Expert Meeting On "Addressing The Unforeseen Impact Of Structural Changes On European Air Quality"

Warsaw, 11th and 12th February 2019

European Commission

Scope of the meeting

Most of the economic sectors impacting the EU air quality are undergoing or are planned to undergo structural changes driven by policies pursuing goals other than air quality control.

Since mid-2018, the JRC has started to develop a science for policy activity, named **"pressure on air"** aimed at **identify and anticipate** the impacts on citizens of unforeseen pressures on air quality driven by coming structural changes brought about by EU policies.

Opening session – Feb 11th

- **13.15 – 14.00 Opening and scene-setting**

- Welcome and introduction to the meeting (Fabio Monforti-Ferrario - JRC)
- Short views from European Court of Auditors (Katarzyna Radecka-Moroz)
- Short views from World Bank (Klas Sander)
- The "pressure on air" concept (Elisabetta Vignati - JRC)

Mobility – Feb 11th

14.00 – 16.00 Mobility

- Electromobility (Andreas Unterstaller – European Environmental Agency)
- Urban ammonia emissions (Cristina Reche - Spanish National Research Council)
- Plug-in hybrid vehicles (Ricardo Suarez Bertoa – JRC)
- Autonomous vehicles (Carlos Lima Azevedo – Danish Technical University)

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Energy and climate – 11th Feb

16.15- 17.50 Energy and climate policies

- Biomass and biofuels (Uwe Fritsche - International Institute for Sustainability Analysis and Strategy)
- Natural gas infrastructures (Eliza Dyakovska – Gaz System S.A.)
- Electricity market (Francesco Gracceva – Italian National Agency for New Technologies, Energy and Sustainable Economic Development)

Key messages – Transport

Transport and energy system interaction

- AQ benefits are expected to rise in tandem with grid decarbonisation
- NH_3 urban emissions could be very relevant at a local scale, especially in environments with high NO_X and SO_2 concentrations
- Importance of spatial and time variation monitoring and modeling of pollutants and GHGs

- Research in integrated modeling and simulation of mobility and emissions is needed

- Need to increase coordination of research seeking evidence for policy making among EC-DG services facing post-6 vehicle emission standards

- While public health has been identified as important driver in Automated Vehicles (AV) policy, heterogeneous practice shows otherwise.
- Open questions: What about freight? & … What about the rest of the world?

Key messages – Energy

- A “corridor” exists for supplying sustainable bioenergy up to 2030
- Solid biomass AQ emissions will remain on the table
- Opportunity: Natural gas infrastructures will mobilize renewable methane
- Gas industry is working hard to decrease fugitive emissions.
- Power systems have to deal with increasing intermittency -> impacts AQ
- Power system needs “reconfiguration” and intelligent use of excess generation
- Embodied Energy links changes and policies across the world
- Life cycle thinking links changes along the supply chain

Key messages – Behavioural changes

- Rebound effect is about energy efficiency, but more importantly about energy/power supply.
- In real-life energy systems and people seek for more power rather than efficiency. This is all more relevant when capital costs are high compare to variable costs (i.e. fuel).
- Will Electrical Vehicles (EV) and automation drive an unforeseen Rebound Effect?
- Energy poverty exists, also in Europe and the problem must be faced taking into account indoor and outdoor AQ.
- Needs for policy blending towards integrated transport systems, and more investments in public transport and cycling mobility (technology is not a solution per se)
- More attention needed to new concepts, i.e. interchange parking, land use of public space to reduce mobility needs where possible and shared mobility (business model !)

Guiding questions - FAIRMODE

- Following ECA's concerns and the summary of the expert discussion, do you have further suggestions/hints to address upcoming issues that might unexpectedly impact European air quality?

- What should we do to better integrate air quality policies with other sectorial policies? Which research gaps should be addressed? Which tools should be created or further developed? Any gap of knowledge?

- Should FAIRMODE adapt/change to account for these issues and better support MS on these aspects?