think the government should mirror their tough action on transport manufacturers and instead ban open fires, a wider range of harmful fuels, and make the regulations on 'cleaner burners' tighter because real world tests demonstrate far higher emissions than in lab tests. In terms of air quality, wood and coal stoves are far more polluting than even the worst performing diesel engine, therefore it is only right that those responsible for the most pollution face the strongest controls.

Q27. Are there gaps in the powers available to local government for tackling local air problems? If so, what are they?

The problem is less so that local government does not have powers to tackle local air problems, and more so that they lack the funding and strong national backing for clean air zones. Currently, local authorities are underfunded and barely have enough money to maintain the roads properly, let alone maintain expensive electric charging points and new technologies. Following from this, funds should be more fairly allocated, as often cities like Manchester receive a lot of funding, whereas others receive a lot less proportionally. Additionally, local authorities have told us the clean air zone framework is too vague, and confusing.

Instead, what is needed is a more uniform framework which ensures local authorities know what is required of them. For example, it could set hard guidelines which would require the setup of a charging zone if a specific area regularly exceeds air quality limits. As previously argued, a charge against Diesel HGVs could be effective in reducing emissions and encouraging the uptake of gas powered HGVs. In its drive for devolution, the government has been keen to give local areas more responsibility, but sometimes too much responsibility and freedom can lead to things not getting done. Further, local authorities are not always going to be experts on the environment or law, often their knowledge is not specialist, and therefore some clearer, stronger regulations would go a long way towards tackling air quality.

Q28. What are the benefits of making changes to the balance of responsibility for clean local air between lower and upper tier authorities? What are the risks?

As mentioned, under the existing system few local authorities consider themselves to have a problem or need to take action on domestic wood and coal burning even though nationally this source accounts for 38% of PM2.5 emissions. Following from this, lower tier local authorities need to face a stronger legislative framework to enforce action in problem areas. As previously mentioned, we think that this framework should be legislated for nationally, rather than allowing local authorities the freedom to not take action if they so choose.

Q29. What improvements should be made to the Local Air Quality Management (LAQM) system? How can we minimise the bureaucracy and reporting burdens associated with LAQM? 10. Progress against targets

The duties of the LAQM require local authorities to review and assess air quality in their area from time to time, however, we think that real time results should be made available in local areas on electronic signposts. After it is set up, this would reduce bureaucracy in getting out the results as they would be shown in real-time. The benefit of this would be that the public are supplied with direct information, which would be likely to influence their opinions on how well the local authority is doing, in essence, it would be more democratic than the current arrangements. Clearly, the framework needs to become clearer and encourage all local authorities to work collaboratively across departmental boundaries. It also needs to have key focuses on particular aspects of the emissions sources, for example, it could have a focus on chimneys, as well as exhaust pipe emissions.

Q30. What do you think of the package of actions in the strategy as a whole?

There are many promising proposals and actions outlined in the strategy, however, as a general comment, we think the government should be more radical and willing to invest in potentially more expensive, but lower emission fuels. We do think engaging more, and being more transparent with the public is a positive step, as people deserve to be informed about hazards to their health. Phasing out coal-fired power stations and moving to cleaner energy sources is a good step toward reducing harmful emissions, however, a nationally backed ban on burning coal in homes, as well as open fires should be considered because it emits much more harmful emissions than a diesel engine.

The two most problematic areas of the framework are around EV charging and off grid properties. As the Government seems to have made up their minds on EVs, they now need to give local authorities the funding and guidance to be able to implement it properly. This will be a challenge due to the constraints it can place on the grid. Instead, there must be a clear pathway to delivering lower carbon fuels and technologies at a similar price to the consumer. As previously mentioned, the government must drop its aversion to clean fuels and technologies that cost them more than current more polluting fuels and find some sort of incentive structure to ensure they become competitive for consumers. Finally, we believe the Government should introduce a charge on Diesel HGVs entering cities, to encourage companies to switch to lower emission gas powered HGVs.