

The Transport Committee

Reply to the call for evidence submitted
by: Clean Air in London

11 October 2011

Sulphur emissions by ships

1. The Transport Committee has invited written evidence on the implementation of the International Maritime Organisation (IMO) and European Union (EU) regulations on sulphur emissions by ships with a view to holding an evidence session in October. Further details can be seen at:

<http://www.parliament.uk/business/committees/committees-a-z/commons-select/transport-committee/news/sulphur-new-inquiry/>

2. Clean Air in London (CAL) is pleased to respond to this call for evidence. CAL is a not for profit organisation with a mission that includes campaigning to achieve urgently and sustainably at least World Health Organisation (WHO) guidelines for air quality throughout London.
3. CAL is independent of any government funding, has cross-party support and many supporters, both individuals in London and organisations. CAL provides a channel for both public concern and expert opinion on air pollution in London. This document provides both general and expert comments in response to the consultation. Further details can be seen at:

<http://www.cleanairinlondon.org/>

4. EU governments – including the UK Government – called for emission reductions at source when the ambient air quality and cleaner air for Europe directive was adopted. This is actually documented in an Annex to the air quality directive. This can be downloaded from the link below (see second last page). It would be hypocritical of the UK government to say ‘we cannot do anything locally because it is all background pollution’ and at the same time oppose one of the very directives that could help to bring down background pollution. Similarly, it would show the Mayor of London of London in his ‘true colours’ if he is not making similar protestations to those of CAL given his oft repeated excuse that London’s air pollution problems are caused in significant part by background and/or ‘transboundary’ air pollution.

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:152:0001:0044:EN:PDF>

Mayor of London claims shipping makes a ‘critical contribution’ to breaches of air quality laws

5. London has the worst air pollution in the UK and some of the worst in Europe. The Mayor of London stated on page 21 of his Air Quality Strategy dated December 2010:

“Sources such as aviation, rail, shipping and industrial sites do not constitute a significant portion of London-wide emissions to air, but they can make a critical contribution to local air pollution hotspots.” [CAL emphasis]

6. If the Mayor is correct, this means that shipping in one of four sources of air pollution in London that could be responsible for triggering – where road traffic is already a problem (e.g. Marylebone Road) – unlimited lump sum and daily fines for breaches of EU air quality laws.
7. CAL considers that the Mayor is likely to be understating rather than overstating the impact on London of harmful emissions from shipping and Thames River-traffic.
8. Harmful emissions from shipping are on the rise – while land-based emissions slowly reduce – even though ship-based mitigation measures are relatively cheap compared to other measures.
9. Please refer to Volumes 1 and 2 of Defra’s Air Quality Strategy published in 2007. The diagram in paragraph 124 on page 43 of Volume 1 identified shipping measures as having huge net present value benefits (with the lower end of the range still significantly positive) compared to any other mitigation measures other than Euro engine emissions standards (which showed negative net present value at the lower end of the range). Further detail is included in Volume 2: page 180 shows annual net present value results of shipping measures through the IMO of £245m to £576m and 576,000 to 1,100,000 life years saved (2010 – 2109); and page 207 refers to the Air Quality Expert Group’s main recommendations including *“Given the significant influence of transport emissions, measures which reduced the use of road vehicles, shipping and aircraft would be highly beneficial”*.

Volume 1

<http://www.defra.gov.uk/publications/2011/03/26/air-quality-strategy-vol1-pb12654/>

Volume 2

<http://archive.defra.gov.uk/environment/quality/air/airquality/strategy/document/s/air-qualitystrategy-vol2.pdf>

Health impacts of air pollution in London

10. Using the same language used for alcoholism, obesity and smoking, the best estimate is that 4,267 deaths in London in 2008 were attributable to long-term exposure to anthropogenic and non- anthropogenic fine particles (PM_{2.5}) at an average loss of life for these people of 11.5 years.
11. Following the clarifications in COMEAP’s (Committee on the Medical Effects of Air Pollutants) ground breaking and excellent recent (2010) report on how to express the mortality effects of air pollution, CAL proposes new phrasing to improve the communication of public health risks in general and air pollution in particular. In essence, the estimate of 4,267 deaths in London in 2008 attributable to long-term

exposure to PM_{2.5} at an average loss of life of 11.5 years is calculated after eliminating the effect of dozens of other possible risk factors (e.g. educational status as a surrogate for income and smoking) to produce a pure number assuming air pollution is the sole cause of those deaths.

12. The estimate of 4,267 extra or excess deaths is a good one for comparing the effects of air pollution with the effects of other causes such as alcohol, active or passive smoking, obesity, diet etc which are including air pollution, almost certainly air pollution played some part in shortening the life of a much larger number of individuals in London. It is not possible to estimate that number reliably but given that much of the impact of air pollution on mortality is linked to cardiovascular deaths, it is more reasonable to consider that air pollution may have contributed to all 15,800 deaths due to cardiovascular causes in London [in 2009] (i.e. one in three of all deaths) at an average additional loss of life for these people of some three years (at typical ages for cardiovascular deaths e.g. 15% of which are before age 65).
13. Nitrogen dioxide (NO₂) is not just a molecule as the Government would like us to believe. World Health Organisation (WHO) guidelines and UK and European legal standards have always addressed exposures and health effects of individual pollutants or indicators (such as PM₁₀ mass, an indicator of a complex pollution mixture with multiple sources). Achieving guideline concentrations for individual pollutants, such as NO₂, may therefore bring health benefits that exceed those anticipated on the basis of estimates of a single pollutant's toxicity. London has the highest annual mean concentrations of NO₂ of any capital city in the EU27. NO₂ limit values and deadlines must be complied with in full.
14. Scientific research published since the Environmental Audit Committee's last inquiry into air quality has shown that those living near roads travelled by 10,000 or more vehicles per day on average could be responsible for some 15-30 per cent of all new cases of asthma in children; and of COPD (chronic obstructive pulmonary disease) and CHD (coronary heart disease) in adults 65 years of age and older. The same study further estimated that, on average for all 10 cities studied, 15-30 per cent of exacerbations of asthma in children, acute worsening of COPD and acute CHD problems are attributable to air pollution. This burden is substantially larger than previous estimates of exacerbations of chronic diseases, since it has been ignored so far that air pollution may cause the underlying disease as well. Related research indicates that associations of asthma with traffic-related pollution from nearby sources at schools were independent of estimated effects of exposures at homes. CAL has found 1,148 schools in London within 150 metres of such roads and a total of 2,270 within 400 metres.
15. Action must be taken urgently to protect those near living or attending school near the busiest roads. The Government must launch within weeks a massive campaign to build public understanding of the dangers of air pollution with advice on how people can protect themselves (i.e. adaptation) and reduce air pollution for themselves and others (i.e. mitigation).
16. We need the Government and Mayor Johnson to play their part in tackling an invisible public health crisis with as many early deaths attributable to air pollution in London in 2008 as we thought occurred during the Great Smog in 1952 (i.e. 4,267 compared to 4,075). This action must ensure full compliance with air quality laws throughout the UK.

Legal situation

17. The MARPOL Annex VI standards were internationally agreed and unanimously adopted by the IMO in 2008. By law they have to be implemented by all parties to the Annex in accordance with the terms of the Convention. The transposition of the standards into EU law would provide an efficient enforcement mechanism and offers a clear regulatory framework ensuring harmonized transposition of the limit values. A prompt adoption of the standards into EU legislation and a clear commitment concerning the application of the 0.5% global standard in 2020 are now necessary to provide sufficient clarity to the shipping and refinery sector when it comes to future limits and compliance dates.

Recommendations

Key action to reduce shipping emissions needs to include the UK supporting:

- i. the IMO's 2008 adopted revised MARPOL Annex VI i.e. 0.1% sulphur in Sulphur Emission Control Areas (SECAs) from 2015; and 0.5% sulphur globally from 2020;
- ii. the European Commission's proposal on the revision of sulphur-in-fuels directive i.e. same standards as above plus a 0.1% passenger ship standard from 2020;
- iii. improvements in the European Commission proposal e.g. a passenger ship standard to apply from 2015 and be extended to cover also cruise ships and an extension of SECAs to cover all EU sea areas etc.;
- iv. shore-side electricity (already in several European and American ports e.g. Port of Gothenburg);
- v. London ports joining – if they have not already done so – good initiatives, such as the Clean North Sea Shipping (CNSS) project and the Clean Shipping Index (CSI); and
- vi. the designation of all European sea areas as NO_x (i.e. oxides of nitrogen) emission control areas (NECAs) where stricter NO_x emission standards would apply. This should extend to the European Commission considering regional measures for controlling NO_x emissions from the existing fleet as it will take 30 years for the MARPOL provisions to take full effect and in the meantime the harmful effects of shipping NO_x will continue to grow.

18. In CAL's view, the first priority should be support for the European Commission's proposal on the revision of the sulphur-in-fuels directive, in particular the 0.1% sulphur limit in SECAs as of 2015 and the 0.5% sulphur limit in 2020.

19. In this regard, CAL urges you to note statements by the Commission in 2008 when the air quality directive was adopted. In essence it said that emission reduction at source is important and that the Commission will adopt a number of laws that should help cities and 'non-attainment areas' in meeting the standards.

20. Here are some excerpts from the text of the European Commission's declaration:

- i. "The Commission takes note of the text adopted by the Council and the European Parliament for the Directive on ambient air quality and cleaner air for Europe. In particular, the Commission notes the importance attributed by the European Parliament and the Member States in Article 22(4) and recital 16 to Community measures for the abatement of air pollutant emissions at source."

- ii. “— in 2008 the Commission foresees new legislative proposals that would:
— address the sulphur content of fuels including marine fuels,”
- iii. “— The Commission also continues to push for substantial emissions reductions from ships at the International Maritime Organisation and it is committed to bringing forward proposals for Community measures should the IMO fail to deliver sufficiently ambitious proposals as foreseen in 2008.”

This can all be found in the official journal of the European Union on the last two pages of the original version of the air quality directive, which is behind this link:

<http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=OJ:L:2008:152:0001:0044:EN:PDF>

Close

- 21. Clean Air in London would welcome the opportunity to give oral evidence to The Transport Committee on the situation in London regarding air pollution at ‘hotspots’ and the health impact of air pollution.