

## EIC RESPONSE TO CLEAN AIR STRATEGY 2018 CONSULTATION

EIC is the leading trade association for the UK environmental goods and services sector. Many of our members are involved in tackling air pollution, either as consultants focused on modelling and analysis or as technology firms developing air pollution control technology. As an organisation we have worked with government on air quality policy for many years, and many of our members were directly involved in the development of the London Low Emission Zone. We are also involved in waste management and resource efficiency, and some points raised in this response are relevant to that sector.

### Key recommendations:

- Match the GLA's hyperlocal monitoring system at a national level to improve public awareness of air pollution.
- Fund the display of visible public information on real-time air quality for public places.
- Enshrine the target to halve the number of people exposed to PM pollution above WHO guidelines in legislation and ensure that the new environmental body holds government to account in meeting that target.
- Strengthen proposals on innovation by including:
  - Funding for demonstration opportunities and testing facilities, to avoid bottlenecks in developing and deploying innovative technologies.
  - A clearer, longer term policy roadmap that provides an investment framework for innovation.
  - An end to market distortions such as the availability of red diesel for NRMM.
  - Proper enforcement of air pollution policies.
- Improve public information about indoor air pollution, its causes and its effects.
  - Introduce a standardised, affordable suite of IAQ tests with an associated rating scheme, to be integrated into an expanded Energy Performance Certificate called an Environmental Performance Certificate.
- Ensure the Clean Air Zone frameworks encourage charging zones as an effective way of reducing air pollution.
- Ensure that there is a commonality of regulation between local authority areas on air quality to reduce business compliance costs.

The rest of this response answers the specific questions set out in the consultation document.

### **1. 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.**

Air pollution is an exceptionally complex environmental and public health challenge. Given the resources (both financial and in terms of behaviour and policy change) that must be mobilised if we are to tackle this challenge successfully, it is vital that our analysis of the

problem is accurate and reliable, both in terms of physical monitoring and modelling and analysis. Specifically:

- We welcome the additional £10m of funding for modelling but question whether this is sufficient.
- We agree with the centralising of monitoring data, and would argue that the accessibility of information is key to improving public awareness about air pollution.
- The aim should be to match the ambition of the GLA, which is creating a system of 'hyperlocal' air quality monitoring, which will allow London residents to check local air quality to the accuracy of a single address.
- The opportunities opened up by private sector remote sensors to produce data sets that can be integrated into air quality data (or used to expand it) should be seized, e.g. the work by EIC member SeeSense with Manchester  
<https://seesense.cc/blogs/hub/cityverve-making-cycling-better-in-manchester>

**2. 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?**

For the public, there is a need to balance the complexity of the data and health impacts with enough clarity of presentation to enable busy members of the public to take notice of the information. In addition to a centralised portal there should be public displays giving real time information on local air quality with a benchmark for reference (e.g. legal Limit Values). These displays could be near schools and other urban landmarks.

**3. 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.**

EIC strongly supports the goal to halve the number of people exposed to PM pollution above WHO guidelines, and the proposal to review progress against this target in 2022 and to consider more challenging milestones. The Government should go further and enshrine the overall target and milestones in the proposed Environment Act. The proposed 'environmental watchdog' should then advise the government on whether it is making sufficient progress and the likely efficacy of its existing policies, and have the power to use legal action to take government to court if it is failing to meet the targets.

The new powers for targeted local action (we assume this refers to the Clean Air Zone agenda, and the NRMM powers referred to later in the document) are welcome, but must be complemented with the provision of adequate resources for enforcement.

The proposed new 'appraisal tools and accompanying guidance' to ensure health impacts of air pollution are taken into account is welcome – there may be value in ensuring this is joined up with Defra's work on developing new appraisal and guidance systems on natural capital.

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

The UK-Air website <https://uk-air.defra.gov.uk/> is a good starting point, but requires a further campaign to increase its visibility. The website also requires a section on the sources of air pollution, which shows where air pollution comes from and possible ways to reduce exposure (such as using quieter walking routes, avoiding car use where possible), and how individuals can reduce their contribution to the problem (i.e. not idling car engines etc)

There is also no mention of indoor air pollution on the UK Air website, which, considering we spend 90% of our time indoors, should be considered an important aspect of air pollution.

There are a number of simple solutions available to improve indoor air quality, such as ventilation, and the UK Air website should reflect this.

**5. What do you think of the actions put forward in the environment chapter? Please provide evidence in support of your answer if possible.**

Creating a strong linkage between air pollution and its impact on the natural environment can raise awareness of the issue and encourage public action.

**6. What further action do you think can be taken to reduce the impact of air pollution on the natural environment? Where possible, please include evidence of the potential effectiveness of suggestions.**

No EIC view.

**7. 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.**

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

**9. 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?**

This section answers questions 7, 8 and 9.

The emphasis on innovation in an air quality policy document is both unusual and welcome. We support the government's focus on clean growth, considering the environmental goods and services sector is one of the fastest growing in our economy. Clean technologies and services can be a key export for Britain post-Brexit, particularly to less developed countries as they become more focused on solving their environmental challenges. UK environmental exports current account for about 0.6% of the global environmental goods and services market – if we could increase that share by half we would create an additional 40,000 jobs by 2025.

The actions set out in the document focus on making policy more joined up across departments, and addressing the distorting impact that red diesel tax policy has on part of the market. Both these issues are important, but by themselves will not be sufficient to unlock the innovation potential in this area.

Barriers to innovation in this field include:

- The limited scale and hence access to internal funding of many of the firms in this field. This means they cannot easily weather the 'feast or famine' issues of lack of demand caused by lack of regulation or enforcement (e.g. limited bus/coach diesel retrofit demand between the end of the London Low Emission Zone implementation and 2017) followed by huge demand which they cannot easily scale up to meet (e.g. the combination of London ULEZ, Scottish Low Emission Zones and Clean Air Zones all being rolled out concurrently).
- Uncertainty of market demand – e.g. the lack of clarity over local Clean Air Zone policies means that companies are reluctant to invest in significant R&D on technology for certain types of equipment because they cannot predict whether market demand for that technology will be sufficient to repay that investment.
- Lack of capacity/opportunity around testing opportunities e.g. the Millbrook Testing Centre cannot provide enough testing capacity for the number of innovative firms who have technology to test; another example would be the difficulty of securing a large scale trial of photocatalytic treatments that could help air pollution etc.

To support innovation effectively, the strategy therefore needs to be strengthened to include:

- Funding for demonstration opportunities and testing facilities, to avoid bottlenecks in developing and deploying innovative technologies.
- A clearer, longer term policy roadmap that provides an investment framework for innovation.
- An end to market distortions such as the availability of red diesel for NRMM.
- Proper enforcement of air pollution policies – firms will not invest in new innovative technologies if they believe consumers will be able to use cheaper, non-compliant technology with little risk of being caught instead.
- Specific innovation funding in priority areas (see answer to Q.10 below)

### **Areas of potential for UK leadership**

We would consider the following areas as potential areas for global leadership, with strong existing markets and available technologies.

- Air quality consultancy.
- Monitoring and modelling, with London instituting a world-leading hyperlocal monitoring system.
- Diesel retrofit – for applications such as buses, HGVs and NRMM.
- Alternative fuels – LPG through repowering vehicles, LPG infrastructure, dual fuels, fuel blending, biodiesels.
- Application of photocatalytic treatments.
- Low emission and hybrid generators.

### **10. In your view, are the priorities identified for innovation funding the right ones?**

We would add one new priority: photo-catalytic treatments (PCTs). PCTs have already proved effective across the world and been applied commercially for a range of applications, and there is significant UK expertise in their use. In terms of air pollution, PCTs do have a depolluting effect in laboratory conditions however there is a debate over their depolluting effectiveness at scale in real world condition. EIC will shortly publish a summary of the latest research in this field which suggests that there is a reasonable possibility that PCTs correctly deployed at scale could have a meaningful effect on localised air pollution (as part of a much broader package of policy and technological solutions). Innovation funding could support trials under controlled conditions to determine more clearly the evidence for this to enable a decision about their use to be made.

In terms of the proposed priorities, we broadly agree that the priorities identified are suitable with the following comments.

In relation to PM emissions, further investment in monitoring is particularly required.

For VOCs – funding should target household products and building development. Further investment also needed into low-cost sensors for homes, and to improve public education on indoor air pollution.

For NRMM – potential areas to target are biofuels, fuel cells, electric, hybrid and LPG. This would need to be accompanied by funding for infrastructure to encourage uptake. The red

diesel tax rate has a negative impact of innovation in this area by creating unfavourable market conditions for clean alternatives.

For HGV – battery technology is currently unsuitable for HGVs, companies are currently investing in their future fleets at this time so funding here should be prioritised.

**11. 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 Road to Zero Strategy and Air Quality Plan for NO<sub>2</sub> must be fully integrated with the wider Clean Air Strategy. To achieve clean air, full electrification of vehicles is the end goal. However there are short-term solutions available to limit harmful emissions. Our 2015 report ‘A Clear Choice for the UK’ found the most cost-effective method of reducing NO<sub>x</sub> and PM<sub>10</sub> emissions to be retrofitting buses with DPF and SCR technology. Our study also found electric vehicles to be, by far, the least cost-effective method of abatement in the short term, which supports the need for cost-effective measures that can have an immediate impact to be prioritised.

**NOx results:**

Technology option	Total impact to 2020			Total impact to 2030		
	Net cost (NPV)	NO <sub>x</sub> savings	Cost of NO <sub>x</sub>	Net cost (NPV)	NO <sub>x</sub> savings	Cost of NO <sub>x</sub>
	£m	tNO <sub>x</sub>	£/tNO <sub>x</sub>	£m	tNO <sub>x</sub>	£/tNO <sub>x</sub>
Electric cars	3,233	1,472	2,196,676	2,315	2,155	1,073,812
Euro 6c diesel cars	408	1,024	398,108	-56	1,451	-38,355
Bus retrofit	131	19,084	6,842	161	27,846	5,769
Renewable diesel generators	18	463	38,719	56	1,544	36,534
Photo-catalytic treatment	11	276	38,932	11	331	32,443

**PM10 results**

Technology option	Total impact to 2020			Total impact to 2030		
	Net cost (NPV)	PM <sub>10</sub> savings	Cost of PM10	Net cost (NPV)	PM <sub>10</sub> savings	Cost of PM <sub>10</sub>
	£m	tPM <sub>10</sub>	£/tPM <sub>10</sub>	£m	tPM <sub>10</sub>	£/tPM <sub>10</sub>
Electric cars	3,233	77	42,235,116	2,315	110	21,011,638
Euro 6c diesel cars	408	74	5,499,833	-56	106	-526,898
Bus retrofit	131	481	271,697	161	575	279,245
Renewable diesel generators	18	17	1,080,046	56	55	1,019,096
Photo-catalytic treatment	11	36	297,296	11	43	247,747

We support the proposals for a series of Port Strategies. This should go further than the requirements of the EU Alternative Fuels Directive and as a minimum should include feasibility studies for shore-to-ship electrical supply.

We would argue that the Strategy misses out an aspect of liquid fuels, and fails to recognise the difference between *fossil* and *liquid* fuels. If fossil fuels are cleaned to reduce water content and particulates, this can achieve up to 6% reduction in fuel usage and therefore carbon. This method can also reduce exhaust emissions by up to 15% on both modern Euro VI and older engines.

We would broadly agree that modal shift away from road is important to reduce transport emissions. This means that government must commit to a long-term framework for investment into cycling and walking infrastructure, and also encourage other modal shift options such as utilisation of river transport in lieu of lorry transport for commercial and industrial use. This has positive benefits both for air quality and transport congestion – as shown in the Port of London Authority’s Air Quality Strategy.

**12. Do you feel that the approaches proposed for reducing emissions from Non-Road Mobile Machinery are appropriate or not? Why?**

We support the government's proposals to grant Local Authorities powers to impose minimum standards for NRMM. EIC has worked with the GLA to introduce similar standards for London, although currently these are being implemented through the planning system. We would strongly advocate that standards at the national level should be implemented into legislation, and that local authorities are provided the necessary resources to employ skilled inspectors to enforce these standards.

We would strongly support the proposal to introduce a register of NRMM to enable local enforcement.

**13. 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.**

The proposals include some positive steps. However in light of the fact that 38% of PM2.5 emissions come from the 10% of UK homes (2.5 million) which have an open fire or wood burning stove, we would recommend considering the following additional measures:

- Updating and extending smoke control areas.
- Prohibiting the installation of new wood burning stoves within smoke control areas, particularly in major cities.

Whilst legislation is being introduced to prohibit the sale of most polluting fuels, we have concerns that this will be difficult to enforce with the burning of wood which has a moisture content of >20%.

**14. Which of the following measures to provide information on a product's non-methane volatile organic compound content would you find most helpful for informing your choice of household and personal care products, and please would you briefly explain your answer?**

- **“A B C” label on product packaging (a categorised product rating for relevant domestic products, similar to other labels such as food traffic light labels)**
- **information on manufacturer website**
- **leaflet at the point of sale**
- **inclusion in advertising campaigns**
- **other option**

**ABC label on product packaging:** Very helpful  
**Information on manufacturer website:** Quite helpful  
**Leaflet at the point of sale:** Very helpful  
**Inclusion in advertising campaigns:** Very helpful

We are keen to support measures that develop an awareness of indoor air quality and its importance to health and wellbeing within the general public. We strongly believe that promoting/highlighting the NMVOC content of household and personal care products would empower people in the same way that food labelling has empowered them to make healthy choices in their diet. Furthermore, it will encourage manufacturers to develop more low NMVOC products. Currently, information on manufacturer websites tends to be too technical for many people to decipher and there is no advice on low NMVOC alternatives that the customer could be considering.

Label products to highlight those containing the most harmful NMVOCs responsible for short-term irritating or longer-term more serious health effects. This labelling, similar to allergy warnings on food packaging, would alert and protect consumers who have a strong reaction to such chemicals, e.g. those suffering from asthma or other respiratory conditions and those suffering from multiple chemical sensitivity (MCS).

**15. What further actions do you think can be taken to reduce human exposure from indoor air pollution?**

We spend around 90% of our time indoors, and millions of homes around the UK have unhealthy levels of indoor air pollution, with low-income households particularly effected.

Awareness of indoor air quality is key to reducing human exposure to indoor air pollution. Therefore we would advocate for the introduction of a standardised, affordable suite of IAQ tests with an associated rating scheme. This will allow the public to make informed choices about the products they purchase.

The Energy Performance Certificate has been a successful tool in increasing public awareness of energy efficiency in our buildings. Considering the significance of indoor air pollution and the detrimental health impacts it could cause, EIC advocates for the expansion of the Energy Performance Certificate into an **Environmental Performance Certificate**.

This new certificate would also require an indoor air quality test to be undertaken as part of the process of sale or letting, then the property would be assigned an Air Quality score of A-G, and some recommendations would be provided to improve the indoor air quality of the home.

The government could introduce a 5% VAT rebate for products and services that reduce indoor air pollution in the interests of public health.

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

No EIC view.

**17. What are your preferences in relation to the 3 regulatory approaches outlined and the timeframe for their implementation: (1) introduction of nitrogen (or fertiliser) limits; (2) extension of permitting to large dairy farms; (3) rules on specific emissions-reducing practices? Please provide evidence in support of your views if possible.**

No EIC view.

**18. Should future anaerobic digestion (AD) supported by government schemes be required to use best practice low emissions spreading techniques through certification? If not, what other short-term strategies to reduce ammonia emissions from AD should be implemented? Please provide any evidence you have to support your suggestions.**

Yes.

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

No EIC view.

**20. We have committed to applying Best Available Techniques to drive continuous improvement in reducing emissions from industrial sites. What other actions would be effective in promoting industrial emission reductions?**

While the BAT approach has had some success in reducing emissions from, for instance, the energy industry, it can also discourage innovation as it provides steady market demand for existing abatement technology without challenging industry to go further. Post-Brexit there is a case for revisiting the use of BAT, though any changes to the BAT framework must be undertaken with the full and early consultation of industry. This partnership approach, with a common purpose and strategy between industry and government is crucial in ensuring the success of the framework.

**21. Is there scope to strengthen the current regulatory framework in a proportionate manner for smaller industrial sites to further reduce emissions? If so, how?**

No EIC view.

**22. What further action, if any, should government take to tackle emissions from medium plants and generators? Please provide evidence in support of your suggestions where possible.**

No EIC view.

**23. How should we tackle emissions from combustion plants in the 500kW-1MW thermal input range? Please provide evidence you might have to support your proposals if possible?**

No EIC view.

**24. Do you agree or disagree with the proposal to exempt generators used for research and development from emission controls? Please provide evidence where possible.**

No EIC view.

**25. 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.**

Actions in this area must recognise that leadership on air quality must come both from national government and from local government. Currently, there is too much focus on local authorities, which face significant restrictions to resources. National government must also take a leadership role in mitigating air pollution.

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

EIC supports the proposals to simplify current frameworks at the earliest opportunity.

The new statutory frameworks for Clean Air Zones must promote the implementation of charging zones as they, to quote the association for local authority environment directors, “will have the greatest impact in reducing air pollution in the worst affected areas over the short to medium term.”<sup>1</sup>

It must also encourage a national approach to Clean Air Zones, to ensure there is some level of regulatory alignment between Clean Air Zones. This is particularly significant for long-haul vehicles potentially travelling between different Clean Air Zones.

Adequate funding must be provided to local authorities in order to implement Clean Air Zones and then to ensure that they are being properly enforced. Given the restricted

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<sup>1</sup> ADEPT response to Clean Air Strategy consultation

parliamentary timetable due to Brexit, these legislative changes must be part of the Environment Bill.

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

Local authorities must be provided the necessary *funding* as well as powers, in order to effectively tackle local air quality problems.

Local government needs the powers to set their own emission standards for combustion engines and the ability to enforce those standards with penalties.

**28. 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?**

We would support transport departments (which are under the remit of the county councils), being given the lead role in air quality, to co-ordinate the actions of other agencies.

**29. 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?**

No EIC view.

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

The actions represent a good start but require further development and addition to be sufficient to meet the challenge posed by poor air quality. EIC looks forward to working with Defra to do this.

**31. Do you have any specific suggestions for additional or alternative actions that you think should be considered to achieve our objectives? Please outline briefly, providing evidence of potential effectiveness where possible.**

See answers to other questions above.

**32. If you have any further comments not covered elsewhere, please provide them here.**