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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Eighty-third Meeting
Montreal, 27– 31 May 2019

**DEVELOPMENT OF THE COST GUIDELINES FOR THE PHASE-DOWN OF HFCs IN
ARTICLE 5 COUNTRIES: DRAFT CRITERIA FOR FUNDING
(DECISION 82/84)**

Background

1. The Twenty-eighth Meeting of the Parties adopted decision XXVIII/2 requesting the Executive Committee to develop within two years guidelines for financing the phase-down of hydrofluorocarbon (HFC) consumption and production, including cost-effectiveness thresholds, and to present those guidelines to the Meeting of the Parties for the parties' views and input before their finalization.¹
2. At the Thirtieth Meeting of the Parties, the parties requested the Executive Committee to continue its work on developing guidelines for financing the phase-down of HFC consumption and production; to provide an update on progress on the elements as part of the annual report of the Executive Committee to the Meeting of the Parties; and to present the draft guidelines developed to the Meeting of the Parties for the parties' views and input before their finalization by the Executive Committee (decision XXX/4).
3. Since its 77th meeting, the Executive Committee has been discussing matters related to the phase-down of HFCs in Article 5 countries, including the development of cost guidelines.² As of the 82nd meeting, the Executive Committee adopted a draft template, which included text agreed by the Committee for some of the elements of decision XXVIII/2. Additional elements to the cost guidelines could be added to the draft template, as required, in line with decisions 80/76(b) and 81/67(f). The draft template is contained in Annex I to the present document.
4. A summary of the status of the Executive Committee's discussions on the elements of the cost guidelines is presented in Table 1.

¹ Paragraph 10 of decision XXVIII/2.

² UNEP/OzL.Pro/ExCom/77/70, UNEP/OzL.Pro/ExCom/78/5 and Corr.1, UNEP/OzL.Pro/ExCom/79/46, UNEP/OzL.Pro/ExCom/80/55, UNEP/OzL.Pro/ExCom/81/53 and UNEP/OzL.Pro/ExCom/82/67.

Table 1. Status of elements of the cost guidelines for the phase-down of HFCs in Article 5 parties

Element of decision XXVIII/2	Paragraph	Status
<i>Discussed</i>		
Flexibility in implementation that enabled parties to select their own strategies and priorities in sectors and technologies	13	Text included in the draft template
Cut-off dates for eligible capacity	17	Text included in the draft template
Second and third conversions	18	Text included in the draft template
Other costs ^a	25	Text not included in the draft template
Eligibility of Annex F substances subject to high-ambient-temperature exemptions	35	Text included in the draft template
<i>Under discussion</i>		
Sustained aggregate reductions in consumption and production	19	Text included in the draft template. A methodology for establishing the starting point for sustained aggregate reductions has to be developed ^b
Eligible incremental costs	15	
Consumption manufacturing sector	15(a)	Text on categories of eligible costs included in the draft template. Cost-effectiveness thresholds to be established, based on data from approved HFC phase-out investment projects ^c
Production sector	15(b)	Text on categories of eligible costs included in the draft template
Refrigeration servicing sector	15(c)	Text on categories of eligible costs included in the draft template. Cost-effectiveness thresholds to be established ^d
Energy efficiency	22	To be discussed at the 83 rd meeting under agenda item 12(a) based on the following documents: <ul style="list-style-type: none"> · Ways to operationalize paragraph 16 of decision XXVIII/2 and paragraph 2 of decision XXX/5^e · Information on funds and financial institutions mobilizing resources for energy efficiency that may be utilized when phasing down HFCs^f · Summary of the report by the Technology and Economic Assessment Panel (TEAP) on matters related to energy efficiency with regard to the issues identified in decision 82/83(e)^g
Capacity building to address safety	23	Text included in the draft template. To be discussed in light of the paper regarding aspects of the refrigeration servicing sector that support HFC phase-down in response to decision 80/76 ^h (decision 81/67(c))
Disposal	24	To be further discussed in light of the paper on ODS disposal in response to decision 79/18(e) ⁱ (decision 81/67(d))

a. "Parties may identify other cost items to be added to the indicative list of incremental costs emanating as a result of the conversion to low-GWP alternatives."

b. At its 82nd meeting, the Executive Committee considered the document on Key considerations for developing a methodology for establishing the starting point for sustained aggregate reductions for the consumption and production sectors under the Kigali Amendment (UNEP/OzL.Pro/ExCom/82/66).

c. Investment projects could be approved up to the 84th meeting in line with decision 81/53(b).

d. At its 82nd meeting, the Executive Committee considered the Preliminary document on all aspects related to the refrigeration servicing sector that support the HFC phase-down (UNEP/OzL.Pro/ExCom/82/64).

e. UNEP/OzL.Pro/ExCom/83/40.

f. UNEP/OzL.Pro/ExCom/83/41.

g. UNEP/OzL.Pro/ExCom/83/42.

h. UNEP/OzL.Pro/ExCom/82/64.

i. UNEP/OzL.Pro/ExCom/82/21.

5. At the 82nd meeting, the Executive Committee decided to continue discussing at its 83rd meeting the cost guidelines for the phase-down of HFCs in Article 5 countries (decision 82/84).

6. In line with decisions 80/76(b) and 81/67(f), Annex II of the present document contains the list of outstanding issues for further discussion. However, noting that Annex II no longer reflects the current status of discussion for all the issues (e.g., it does not include several aspects related to energy efficiency that the Executive Committee discussed separately), the Executive Committee may wish to consider following the recommendation prepared for the present document as a guide to continuing the discussion on the cost guidelines.

Outstanding issues on the cost guidelines for the phase-down of HFCs

Methodology for determining the starting point for aggregate reductions

7. At the 81st meeting, issues related to the starting point for aggregate reduction in consumption and production were discussed in the contact group on the cost guidelines. Some members suggested that the HFC starting point be determined by the “HFC component” of the baseline, while others suggested the HFC baseline established by the parties under the Kigali Amendment (i.e., the “HFC component” plus the “HCFC component”). Subsequently, the Secretariat was requested to prepare a preliminary information document containing key considerations that could assist the Committee in developing a methodology for establishing the starting point for sustained aggregate reductions, taking into account the discussions that had taken place at the meeting (decision 81/67(e)).

8. In response to decision 81/67(e), the Secretariat submitted to the 82nd meeting document UNEP/OzL.Pro/ExCom/82/66. Based on the document, the Executive Committee discussed *inter alia* the units to be used to measure the reductions and the methodology for setting the starting point. Some members proposed to use metric tonnes (mt), as that unit of measurement reflected the actual production of the converted plants. Other members proposed CO₂-equivalent tonnes in order to measure the environmental impact of the conversions. Some other members suggested using both units of measurement at first and making a definitive decision about which to use once the pros and cons of each approach had been ascertained. The Committee also made suggestions on: including pre-blended polyols in the starting point, on the understanding that such consumption would be monitored and controlled by Article 5 countries; and excluding the phase-down tail (20 per cent for Article 5 group 1 countries and 15 per cent for Article 5 group 2 countries) from the starting point because the reduction of that part of the total tonnage was not mandated by the Montreal Protocol.

9. Noting that as of the 82nd meeting an overall methodology for determining the starting point for aggregate reduction had not yet been proposed, the Executive Committee may wish to focus its discussion at the 83rd meeting on this matter, taking into account the key considerations in developing a methodology described in document UNEP/OzL.Pro/ExCom/82/66.

Eligible incremental costs for the consumption manufacturing sector

10. Since the 77th meeting, the Executive Committee has had several discussions on cost-effectiveness thresholds for the phase-out of HFCs. It has noted that the cost-effectiveness thresholds for the phase-out of CFCs and HCFCs were not necessarily applicable for HFCs; that there was limited experience at the Fund in phasing out HFCs in certain sectors; and that the associated incremental costs might differ from the costs associated with phasing out other controlled substances. Accordingly, the Committee considered that additional information was required to reach a decision on eligible incremental costs, and agreed to

consider approving a limited number of stand-alone HFC investment projects, on a case-by-case basis in terms of maturity of technology, replicability and geographic distribution (decisions 78/3 and 79/45).³

11. As of the 82nd meeting, ten stand-alone investment projects⁴ had been approved at a total cost of US \$13,397,249 (plus agency support costs) to phase down 1,110 mt (1.63 million mt CO₂-eq) of HFCs in the air-conditioning, domestic and commercial refrigeration manufacturing sectors in nine countries. The Executive Committee may wish to consider establishing cost-effectiveness thresholds once the results of those projects are available.

Eligible incremental costs for the refrigeration servicing sector

12. At its 80th meeting, the Secretariat was requested to prepare, in cooperation with bilateral and implementing agencies, a preliminary document on all aspects relating to the refrigeration servicing sector that supported HFC phase-down, for submission to the 82nd meeting⁵ (decision 80/76(c)). At its 81st meeting, the Committee decided to consider, at the 82nd meeting, the matter of prioritization of technical assistance and capacity building to address safety issues associated with alternatives with low- and zero-global-warming potential (GWP) for all sectors,⁶ in light of the above-mentioned document on the refrigeration servicing sector (decision 81/67(c)).

13. In response to decisions 80/76(c) and 81/67(c), at its 82nd meeting, the Executive Committee considered document UNEP/OzL.Pro/ExCom/82/64. During the discussions members from Article 5 countries identified additional activities in the refrigeration servicing sector, beyond those already being implemented under HCFC phase-out, including: building capacity on risk assessment and management of flammable refrigerants; activities in the assembly and installation sub-sector; enhancing and/or maintaining energy efficiency during installation and servicing; and ensuring reclamation of a wider variety of refrigerants, given the possibility of larger quantities of blends for disposal. With regard to the increase in funding for low-volume-consuming (LVC) countries when replacing HCFCs in servicing in line with paragraph 16 of decision XXVIII/2, the Committee agreed to discuss this matter under energy efficiency as related to decision XXX/5.

14. At its 83rd meeting, the Executive Committee may wish to continue discussing the level and modalities of funding of eligible incremental costs for the phase-down of HFCs in the refrigeration servicing sector in light of the information contained in document UNEP/OzL.Pro/ExCom/82/64. In particular:

- (a) Opportunities and synergies emerging from implementing activities that benefit both HCFC phase-out and HFC phase-down,
- (b) Identified challenges for the introduction of low-GWP alternatives at a larger scale; and
- (c) Required funding levels to ensure compliance with the phase-down steps, and the flexibility required by Article 5 countries to allocate funding to strategic priorities based on their levels of consumption (e.g., support for the introduction of specific technologies

³ Projects could be submitted up to and including the 84th meeting, especially in sectors and regions that were not covered by projects approved up to and including the 81st meeting (decision 81/53(b)).

⁴ HFC investment projects have been approved for Argentina, Bangladesh, China, the Dominican Republic, Jordan, Lebanon, Mexico (two), Thailand and Zimbabwe.

⁵ The document needed to take into account previous policy documents, case studies, monitoring and evaluation reviews, and the work undertaken in developing and implementing training and technical assistance programmes; an analysis of the existing capacities in Article 5 countries funded under the refrigeration servicing sector and how those capacities could be utilized for HFC phase-down; and information needed for the development of training and competency-based certification programmes and modules for service technicians and customs officers for the transition to alternatives.

⁶ Paragraph 23 of decision XXVIII/2.

in specific sectors, addressing assemblers, prioritizing specific refrigerants to phase down).

15. During its deliberations, the Executive Committee may wish to note that currently, a large number of LVC countries are preparing or will start preparing stage II of their HCFC phase-out management plans, and that more than 35 Article 5 countries that have ratified the Kigali Amendment would be able to submit in 2019 requests for preparatory funding for HFC phase-down plans. The discussion of a starting point for sustained reductions in HFC consumption for the refrigeration servicing sector would also be beneficial for the majority of Article 5 countries, which seem to only have HFC consumption in this sector.

16. Pending the outcome of discussions at its 83rd meeting, the Executive Committee may wish to request the Secretariat to prepare a document providing information on the level and modalities of funding for the refrigeration servicing sector.

Energy efficiency

17. At its 81st meeting, the Executive Committee discussed matters related to energy efficiency, and requested the Secretariat to provide to the 82nd meeting the summary of the parties' deliberations at the 40th Meeting of the Open-Ended Working Group (OEWG) of the parties and at the Thirtieth Meeting of the Parties in relation to the report by the TEAP on issues related to energy efficiency, in response to decision XXIX/10 (decision 81/67(b)).

18. In response to decision 81/67(b), the Secretariat submitted to the 82nd meeting documents UNEP/OzL.Pro/ExCom/82/65 and Add.1. At the same meeting, the Committee selected to discuss energy efficiency separately from the HFC phase-down cost guidelines. Furthermore, the Committee agreed to discuss the increase in funding for LVC countries when replacing HCFCs in the servicing sector in line with paragraph 16 of decision XXVIII/2 under energy efficiency as related to paragraph 2 of decision XXX/5.⁷

19. Further to its deliberations, the Executive Committee decided *inter alia* to discuss at its 83rd meeting (decision 82/83):

- (a) A document on ways to operationalize paragraph 16 of decision XXVIII/2, and paragraph 2 of decision XXX/5;
- (b) A document providing information on relevant funds and financial institutions mobilizing resources for energy efficiency that might be utilized when phasing down HFCs under the Multilateral Fund;
- (c) Ways to operationalize paragraph 22 of decision XXVIII/2, and paragraphs 5 and 6 of decision XXX/5; and
- (d) A summary of the report by the TEAP on matters related to energy efficiency with regard to the issues identified in sub-paragraph (e) of decision 82/83.⁸

⁷ Paragraph 2 of decision XXX/5 requested the Executive Committee to consider, within the context of paragraph 16 of decision XXVIII/2, increasing the funding provided to LVC countries to assist them in implementing the activities outlined in paragraph 1 of this decision (i.e., developing and enforcing policies and regulations to avoid the market penetration of energy-inefficient refrigeration, air-conditioning and heat-pump equipment; promoting access to energy-efficient technologies in these sectors; and targeted training on certification, safety and standards, awareness-raising and capacity-building aimed at maintaining and enhancing the energy efficiency).

⁸ To discuss, at its 83rd meeting, ways to operationalize paragraph 22 of decision XXVIII/2, and paragraphs 5 and 6 of decision XXX/5, including: (i) Initiatives associated with maintaining and/or enhancing the energy efficiency of replacement technologies with low- or zero-GWP in the refrigeration, air-conditioning and heat-pump sector, such as:

20. In response to decision 82/83, the Secretariat has submitted the requested documents to the 83rd meeting,⁹ to be discussed under agenda item 12(a) on Matters related to the Kigali Amendment to the Montreal Protocol: Energy efficiency.

21. The Executive Committee may wish to consider whether to include in the cost guidelines for phasing down HFCs in Article 5 countries any decision it adopts on energy efficiency under agenda item 12(a).

Disposal

22. At its 81st meeting, the Executive Committee decided to consider, at its 82nd meeting, issues related to funding the cost-effective management of stockpiles of used or unwanted controlled substances, including through destruction, in light of the paper on ODS disposal being prepared by the Secretariat in response to decision 79/18(e) (decision 81/67(d)).

23. In response to decision 81/67(d), the Secretariat submitted to the 82nd meeting document UNEP/OzL.Pro/ExCom/82/21.¹⁰ During the discussions, some members, while cognizant that disposal was important and mandated by decision XXVIII/2, were of the view that, as disposal was not required for compliance and was not an incremental cost, it should not be discussed as part of the HFC phase-down cost guidelines. Other members considered disposal to be of fundamental importance, particularly for LVC countries, and saw it as an integral part of the cost guidelines. Members also raised other matters, such as: relevance of the ODS disposal synthesis report; interim guidelines for the pilot projects approved at the 58th meeting; and policies on refrigerant management to minimize unwanted refrigerants.

24. The Executive Committee may wish to continue its discussion on this matter during the 83rd meeting.

Other general matters related to HFC phase-down

25. The document on the cost guidelines for the phase-down of HFCs submitted to the 80th meeting included overarching aspects¹¹ that were already being applied in the context of enabling activities and stand-alone HFC investment projects currently under implementation (these aspects are contained in Part III of Annex II to the present document). However, the Executive Committee has not reached an agreement on the overarching aspects.

26. Noting that the overarching aspects are being applied, the Executive Committee may wish to consider whether to incorporate the text contained in Annex II to the present document into the Draft template of the cost guidelines for the phase-down of HFCs contained in Annex I to the present document, or to defer further discussion on those aspects until other elements of the cost guidelines have been agreed.

a. Methodologies to quantify changes in energy efficiency; and b. Technical interventions associated with maintaining and/or enhancing energy efficiency; (ii) Cost-related issues such as associated incremental costs, payback opportunities and costs of monitoring and verification; (iii) Possible environmental benefits, particularly those associated with climate.

⁹ UNEP/OzL.Pro/ExCom/83/40, UNEP/OzL.Pro/ExCom/83/41, and UNEP/OzL.Pro/ExCom/83/42.

¹⁰ The document is based on the implementation of 11 projects, and includes issues related to project design, synergy with other projects, opportunities for resource mobilization, cost-effectiveness and lessons learned.

¹¹ Paragraph 43 of document UNEP/OzL.Pro/ExCom/80/55.

Recommendation

27. The Executive Committee may wish:

- (a) To note document UNEP/OzL.Pro/ExCom/83/43 on the development of the cost guidelines for the phase-down of HFCs in Article 5 countries: Draft criteria for funding;
- (b) When continuing its deliberation of the cost guidelines for the phase-down of HFCs in Article 5 countries:

In relation to sustained aggregate reductions in HFC consumption and production

- (i) To consider specific proposals from Executive Committee members for a methodology for establishing the starting point for sustained aggregate reductions for HFCs based on the key considerations described in document UNEP/OzL.Pro/ExCom/82/66 and its deliberations on this matter at its 83rd meeting;
- (ii) To incorporate, once agreed, the methodology for establishing the starting point for sustained aggregate reductions for HFCs into Annex I to the present document, and to delete the text on sustained aggregate reductions in Annex II to the present document;

In relation to the consumption manufacturing sector

- (iii) To consider establishing cost-effectiveness thresholds and thresholds for incremental operating costs (IOCs) for HFC phase-down activities in the consumption manufacturing sector based on the results from the implementation of HFC investment projects;
- (iv) To incorporate, once agreed, the cost-effectiveness thresholds and thresholds for IOCs for HFC phase-down activities in the consumption manufacturing sector into Annex I to the present document, and to delete the text on additional work to be requested to the Secretariat in relation to the consumption manufacturing sector contained in Annex II to the present document;

In relation to the eligible incremental costs for the refrigeration servicing sector

- (v) To discuss the level and modalities of funding of eligible incremental costs for the phase-down of HFCs in the refrigeration servicing sector in light of the information contained in document UNEP/OzL.Pro/ExCom/82/64, in particular, the opportunities and synergies emerging from implementing activities that benefit both HCFC phase-out and HFC phase-down, the identified challenges for the introduction of low-GWP alternatives, the required funding levels, and the flexibility required by Article 5 countries to allocate funding to strategic priorities based on their consumption;
- (vi) To consider whether to request the Secretariat to prepare a document providing an analysis on the level and modalities of funding for the refrigeration servicing sector;
- (vii) To incorporate, once agreed, the cost-effectiveness thresholds for the refrigeration servicing sector into Annex I to the present document and to delete the related text

in Annex II to the present document;

In relation to energy efficiency

- (viii) To consider whether to incorporate, once agreed, any decisions related to energy efficiency under agenda item 12(a) of the present meeting into Annex I to the present document;
- (ix) To delete the text on energy efficiency, including the conference room paper submitted by the Government of Austria to the 80th meeting, in Annex II to the present document;

In relation to disposal

- (x) To take into consideration the issues related to funding the cost-effective management of stockpiles of used or unwanted controlled substances, including through destruction, in light of the paper on ODS disposal being prepared by the Secretariat in response to decision 79/18(e), contained in document UNEP/OzL.Pro/ExCom/82/21 in its discussions on the element of disposal;
- (xi) To consider whether to incorporate, once agreed, any decisions related to disposal into Annex I to the present document and, accordingly, to delete the related text in Annex II to the present document; and

In relation to other general matters related to HFC phase-down

- (xii) To consider whether to incorporate the text related to “other general matters related to HFC phase-down” contained in Annex II into Annex I, or to defer consideration thereof to a future meeting.

Annex I

DRAFT TEMPLATE OF THE COST GUIDELINES FOR THE PHASE-DOWN OF HFCs (As of the 82nd meeting)

Background

1. The present Annex contains the draft cost guidelines for the phase-down of HFCs based on the relevant elements of decision XXVIII/2 agreed by the parties at their Twenty-Eighth Meeting. These draft cost guidelines contain elements agreed at the 78th and 80th meetings of the Executive Committee, and will be updated pursuant to further discussions at future meetings of the Executive Committee.

Draft cost guidelines for the phase-down of HFCs

Flexibility in implementation that enables parties to select their own strategies and priorities in sectors and technologies

2. Article 5 countries will have flexibility to prioritize HFCs, define sectors, select technologies and alternatives and elaborate and implement their strategies to meet agreed HFC obligations, based on their specific needs and national circumstances, following a country-driven approach.

Cut-off date for eligible capacity

3. The cut-off date for eligible capacity is 1 January 2020 for those parties with baseline years from 2020 to 2022, and 1 January 2024 for those parties with baseline years from 2024 to 2026.

Second and third conversions

4. To apply the following principles for second and third conversion projects:

- (a) First conversions, in the context of a phase-down of HFCs, are defined as conversions to low-global-warming potential (GWP) or zero-GWP alternatives of enterprises that have never received any direct or indirect support, in part or in full, from the Multilateral Fund, including enterprises that converted to HFCs with their own resources;
- (b) Enterprises that have already converted to HFCs in phasing out CFCs and/or HCFCs 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;
- (c) Enterprises that convert from HCFCs to high-GWP HFCs, after the date of adoption of the Amendment, under HCFC phase-out management plans 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;
- (d) Enterprises that convert from HCFCs to high-GWP HFCs with their own resources before 2025 under the 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; and

- (e) Enterprises that convert from HFCs to lower-GWP HFCs 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 HFC phase-down step.

Sustained aggregate reductions

5. The remaining eligible consumption for funding in tonnage will be determined on the basis of the starting point of national aggregate consumption less the amount funded by previously approved projects in future multi-year agreement templates for HFC phase-down plans.

Eligible incremental costs

Consumption manufacturing sector

6. To make the following categories of costs eligible and to include them in the cost calculation associated with the phase-down of HFCs in the consumption manufacturing sector:

- (a) Incremental capital costs (ICCs);
- (b) Incremental operating costs (IOCs) for a duration to be determined by the Executive Committee;
- (c) Technical assistance activities;
- (d) Research and development, when required to adapt and optimize alternatives to HFCs with low or zero GWP;
- (e) Costs of patents and designs, and incremental costs of royalties, when necessary and cost-effective; and
- (f) Costs of the safe introduction of flammable and toxic alternatives.

Production sector

7. To make the following categories of costs eligible and to include them in the cost calculation associated with the phase-down of HFCs in the production sector:

- (a) Lost profit due to the shutdown/closure of production facilities, as well as production reduction;
- (b) Compensation for displaced workers;
- (c) Dismantling of production facilities;
- (d) Technical assistance activities;
- (e) Research and development related to the production of low-GWP or zero-GWP alternatives to HFCs with a view to lowering the costs of alternatives;
- (f) Costs of patents and designs or incremental costs of royalties;

- (g) Costs of converting facilities to produce low-GWP or zero-GWP alternatives to HFCs when technically feasible and cost-effective; and
- (h) 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 it to other environmentally safe chemicals; such costs should be funded by the Multilateral Fund to meet the obligations of Article 5 parties specified under the Amendment.

Refrigeration servicing sector

8. To make the following categories of costs eligible and to include them in the cost calculation associated with the phase-down of HFCs in the refrigeration servicing sector:

- (a) Public awareness activities;
- (b) Policy development and implementation;
- (c) Certification programmes and training of technicians on safe handling, good practice and safety in respect of alternatives, including training equipment;
- (d) Training of customs officers;
- (e) Prevention of illegal trade of HFCs;
- (f) Servicing tools;
- (g) Refrigerant testing equipment for the refrigeration and air-conditioning sector; and
- (h) Recycling and recovery of HFCs.

Energy efficiency

Capacity building to address safety

Disposal

Eligibility of Annex F substances subject to high-ambient-temperature exemptions

9. That amounts of Annex F substances that are subject to the high-ambient-temperature exemption are not eligible for funding under the Multilateral Fund while they are exempted for that party.

Annex II

OUTSTANDING ISSUES FOR FURTHER DISCUSSION BY THE EXECUTIVE COMMITTEE ON THE COST GUIDELINES FOR THE PHASE-DOWN OF HFCs (As of the 82nd meeting)

I. IN RELATION TO THE COST GUIDELINES

Sustained aggregate reductions

- (a) To use the following methodology [to be proposed by the Executive Committee] for determining the starting point for sustained aggregate reduction in HFC consumption and production, noting that the starting point should be expressed in [[CO₂ equivalent] and/or [metric tonnes]]
- (b) [add text for production]

Eligible incremental costs

Refrigeration servicing sector

- (c) [Consideration of paragraph 16 of decision XXVIII/2, [including consideration of maintaining energy efficiency in the servicing/end-user sector]]

Energy efficiency

- (d) [To continue discussing how it wishes to develop cost guidance associated with maintaining and/or enhancing the energy efficiency of low-GWP or zero-GWP replacement technologies and equipment, when phasing down HFCs, [including in the servicing sector [and end-user sector],] after reviewing additional relevant information, including the information provided by the TEAP in its assessment of energy efficiency at the 40th OEWG meeting;]

Capacity building to address safety

Disposal

II. ADDITIONAL WORK TO BE REQUESTED FROM THE SECRETARIAT¹

In relation to the consumption manufacturing sector

- (a) [The Executive Committee decided to consider at a future meeting to request the Secretariat to undertake additional work, including to determine cost-effectiveness thresholds and thresholds for IOCs for HFC-phase-down activities in the consumption manufacturing sector once progress in the implementation of HFC investment projects has been made;]

¹ Contained in paragraph 46 of document UNEP/OzL.Pro/ExCom/80/55.

In relation to energy efficiency

- (b) [To request the Secretariat to contract an independent consultant to:
- (i) Prepare, for the [82nd meeting], a document on issues associated with maintaining and/or enhancing the energy efficiency of low-GWP or zero-GWP replacement technologies and equipment when phasing down HFCs, including:
 - a. Incremental costs for maintaining and/or enhancing energy efficiency in the manufacturing and servicing of refrigeration and air-conditioning equipment, including in situ manufacturing;
 - b. Pay-back periods and economic benefits associated with energy-efficiency improvements in the refrigeration and air-conditioning sector;
 - c. Possible modalities for funding, including operational modalities for co-funding with other institutions at the national and global level, in order to maintain and/or enhance energy efficiency and address associated challenges in the refrigeration and air-conditioning sector;
 - d. Requirements for establishing minimum energy-efficiency standards, including the testing and verification of energy efficiency in equipment;
 - e. The institutional and regulatory framework needed in Article 5 countries to support and monitor improvements in energy efficiency, including in the refrigeration and air-conditioning servicing sector;
 - (ii) Consider, when preparing the document, appropriate standards and directives, such as the four European Union directives for reducing greenhouse gas emissions in Europe on Energy Efficiency, Ecodesign, Energy Performance of Buildings and Industrial Emissions, to determine the best available technologies; and
 - (iii) Consider, when preparing the document, the Conference Room Paper submitted by the Government of Austria to the 80th meeting (Appendix I to the present Annex); and
- (c) To allocate US \$XXX for the preparation of the study.]

III. OTHER GENERAL MATTERS RELATED TO HFC PHASE-DOWN²

- (a) To agree on the following prerequisites for an Article 5 country to access Multilateral Fund funding other than for enabling activities for the phase-down of HFC consumption and production:
- (i) Ratification, acceptance, or accession to the Kigali Amendment;
 - (ii) Establishment of an agreed starting point for a sustained aggregate reduction in HFC consumption and production, on the understanding that any phase-down of HFCs resulting from any project that might be approved by the Executive Committee would be deducted from the country's starting point;

² As contained in paragraph 43 of document UNEP/OzL.Pro/ExCom/80/55.

- (b) [To agree that institutions and capacities in Article 5 countries developed with Multilateral Fund assistance for the phase-out of ODS should be used to the extent possible for the phase-down of HFCs]; and
- (c) [To agree that the existing policies and guidelines of the Multilateral Fund [where applicable] for funding the phase-out of ODS would be applicable to the funding of HFC phase-down [unless decided otherwise] [as long as agreed upon] by the Executive Committee [taking into account in particular decision XXVIII/2];]

Appendix I

**TEXT FOR DISCUSSION RELATED TO THE DEVELOPMENT OF THE COST GUIDELINES
FOR THE PHASE-DOWN OF HFCS IN ARTICLE 5 COUNTRIES:
DRAFT CRITERIA FOR FUNDING (DECISIONS 78/3(i) AND 79/44(b))
(A Conference Room Paper submitted by the Government of Austria to the 80th meeting)**

Energy Efficiency

1. The Executive Committee may wish to consider the following elements when requesting the Secretariat to do additional work on energy efficiency as proposed by the Government of Austria based on the summary document prepared by the Chair at the 78th meeting.

- (a) Prepare, for the [81st meeting], a document on issues associated with maintaining and/or enhancing the energy efficiency of low-GWP or zero-GWP replacement technologies and equipment when phasing down HFCs, including:
 - (i) Inventory of energy efficiency activities already undertaken and /or funded by GEF and GCF and implementing agencies, in the refrigeration, heat-pump, and air-conditioning and production sectors; including typical level of funding, co-financing committed Pay-back periods and economic benefits associated with energy-efficiency and estimate or range of cost-effectiveness;
 - (ii) Cost guidance, methodologies, processes, monitoring, verification associated with energy efficiency interventions of other institutions, especially GEF and GCF;
 - (iii) Identification of costs for maintaining and/or enhancing energy efficiency in the manufacturing and servicing of refrigeration and air-conditioning equipment, including in situ manufacturing;
 - (iv) Possible modalities for funding, including operational modalities for co-funding and/or cooperation/coordination with other institutions at the national and global level, in order to maintain and/or enhance energy efficiency and address associated challenges and address associated challenges in the production sector and the refrigeration and air-conditioning sectors;
 - (v) Examples of minimum energy-efficiency standards and labelling, including the Requirements for establishing them and ensuring the testing and verification of energy efficiency in equipment;
 - (vi) The institutional and regulatory framework needed in Article 5 countries to support and monitor improvements in energy efficiency, including in the refrigeration and air-conditioning servicing sector; and
- (b) To consider, when preparing the document, appropriate standards, such as LEED and BREEAM, and directives, such as the four European Union directives for reducing greenhouse gas emissions in Europe on Energy Efficiency, Eco-design, Energy Performance of Buildings and Industrial Emissions, to determine the best available technologies.