

**Twenty-Eighth Meeting of the Parties to
the Montreal Protocol on Substances
that Deplete the Ozone Layer**
Kigali, 10–14 October 2016
Item 6 of the agenda for the preparatory segment
Dubai pathway on hydrofluorocarbons (decision XXVII/1)

Further Amendment of the Montreal Protocol

Submitted by the Contact group on HFCs

Decision XXVIII/--- Further Amendment of the Montreal Protocol

Recalling Decision [----], adopting the Amendment to the Montreal Protocol as set out in Annex---- to the report of the Twenty-Eighth Meeting of the Parties,

The Twenty-Eighth Meeting of the Parties decides:

- That paragraphs 2 and 4 of Article 2J in Article I of the Amendment are applicable to Belarus, the Russian Federation, Kazakhstan, Tajikistan, and Uzbekistan;
- That subparagraphs (b) and (d) of paragraph 8 *qua* of Article 5 of Article I of the Amendment are applicable to Bahrain, India, Iran, Iraq, Kuwait, Oman, Pakistan, Qatar, Saudi Arabia, and the United Arab Emirates;
- To recognize the importance of timely updating international standards for flammable low-GWP refrigerants, including IEC60335-2-40, and to support promoting actions that allow safe market introduction, as well as manufacturing, operation, maintenance and handling of zero-GWP or low-GWP refrigerant alternatives to hydrochlorofluorocarbons and hydrofluorocarbons;
- To conduct periodic reviews of alternatives using criteria set out in paragraph 1 (a) of decision XXVI/9;
- [To request the TEAP to conduct a review of the adoption of alternatives to hydrofluorocarbons in sub-sectors, including an assessment of the technical and economic factors facilitating and impeding market adoption that are relevant for those Article 5 parties listed in paragraph [X] above with respect to the relevant freeze date, and submit a report on this information for consideration by the Open-Ended Working Group in 2024];
- That Parties operating under paragraph 1 of Article 5 will have flexibility to prioritize hydrofluorocarbons, define sectors, select technologies/alternatives, elaborate and implement their strategies to meet agreed hydrofluorocarbon obligations, based on their specific needs and national circumstances, following a country-driven approach;

- To request the Executive Committee of the Multilateral Fund to incorporate the principle in the paragraph above into relevant funding guidelines for the phase-down of hydrofluorocarbons and in its decision making process;
- To acknowledge the linkage between the hydrofluorocarbon and hydrochlorofluorocarbon reduction schedules relevant to sectors and the preference to avoid transitions from hydrochlorofluorocarbons to high-GWP hydrofluorocarbons and to provide flexibility if no other technically proven and economically viable alternatives are available;
- To also acknowledge these linkages with respect to certain sectors, in particular industrial process refrigeration, and the preference to avoid transitions from hydrochlorofluorocarbons to high-GWP hydrofluorocarbons, and to be willing to provide flexibility, if no other alternatives are available, in cases where: (1) hydrochlorofluorocarbon supply may be unavailable from existing allowable consumption, stocks as well as recovered/recycled material, and (2) if it would allow for a direct transition at a later date from hydrochlorofluorocarbons to low-GWP or zero GWP alternatives;
- To provide, prior to the commencement of any Article 5 hydrofluorocarbon freeze or other initial control obligations and in light of the acknowledgement above, flexibility measures in relation to the hydrochlorofluorocarbon phase-out relevant to certain sectors, in particular the industrial process refrigeration subsector, in order to avoid double conversions;
- To recognize that the amendment maintains the Multilateral Fund as the financial mechanism and that sufficient additional financial resources will be provided by Parties not operating under paragraph 1 of Article 5 to offset costs arising out of hydrochlorofluorocarbon obligations for Parties operating under paragraph 1 of Article 5 under this amendment;
- That Parties operating under paragraph 1 of Article 5 will have flexibility to prioritize hydrofluorocarbons, define sectors, select technologies/alternatives, elaborate and implement their strategies to meet agreed hydrofluorocarbon obligations, based on their specific needs and national circumstances, following a country-driven approach;

- To request the Executive Committee of the Multilateral Fund to incorporate the principle in the paragraph above into relevant funding guidelines for the phase-down of hydrofluorocarbons and in its decision making process;
- To request the Executive Committee to develop, within one year of the adoption of this amendment, guidelines for financing the phase-down of hydrofluorocarbon consumption and production, including cost-effectiveness thresholds;
- To request the Chair of the Executive Committee to report back to the Meeting of the Parties on the progress made in accordance with this decision, including on cases where Executive Committee deliberations have resulted in a change in the national strategy or the national technology choice submitted to the Executive Committee;
- To request the Executive Committee of the Multilateral Fund to revise the rules of procedure of the Executive Committee with a view to building in more flexibility for Parties operating under paragraph 1 of Article 5;
- To request the Executive Committee, in developing new guidelines on methodologies and cost calculations, to make the following categories of costs eligible and to include them in the cost calculation:
 - For the consumption manufacturing sector:
 - Incremental capital costs;
 - Incremental operating costs;

- Technical assistance activities;
 - Research and development, when required to adapt and optimize low-GWP or zero-GWP alternatives to hydrofluorocarbons;
 - Costs of patents and designs, and incremental costs of royalties, when necessary and cost-effective; and
 - Costs of safe introduction of flammable and toxic alternatives.
- For the production sector:
- Lost profit due to shutdown/closure of the production facilities as well as production reduction;
 - Compensation to displaced workers;
 - Dismantling of production facilities;
 - Technical assistance activities;
 - Research and development related to the production of low-GWP or zero-GWP alternatives to hydrofluorocarbons with a view to lowering the costs of alternatives
 - Costs of patents and designs or incremental costs of royalties
- Costs of converting facilities to produce low-GWP or zero-GWP alternatives to hydrofluorocarbons when technically feasible and cost-effective
 - Costs of reducing emissions of HFC-23, a by-product from the production process of HCFC-22, by reducing its emission rate in the process, destroying it from the off-gas, or by collecting and converting to other environmentally safe chemicals. Such costs should be funded by the Multilateral Fund to meet the obligations of Parties operating under paragraph 1 of Article 5 specified under this amendment.
- For the servicing sector:
- Public awareness activities;
 - Policy development and implementation;
 - Certification programs and training of technicians on the safe handling, good practice and safety of alternatives, including training equipment;
 - Training of customs officers;
 - Preventing illegal trade of hydrofluorocarbons;
 - Servicing tools;
 - Refrigerant testing equipment for the RAC sector;
 - Recycling and recovery of hydrofluorocarbons
 - [Additional import costs]
 - [Incremental cost of refrigerants for MVAC servicing/recharging]
- To request the Executive Committee of the Multilateral Fund to increase in relation to the servicing sector the funding available under Executive Committee Decision 74/50

up to a maximum of [X %] above the amounts listed in that decision for Parties with total HCFC baseline consumption up to 360 metric tonnes when needed for the introduction of alternatives to hydrochlorofluorocarbons with low-GWP and zero-GWP alternatives to hydrofluorocarbons, and maintaining energy efficiency also in the servicing/end-user sector;

- That the cut-off date for eligible capacity is [DATE];
 - To request the Executive Committee to develop cost guidance associated with maintaining and/or enhancing energy efficiency of low-GWP or zero-GWP replacement technologies and equipment, when phasing down hydrofluorocarbons, while taking note of the role of other institutions addressing energy efficiency, when appropriate;
 - To direct the Executive Committee to increase institutional strengthening support in light of new commitments related to hydrofluorocarbons under this amendment;
 - To request the Executive Committee of the Multilateral Fund to consider funding the cost-effective management of stockpiles of used or unwanted controlled substances, including destruction;
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- To request the Executive Committee of the Multilateral Fund to prioritize technical assistance and capacity building to address safety issues associated with low-GWP or zero-GWP alternatives;
 - [Additional cost of importing alternative substances];
 - That the Parties may identify other cost items to be added to the indicative list emanating as a result of the conversion to low-GWP alternatives;
 - To request the Executive Committee of the Multilateral Fund to incorporate the following principles relating to second and third conversions into funding guidelines:
 - first conversions, in the context of a phase-down of hydrofluorocarbons, are defined as conversions of enterprises to low-GWP or zero-GWP alternatives that have never received any direct or indirect support, in part or in full, from the Multilateral Fund, including enterprises that converted to hydrofluorocarbons with their own resources;
 - enterprises that have already converted to hydrofluorocarbons in phasing out CFCs and/or hydrochlorofluorocarbons will be eligible to receive funding from the Multilateral Fund to meet agreed incremental costs in the same manner as enterprises eligible for first conversions;
 - enterprises that convert from hydrochlorofluorocarbons to high-GWP hydrofluorocarbons, after the date of adoption of a hydrofluorocarbon amendment, under HPMPs already approved by the Executive Committee will be eligible to receive funding from the Multilateral Fund for a subsequent conversion to low-GWP or zero-GWP alternatives to meet agreed incremental costs in the same manner as enterprises eligible for first conversions;
 - enterprises that convert from hydrochlorofluorocarbons to high-GWP hydrofluorocarbons with their own resources before the freeze date under this amendment will be eligible to receive funding from the Multilateral Fund to meet agreed incremental costs in the same manner as enterprises eligible for first conversions;
 - enterprises that convert from hydrofluorocarbons to lower-GWP hydrofluorocarbons with Multilateral Fund support when no other alternatives are available will be eligible to receive funding from the Multilateral Fund for

a subsequent conversion to low-GWP or zero-GWP alternatives if necessary to meet the final hydrofluorocarbon phase-down step;

- To request the Executive Committee of the Multilateral Fund to incorporate the following principle related to sustained aggregate reductions in Multilateral Fund policies;
- That remaining eligible consumption for funding in tonnage will be determined on the basis of the starting point of the national aggregate consumption less the amount funded by previously approved projects in future multi-year agreement templates for hydrofluorocarbon phase-down plans, consistent with Executive Committee Decision 35/57;
- To request the Executive Committee of the Multilateral Fund to include the following enabling activities to be funded in relation to the hydrofluorocarbon phase-down in the amendment:
 - Capacity-building and training for handling hydrofluorocarbon alternatives in the servicing sector, the manufacturing and production sectors;
 - Institutional strengthening;
 - Article 4B licensing;
 - Reporting;
 - Demonstration projects; and
 - Developing national strategies.

Exemption for High Ambient Temperature Countries

1. To make available an exemption for Parties with high ambient temperature conditions where suitable alternatives do not exist for the specific sub-sector of use, as described below;
2. To distinguish and separate this exemption from the essential and critical use exemptions under the Montreal Protocol;
3. To make this exemption effective and available as of the hydrofluorocarbon freeze date or other initial control obligation, with an initial duration of four years;
4. To apply this exemption for sub-sectors contained in Annex I in Parties with an average of at least two months per year over 10 consecutive years with a peak monthly average temperature above 35 degrees Celsius, where the Party has formally notified the Secretariat of its intent to use this exemption no later than one year before the hydrofluorocarbon freeze date or other initial control obligation, and every four years thereafter should it wish to extend the exemption;¹²
5. That any Party operating under this high ambient temperature exemption will report separately its production and consumption data for the sub-sectors to which a high ambient temperature exemption applies;
6. That any transfer of production and consumption allowances for this high ambient temperature exemption will be reported to the Secretariat under Article 7 of the Protocol by each of the Parties concerned;

¹ Spatially weighted average temperatures deriving the daily highest temperatures (using the Centre for Environmental Data Archival: http://browse.ceda.ac.uk/browse/badc/cru/data/cru_cy/cru_cy_3.22/data/tmx)

² As listed in Annex II

7. The Technology and Economic Assessment Panel (TEAP) and a TEAP subsidiary body that includes outside expertise on high ambient temperatures will assess the suitability of hydrofluorocarbon alternatives for use where suitable alternatives do not exist based on criteria agreed by the Parties and can recommend to add or remove sub-sectors to Annex I, that will include, but not be limited to, the criteria listed in paragraph 1(a) of Decision XXVI/9, and report this information to the Meeting of the Parties.³

8. That this assessment will take place periodically starting four years from the hydrofluorocarbon freeze date or other initial control obligation and every four years thereafter;

9. To review, no later than the year following receipt of the first TEAP report on suitability of alternatives, the need for an extension of this exemption for a further period of up to four years, and periodically thereafter, for specific sub-sectors in Parties that meet the criteria set out in paragraph 4 above, and that Parties will develop an expedited process to ensure the renewal of the exemption in a timely manner where there are no feasible alternatives, taking into account the recommendation of the TEAP and its subsidiary body;

10. That amounts of Annex F substances that are subject to the HAT exemption are not eligible for funding under the Multilateral Fund while they are exempted for that Party;

11. That the Implementation Committee and Meeting of the Parties should, for 2025 and 2026, defer the consideration of the HCFC compliance status of any Party operating under a high ambient temperature exemption in cases where it has exceeded its allowable consumption or production levels due to its HCFC-22 consumption or production for the sub-sectors listed in Annex I, on the condition that the Party concerned is following the phase-out schedule for consumption and production of Hydrochlorofluorocarbons for other sectors and has formally requested a deferral through the Secretariat;

12. To consider, no later than 2026, whether to extend the compliance deferral in paragraph 11 for an additional period of two years, and, if appropriate, to consider further deferrals thereafter, for Parties operating under the high ambient temperature exemption.

³ insert criteria from XXVI/9 para (1)(a)

Other Exemptions

1. To allow for other exemptions, such as for essential use and critical uses, for production or consumption that is necessary to satisfy uses agreed by the Parties to be exempted uses;
2. To consider mechanisms for such exemptions in [20XX], including multi-year exemption mechanisms;
3. To provide information and guidance to the TEAP for its periodic review of sectors where exemptions may be required.

Annex I: List of Exempted Equipment for High Ambient Temperatures

- Multi-split air conditioners for commercial and residential
- Split ducted air conditioners (residential and commercial)
- Ducted commercial packaged (self-contained) air conditioners

Annex II: List of countries operating under the high ambient temperature exemption

Algeria, Bahrain, Benin, Burkina Faso, Central African Republic, Chad, Cote d'Ivoire, Djibouti, Egypt, Eritrea, Gambia, Ghana, Guinea, Guinea-Bissau, Iran, Iraq, Jordan, Kuwait, Libya, Mali, Mauritania, Niger, Nigeria, Oman, Pakistan, Qatar, Saudi Arabia, Senegal, Sudan, Syria, Togo, Tunisia, Turkmenistan, United Arab Emirates