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EXECUTIVE COMMITTEE OF  
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Item 11(c) of the provisional agenda<sup>1</sup>

**ISSUE OF HFCs CONTAINED IN IMPORTED PRE-BLENDED POLYOLS IN THE  
POLYURETHANE FOAM SECTOR IN ARTICLE 5 COUNTRIES (DECISION 93/34)****Introduction**

1. Several of the Article 5 countries submitting stage I of their KIPs to the 93<sup>rd</sup>, 94<sup>th</sup> and 95<sup>th</sup> meetings have reported the use of HFCs contained in imported pre-blended polyols in the polyurethane (PU) foam manufacturing sector under their country programme implementation reports (CP report). Some of these countries (e.g., Cuba, Ecuador, Kyrgyzstan, Peru and Tunisia) intend to address the use of HFCs contained in imported pre-blended polyols at a future time, whether as part of stage I or a future stage of their KIPs. Other countries like Chile, which have also identified this use, are planning to eliminate it through regulations. In addition, several countries (e.g., Argentina, Chile, Colombia, Malaysia, Panama and Türkiye) have reported exports of HFCs in pre-blended polyols under their CP report or have identified the existence of these exports in their KIPs, but the specific amounts were not always available.

**Funding of HCFC-141b contained in imported pre-blended polyols**

2. In the context of the HCFC phase-out management plans (HPMPs), several Article 5 countries reported the use of HCFC-141b contained in imported pre-blended polyols under their CP reports. As HCFC-141b contained in pre-blended polyols is considered a product, it is not included as consumption under Article 7 and therefore would not be included as part of the HCFC consumption baseline nor related to compliance. The main implications of this were the following:

- (a) Foam enterprises and systems houses that purchased pure HCFC-141b, which counted as consumption, would be eligible for assistance from the Multilateral Fund, while the large majority of the foam enterprises using HCFC-141b in imported pre-blended polyols would not be eligible for assistance as the imports of HCFC-141b contained in pre-blended polyols did not count as consumption, and therefore were not related to compliance;

<sup>1</sup> UNEP/OzL.Pro/ExCom/95/1

Pre-session documents of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol are without prejudice to any decision that the Executive Committee might take following issuance of the document.

- (b) Any foam enterprise using pure HCFC-141b that had been converted to non-HCFC foam blowing technology could start using HCFC-141b-based pre-blended polyols, particularly if the alternative technology selected resulted in higher operating costs; and
- (c) Countries exporting locally blended HCFC-141b-based polyols were not reporting under Article 7 the amount of HCFC-141b contained in the exported polyols. Therefore, if the use of HCFC-141b contained in pre-blended polyols were to be funded, there should be a mechanism to account for HCFC-141b in pre-blended polyols exported by Article 5 countries to avoid duplication of funding in the exporting and importing country.

3. Upon discussions on this matter, between its 61<sup>st</sup> and 68<sup>th</sup> meetings, the Executive Committee agreed on a series of decisions to fund the phase-out of HCFC-141b contained in imported pre-blended polyols that had not been counted as consumption under Article 7 and to address the issues described above. In addition, the CP report template included a field to report use, imports and exports of HCFCs contained in pre-blended polyols. This field is also available for HFCs.

#### Funding of HFCs contained in imported pre-blended polyols

4. In the context of the KIPs, the Executive Committee has not yet agreed whether to provide funding to phase out HFCs contained in imported pre-blended polyols not reported under Article 7. At the 93<sup>rd</sup> meeting, the Executive Committee requested the Secretariat to prepare, for consideration at the 95<sup>th</sup> meeting, a brief note on the issue of HFCs contained in imported pre-blended polyols in the PU foam sector in Article 5 countries on the basis of past practice with regard to HCFCs contained in imported pre-blended polyols (decision 93/34).

#### **Relevant policies for funding the phase-out of HCFC-141b contained in imported pre-blended polyols**

5. The policies for funding the phase-out of HCFC-141b contained in imported pre-blended polyols were established over several Executive Committee meetings. These policies also addressed methods for tracking the exports of HCFC-141b contained in pre-blended polyols that were not deducted from the HCFC consumption reported under Article 7 in order to prevent funding the phase-out of these amounts in both the exporting and importing countries. The key decisions on this matter are summarized below:

- (a) Decision 61/47: This decision established that Article 5 Parties with eligible enterprises manufacturing HCFC-141b pre-blended polyols would be provided with assistance calculated on the basis of consumption of HCFC-141b sold domestically on the understanding that the full consumption of HCFC-141b by those enterprises manufacturing pre-blended polyol systems would be deducted from the starting point. The decision also established several requirements for those Article 5 countries that wished to seek assistance for the phase-out of HCFC-141b in imported pre-blended polyols, namely, the inclusion in the overarching strategy of their HPMPs of an indicative list of all eligible foam enterprises that used imported polyol systems, including the amount of HCFC-141b contained therein; inclusion in the starting point for aggregate reduction in HCFC consumption of the annual amount of HCFC-141b contained in imported polyol systems during the 2007–2009 period; inclusion in their HPMPs of a sector plan for the complete phase-out of the use of HCFC-141b in imported pre-blended polyol systems and a commitment from the country to put in place, by the time the last foam manufacturing plant had been converted to a non-HCFC technology, regulations or policies banning the import and or the use of HCFC-141b pre-blended polyol systems;
- (b) Decision 63/15: This decision established that Article 5 countries with HCFC consumption reported under Article 7 solely in the refrigeration servicing sector and with foam enterprises relying exclusively on imported HCFC-141b pre-blended polyol systems not

reported as consumption could, on an exceptional and case-by-case basis, and consistent with decision 61/47, submit a funding request for the conversion of those enterprises during implementation of stage I of the HPMP, on the understanding that inter alia there were no systems houses in the country concerned; all foam enterprises and the annual amount of HCFC-141b contained in imported pre-blended polyol, to be calculated based on the 2007-2009 average consumption excluding those years in which no production was reported, would be included therein; the eligibility of the foam enterprises would be determined at the time of the submission of the project; and the project proposal would completely phase out the use of HCFC-141b in imported pre-blended polyol systems and would include a commitment from the country to put in place, by the time the last foam manufacturing plant had been converted to a non-HCFC technology, regulations or policies banning the import and/or the use of HCFC-141b pre-blended polyol systems;

- (c) Decision 66/51: This decision related to options for a tracking system to correlate, by country, the amounts of HCFC-141b-based pre-blended polyols exported by systems houses, with the amounts used by foam enterprises in importing Article 5 countries that had been approved for phase out. It requested inter alia to consider discounting from a country's starting point for aggregate reductions in HCFC consumption the amount or average amount of HCFC-141b contained in pre-blended polyols exported for the year or years on which the starting point had been based; and invited several countries to provide the Secretariat with the best available data on the amount of HCFC-141b in pre-blended polyols exported in 2009 and 2010; and
- (d) Decision 68/42: This decision requested the amounts of HCFC-141b exported in pre-blended polyols be deducted from the starting point of those countries identified in decision 66/51 when the stage II of the HPMP for those countries was submitted; and it encouraged relevant Article 5 countries to consider establishing a national system for recording the amounts of HCFC-141b contained in pre-blended polyols imported and/or exported (where applicable) to support the ban on imports of pure HCFC-141b, as well as the HCFC-141b contained in pre-blended polyols, to be issued once all the foam enterprises had been converted, and to facilitate monitoring of these enterprises to sustain the phase-out of HCFC-141b.

6. In addition, in view of the low availability of low-GWP alternatives for certain applications such as spray foam, in approving stage I of the HPMPs, a few countries were allowed in accordance with decisions 61/47 and 63/15, to submit a project to phase out the use of HCFC-141b contained in pre-blended polyols during stage I of their HPMP, when proven cost-effective and commercially available low-GWP technology would make it possible to replace the HCFC-141b used by small enterprises. This flexibility was reflected in the Agreements between the countries and the Executive Committee (e.g., Ecuador).

#### Observations from the phase-out of HCFC-141b contained in imported pre-blended polyols

7. Funding the phase-out of HCFC-141b in imported pre-blended polyols has enabled Article 5 countries to eliminate this substance entirely from PU foam manufacturing through a sector-wide approach, through Multilateral Fund assistance provided to all eligible enterprises. This support has been particularly useful for small- and medium-sized enterprises which tend to rely on systems houses to provide them with pre-blended systems rather than blending foam systems in-house. With this support, governments committed to establishing import bans on HCFC-141b, both in its pure form and in pre-blended polyols, by a set date after all conversions were complete, as outlined in the Executive Committee's project approval decisions. This also helped prevent enterprises that were phasing out pure HCFC-141b from switching to its import in pre-blended polyols.

8. In countries where HCFC-141b in imported pre-blended polyols was not used when their HPMPs were approved, the lack of monitoring for polyol imports containing HCFC-141b threatened the sustainability of the phase-out of pure HCFC-141b by PU foam enterprises. For example, one country detected new HCFC-141b use from imported pre-blended polyols, despite the ongoing phase-out of pure HCFC-141b through conversion projects. In response, the Government committed to regularly report HCFC-141b consumption in imported pre-blended polyols in the CP data report and to implement monitoring mechanisms to ensure that converted enterprises no longer used HCFC-141b in any form.

9. When the phase-out of HCFC-141b in imported pre-blended polyols was not funded under the HPMP, enforcing controls on these polyols proved challenging, especially where some PU foam enterprises used pure HCFC-141b and others rely on imported pre-blended polyols. To sustain the phase-out of controlled substances in the PU foam sector, countries need mechanisms to monitor these substances, both in their pure form and within imported pre-blended polyols.

10. Another key observation from the phase-out of HCFC-141b in imported pre-blended polyols is that, since this was not compliance-related, it was not part of the performance-based agreements (HCFC reduction targets) or in HCFC consumption verification reports submitted with HPMP tranches. The HPMP Agreement between the Executive Committee and the country involved included the funding provided to eliminate HCFC-141b in pre-blended polyols (comprised in the overall funding) and specified the amount to be deducted from the starting point, but it lacked provisions for commitment enforcement or addressing any phase-out violations. Sector-specific considerations could, however, be included in Appendix 8-A of the Agreement on Sector-Specific Arrangements.

11. To prevent funding duplication, HCFC-141b exports in pre-blended polyols were deducted from the starting point for countries that identified exports. However, tracking these exports remains challenging for countries blending HCFC-based polyols locally, highlighting the need for enhanced export monitoring. Further safeguards against duplicate funding in the future include requiring Article 5 countries requesting funds for phasing out HFC in imported pre-blended polyols to disclose the source countries for these imports; and for Article 5 countries that export HFCs in pre-blended polyols, requiring them to inform their exports for the years 2020-2022 when requesting funding to phase out HFCs in the PU foam sector, noting that funding duplication could only occur if the exporting Article 5 country also seeks Multilateral Fund assistance.

### **Relevant information on the use of HFCs contained in imported pre-blended polyols**

12. An analysis of the CP reports for 2020–2022 revealed that, among the 119 countries that submitted HFC data, up to 30 reported the use of HFCs in the PU foam sector. Of these, 19 countries—all from group 1—reported the use of HFCs contained in imported pre-blended polyols in the PU foam sector. Three group 1 countries reported exports of HFCs in pre-blended polyols, totaling 0.19 metric tons (mt) in 2021 and 54.24 mt in 2022.

13. The average use of HFCs in imported pre-blended polyols in the foam sector between 2020 and 2022 was 418 mt, representing less than 5 per cent of the average 12,677 mt of all HFCs used in the foam sector during the same period. Possible reasons for the low proportion of HFCs in imported pre-blended polyols used by Article 5 countries are under-reporting due to the lack of monitoring of HFCs contained in polyols, and the fact that the PU foam enterprises and systems houses assisted under the Multilateral Fund to phase out HCFC-141b pure and in pre-blended polyols transitioned directly to low-GWP alternative technologies. Although the situation in most group 2 countries remains unknown, it is expected to be similar to the results observed in the sample of 119 countries analyzed.

14. The average amount of HFCs exported in pre-blended polyols by Article 5 countries for the period 2020-2022 is 18.14 mt. The difference between this value and the average imports of HFCs in pre-blended polyols by Article 5 countries during the same period can be attributed to imports from non-Article 5

countries, imports from Article 5 countries that have not submitted their CP reports, or imports from Article 5 countries that still do not have a system to monitor exports of HFCs in pre-blended polyols.

15. The Secretariat also identified several differences between HCFC-141b and HFCs in imported pre-blended polyols, out of which, these are the most relevant:

- (a) *Controlled substances contained in pre-blended polyols:* HCFC-141b was the only HCFC used in pre-blended polyols, whereas various HFCs (e.g., HFC-245fa, HFC-365mfc, or HFC-365mfc mixed with HFC-227ea) can be used in these polyols. Although each HFC's global warming potential (GWP) could impact the overall environmental effect, this variation does not affect the level of funding, which is based on US dollars per metric kilogram; and
- (b) *Reference years:* Under the HFC phase-down, Article 5 countries are grouped with different baseline years for tracking consumption and reduction schedules. Using different reference years for imports and exports of HFCs in pre-blended polyols could lead to potential overfunding or underfunding, especially in cases when a group 1 country exports to a group 2 country or vice-versa. The simplest and most reliable way to ensure equity across countries and avoid double-funding HFCs in pre-blended polyols is to use the same reference year for group 1 and group 2 countries.

### **Funding the phase-out of HFCs contained in imported pre-blended polyols**

16. The key principles followed by the policies established to fund the phase-out of HCFC-141b in imported pre-blended polyols were: to ensure the effective phase-out of HCFC-141b, whether pure or pre-blended, by providing support to eligible PU foam enterprises; to support the sustainability of the phase-out through the adoption of appropriate regulatory measures by Article 5 countries once the projects were completed; to prevent duplication of funding of HCFC-141b phase-out by requiring exporting countries to deduct their exports from their starting points; and to enhance the monitoring of HCFC-141b imports and exports by encouraging Article 5 countries to establish national systems for recording these amounts. The Executive Committee may wish to consider funding activities to phase out HFCs contained in imported pre-blended polyols in the PU foam sector in Article 5 countries, based on past practices regarding HCFCs in imported pre-blended polyols.

17. Taking these principles into consideration, as well as the observations and relevant information on HFCs presented by the Secretariat in the present document, the Executive Committee may wish to consider:

- (a) With regard to imports of HFCs contained in pre-blended polyols, which have not been counted as consumption under Article 7, to request Article 5 countries that wish to seek assistance for the phase-out of such imports, irrespective of whether the Article 5 country in question belongs to group 1 or group 2:
  - (i) To include in the overarching strategy for their Kigali HFC implementation plans (KIPs) the amount and type of HFCs imported in pre-blended polyols for the years 2020 to 2022, the countries from where they are being imported, and an indicative list of all the polyurethane (PU) foam enterprises established prior to 1 January 2020 that used imported polyol systems, including the amount and type of HFCs contained therein;
  - (ii) Also to include in their KIPs a sector plan for the complete phase-out of the use of HFCs contained in imported pre-blended polyols, covering the cost and funding schedule, on the understanding that quantities of HFCs contained in imported pre-blended polyols that had not been included in the overarching strategy for the

KIP would not be eligible for funding. In the cases where the country decides not to request funding for the sector plan for the complete phase-out of the use of HFCs contained in imported pre-blended polyols due to national circumstances, the country could, on an exceptional and case-by-case basis, submit a funding request for that sector plan during the implementation of stage I or a future stage of the KIP, on the understanding that the eligibility of the PU foam enterprises would be determined at the time of the submission of the project, and the maximum funding level would be based on the amount of HFCs contained in imported pre-blended polyol systems as defined under subparagraph (i) above; and

- (iii) To include in the sector plan a commitment from the country to put in place, by the time the last foam manufacturing plant has been converted to a non-HFC technology, regulations or policies banning the import and or the use of HFCs, both pure and contained in pre-blended polyols, in the PU foam sector;
- (b) That the maximum level of funding to be approved for each Article 5 country to phase out the import of HFCs contained in pre-blended polyols will be based on the average amount of HFCs contained in imported pre-blended polyols during the 2020–2022 period, on the understanding that this value is separate from the starting point for sustained reductions in HFC consumption and will be reflected separately from the starting point in the Agreement between the country and the Executive Committee;
- (c) That Article 5 countries with eligible enterprises manufacturing HFC pre-blended polyols would be provided with assistance calculated on the basis of consumption of HFCs sold domestically for use by PU foam enterprises from 2020 to 2022, on the understanding that the export of HFCs contained in pre-blended polyols from 2020 to 2022 would be deducted from their starting point for aggregate reductions in HFC consumption at the time of submission of their KIP;
- (d) To request Article 5 countries that export HFCs in pre-blended polyols, to inform their exports for the years 2020-2022 when requesting funding to phase out HFCs in the PU foam sector; and
- (e) To request Article 5 countries using HFCs, either pure or contained in pre-blended polyols, in the PU foam sector to consider establishing a national system for recording and monitoring the amounts of HFCs contained in pre-blended polyols imported and/or exported (where applicable) to support the ban on imports of pure HFCs, as well as HFCs contained in pre-blended polyols, to be issued once all the foam enterprises have been converted, and to facilitate monitoring of these enterprises to sustain the phase-out of HFCs.