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Item 3 of the provisional agenda

Progress in the implementation of the 2014–2015 workplan

Report of the Task Force on Techno-economic Issues

Summary

At its thirty-third session (Geneva, 8–11 December 2014), the Executive Body to the Convention on Long-range Transboundary Air Pollution adopted decision 2014/2 (see ECE/EB.AIR/127/Add.1), upgrading the Expert Group on Techno-economic Issues to the Task Force on Techno-economic Issues. In accordance with the mandate set out in the annex to decision 2014/2, the Task Force is required to report on progress in its work to the Working Group on Strategies and Review.

The enclosed report by the Task Force on Techno-economic Issues contains information on the progress in the implementation of the 2014–2015 workplan for the Convention (ECE/EB.AIR/122/Add.2) with respect to activities relevant to the Task Force, as well as the outcomes of the last plenary meeting of the Expert Group (Brussels, 10 October 2015) and the first plenary meeting of the Task Force (Brussels, 25 June 2015).



I. Introduction

1. At its thirty-third session (Geneva, 8–11 December 2014), the Executive Body to the United Nations Economic Commission for Europe (ECE) Convention on Long-range Transboundary Air Pollution (Air Convention) adopted decision 2014/2 (see ECE/EB.AIR/127/Add.1), upgrading the Expert Group on Techno-economic Issues to the Task Force on Techno-economic Issues, with the mandate as set out in the annex to that decision. By the same decision the Executive Body noted that, following the discontinuation of the Task Force on Persistent Organic Pollutants by decision 2013/22, any further relevant work with regard to persistent organic pollutants should be organized under ad hoc groups, if needed, or under the new Task Force on Techno-economic Issues. Furthermore, given the discontinuation of the Task Force on Heavy Metals as of 1 January 2015, its experts were invited to participate in the activities of the new Task Force on Techno-economic Issues.

2. The final annual meeting of the Expert Group on Techno-economic Issues was held on 10 October 2014, and the first meeting of the new Task Force on Techno-Economic Issues took place on 25 June 2015. Both meetings were hosted by the Italian National Agency for New Technologies, Energy and Sustainable Economic Development (ENEA) at its liaison office in Brussels. The present document contains information on the outcomes of those meetings and on the progress made in the implementation of the 2014–2015 workplan for the Convention (ECE/EB.AIR/122/Add.2) with respect to activities relevant to the Task Force.

A. Attendance

3. Forty-two experts participated in the Expert Group meeting in 2014, including experts from 11 Parties to the Convention: Belarus, Belgium, Croatia, France, Germany, Italy, Netherlands, Russian Federation, Sweden, Switzerland and United States of America. Twenty-eight experts attended the first meeting of the Task Force on Techno-economic Issues in 2015, including experts from 13 Parties to the Convention: Austria, Azerbaijan, Belarus, Croatia, France, Germany, Italy, Netherlands, Poland, Russian Federation, Spain, Sweden and Switzerland.

4. The representatives of the Interprofessional Technical Centre for Studies on Air Pollution (CITEPA), the French-German Institute for Environmental Research at the Karlsruhe Institute of Technology (KIT-DFIU) and the French Agency of Environment and Energy Management (ADEME), as members of the technical secretariat of the Task Force, attended both meetings, as did the representatives of the European Commission and the ECE Air Convention secretariat. The following organizations were also represented at the meetings: Électricité de France (EDF); EMISIA (a spin-off company of the Aristotle University of Thessaloniki); the Energy Research Centre of the Netherlands; the European Association of Internal Combustion Engine Manufacturers; the European Association of Metals; the European Automobile Manufacturers' Association; the European Cement Association; the European Chemical Industry Council; the European Federation for Print and Digital Communication; the European Petroleum Refiners Association; the European Solvents Industry Group; the European Solvents Volatile Organic Compounds Co-ordination Group; the European Steel Association; the European Suppliers of Waste to Energy Technology; the International Association for Catalytic Control of Ship Emissions to Air; and the International Institute for Applied Systems Analysis (IIASA). The meetings were also attended by a number of experts from the private sector.

5. Simultaneous English-Russian interpretation was provided by France to facilitate the active participation of the Russian-speaking experts. The participation of experts from the

countries of Eastern Europe, the Caucasus and Central Asia was also financially supported by France. All presentations delivered at the meetings, as well as other relevant documents, are available on the new Task Force website.¹

B. Organization of work

6. Mr. Tiziano Pignatelli (Italy) and Mr. Jean-Guy Bartaire (France) chaired the meetings. A technical session on “Best Available Techniques (BATs) for mobile sources”, dedicated to the work carried out by EMISIA and IIASA and financed by the European Commission was organized back to back with the Expert Group meeting in 2014. A similar technical session took place back to back with the Task Force meeting in 2015. The 2015 session was dedicated to the work on the development of the new website of the Task Force and the Clearing House of Control Technologies, as well as to an activity related to the costs of mitigation of emissions of volatile organic compounds (VOCs) and techniques for the measurement and calculation of their emissions, carried out by the technical secretariat of the Task Force.

II. Progress in the implementation of the 2014–2015 workplan for the Convention

7. This part of the report summarizes the status of progress in the implementation of activities assigned to the Task Force in the 2014–2015 workplan for the implementation of the Convention.² The summaries are provided by each workplan item.

1. Workplan item 2.2.1 — Develop guidance document on control techniques for emissions from mobile sources and its translation into Russian

8. The development of a guidance document on control techniques for emissions from mobile sources was financially supported by the European Commission, which subcontracted IIASA and EMISIA in December 2013 to undertake a technical analysis of the BATs applicable to mobile sources of emissions and draft the document on that basis. The resulting background technical document and the draft guidance were presented by IIASA and EMISIA at the Expert Group meeting in 2014. The background technical document and the draft guidance were subsequently updated to reflect the comments provided by the Task Force experts at the meeting.

9. The revised draft guidance was again presented by CITEPA and EMISIA at the Task Force meeting in 2015, and circulated among the experts for final comments. At the same meeting, the European Commission representative introduced the current emission share of mobile sources in the four major subregions of ECE and highlighted the political context and the importance of producing the updated guidance document, along with some policy recommendations. The revised draft guidance on emissions from mobile sources (ECE/EB.AIR/WG.5/2015/4) is before the Working Group for consideration at its present session

¹ See <http://tfei.citepa.org/>.

² For detailed information about each item and its respective full title please see document ECE/EB.AIR/122/Add.2.

2. Workplan item 2.2.2 — Workshops in 2014-2015 to promote awareness and understanding, in particular in countries of Eastern Europe, the Caucasus and Central Asia

10. An awareness-raising workshop to be jointly organized by the Coordinating Group on promotion of actions towards implementation of the Convention in Eastern Europe, the Caucasus and Central Asia (Coordinating Group) and the Task Force, originally planned for June 2014, was postponed to the end of 2015 due to organizational issues and following discussions at the 2015 Task Force meeting. The workshop will aim to promote understanding in the countries of Eastern Europe, the Caucasus and Central Asia of the guidance document on control techniques for emissions of sulphur, nitrogen oxides, volatile organic compounds and particulate matter (including PM₁₀, PM_{2.5} and black carbon) from stationary sources (ECE/EB.AIR/117). The following issues were also discussed as possible agenda items for the workshop and as potential areas for cooperation between the Coordinating Group and the Task Force: (a) work on the guidelines for the calculation of VOCs emissions; (b) identification of synergies between the 1998 Protocol on Heavy Metals and the Minamata Convention on Mercury; (c) cost methodologies for large combustion plants; and (d) the Greenhouse Gas and Air Pollution Interactions and Synergies (GAINS)³ model-related methodology used by the Task Force.

3. Workplan item 2.2.5 — Develop a techno-economic tool for evaluating costs in the Large Combustion Plants Sector

11. At the Expert Group meeting in 2014, representatives of CITEPA and KIT-DFIU presented the updated tool for the evaluation of costs for implementation of abatement technologies in the power plant sector. In particular, a user interface had been developed in the Visual Basic for Applications (VBA) software to guide and facilitate the users in the application of the methodology, including the user manual. A new update of the methodology and the tool was subsequently presented at the Task Force meeting in 2015. A meeting was held in July 2015 to demonstrate and further discuss the updated methodology with experts from IIASA and the Institute for Prospective Technological Studies (IPTS), Joint Research Centre of the European Commission, in Seville, Spain. A demonstration of the methodology is also planned at the workshop for the countries of Eastern Europe, the Caucasus and Central Asia.

4. Workplan item 2.2.6 — Analyse the available Gothenburg GAINS scenarios to estimate the technical upgrade to be implemented by countries of Eastern Europe, the Caucasus and Central Asia

12. At the Expert Group meeting in 2014, the Italian co-Chair presented applications and results of the methodology, developed ad hoc, to analyse existing GAINS scenarios with the purpose of estimating the technological improvement deriving from the application of the Protocol to Abate Acidification, Eutrophication and Ground-level Ozone (Gothenburg Protocol) in selected countries in Eastern Europe, the Caucasus and Central Asia. Potential emission reductions and related additional costs of implementation were also highlighted. An ad hoc Excel macro tool developed in VBA software to perform an analysis of scenarios was subsequently introduced at the Task Force meeting in 2015. The tool will be delivered, along with the user instructions, to experts from Belarus and the Russian Federation for testing, prior to the workshop mentioned under workplan item 2.2.2 above.

³ Detailed information about the GAINS model is available from www.iiasa.ac.at/web/home/research/researchPrograms/GAINS.en.html.

5. Workplan item 2.2.7 — Collect and provide up-to-date data for cost modelling for BAT

13. The Task Force has been continuously updating the costs data related to abatement technologies and, occasionally, consultation meetings are convened with IIASA experts with the aim of introducing updated costs data into the GAINS model.

6. Workplan item 2.2.10 — Explore abatement techniques for further reducing heavy metals emissions

14. At the Task Force meeting in 2015, the former Chair of the discontinued Task Force on Heavy Metals presented key issues related to heavy metals, following amendments to the 1998 Protocol on Heavy Metals adopted in 2012. In particular, she highlighted the need to promote the ratification of the amended Protocol and increasing awareness of the flexibility mechanisms. She also underlined potential links with the work under the Minamata Convention on Mercury. The following areas were considered priorities for future work to be carried out by the Task Force on Techno-economic Issues in this regard: (a) provision of information to Parties with regard to technical work in industrial sectors and products; (b) work on the costs of abatement techniques; (c) provision of information to Parties on studies with regard to health effects of heavy metals and particulate matter (PM); and (d) provision of support to countries in Eastern Europe, the Caucasus and Central Asia through workshops and projects in cooperation with the Coordinating Group.

7. Workplan item 2.2.12 — Serve as a regional clearinghouse of control technology information

15. At the Task Force meeting in 2015, a representative of CITEPA presented the new Task Force website and, in particular, the new Clearinghouse of Control Technology Information for primary emissions of nitrogen oxides (NO_x), sulphur dioxide, VOCs and PM, including short-lived climate pollutants (SLCPs), heavy metals and persistent organic pollutants (POPs). The Clearinghouse was linked to the website, and its establishment and maintenance was being carried out in line with the new mandate of the Task Force. The primary objective of the Clearinghouse was to serve as a reference place for dissemination of information to Parties. It would also provide a platform for relevant experts to discuss characteristics, actual efficiency and implementation issues related to the application of abatement technologies. The Task Force website would also be available in the Russian language, thanks to funds provided by Germany.

III. Other relevant discussion points at the annual meetings

16. At the Expert Group meeting in 2014, the representative of Belarus delivered a presentation on the technical and economic aspects of pollutant emission reduction in Belarus, mainly focusing on the assessment of the emission abatement potential in the country towards the emission reduction targets in 2020 in accordance with the amended Gothenburg Protocol. The analysis had showed that additional measures were required to meet the targets, with regard to ammonia (NH₃), fine particulate matter (PM_{2.5} or ≤2.5µm in diameter), and NO_x. Additional abatement costs had also been estimated. At the Task Force meeting in 2015, the representative of Belarus presented the results of an analysis of VOCs emissions (inventory and monitoring) from paint application in Belarus.

17. At the Expert Group meeting in 2014, the representative of the Russian Federation delivered a presentation on the new policy instruments to promote better air quality through the application of BATs in the Russian Federation. At the initial stage incentives would be introduced for the industry and relevant by-laws would be adopted. In addition, national

BAT reference documents would be adopted to facilitate the gradual shift to the BAT approach. Finally, the process of transition to BAT and integrated environmental permits for all entities or enterprises should take place in the period 2022–2030. At the Task Force meeting in 2015, the Russian representative provided an update on the proposed activities to be carried out jointly by the Coordination Group and the Task Force, as reported under the workplan item 2.2.2 above.

18. At the Expert Group meeting in 2014, representatives of ADEME and CITEPA presented a new activity to be carried out in 2015, concerning the cost estimation methodology for abatement technologies for VOCs emissions, related to the use of solvents in industry and referring to the major sources of emissions considered in annex VI to the Gothenburg Protocol.

19. At the 2015 meeting, a representative of CITEPA presented an update of the work on VOCs emissions from solvents, focusing on the plants using more than 200 tons of solvents per year, as in the EU Industrial Emissions Directive⁴ and the ECE guidelines for estimation and measurement of VOCs emissions from activities covered by annex VI to the Gothenburg Protocol (currently being developed). As first activities in 2015–2016, car manufacturing and packaging printing sectors were expected to be covered.

20. At the 2014 and the 2015 meetings, the French co-Chair of the Task Force presented the state of progress in the revision of the European Union BAT reference documents carried out at IPTS. The technical and political aspects were highlighted along with the consideration that, with the implementation of BATs, the future BATs Associated Emission Levels in large combustion plants would be stricter than the current emission limit values in the Industrial Emissions Directive.

21. At the Task Force meeting in 2015, the representative of the Convention secretariat presented an overview of the outreach activities under the Convention, and highlighted the main outcomes of the thirty-third session of the Executive Body for the Convention (Geneva, 8–11 December 2014).

22. At the same meeting, the co-Chair of the Task Force on Reactive Nitrogen under the Convention presented a proposal via a videoconference for an activity related to potential recapture and utilization of NO_x emissions, specifically addressing the representatives of industry. The importance of exploring potential reduction measures for NO_x emissions by recapture and utilization in the energy sector was highlighted. Such measures would lead to a number of potential synergies, such as greater energy and food production with less nitrogen use.

23. At the Expert Group meeting in 2014, the representative of the European Suppliers of Waste to Energy Technology presented an overview of the most efficient available technologies to abate emissions of dust, acidic gases, heavy metals, NO_x and POPs in flue gases. He highlighted that in the process of energy recovery from waste it was possible to meet strict emission limits in compliance with the EU legislation through efficient flue gas treatment.

24. At the same meeting, the representative of the Walloon Region of Belgium and the representative of the BENVITEC company presented work on the control of hexavalent chromium emissions. They explained that the emissions could pose a threat to human health and presented the results of the emission modelling simulations in Wallonia, along with a number of technological alternatives to reduce the hexavalent chromium emissions.

⁴ Directive 2010/75/EU of the European Parliament and of the Council of 24 November 2010 on industrial emissions (integrated pollution prevention and control). For details see <http://ec.europa.eu/environment/industry/stationary/ied/legislation.htm>.

25. Also at the Expert Group meeting in 2014, the representative of EDF presented an overview of the EDF projects concerning renewable energy, including projects on solar energy, on-shore and off-shore wind energy, biomass and biogas energy, energy from the sea and geothermal energy. He highlighted the great potential of renewable energy utilization along with the benefits for the environment.

IV. Draft 2016–2017 workplan for the implementation of the Convention

26. Following its 2015 meeting, the Task Force, with the support from the ECE Convention secretariat, drafted its part of the 2016–2017 workplan for the implementation of the Convention, based on the priorities expressed by the Executive Body at its thirty-third session, the past achievements of the Task Force and the tasks emanating from its new mandate. The following activities were listed among main priorities for the Task Force:

- (a) Cooperation with the countries in Eastern Europe, the Caucasus and Central Asia;
- (b) Development and consolidation of tools for analysis and measurement of emissions, as well as abatement technologies and the related costs;
- (c) Continuous update of information on the abatement technologies and costs and ensuring its availability to experts of Parties through the Clearinghouse of Control Technology Information;
- (d) Cooperation with other Convention bodies, such as the Task Force on Integrated Assessment Modelling and the Task Force on Emission Inventory and Projections.

V. Annual meetings of the Task Force

27. The next annual meeting of the Task Force is tentatively scheduled for May 2016, to be hosted by the University of Catania, in Sicily, Italy.
