

**Open-ended Working Group of the Parties to  
the Montreal Protocol on Substances that  
Deplete the Ozone Layer**  
Thirty-second meeting  
Bangkok, 23–27 July 2012  
Agenda item 12  
**Other matters**

## **Draft decision on feedstock uses**

### **Submission by the European Union and Croatia**

#### **Explanatory Note**

In decision XXI/8(3), parties requested the Technology and Economic Assessment Panel (TEAP) “to investigate chemical alternatives to ODS in exempted feedstock uses and investigate alternatives, including not-in-kind alternatives, to products made with such process agents and feedstocks and provide assessment of the technical and economic feasibility of reducing or eliminating such use and emissions.”

TEAP presented its findings in that regard in its 2011 Assessment Report and, more recently, in its 2012 Progress Report. On the basis of those findings, it can be noted that, among other things:

(a) Quantities of ozone-depleting substances (ODS) used for feedstock amount currently to over 1 million metric tons (over 433 000 ODP tons) and are expected to grow in the future. Without closer monitoring, there is a risk that significant amounts of ODS will be diverted to other uses which are either banned (e.g., CFCs, CTC) or largely limited (e.g., MB, HCFCs);

(b) Emission rates from feedstock uses remain uncertain owing to a lack of robust information that could be applied in all regions or for all processes. TEAP, however, estimates that they are probably in the range of 0.1 – 5.0 per cent, depending on the process and the level of emission controls. Even when taking only 1 per cent as the average, annual emissions would amount to about 10,000 metric tons and about 4,400 ODP tons. Since the majority (over 77 per cent) of the quantities of ODS used for feedstock are CFCs, CTC and HCFCs, which are also potent greenhouse gases, the annual emissions in terms of CO<sub>2</sub>eq would amount to approximately 12 million tons CO<sub>2</sub>eq, assuming an average GWP of 1 500;

(c) There may also be quantities of ODS used for feedstock which are not reported, and even where data is reported significant discrepancies between imports and exports can be observed;

(d) There is insufficient information available on possible alternative technologies to ODS in feedstock uses.

These observations clearly indicate the urgent need for addressing feedstock uses of ODS. Measures may include exchanging information on alternative technologies, reducing ODS emissions from such processes and closer monitoring in general.

Closer monitoring would assist parties in managing ozone-depleting substances and reducing threats to a successful phase-out. Improved reporting on feedstock would help to estimate the

quantities of ODS used as feedstock in different types of processes. The labelling of ODS containers intended for feedstock could prevent diversion to other uses of ODS.

Communicating and sharing existing knowledge on types of processes in which ODS are used as feedstock, alternatives that avoid the use of ODS and information about better products not requiring ODS feedstock will also facilitate addressing emissions of ozone-depleting substances in uses that are not relevant for the calculation of consumption. Calling for better emission controls would diminish emissions from feedstock uses but also have positive side effects in other areas, notably when CTC is used, since this is a toxic substance.

In its 2012 Progress Report, TEAP emphasized the problem of the proper classification of ODS use in certain chemical processes as feedstock or process agent. On the basis of information received from the parties concerned, TEAP clarified that the use of CTC in the process of vinyl chloride monomer (VCM) production by pyrolysis of ethylene dichloride can be considered as a feedstock use and not a process agent use. However, as the design of this process can vary significantly from plant to plant, there is a need to request those parties having VCM production that have not yet submitted information to submit information to TEAP through the Ozone Secretariat on the use of CTC in such processes in order to allow TEAP to identify whether the relevant use is process agent or feedstock use.

## Draft decision

*The Twenty-Fourth Meeting of the Parties decides:*

*Recalling* Article 1 of the Montreal Protocol, which indicates that the amount of ozone-depleting substances entirely used as feedstock in the manufacture of other chemicals shall not be counted in the calculation of “production” of ozone-depleting substances,

*Recalling also* Article 7 of the Montreal Protocol, mandating, inter alia, reporting on feedstock uses,

*Recalling further* paragraph 1 of decision VII/30, in which, inter alia, the parties specified that importing countries shall report the quantities of ozone-depleting substances imported for feedstock uses,

*Recalling* decision IV/12, in which the parties clarified that only insignificant quantities of ozone-depleting substances originating from inadvertent or coincidental production during a manufacturing process, from unreacted feedstock, or from their use as process agents which are present in chemical substances as trace impurities, or that are emitted during product manufacture or handling, shall be considered not to be covered by the definition of an ozone-depleting substance contained in paragraph 4 of Article 1 of the Montreal Protocol, and recalling also that in decision IV/12 the parties were urged to take steps to minimize emissions of such substances, including such steps as avoidance of the creation of such emissions and reduction of emissions using practicable control technologies or process changes, containment or destruction,

*Noting with concern* that the Technology and Economic Assessment Panel reported a continued increase in the global production of ozone-depleting substances for feedstock uses, and mindful that, even when emission rates are assumed to be low, the quantities emitted pose a notable threat of ozone depletion and contribute considerably to global warming,

*Mindful* that carbon tetrachloride is being used in large quantities as feedstock, which may contribute to the discrepancies observed in global atmospheric abundances of carbon tetrachloride,

*Mindful also* that most ozone-depleting substances used as feedstock can also be employed for uses that have already been phased out and, if not appropriately monitored, could pose a threat to a successful phase-out,

*Mindful further* that the identification of processes in which ozone-depleting substances are used as feedstock and the promotion of alternative technologies and superior products not or no longer requiring the use of ozone-depleting substances as feedstock will facilitate the management of ozone-depleting substances,

*Recalling* decision XXIII/7, in which the parties stated that the use of carbon tetrachloride for vinyl chloride monomer production would be considered to be a feedstock use, on an exceptional basis, until 31 December 2012,

*Noting with appreciation* the information provided by the Technology and Economic Assessment Panel in its 2012 progress report about the use of carbon tetrachloride for the production of vinyl chloride monomer,

1. To confirm that the use of carbon tetrachloride in the production of vinyl chloride monomer by pyrolysis of ethylene dichloride in the processes evaluated by the Technology and Economic Assessment Panel in its 2012 progress report is considered to be a feedstock use;
  2. To request parties with vinyl chloride monomer production facilities in which carbon tetrachloride is used and that have not yet reported the information requested by the parties in decision XXIII/7 to provide such information to the Panel before 28 February 2013 to allow it to clarify whether the use in a particular facility is a feedstock use or process agent use;
  3. To remind all parties that reporting on quantities of ozone-depleting substances used as feedstock is obligatory under Article 7 of the Montreal Protocol;
  4. To remind parties to minimize emissions of ozone-depleting substances in feedstock uses, including by taking measures to avoid emissions, such as control technologies, process changes, containment or destruction, and to replace ozone-depleting substances with alternatives to the extent possible;
  5. To call upon all parties to refrain from commissioning new production facilities using ozone-depleting substances as feedstock when alternatives to ozone-depleting substances are available for feedstock applications that meet the requirements of the products;
  6. To request all parties to identify processes in which ozone-depleting substances are used as feedstock on their territory and to report to the Ozone Secretariat by 31 January 2014 aggregated information on the processes identified, including the name of the end-products, with Chemical Abstract Service (CAS) numbers if available, and the types and amounts of ozone-depleting substances used in each process, and to update that information as new feedstock uses are identified in their territories;
  7. To request all parties to provide information to the Ozone Secretariat on new alternatives replacing any feedstock uses reported under paragraph 4 of the present decision;
  8. To request the Ozone Secretariat to publish on its website and update annually an aggregated list of feedstock uses of ozone-depleting substances and of alternatives to ozone-depleting substances for those uses reported by the parties in accordance with paragraph 4 of the present decision, to include:
    - (a) The end-products of the processes, with the CAS numbers, if available;
    - (b) The types of ozone-depleting substances used in the process;
    - (c) The quantity of the ozone-depleting substances used in the processes;
    - (d) The total quantity for each substance over all uses;
  9. To request all parties to consider introducing labelling requirements for ozone-depleting substance containers to allow for the identification of the intended use of the substances in the containers;
  10. To request the Technology and Economic Assessment Panel to continue its work and to provide, in its 2013 progress report, information as called for in decision XXI/8, in particular on the identification of alternatives to ozone-depleting substances for feedstock uses, and to assess the technical and economic feasibility of measures to reduce or eliminate such uses and emissions.
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