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Air Quality Initiative of Regions (AIR) Position Paper – European Commission Air Pollution Policy Review 2011-2013

Introduction

The Air Quality Initiative of the Regions (AIR) welcomes the commitment from the European Commission to involve regional authorities in its review of air quality policy in the EU and submits this position paper for the Commission's consideration. In addition, AIR members will continue to work closely with national authorities to ensure that, as far as possible, the views of regions are represented in future formal decision making processes.

It is vital that a revised Air Quality Directive helps regional authorities to take the air quality management measures that will deliver improved health for the population of the EU. Over the past decade Europe's regions have taken decisive action to help improve local air quality. However, further support from the Commission and Member States is required to help combat pollutant emissions at source.

Summary

AIR proposes:

A commitment to protecting human health:

- Given the proven health impacts of poor air quality AIR believes European citizens have a right to clean air. AIR members are committed to delivering improvements in air quality in their regions and look to the European Commission to put in place an appropriate legal framework which focuses on protecting human health.

EU limit values:

- Simplification of the limit value regime should ensure action is targeted where there are the greatest impacts on human health. The selection of limit values should be determined by the available health evidence. AIR also believes simplification would aid effective communication of priorities to the public and policy makers.

Compliance process:

- Where all reasonable and proportionate action has been taken this should be considered in the compliance process. For NO2 this should reflect the failure of recent Euro standards to reduce NO_x emissions from road vehicles as expected and the consequent absence of measures not entailing disproportionate costs to address the large compliance gaps that are now being seen.

Compliance assessment:

- Compliance assessment of limit values should be based on monitoring supported by modelling, focusing on those areas where there is relevant human exposure.

- Where monitoring data is used this should cover a longer time period than a single year (as for ozone) to take into account meteorological fluctuations and

other variations. A longer time perspective gives a better representation of air quality and associated trends. Transboundary pollution, geographical and meteorological conditions should be taken into account as well.

- Where exposure concentration obligations and exposure reduction targets are used member states and regions should have flexibility in choosing which are the most appropriate areas for any such obligations given variations in regional conditions and priorities, within reasonable parameters.
- Modelling standards should be introduced and harmonised where possible and emissions databases improved, while maintaining flexibility to reflect regional special requirements.

EU-level action:

- Sectoral emission standards (eg. Euro standards) should be introduced as soon as feasibly possible and the timescales linked to limit value compliance dates. Further support should be offered by the European Commission to incentivise their early adoption.
- Action at EU level is needed to promote energy efficiency and control all relevant emissions, including those from biomass boilers, combined heat and power systems, tyres and brake systems, pavement ware and road dust re-suspension, open and closed fire places, stoves, ships, non-road mobile machinery and motorcycles. Appropriate emissions standards should cover both new and existing systems (i.e. through retrofit).
- There should be greater consistency in European-level environmental policy to prevent any contradictory effects on air quality (e.g. focus on reducing carbon emissions resulting in dieselisation, promotion of biomass without ambitious emission standards etc) and maximise co-benefits (e.g. noise, new mobility concepts, energy efficiency).
- Air quality should be made a specific priority within EU funding (e.g. structural funds) with a particular focus on supporting additional action at regional level.

EU-wide co-operation

- The Commission should help reduce transboundary pollution by bringing Member States and regions together.
- Through the AIR Group and other fora, regions and cities are keen to share their experiences to maximise the application of best practice at regional level across the European Union. The Commission should identify appropriate ways of supporting and encouraging such activities.

Background

The Air Quality Initiative of Regions (AIR) was founded in 2011 and represents 12 regions from seven European Union (EU) Member States. These are: Baden-Württemberg, Catalunya, Emilia-Romagna, Greater London, Hessen, Lombardia, North Rhine-Westphalia, Piemonte, Randstad, Steiermark, Veneto and Vlaanderen. Together these regions represent 22% of EU GDP and 18% of the EU's population (87.6 million inhabitants).

These regions, which include some of the most densely populated and industrialised areas of the EU, have been at the forefront of air quality management over recent years. However, despite these efforts, these regions, like many others in the EU, are struggling to meet some of the limit and target values set in the Air Quality Directive.

AIR welcomes the European Commission's review of air pollution policy, which was launched on 30 June 2011. At a conference in Brussels on 10 November 2011 organised by AIR, the group committed to work with all European institutions to contribute a regional perspective to the review of the Air Quality Directive. This paper sets out AIR's priorities for the review.

Limit values

What is the experience: EU limit values are valuable in that they oblige authorities to take measures to reduce pollutant concentrations, and therefore improve public health. However, the current regime set out in the Air Quality Directive is extremely complex – there are seven limits or target values for particulate matter alone. Faced with a panoply of targets, it is hard for policy makers to focus measures where they will have the maximum impact to protect public health. It also makes it difficult to communicate the air quality problem to the public. In addition, it is vital that regional authorities commit to meeting health-based targets, but retain the freedom to meet them in ways that best suit their local circumstances and reflect local conditions such as geography.

AIR proposal: AIR proposes the simplification of the limit value regime to ensure action is targeted where there are the greatest impacts on human health. The selection of limit values should be determined by the available health evidence. AIR notes that Black Carbon may be a particularly useful indicator for both transport-related air pollution and carbon emissions.

Compliance process:

What is the experience: Euro standards were the primary policy lever to reduce emissions from vehicles and they have been proven to be ineffective. Natural turnover in the vehicle fleet was expected to deliver significant reduction in NOx emissions as tighter Euro standards came into effect. In addition, a number of cities and regions have introduced Low Emission Zones to accelerate the natural replacement cycle to bring forward emissions benefits. These entailed considerable costs to vehicle operators such as small businesses.

AIR proposal: Where all reasonable and proportionate action has been taken this should be considered in the compliance process. For NO2 this should reflect the failure of recent Euro standards to reduce NO_x emissions from road vehicles as expected and the consequent absence of measures not entailing disproportionate costs to address the large compliance gaps that are now being seen.

Compliance assessment

What is the experience: The assessment of compliance through monitoring has limitations. The representativeness of a monitoring station is hard to determine and even a comprehensive monitoring network is generally insufficient to calculate with any accuracy population exposure across an entire zone. Variations of monitoring

approaches between Member States also make international comparisons very difficult.

Furthermore, fluctuations in annual meteorology (eg. low wind speed, atypical prevalent wind direction, low precipitation) can determine whether a limit value is exceeded or not in any one year. In addition, transboundary pollution can contribute significantly to background concentrations within a region as can geographical factors. Such factors are outside the control of regional or even national authorities.

AIR proposal: Monitoring data supported by modelling would be a more accurate way to establish exposure across a zone. While the range of uncertainty for modelling is undoubtedly higher than for monitoring, a compliance regime that considered the likelihood of exposure as shown by modelling would complement monitoring data. General standards for monitoring would have to be developed, including guidelines for population exposure (e.g. the distance from the kerb at which concentrations should be modelled). It is also important that any revised Directive should include clear guidelines on the location of monitoring sites that are reported to the Commission, to ensure that they genuinely reflect population exposure. In addition, metrics for exceedences that are more closely associated with the extent of exceedences and are more easily understood by the public – such as exposed population – need to be considered.

By basing compliance on longer averages, abnormal meteorological conditions in one particular year would be less influential in determining compliance with limit values. In addition, in the same way that assessment currently allows deductions for natural sources and sea salt, recognising that Member States have no control over these sources, a methodology needs to be developed to allow some flexibility for transboundary pollution, geographical effects and meteorological conditions.

EU-level action

What is the experience: There are European Union mechanisms in place to encourage the use of Best Available Techniques (BAT) for many sectors that contribute to pollution. The most important are Euro standards for road vehicles. Yet the failure of recent Euro standards to deliver the expected emissions reductions has significantly restricted the NO_2 management policy measures available to regional authorities (such as Low Emission Zones). This is partly due to the fact that the technology used by vehicle manufacturers to comply with emission limit values has a side effect of increasing the NO_2 / NOx emission ratio. Another cause is that the test cycle used to determine if a model meets the Euro standard does not replicate real-world urban driving conditions. It should also be noted that the Euro VI/6 standard will deliver the most significant reductions in NO_x emissions compared to previous Euro standards. Yet this standard will not become mandatory until 2014/2015 – at least four years after the NO_2 limit value deadline.

Similarly, emission standards exist for non-road mobile machinery (NRMM). Yet for this sector, the 'stage' standards are far less stringent than the Euro standards for road vehicles. Once again, the Stage IV standard, which will deliver the greatest NOx reductions, will not become mandatory until 2014.

Other sectors, including biomass boilers, fireplaces, stoves and CHP (which are becoming increasingly prevalent in urban areas) do not have Europe-wide emission

standards at all. Nor is there any Europe-wide legislation to regulate tyre and brake wear particle emissions, which in some urban areas will soon be a larger source of PM_{10} pollution than vehicle exhaust emissions. Another unregulated source is road and pavement surface wear, which EMEP/EEA calculation methodologies suggest could be significant.

AIR proposal: Emission standards for vehicles and NRMM need to be tightened as soon as new technology is feasible. In addition, the emission standard legislation needs to be aligned to limit values so that the two regimes complement each other.

Given the failure of recent Euro standards to deliver NO_x reductions, it is vital that the Commission commits to testing the NO_2 emissions from Euro 6/VI vehicles as soon as they are on the market (expected from 2013) to ensure that they are delivering the required improvements. Only then will policy makers have the confidence to introduce measures that incentivise the early uptake of Euro 6/VI vehicles. If emissions are still too high, the Commission should commit to making further changes to the test cycle and introducing a NO2 threshold to the Euro 6/VI standard.

Furthermore, the failure of earlier Euro standards with regard to NO2 combined with the fact that Euro 6/VI standard will only become mandatory from 2014/15 means that there will be a great deal of lost ground to make up. The Commission should consider establishing a fund to support early introduction of Euro 6/VI (and other technological advances) to assist with this.

The Commission should consider the need for emission standards for all biomass boilers, fireplaces, stoves and CHP sold in the EU, following the model of Euro standards for road vehicles. The Commission also needs to encourage research leading to the development of low-wear brake and tyre systems. To encourage the industry to support this research, an intention could be stated to set standards for brake systems in the vehicle type approval regime and to include tyre wear in the EU labelling scheme for tyres. The Commission should also promote research, and if necessary legislation, regarding low-wear road surfaces and road dust re-suspension attenuation.

There should be greater consistency in European-level environmental policy to prevent any contradictory effects on air quality (e.g. dieselisation, promotion of biomass without ambitious emissions standards, especially for small combustion units). To facilitate this the Commission's review of air quality policy in the EU should encourage cost-benefit analysis that integrates air quality, climate change, energy and noise impacts. This would discourage the promotion of measures that are cost effective separately but that in combination lead to high cost. An example is the promotion of small-scale CHP installations in urban areas which could increase NO_x and PM emissions locally. Such holistic cost benefit analysis would also encourage the adoption of measures that have synergetic effects – for example resource-efficient energy production, energy efficiency programmes or schemes that focus on reducing Black Carbon emissions.

In order to assist regions to implement these sectoral measures, air quality should be made a priority within the EU budget. In particular, funds should be made available for implementing cleaner technology, rather than simply for technical development

and exchange of best practice. These funds should be made available at regional level where possible, to reflect the central role played by the regions in delivering air quality management measures.

EU-wide co-operation

What is the experience: many regions find transboundary sources of pollution problematic as Member States have no control over these sources. Some regions such as Steiermark and Slovenia have successfully worked together to address transboundary pollution.

Likewise, broader networks to share experiences are an important way of disseminating best practice. The Commission should identify appropriate ways of supporting and encouraging such activities.

AIR proposal: The Commission should help reduce transboundary pollution by bringing Member States and regions together.

Through the AIR Group and other fora, regions and cities are keen to share their experiences to maximise the application of best practice at regional level across the European Union. The Commission should identify appropriate ways of supporting and encouraging such activities.

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