EURELECTRIC comments following the Fifth meeting of the Stakeholder Expert Group on the EU Air Policy Review

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A EURELECTRIC paper

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- Commitment, innovation, pro-activeness

Social Responsibility

- Transparency, ethics, accountability

EURELECTRIC comments following the Fifth meeting

of the Stakeholder Expert Group on the EU Air Policy Review

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It is not clear how the new targets for air quality will be integrated in the future 2030 framework for climate and energy policies. There is a risk that an air quality policy that is too stringent, without room for flexibility or too close to MTFR, may run against climate/energy policies and targets and be a barrier to cost-efficient investment choices. It is crucial that developments in EU Air Quality policy are assessed in a framework which is consistent with EU energy and climate policy developments. For these reasons, 2030 is a more appropriate date for more ambitious emission ceilings as by this date it is expected that the power sector across Europe will be significantly decarbonised (with co-benefits for air quality emissions).

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The study has focused on 2025 as the year by which further emission abatement measures should be implemented and National Emission Ceilings Directive (NECD) emission ceilings set (without any real justification of why only 2025 is considered). In our view it is crucial that developments in EU Air Quality policy are assessed in a framework which is consistent with EU energy, climate, resource-efficiency and transport policy development. For these reasons 2030 is a more appropriate date for more ambitious emission ceilings as by this date it is expected that the power sector across Europe will be significantly decarbonised (with co-benefits for air quality emissions). Recent energy policy decisions across several EU Member States reflect the transformation in favour of renewable energies and energy efficiency accompanied with massive CO_2-reductions.

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The study proposes high environmental ambition levels, informed by an assessment of marginal costs and marginal benefits. This introduces a new and untested approach into the TSAP review, where previously the discussion has been informed by an assessment of cost effectiveness of measures. There remain significant issues with benefit methodologies (and even more so with the estimation of marginal benefits) and we would urge that an assessment of cost-effective measures should continue to be used as a more robust basis for the discussion of environmental ambition levels.

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The delivery of the baseline will require significant investment for implementing the Industrial Emissions Directive (IED) and the upcoming updated BREF Large Combustion Plants (LCP). The high ambition levels going beyond the current legislation baseline would require further investments by operators of power plant beyond those required to comply with the Industrial Emissions Directive. The consequences of investing – or not investing – in existing power plants have wide implications, for example on the security of electricity supply and the management of the transition to low carbon generation. These are complex factors that have not been considered in this study but are very material to an overall policy decision. We support the view already expressed by Commissioner Potocnik that 'for industry we have a solid legal framework in place – the Industrial Emissions Directive'. We would like to stress that the baseline is already

ambitious and that the IED is a dynamic process whose implementation will have consequences for many years to come.

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The report appears to conclude that Europe-wide 'end of pipe' abatement measures would ensure compliance with EU air quality standards in urban areas. From our perspective there are likely to be more cost-effective behavioural measures for traffic in urban areas to control air quality - this should not be seen as the role of controls on large combustion plant (for example).

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The IIASA baseline for 2005 and 2010 is still not in line with the data of the member state inventories reported under the NECD and the UN CLRTAP. Major differences can be observed in some countries with respect to SO2, NOx and PM emissions. On the EU level, there is a notable difference between the aggregated reported member states emissions for PM 2.5 and the attributed emissions of the GAINS model. Differences are mainly due to different structure of sectors and differing assumptions of the GAINS model as compared to the methods used for setting up member state inventories. So the key question is how progress shall be measured (using member state specific inventory methodology) against the targets (calculated via IIASA methodology). Baseline and progress must be assessed in a consistent manner.

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The ‘optimized’ scenarios leading to national emission ceilings are characterized by emission levels very close to the Maximum Technically-Feasible Reductions. Due to the steepness of the marginal abatement cost curve in this range abatement costs, and the attainability of ceilings, will be very sensitive to uncertainties of the underlying energy model and decarbonisation path in the assessment. Although no proper uncertainty analysis is presented in the report, preliminary sensitivity studies are included in the report and these show that, for example:

- If the previously released ‘best view’ projection (TSAP-2012 instead of TSAP-2013) is used as the basis, then a number of the proposed emission ceilings would be unachievable. In other words a number of the emission ceilings are so close to being unattainable that changing the underlying projections could make several Member States unable to comply with NECD.
- NOx emissions show a critical dependence on the future performance of Euro-6 under real-world driving conditions, and this could strongly affect the cost (and feasibility) of achieving the proposed Ceilings.

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- We agree that the reduction of black carbon emissions would benefit both the air quality and climate change policies. However, power plants subject to the IED regime are a very small contributor to total black carbon emissions, and existing particulate control methods are also effective in abating black carbon emissions. More research is needed to gather scientifically sound data on black carbon emissions by sectors and suitable correlations with other air pollutant emissions or process parameters, starting with agreed methodologies and inventory work at member state level (analogous to PM 2.5). At this stage, there should be no additional measurement or reporting obligations at site-level required. Due to the currently limited knowledge and data on black carbon emissions, it would be premature to adopt

binding national emission ceilings or targets for black carbon under the current revision of the NECD and the TSAP.

- As the standards for particulate matter (PM) move to lower concentrations, and in particular as national exposure reduction targets lead to reductions in PM2.5 concentrations below limit and target values, it is increasingly important to understand which fractions of PM are responsible for the reported health effects. Current legislation, in accordance with WHO guidelines, assumes that all components of PM are equally harmful to human health although latest epidemiological evidence suggests that primary emissions from traffic are the main causal agent for air pollution health effects in urban areas and, from a toxicological viewpoint, it is difficult to explain why ambient concentrations of secondary sulphates and nitrates would be harmful to human health. Treating all PM components as equally harmful reduces the effectiveness of emission reduction policies and may result in costly emissions abatement which has little or no benefit to health. This approach could even allow an increase in adverse health impacts, if emission reduction policies allowed the ambient concentrations of toxic components to rise, providing the increases are more than offset by reductions in the concentration of non-toxic components. Future PM standards should be aimed at reducing the more toxic components of PM, rather than total PM concentrations regardless of composition. In order to develop such standards, which should be based on evidence and best science, it is vital to continue research into the relative toxicity of PM components, e.g. toxicological studies and cohort studies with PM speciation. Consideration should also be given to standards based on well-established chemical or biological pathways for harm rather than simple mass measurements (e.g. measuring the ability to cause oxidative stress).

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The study assesses the magnitude of 'regret investments', where investment is made in pollution abatement equipment in response to increased environmental ambition, but the plant is then closed before the return on investment can be made. 50% of these regret investment costs are calculated to occur in the UK. The IIASA report points out that these 'regret investments' are associated with emissions abatement measures on UK coal plant (beyond the requirements of the Industrial Emissions Directive). It also points out that the draft PRIMES 2012 Reference scenario suggests an almost complete phase out of coal from power generation between 2025 and 2030 in the UK. While this may be a theoretically interesting concept to many, it is of significant practical concern, and would present a substantial risk, to operators and investors in power plant. This risk to investment in the UK would be substantially mitigated if the revised emission ceilings were set for 2030. The costs associated with these 'regret investments' will have significant implications for UK customers. This reinforces once again that 2025 is too early for the setting of NECD emission ceilings. A careful analysis of “regret invextment” is needed across Europe as this may happen in other member States. In addition to the views from the PRIMES model member States energy projections should be considered when setting the targets in order to avoid unachievable ceilings.

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Relevant information on Small Combustion Plants (SCP) is often not sufficiently available at member state level. Therefore, it has to be highlighted that significant further work on member state practices, case numbers and plant types (boilers, gas turbines, engines) is needed for the pursued cost-benefit-analysis with particular emphasis on the 1 – 20 MW capacity classes.

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We are concerned that the implementation of an IED permitting regime would lead to additional administrative costs for the operators (compliance with appropriate requirements concerning the periodic monitoring of soil and groundwater (Art. 14 (1) e)); commissioning the baseline report (Art 22 (2)); assessment of the state of soil and groundwater upon definitive cessation of activities (Art. 22 (3)) and the national authorities (inclusion of SCP in the national environmental inspection plan (Art. 23 (3)); systematic appraisal of the environmental risks at installation level (Art. 23 (4)); public participation in the permit procedure (Art. 24 (1)); access to justice for members of the public concerned (Art. 25)).

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We would ask that the following requirements and derogations of the IED are sufficiently considered when assessing cost and benefits of the inclusion of SCP under the IED regime for the different capacity classes:

- The aggregation rules under the common stack-approach (Art. 29): many small SCP are made up of smaller combustion units. When assessing different classes and abatement options the impact of the aggregation rules on case numbers, number of stacks, and the presence of different aggregate types that make up the common plant, need to be considered.

- The minimum desulphurization rate derogation (Art. 31) for combustion installations using domestic solid fuels.

- In addition, due consideration must be given to combustion installations with short operating time in nuclear power plants :

  Emergency installations: their only function is to guarantee the power supply for cooling of the reactor core in case of loss of external electricity supply. Normally, they are stand-by equipment with a total capacity that could exceed 20 MWth, but in general they work one at a time and for only short periods.
  Auxiliary boilers: they only operate at full capacity for two-three weeks a year during plant maintenance outage or start-up, whereas for the rest of the time they are either in stand-by or in shutdown situation.

Permits issues by national Nuclear Regulatory authorities demand periodic tests and set out the operational criteria for this plant. If an IED permit is also required, it could create conflicts between the needs of operation due to nuclear security and the fulfilment of the emissions

requirements of the permit. It would also be appropriate to take into consideration not only the power capacity, but also the operating time.

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- When setting the EU ELVs for all capacity classes to ELVs for 50 – 100 MWth for existing plants the important derogations for existing elder plants operating less than 1500 hour per year (see Annex V part 1) need to be considered in the cost-benefit-analysis to avoid excessive costs and exaggerated environmental benefits from extending the IED requirements to SCP.

- The important derogations for both existing and new gas turbines and gas engines operating less than 500 hours per year (see Annex V parts 1 and 2) must be considered.

- The IED obligations for emission monitoring (Annex V part 3) and assessment of compliance (Annex V part 4) need to be considered as a general additional cost factor under a full IED regime. In this context, particular emphasis should be placed on the requirement for periodic measurements of air pollutants including mercury (Part 3 n° 3 and 4).

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A business-as-usual (BAU) approach must be based on a reasonable projection of activity rates, plant closures and new built with particular emphasis on the existing RES and CHP support schemes aiming at significantly decentralizing the energy supply system over the forthcoming years in many member states.

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