NSCA's response to the consultation on AQEG's draft report – 'Air quality and climate change: a UK perspective'

NSCA recognise that anthropogenic emissions interfere with natural processes and influence atmospheric composition in complex ways. At the detailed level traditional analysis of both pollutants and their impacts into air quality and climate change categories breaks down. Similarly mitigation options are closely inter-linked. Developing a robust understanding of the interactions in order to inform policy making is very important. As a contribution to this, the AQEG report is warmly welcomed.

We also welcome the opportunity to comment on the draft report. This note provides comments on both technical and policy matters. We include both for completion here, though will approach Defra directly regarding the latter, since they fall outside of the terms of reference of the AQEG consultation.

This note is heavily informed by the recent NSCA/GLA workshop (draft meeting report attached). Though the response is independent to this event and the conclusions stemming from it.

Technical matters

a) We suggest that the report does not reflect the scientific case for greenhouse gas reduction with sufficient urgency. The mismatch between present policies and science based climate objectives should be more heavily stressed. Failure to do so is a key omission in itself and importantly can act as a barrier to acceptance of the study's more involved analysis and arguments.

b) The report considers a range of different climate forcing mechanisms and attempts to sum up and compare the impacts. The diverse nature of these effects causes difficulty, which is compounded by the significant uncertainties involved. We suggest that greater caution is needed and more thought be given as to how these comparisons will be used.

   - It may be reasonable to 'sum' such different quantities for the purpose of climate modelling and making predictions, but less so when defining metrics to drive policy action. NSCA would like to see the latter emphasise the long term 'legacy' pollution (e.g CO2) over shorter lived 'interference' (e.g. aerosols).
   - It is questionable, whether in light of the significant uncertainties and complexities involved, whether any 'credit' should be given to pollutants providing climate cooling effects. By this logic, climate metrics, intended to inform/drive mitigation policy, should focus solely on warming contributions.

c) The concepts of trade-off and win-win are fundamental to the study, however they are defined only very briefly. There is a danger that this will add fuel to simplistic and damaging debates once the report is published. A more detailed treatment of these concepts, which identifies the pitfalls and difficulties would help to avoid this. The following points should be stressed:

   - Since there is no practical method for 'weighing-up' short term health impacts against long term climate 'legacies', attempting to do so is fruitless. Decisions as to whether to apply a short/med term air quality measure are more appropriately addressed in the context of traditional short term cost-benefit and cost-effectiveness considerations. In this context, understanding the carbon debits associated with planned measures remains vital, so that they can be factored into the wider process of managing sustainable carbon dioxide budgets.
   - The report considers trade-off in a very narrow sense. In practice a host of other factors are equally relevant (e.g. for vehicle after treatment, this includes factors such as road speed, engine size, and miles travelled). The priority given to these different parameters is a value judgement, which should be made transparently. Up-front trade-off between AQ and CC, without reference to these other factors is not transparent and also (implicitly) applies questionable values.

- Similarly with win-win solutions, the narrow frame of reference can be misleading. Most obviously, some critics will identify potential conflicts with the competitiveness and growth agenda, but other environmental/social factors such as noise and social inclusion may also be relevant. It is anticipated that intelligent policy design and systemic transformation will enable AQ/CC win-wins, without (or with acceptable) trade-off on all relevant factors. However, in the short/medium term it is likely to be these 'external' factors, which are blocking win-win action. These complications should be mentioned, not so as to detract from the desire to achieve win-wins, but to help clarify the context, overcome the barriers and, perhaps also, to help explain why trade-off action on air quality may be appropriate and necessary.

d) The conclusion that '*the measures which most clearly benefit CC and AQ are those which result in the reduction in the demand for a product or service or those that enable the same activity to be carried out more efficiently'* (p128) is very important, not least because of its contrast with the thrust of current (and planned) air quality measures. These are largely techno-centric AQ/CC trade-off's. Consequently, restricting the analysis of mitigation options to these same current/planned measures is unduly restrictive and self-defeating). Policies such as environmentally optimised road user charging, the extension of low emission zones to consider CO2 performance, more stringent fiscal regimes and the effective enforcement/reduction of speed limits, should be included and their potential win-win air quality and climate change benefits highlighted.

e) Assumptions regarding the Uk's future energy baseline are critical in determining future air quality and air quality policy. The baseline used in the AQEG study appears to be unrealistic. For example coal is likely to play a larger role in future. Also the 4% CO2 reduction by 2020 is inconsistent with (a) a 'soft climate landing' and (b) latest UK and EU climate policy signals. These anomalies and their implications should be considered within the report.

   Similarly when the significance of air quality / climate trade offs is assessed, these should be considered in terms of 'climate policy consistent reductions' as well as predictions based on the latest energy baseline (i.e. the significance of an effect relative to a 4% reduction by 2020, is different to the significance relative to a 20-30% reduction).

f) At the recent NSCA/GLA workshop, three areas were suggested where the AQEG report is lacking in detail:

   - Biogas for road transport has real potential and should be given more attention.
   - Biomass (e.g. implications for air quality? imports and associated transport emissions?)
   - Lifestyle adaptation responses (e.g. retrofitting air conditioners to houses, driving to work rather than using the hot and stuffy Underground).

   At the time, it was indicated that the final report would be giving greater consideration to Biomass and Biogas, though that adaptation issues are outside of the scope. We look forward to reading the updated version and also suggest that Defra consider further work on the links with adaptation.

g) The report identifies five categories of mitigation measures: conservation, efficiency, abatement, fuel switching and behavioural change. Later in the chapter 'demand management' is used as a category, though is not defined in the preamble. Finally in the conclusion non-technical options are defined as conservation, efficiency and behaviour change. Though. looking at the example given, conservation (of energy) is achieved by behaviour change resulting in efficiency improvements! Perhaps abatement, fuel switching, efficiency improvement and demand management/behaviour change are the appropriate categories? greater clarity and consistency would be helpful

Policy matters

1. Air quality and climate change policy must be joined up and the interactions need to be considered at local, regional and national levels.

a) The greatest priority must be given to 'transformational win-win solutions', which support movement towards both cleaner air and a lower carbon society.

b) Air quality and climate change provide complimentary drivers in support of win-win providing payback over a range of time scales. Capturing this synergy through joined up policy making will enable stronger and more ambitious policy objectives.

c) Treatment of multiple sources and multiple impacts needs to reflect the nature of the risks involved - pollutant lifetime is a key factor. Minimising the climate forcing legacy passed on to future generations must be a primary goal.

d) Concerns over air quality and climate change trade-offs also need to be tackled, particularly with regard to action on air quality in the short and medium term. Air pollution continues to cause significant harm and all action should be considered to reduce this.

e) Air quality solutions, which incur a carbon dioxide debit, should not be discounted without very careful consideration. Indeed in many cases they can justifiably be considered as part of the cost of 'acceptable operation.' The debit incurred should be managed along with all other long-lived greenhouse gas emissions in relation to the climate forcing legacy identified above and in the widest possible policy context.

f) NSCA have not yet properly considered the complex interactions and impacts surrounding ozone formation, which the AQEG report identifies. However, it would appear that tackling this increasingly important pollutant (and its associated chemistries) represents a major challenge in terms of joined up policy making.

g) The localised nature of some impacts and some mitigation options suggest that it is important that the understandings and findings generated by the AQEG study are disseminated and applied at local and regional levels as well as nationally.

h) In formulating policy mechanisms to achieve these objectives, a realistic mix of positive incentives as well as more directive measures is required to drive and lock-in the changes and benefits.

2. The present regulatory regime is imbalanced and fails to address emerging priorities.

a) The present regime provides hard statutory limits and legislation on air quality pollutants (especially PM and NO2) and weak (often voluntary) signals on GHG emissions. These inherent inconsistencies drive micro-management of selected issues, at the expense of fundamental systemic transformation. Not surprisingly this leads to conflicts and perverse trade-off's

b) The contrast is particularly evident at the local/regional level. Current policy drives 'blinkered' action on air quality, while progress on climate change is driven independently often by 'willfull individuals' operating in spite of rather than as a result of the policy framework. Stronger linkage of local (hot-spot driven) action on air quality with that on climate change, and indeed with 'wider area' air quality emissions reduction, is urgently required.

- An extreme example is local transport planning, where air quality is one of four shared priorities, but climate change is relegated as one of a multitude of (optional) quality of life concerns.
- Similarly, spatial planning has important implications for local air quality, personal exposure and lifestyle carbon intensity. Decisions taken today strongly influence local and regional emissions in the long term. Poor integration and weak prioritisation in the face of other competing interests is a real concern.

c) Ozone is an increasingly important pollutant and it appears that it is presently slipping between the present focus on localised air quality problems and wider carbon dioxide driven climate policy. Clearly, neither provides an adequate framework for control.

3. Responding to the study

a) It is important that the knowledge and focus generated by the AQEG report is rapidly translated into joined up policies and action.

b) The report raises significant complexity and uncertainty. It must not become an excuse for delayed or weakened action nor a weapon used to play the different concerns off against each other.

c) The further technical work, which the report recommends is important, particularly understanding lifecycle emissions and improving both the basis and tools for assessment and decision making. This work should be used to fine tune policies as new knowledge emerges. However, it must not delay action and policy development in the short and medium term.

d) We suggest that Defra takes a strategic approach in addressing the concerns raised. This should include a formal response to the AQEG report by the end of 2006, which outlines what they perceive to be the key strengths and weaknesses in current policies, processes and practices at local, regional and national level with regards to integrated action on air quality and climate change. It should also identify options, plans and timelines for addressing the problems identified.

e) In developing this response, AEQ should work internally with other Defra departments and across central government more widely. Engagement, with external stake holders is also important.

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