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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Eighty-sixth Meeting
Montreal, 2-6 November 2020
Postponed to 8-12 March 2021¹

**DEVELOPMENT OF THE COST GUIDELINES FOR THE PHASE-DOWN OF HFCs IN
ARTICLE 5 COUNTRIES: DRAFT CRITERIA FOR FUNDING (DECISION 84/87)****Background**

1. Since their Twenty-eighth Meeting, the Parties to the Montreal Protocol have requested the Executive Committee *inter alia*:

- (a) 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 (decision XXVIII/2);² and
- (b) 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 (decision XXX/4).³

2. Immediately after the adoption of the Kigali Amendment, the Executive Committee:

- (a) At its 77th meeting, started discussing matters related to the phase-down of HFCs in Article 5 countries;⁴
- (b) At its 78th meeting, adopted a draft template of the cost guidelines for the phase-down of HFCs (draft template);

¹ Due to coronavirus disease (COVID-19)

² Decision related to the amendment phasing down hydrofluorocarbons. It includes 40 elements, several of which are for the consideration of the Executive Committee as they relate to the operation of the Multilateral Fund.

³ Progress by the Executive Committee of the Multilateral Fund in the development of guidelines for financing the phase-down of HFCs.

⁴ UNEP/OzL.Pro/ExCom/77/70/Rev.1

- (c) At its 80th meeting, decided *inter alia* to continue to use the draft template, and the list of outstanding elements for further discussion, as the working documents for discussions at the 81st meeting and future meetings on the development of the cost guidelines, and agreed that additional elements could be added to the draft template. The draft template of the cost guidelines for the phase-down of HFCs, as of the 84th meeting, is contained in Annex I to the present document; and
- (d) Continued discussions on matters related to the phase-down of HFCs at each subsequent meeting.⁵ The outstanding issues on the cost guidelines for the phase-down of HFCs as of the 84th meeting are presented in Annex II to the present document.

3. As of the 84th meeting, the Executive Committee's extensive discussions on all matters related to the phase-down of HFCs in Article 5 countries, in particular on the cost guidelines, have been based on 42 documents⁶ that have been prepared since the adoption of the Kigali Amendment; 11 additional documents have been submitted to the 86th meeting. The list of these documents is contained in Annex III to the present document.

Impact of the COVID-19 pandemic on the development of the cost guidelines

4. The Executive Committee decided to continue discussions at its 85th meeting on the development of the cost guidelines for the phase-down of HFCs, based on documents that had already been submitted and on additional documents that it had requested the Secretariat to prepare. However, in light of the COVID-19 pandemic, the Executive Committee agreed to postpone its 85th meeting, originally scheduled from 25 to 29 May 2020, and to hold it back-to-back with the 86th meeting in November 2020. In order to ensure continuity of compliance-related activities in Article 5 countries, and to reduce its workload when convened, the Executive Committee decided to implement an intersessional approval process (IAP) for certain reports, projects and activities that were to be submitted to the 85th meeting; agenda items that were not considered intersessionally would be included in the agenda of the 86th meeting. Given the evolution of the pandemic, the Executive Committee decided to establish an IAP addressing over 60 documents submitted to the 86th meeting, and further deferred both meetings to March 2021, leading to a 15-month period between the 84th and 86th meetings.

5. The contact group established to discuss the cost guidelines for the phase-down of HFCs in Article 5 countries has included in Annex II of the present document the outstanding issues under discussion. To facilitate the work of the contact group, at the 84th meeting, the Secretariat suggested under Annex II actions to be taken by members to conclude deliberations on the outstanding issues (for ease of reference, the text was presented in square brackets and highlighted). However, noting that such guidance became outdated, the Secretariat removed it from Annex II, updated it and included it in the following section of the present document.

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

6. Table 1 summarizes both the status of the discussions as at the 84th meeting and the expected additional actions on outstanding issues by the Executive Committee at the present meeting.

⁵ Documents on the cost guidelines submitted to the meetings of the Executive Committee are: 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, UNEP/OzL.Pro/ExCom/82/67, UNEP/OzL.Pro/ExCom/83/43 and UNEP/OzL.Pro/ExCom/84/66.

⁶ Several of the documents were updated and/or revised following their consideration by the Committee at a given meeting, and resubmitted to subsequent meetings.

Table 1. Status of the cost guidelines for the phase-down of HFCs in Article 5 parties as at the 84th meeting

Element of decision XXVIII/2	Paragraph	Status	Expected additional action
<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	None
Cut-off dates for eligible capacity	17	Text included in the draft template	None
Second and third conversions	18	Text included in the draft template	None
Other costs	25	Text not included in the draft template ⁷	
Eligibility of Annex F substances subject to high-ambient-temperature exemptions	35	Text included in the draft template	None
<i>Under discussion</i>			
Sustained aggregate reductions in consumption and production	19	Text included in the draft template Document on key considerations for developing a methodology for establishing the starting point for sustained aggregate reductions in consumption and production was considered at the 82 nd meeting (UNEP/OzL.Pro/ExCom/82/66)	To agree on a methodology for establishing the starting point for sustained aggregate reductions taking into consideration the information contained in document UNEP/OzL.Pro/ExCom/82/66
Eligible incremental costs	15		
Consumption manufacturing sector	15(a)	Text on categories of eligible costs included in the draft template	To consider establishing cost-effectiveness thresholds based on the results of HFC stand-alone investment projects and information contained in document UNEP/OzL.Pro/ExCom/86/91 providing an analysis of and information on the incremental capital costs (ICC) and incremental operating costs (IOC) and their duration, and the cost-effectiveness of investment projects in the relevant manufacturing sectors and sub-sectors
Production sector	15(b)	Text on categories of eligible costs included in the draft template	To consider, on a case-by-case basis, compensation for compliance-related control obligations for the production sector
Refrigeration servicing sector	15(c)	Text on categories of eligible costs included in the draft	To consider establishing cost-effectiveness thresholds based on document UNEP/OzL.Pro/ExCom/82/64

⁷ Parties to the Montreal Protocol 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.

Element of decision XXVIII/2	Paragraph	Status	Expected additional action
		template A preliminary document on all aspects related to the refrigeration servicing sector that support the HFC phase-down was considered at the 82nd meeting (UNEP/OzL.Pro/ExCom/82/64)	and two documents submitted to the 86th meeting: An analysis on the level and modalities of funding for the HFC phase-down in the refrigeration servicing sector (decision 83/65(b)) (UNEP/OzL.Pro/ExCom/86/89) Potential strategies, policy measures and commitments, as well as projects and activities that could be integrated within stage I of HFC phase-down plans for Article 5 countries to ensure limits on growth and reductions in HFC consumption that were sustained over time (decision 84/54(b)) (UNEP/OzL.Pro/ExCom/86/87)
Energy efficiency	22	At the 80th meeting, the text related to energy efficiency was removed from the cost guidelines, in order to be discussed separately The following documents have been considered at the 83rd and 84th meetings: Ways to operationalize paragraph 16 of decision XXVIII/2 and paragraph 2 of decision XXX/5 (UNEP/OzL.Pro/ExCom/83/40, UNEP/OzL.Pro/ExCom/84/67) Information on funds and financial institutions mobilizing resources for energy efficiency that may be utilized when phasing down HFCs (UNEP/OzL.Pro/ExCom/83/41, UNEP/OzL.Pro/ExCom/84/68) 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) (UNEP/OzL.Pro/ExCom/83/42, UNEP/OzL.Pro/ExCom/84/69)⁸	To continue discussions separately under agenda item 13(g) “Matters related to the Kigali Amendment to the Montreal Protocol: Energy efficiency”, the following items: Ways to operationalize paragraph 16 of decision XXVIII/2 and paragraph 2 of decision XXX/5 (decision 84/88) (UNEP/OzL.Pro/ExCom/86/92) A framework for consultations with relevant funds and financial institutions to explore, at both the governing and operational levels, the mobilization of financial resources, additional to those provided by the Multilateral Fund, for maintaining or enhancing energy efficiency when replacing HFCs with low-GWP refrigerants in the refrigeration and air-conditioning sector (decision 84/89) (UNEP/OzL.Pro/ExCom/86/93) To consider whether to integrate any decisions made on energy efficiency in the cost guidelines
Capacity building to address safety	23	Text included in the draft template	To discuss the details on capacity building to address safety together with the discussions on the refrigeration servicing sector (decision 81/67(c))

⁸ At its 84th meeting, the Executive Committee took note of the updated summary of the report by the TEAP (document UNEP/OzL.Pro/ExCom/84/69), with the understanding that the Secretariat would not be required to update the summary further.

Element of decision XXVIII/2	Paragraph	Status	Expected additional action
Disposal	24	Discussion started at the 82 nd meeting based on the synthesis report on the pilot ODS disposal projects (UNEP/OzL.Pro/ExCom/82/21)	To discuss the matter based on the document on the Synthesis report describing best practices and ways to consider operationalizing paragraph 24 of decision XXVIII/2 (decision 84/87(b)) (UNEP/OzL.Pro/ExCom/86/90)

7. As summarized in Table 1 above, the following elements of the cost guidelines for the phase-down of HFCs require further consideration by the Executive Committee:

- Methodology for determining the starting point for sustained aggregate reductions
- Eligible incremental costs for the consumption manufacturing sector
- Eligible incremental costs for the refrigeration servicing sector
- Energy efficiency (being discussed under a separate agenda item)
- Disposal
- Other general matters related to HFC phase-down (not included in decision XXVIII/2)

8. To facilitate the discussions at its 86th meeting, the Executive Committee may wish to consider the summary on the progress achieved so far on each of the outstanding elements and the suggestions on how to continue its deliberations as presented below.

Methodology for determining the starting point for sustained aggregate reductions

9. In response to decision 81/67(e), the Secretariat prepared document UNEP/OzL.Pro/ExCom/82/66, 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. Section IV of the document set out a number of key considerations that informed the discussions of the contact group on the cost guidelines in the margins of the 82nd, 83rd and 84th meetings.⁹ The issues discussed by the contact group included, *inter alia*:

- (a) The unit of measurement, where some members proposed to use metric tonnes (mt), as that unit reflected the actual production of the converted plants, while others proposed to use CO₂-equivalent tonnes in order to measure the environmental impact of the conversions, and others yet suggested using both units of measurement at first and making a definitive decision about which one to use once the pros and cons of each approach had been ascertained;
- (b) Possible options for determining the starting point, where it was proposed to use the HFC baseline including the HFC and HCFC components,¹⁰ the HFC component, or an intermediate value between the two. It was also proposed that Article 5 countries could

⁹ The key considerations were: the starting point as a combination of different groups of substances; the time of establishment of the starting point; the need to ensure that the methodology to determine the starting point is equitable to all Article 5 countries; whether starting points should be based on pure HFCs only or on pure HFCs and HFC blends; measurement of HFC starting points in tonnage, CO₂ equivalent, and/or both; additional tonnage of HFCs associated with the “HCFC component”; the HCFC baseline or the HCFC starting point as the basis for the “HCFC component”; potential double counting associated with the “HCFC component”; import and export of controlled substances contained in pre-blended polyols; the role of the starting point in the servicing sector; and the starting point for the production sector.

¹⁰ Discussion on the “HFC component” and the “HCFC component” is presented in paragraphs 28 to 32 of document UNEP/OzL.Pro/ExCom/82/66.

choose as the starting point the HFC consumption from a number of previous years (e.g., the last year or the average of the last three years) or the year when the first HFC investment project had been approved by the Executive Committee;

- (c) The inclusion in the starting point of HFCs contained in imported pre-blended polyols, and the exclusion of HFCs contained in exported pre-blended polyols, on the understanding that such consumption would be monitored and controlled by Article 5 countries;¹¹
- (d) The exclusion of the HFC phase-down tail (i.e., 20 per cent for Article 5 group 1 countries and 15 per cent for Article 5 group 2 countries) from the starting point as the phase-out of that consumption was not mandated by the Montreal Protocol. While there was no consensus, some members indicated that deducting the consumption associated with the tail would imply that the starting point would be based on the HFC baseline for compliance, which would include the totality of the HFC and HCFC components; and
- (e) Whether sustained reductions from the starting point should be accounted on a substance-by-substance basis. Different views were expressed, including that the starting point should be one unique number, and that reductions should be made by substance, but only for the most commonly used HFCs.

Discussions at the 86th meeting on the starting point

10. The Executive Committee may wish to continue its discussions on the methodology for determining the starting point for sustained aggregate reductions, taking into account the considerations contained in document UNEP/OzL.Pro/ExCom/82/66, 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.

Eligible incremental costs for the consumption manufacturing sector

11. Preliminary discussions on cost-effectiveness thresholds for the phase-out of HFCs in the consumption manufacturing sector started at the 78th meeting and continued at the 79th meeting. During the discussions, members noted *inter alia* that the cost-effectiveness thresholds for the phase-out of CFCs and HCFCs were not necessarily applicable to 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 Executive 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 (decisions 78/3(g)¹² and 79/45¹³).

¹¹ Members agreed to include text to reflect this proposal in the working document of the contact group, contained in Annex XIV of the report of the 83rd meeting and Annex II of the present document.

¹² The Executive Committee considered approving a limited number of HFC-related projects in the manufacturing sector only, without prejudice to different kinds of technology, no later than at the first meeting of 2019, to allow the Committee to gain experience in the ICC and IOC that might be associated with phasing down HFCs in Article 5 countries, on the understanding: that any Article 5 country that submitted a project should have ratified the Kigali Amendment or submitted a formal letter indicating the government's intention to ratify the Amendment; that no further funding would be available until the instrument of ratification had been received by the depositary at the Headquarters of the United Nations in New York; and that any amount of HFC reduced as a result of the project would be deducted from the starting point.

¹³ Projects under decision 78/3(g) would be considered on a case-by-case basis, should be in individual enterprises deciding to convert to mature technologies, should have broad replicability to the country or region or sector, and should take into account geographic distribution; must be fully implemented by no more than two years from the time of their approval, that the relevant project completion reports should be comprehensive with detailed information on the eligible ICC, IOC, any possible savings incurred during the conversion and relevant factors that facilitated

12. In line with decisions 78/3(g) and 79/45, at its 80th, 81st and 82nd meetings the Executive Committee approved 10 stand-alone HFC investment projects in the domestic and commercial refrigeration manufacturing sectors.¹⁴

13. Additional discussions were held at the the 83rd meeting, where one member proposed that the cost-effectiveness thresholds should be established through an appropriate methodology, taking into account relevant information, decisions of the Executive Committee and results of the implementation of stand-alone HFC investment projects;¹⁵ and at the 84th meeting, where the Executive Committee requested the Secretariat to prepare for the 86th meeting an analysis of and information on the ICCs and IOCs and their duration in the consumption manufacturing sector (decision 84/87(a)). At the 84th meeting, recognizing the valuable information to be gained from HFC-related stand-alone investment projects for use in the preparation of the cost guidelines for the phase-down of HFCs, the Executive Committee also decided to consider proposals for such projects up to the 87th meeting, in accordance with the criteria set out in decisions 78/3(g), 79/45 and 81/53, and prioritizing projects in the stationary air-conditioning, commercial refrigeration and mobile air-conditioning sectors (decision 84/53).

14. Document UNEP/OzL.Pro/ExCom/86/91 containing an analysis of and information on the ICCs and IOCs and their duration in the consumption manufacturing sector has been submitted to the 86th meeting in response to decision 84/87(a). The document presents a summary of the ICC, IOC and cost-effectiveness of approved investment projects in the relevant manufacturing sectors and sub-sectors (in particular the refrigeration and air-conditioning and the foam sectors where the large majority of HCFCs and HFCs are used); a preliminary analysis on the ICC and IOC incurred in the conversion of HFC-consuming enterprises that have been completed; and conclusions and observations.

Discussions at the 86th meeting on cost-effectiveness thresholds for the manufacturing sector

15. The Executive Committee may wish to continue its discussions on the cost-effectiveness thresholds for the consumption manufacturing sector, taking into account the analysis contained in document UNEP/OzL.Pro/ExCom/86/91.

Eligible incremental costs for the refrigeration servicing sector

16. Extensive discussions on matters related to the refrigeration servicing sector for the phase-down of HFCs were initiated at the 80th meeting and continued up to the 84th meeting, as summarized below.

Discussions at the 82nd meeting on the refrigeration servicing sector

17. At its 82nd meeting, the Executive Committee considered document UNEP/OzL.Pro/ExCom/82/64, Preliminary document on all aspects related to the refrigeration servicing sector that support the HFC phase-down, prepared in response to decision 80/76(c).¹⁶ The document presented an overview of the

implementation, and that any remaining funds would be returned to the Multilateral Fund no later than one year after the date of project completion as per the project proposals.

¹⁴ HFC investment projects have been approved in Argentina, Bangladesh, China, the Dominican Republic, Jordan, Lebanon, Mexico (two), Thailand and Zimbabwe, at a total value of US \$13,397,249 (plus agency support costs) to phase down 1,090 mt (1.63 million mt CO₂-eq) of HFCs.

¹⁵ A draft text to reflect this proposal was included in the working document of the contact group, contained in Annex XIV of the report of the 83rd meeting and Annex II of the present document.

¹⁶ 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

evolution of the refrigeration servicing sector since the inception of the Multilateral Fund; an analysis of the capacity that had been established and strengthened in relation to policy and regulatory frameworks, training and certification of refrigeration technicians, technical assistance activities; and the information needed for the development of training and competency-based certification programmes for technicians and customs officers. The document also discussed the joint implementation of decision XIX/6 (on HCFCs) and decision XXVIII/2 (on HFCs), taking into consideration the overlapping schedule of HCFC phase-out and HFC phase-down.

18. During the discussions, members identified additional activities in the refrigeration servicing sector that would be required beyond those already being implemented under the 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. The Committee also agreed to discuss matters related to an increase in funding for low-volume-consuming (LVC) countries when replacing HCFCs in the servicing sector under energy efficiency as it was related to decision XXX/5.¹⁷

Discussions at the 83rd meeting on the refrigeration servicing sector

19. During the discussions of the contact group on the cost guidelines in the margins of the 83rd meeting, members considered issues related to opportunities and synergies between implementing activities that would concurrently phase out HCFCs and phase down HFCs; challenges in the introduction of low-GWP alternatives; and the flexibility required by Article 5 countries to allocate funding to strategic priorities based on their consumption and national circumstances. Further to the report by the facilitator of the contact group, the Executive Committee requested the Secretariat to prepare a document for the 85th meeting, providing an analysis of the level and modalities of funding for HFC phase-down in the refrigeration servicing sector, in light of the information provided in document UNEP/OzL.Pro/ExCom/82/64 and guidance provided by the Executive Committee, including the flexibility Article 5 countries have in implementing their servicing sector activities in line with their national circumstances and the implementation of planned and ongoing activities in their HCFC phase-out management plans (HPMPs) (decision 83/65(b)). In line with that decision, document UNEP/OzL.Pro/ExCom/86/89 has been submitted to the present meeting.

Discussions at the 84th meeting on the refrigeration servicing sector

20. At its 84th meeting, the Executive Committee discussed, under agenda item 12, “Analysis of the implications of parallel or integrated implementation of HCFC phase-out and HFC phase-down activities,” document UNEP/OzL.Pro/ExCom/84/65. The document described the compliance targets for HCFCs and for HFCs, the estimated consumption of HCFCs and HFCs during the 2020-2030 period and their sectoral distribution, and presented an analysis of the extent to which HCFC phase-out and HFC phase-down activities could be implemented in an integrated or parallel manner. The analysis indicated that approximately 100 countries consumed HFCs exclusively in the refrigeration servicing sector, and concluded *inter alia* that during the 2020-2030 period Article 5 countries could implement an integrated, cost-effective approach in simultaneously phasing out the remaining consumption of HCFCs and phasing down the consumption of HFCs used in the refrigeration servicing sector.

21. During the discussion, members highlighted potential synergies in HCFC phase-out and HFC phase-down in the refrigeration servicing sector, while noting opportunities in the foam, room air-conditioning, commercial refrigeration and chiller manufacturing sectors. Subsequently, the Executive

competency-based certification programmes and modules for service technicians and customs officers for the transition to alternatives.

¹⁷ UNEP/OzL.Pro/ExCom/86/92

Committee requested the Secretariat to take into account the opportunities for integrated implementation of the phase-out of HCFC and phase-down of HFCs in the refrigeration servicing sector when developing the document on an analysis of the level and modalities of funding for the HFC phase-down in the refrigeration servicing sector requested by decision 83/65(b) (decision 84/86(b)(ii)).

22. Also at its 84th meeting, the Executive Committee considered under agenda item 9(a) “Overview of issues identified during project review,” requests for preparatory funding for HFC phase-down plans and demonstration pilot projects that were included in the work programme amendments of one implementing agency. Further to a discussion, the Committee requested the Secretariat to prepare for the 85th meeting: (a) the draft guidelines for the preparation of HFC phase-down plans for Article 5 countries, and (b) a document discussing potential strategies, policy measures and commitments, as well as projects and activities that could be integrated within stage I of HFC phase-down plans for Article 5 countries to ensure limits on growth, and reductions in HFC consumption that were sustained over time, taking into account the parallel or integrated implementation of HCFC phase-out and HFC phase-down activities, where appropriate (decision 84/54). In line with decision 84/54(b), document UNEP/OzL.Pro/ExCom/86/87 has been submitted to the present meeting.

Discussions at the 86th meeting on the cost-effectiveness in the refrigeration servicing sector

23. The Executive Committee may wish to continue its discussions on the cost-effectiveness thresholds for the refrigeration servicing sector, taking into account the relevant information contained in the following documents:

- (a) UNEP/OzL.Pro/ExCom/84/65, Analysis of the implications of parallel or integrated implementation of HCFC phase-out and HFC phase-down activities;
- (b) UNEP/OzL.Pro/ExCom/86/89, An analysis of the level and modalities of funding for the HFC phase-down in the refrigeration servicing sector (decision 83/65(b)); and
- (c) UNEP/OzL.Pro/ExCom/86/87, Potential strategies, policy measures and commitments, as well as projects and activities that could be integrated within stage I of HFC phase-down plans for Article 5 countries to ensure limits on growth, and reductions in HFC consumption that were sustained over time, taking into account the parallel or integrated implementation of HCFC phase-out and HFC phase-down activities, where appropriate (decision 84/54(b)).

24. The Executive Committee may also wish to note that:

- (a) During the IAPs established for the 85th and 86th meetings, it approved funding for new stages I, II or III of HPMPs for 42 Article 5 countries (i.e., 35 LVC countries and seven non-LVC countries);
- (b) An additional 47 Article 5 countries (i.e., 34 LVC countries and 13 non-LVC countries) are preparing submissions of new stages of their HPMPs for consideration at the 87th or 88th meeting;
- (c) A total of 50 Article 5 countries have had their HPMPs approved for the total phase-out of HCFCs;
- (d) As of 30 November 2020, 75 Article 5 countries (i.e., 52 LVC countries and 23 non-LVC countries) had ratified the Kigali Amendment and would be able to submit requests for preparatory funding for HFC phase-down plans.

25. Therefore, in the near future, a large number of Article 5 countries could be implementing activities in the refrigeration servicing sector under their HPMPs and under their HFC phase-down plans.

Energy efficiency

26. Matters related to energy efficiency were first discussed in the contact group on the cost guidelines for the phase-down of HFCs, established in the margins of the 81st meeting and subsequently discussed under a separate agenda item since the 83rd meeting. Once the Executive Committee has finished its deliberations on energy efficiency, the Executive Committee may wish to consider whether to include in the cost guidelines for the phase-down of HFCs in Article 5 countries any decision it has adopted on energy efficiency.

Disposal

27. Between its 58th and 73rd meetings, the Executive Committee approved funding for the preparation of 16 project proposals that resulted in the approval of pilot demonstration projects for ODS waste management and disposal in 11 Article 5 countries, two regional projects and one technical assistance project.

28. At its 79th meeting, the Executive Committee considered a progress report on the implementation of the pilot demonstration projects for ODS waste management and disposal.¹⁸ Further to a discussion, the Executive Committee requested the Secretariat to submit to the 82nd meeting a synthesis report on the pilot ODS disposal projects that had been completed (decision 79/18(e)).

29. 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 prepared in response to decision 79/18(e) (decision 81/67(d)).

30. At its 82nd meeting, the Executive Committee considered matters related to disposal of ODS waste under:

- (a) Agenda item 6(d), “Draft monitoring and evaluation work programme for the year 2019,” where the Executive Committee approved the second phase of the evaluation of pilot demonstration projects on ODS disposal and destruction;¹⁹
- (b) Agenda item 7(c), “Synthesis report on the pilot ODS disposal projects (decision 79/18(e)),” where the Executive Committee considered document UNEP/OzL.Pro/ExCom/82/21 submitted pursuant to decision 81/67(d). During the discussions, members expressed appreciation for the thoroughness of the report and raised a number of issues associated with the disposal and destruction of ODS, highlighting their relevance to HFC phase-down and to discussions on the cost guidelines for the phase-down of HFCs. Subsequently, the Executive Committee *inter alia* took note of the synthesis report, and requested bilateral and implementing agencies to apply, where appropriate, the findings and recommendations of the synthesis report; and
- (c) Agenda item 11(d), “Development of the cost guidelines for the phase-down of HFCs in Article 5 countries,” where discussions took place in the contact group on the cost guidelines. In reporting to plenary, the facilitator of the contact group indicated that some members, while cognizant that disposal was important and mandated by

¹⁸ Reports on projects with specific reporting requirements (UNEP/OzL.Pro/ExCom/79/14).

¹⁹ The terms of reference are contained in document UNEP/OzL.Pro/ExCom/82/13/Rev.1.

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 for Article 5 countries, particularly for LVC countries, and saw it as an integral part of the cost guidelines for HFC phase-down. Following the report by the facilitator of the contact group, the Executive Committee decided to continue discussing the cost guidelines for the phase-down of HFCs in Article 5 countries at the 83rd meeting (decision 82/84).

31. Discussions on disposal continued in the contact group on the cost guidelines, based on which the Executive Committee took the following decisions:

- (a) At its 83rd meeting, the Executive Committee agreed to further discuss the matter at the 84th meeting, in light of the final report on the evaluation of pilot demonstration projects on ODS disposal and destruction to be submitted by the Senior Monitoring and Evaluation Officer (decision 83/65(c)); and
- (b) At its 84th meeting, the Executive Committee requested the Secretariat to prepare for the 85th meeting a synthesis report describing best practices and ways for the Executive Committee to consider operationalizing paragraph 24 of decision XXVIII/2, taking into account the final report on the evaluation of the pilot demonstration projects on ODS disposal and destruction²⁰ and the synthesis report on pilot ODS disposal projects;²¹ other relevant projects implemented in HPMPs; lessons learned from existing infrastructure and policies that could be used to establish the cost-effective management of stockpiles of used or unwanted controlled substances; and external funding opportunities and existing disposal programmes and partnerships (decision 84/87(b)).

32. Document UNEP/OzL.Pro/ExCom/86/90 has been submitted to the 86th meeting in response to decision 84/87(b).

Discussions at the 86th meeting on disposal of ODS waste

33. The Executive Committee may wish to continue its discussion on disposal of ODS waste taking into consideration document UNEP/OzL.Pro/ExCom/86/90.

Other general matters related to HFC phase-down

34. The document on the cost guidelines for the phase-down of HFCs submitted to the 80th meeting included overarching aspects²² that were already being applied in the context of enabling activities and stand-alone HFC investment projects under implementation (the aspects are contained in Part III of Annex II to the present document). However, the Executive Committee has not reached an agreement on those overarching aspects.

Discussions at the 86th meeting on other general matters related to the HFC phase-down

35. Noting that the overarching aspects are being applied, the Executive Committee may wish to consider whether to incorporate the text contained in Part III of 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.

²⁰ UNEP/OzL.Pro/ExCom/84/11 and Corr.1

²¹ UNEP/OzL.Pro/ExCom/82/21

²² Paragraph 43 of document UNEP/OzL.Pro/ExCom/80/55

Recommendation

36. The Executive Committee may wish:

- (a) To note document UNEP/OzL.Pro/ExCom/86/86 on the development of the cost guidelines for the phase-down of HFCs in Article 5 countries: Draft criteria for funding; and
- (b) To continue its deliberations on the cost guidelines for the phase-down of HFCs in Article 5 countries in light of document UNEP/OzL.Pro/ExCom/86/86.

Annex I

DRAFT TEMPLATE OF THE COST GUIDELINES FOR THE PHASE-DOWN OF HFCs (As of the 84th 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;
- (b) Incremental operating costs 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 practices 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 exemption

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 84th meeting)

Note by the Secretariat: The outstanding issues for further discussion by the Executive Committee are presented in the following three parts:

- I. In relation to the cost guidelines
- II. Additional work to be requested from the Secretariat
- III. Other general matters related to HFC phase-down

A reference to the documents prepared by the Secretariat to discuss each subject has been included.

I. IN RELATION TO THE COST GUIDELINES

Sustained aggregate reductions

(Reference documents: UNEP/OzL.Pro/ExCom/82/66)

- (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];
- (c) [When determining the starting point for aggregate reduction in HFC consumption, the following approach will be followed with regard to the import and export of HFCs contained in pre-blended polyols, which had not been counted as consumption under Article 7 of the Montreal Protocol:
 - (i) [Paragraph about internal production of pre-blended polyols];
 - (ii) To request Article 5 countries to report under the country programme implementation report imports and exports of HFCs contained in pre-blended polyols;
 - (iii) To request Article 5 countries that wished to seek assistance for the phase-out of imports of HFCs contained in pre-blended polyols to include in the starting point for aggregate reduction in HFC consumption the amount of HFC imported contained in polyol systems during the years used as reference to determine the starting point; and
 - (iv) To request Article 5 countries that export HFC contained in pre-blended polyols to deduct from the starting point for aggregate reduction in HFC consumption the amount of HFC exported contained in polyol systems during the years used as reference to determine the starting point.]

Eligible incremental costs

Consumption manufacturing sector

(Reference documents: UNEP/OzL.Pro/ExCom/86/91)

- (d) [To continue discussing the cost guidelines for the phase-down of HFCs in Article 5 Parties, *inter alia* including establishment of cost-effectiveness thresholds, through an appropriate methodology in relation to consumption manufacturing sector, taking into account relevant information, decisions of the Executive Committee and results from the implementation of stand-alone HFC investment projects in all sectors of HFCs;]

Refrigeration servicing sector

(Reference documents: UNEP/OzL.Pro/ExCom/82/64, UNEP/OzL.Pro/ExCom/84/65, UNEP/OzL.Pro/ExCom/86/87, UNEP/OzL.Pro/ExCom/86/89)

- (e) [Consideration of paragraph 16 of decision XXVIII/2, [including consideration of maintaining energy efficiency in the servicing/end-user sector]]; [It is proposed to delete this paragraph as this issue is already being discussed separately under agenda item 13(b) on Matters related to the Kigali Amendment to the Montreal Protocol: Energy efficiency]

Energy efficiency

Note: This item is being considered outside the cost guidelines for the phase-down of HFCs.

Capacity building to address safety

Note: This item is being addressed under the refrigeration servicing sector.

Disposal

(Reference documents: UNEP/OzL.Pro/ExCom/82/21, UNEP/OzL.Pro/ExCom/86/90)

- (f) To consider, at the 84th meeting, the matter of disposal of controlled substances, in light of the final report on the evaluation of pilot demonstration projects on ODS disposal and destruction to be submitted by the Senior Monitoring and Evaluation Officer;

II. ADDITIONAL WORK TO BE REQUESTED FROM THE SECRETARIAT ²³

In relation to the consumption manufacturing sector

(Reference documents: UNEP/OzL.Pro/ExCom/86/91)

- (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 incremental operational costs for HFC-phase-down activities in the consumption manufacturing sector once progress in the implementation of HFC investment projects has been made;]

²³ As contained in paragraph 46 of document UNEP/OzL.Pro/ExCom/80/55

III. OTHER GENERAL MATTERS RELATED TO HFC PHASE-DOWN ²⁴

- (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;
- (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

[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].]

²⁴ As contained in paragraph 43 of document UNEP/OzL.Pro/ExCom/80/55

Annex III

LIST OF DOCUMENTS ON HFC MATTERS THAT HAVE BEEN PREPARED SINCE THE ADOPTION OF THE KIGALI AMENDMENT

No	UNEP/OzL.Pro/	Title
1	ExCom/77/70/Rev.1	Issues relevant to the Executive Committee arising from the Twenty-eighth Meeting of the Parties to the Montreal Protocol
2	ExCom/78/4 & Corr.1	Available information on HFC consumption and production in Article 5 countries
3	ExCom/78/5 & Corr.1	Information relevant to the development of the cost guidelines for the phase-down of HFCs in Article 5 countries: Draft criteria for funding
4	ExCom/78/6	Information relevant to the development of the cost guidelines for the phase-down of HFCs in Article 5 countries: Enabling activities
5	ExCom/78/7	Information relevant to the development of the cost guidelines for the phase-down of HFCs in Article 5 countries: Institutional strengthening
6	ExCom/78/8	Identification of issues to be considered in relation to existing HCFC phase-out activities
7	ExCom/78/9 and Corr.1	Key aspects related to HFC-23 by-product control technologies
8	ExCom/78/10 and Corr.1	Draft procedures for Article 5 countries that have HFC consumption baseline years from 2020 to 2022 in accessing additional contributions for enabling activities
9	ExCom/79/45 and Corr.1	Overall analysis of the results of the surveys on ODS alternatives (decision 74/53)
10	ExCom/79/46	Development of the cost guidelines for the phase-down of HFCs in Article 5 countries: Draft criteria for funding (decision 78/3)
11	ExCom/79/47	Development of the cost guidelines for the phase-down of HFCs in Article 5 countries: Draft guidelines on enabling activities (decision 78/4(a))
12	ExCom/79/48, Corr.1, Corr.2, and Add.1	Key aspects related to HFC-23 by-product control technologies (decision 78/5)
13	ExCom/79/49	Procedures for Article 5 countries that have HFC baseline years from 2020 to 2022 in accessing additional voluntary contributions for enabling activities
14	ExCom/80/54	Overall analysis of the results of the surveys of ODS alternatives
15	ExCom/80/55	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))
16	ExCom/80/56 and Add.1	Key aspects related to HFC-23 by-product control technologies
17	ExCom/81/53	Development of the cost guidelines for the phase-down of HFCs in Article 5 countries: Draft criteria for funding (decisions 78/3(i), 79/44(b) and 80/76(b))
18	ExCom/81/54	Key aspects related to HFC-23 by-product control technologies (decisions 78/5(e), 79/47(e) and 80/77(b))
19	ExCom/81/55	Implications for the Multilateral Fund institutions in terms of the expected workload in the coming years including in relation to the Kigali Amendment for the phase-down of HFCs (decision 80/34(f))
20	ExCom/82/64	Preliminary document on all aspects related to the refrigeration servicing sector that support the HFC phase-down (decision 80/76(c))
21	ExCom/82/65 and Add.1	Summary of the Parties' deliberations at the 40 th Meeting of the Open-Ended Working Group and the Thirtieth Meeting of the Parties to the Montreal Protocol in relation to the Technology and Economic Assessment Panel's report on issues related to energy efficiency (decision 81/67(b))

No	UNEP/OzL.Pro/	Title
22	ExCom/82/66	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 (decision 81/67(e))
23	ExCom/82/67 and Add.1	Development of the cost guidelines for the phase-down of HFCs in Article 5 countries: Draft criteria for funding (decision 81/67(f))
24	ExCom/82/68 and Corr.1	Cost-effective options for controlling HFC-23 by-product emissions (decision 81/68(e))
25	ExCom/82/69	Key aspects related to HFC-23 by-product control technologies: options related to the control of HFC-23 by-product emissions in Argentina (decision 81/68)
26	ExCom/82/70	Matters relevant to the Multilateral Fund arising from the 40 th Meeting of the Open-Ended Working Group and the Thirtieth Meeting of the Parties to the Montreal Protocol
27	ExCom/83/40	Paper on ways to operationalize paragraph 16 of decision XXVIII/2 and paragraph 2 of decision XXX/5 of the Parties
28	ExCom/83/41	Paper on information on relevant funds and financial institutions mobilizing resources for energy efficiency that may be utilized when phasing down HFCs
29	ExCom/83/42	Summary of the report by the Technology and Economic Assessment Panel on matters related to energy efficiency with regard to the issues identified in decision 82/83(e)
30	ExCom/83/43	Development of the cost guidelines for the phase-down of HFCs in Article 5 countries: Draft criteria for funding
31	ExCom/83/44	Key aspects related to HFC-23 by-product control technologies Argentina project options
32	ExCom/84/65	Analysis of the implications of parallel or integrated implementation of HCFC phase-out and HFC phase-down activities
33	ExCom/84/66	Development of the cost guidelines for the phase-down of HFCs in Article 5 countries: Draft criteria for funding
34	ExCom/84/67	Paper on ways to operationalize paragraph 16 of decision XXVIII/2 and paragraph 2 of decision XXX/5 of the Parties
35	ExCom/84/68	Paper on information on relevant funds and financial institutions mobilizing resources for energy efficiency that may be utilized when phasing down HFCs
36	ExCom/84/69	Summary of the report by the Technology and Economic Assessment Panel on matters related to energy efficiency with regard to the issues identified in decision 82/83(e)
37	ExCom/84/70	Key aspects related to HFC-23 by-product control technologies
38	ExCom/84/71	Key aspects related to HFC-23 by-product control technologies: Argentina
39	ExCom/84/72	Key aspects related to HFC-23 by-product control technologies: Mexico
40	ExCom/85/63	Key aspects related to HFC-23 by-product control technologies (decisions 84/90 and 84/91)
41	ExCom/85/64	Key aspects related to HFC-23 by-product control technologies: Argentina
42	ExCom/85/65	Key aspects related to HFC-23 by-product control technologies: Mexico
43	ExCom/86/86	Development of the cost guidelines for the phase-down of HFCs in Article 5 countries: Draft criteria for funding
44	ExCom/86/87	A document discussing potential strategies, policy measures and commitments, as well as projects and activities that could be integrated within stage I of HFC phase-down plans for Article 5 countries to ensure limits on growth and sustainable reductions in HFC consumption (decision 84/54(b))
45	ExCom/86/88	Draft guidelines for the preparation of HFC phase-down plans for Article 5 countries (decision 84/54(a))

No	UNEP/OzL.Pro/	Title
46	ExCom/86/89	Analysis of the level and modalities of funding for HFC phase-down in the refrigeration servicing sector (decisions 83/65(b) and 84/86(b)(ii))
47	ExCom/86/90	A synthesis report describing best practices and ways for the Executive Committee to consider operationalizing paragraph 24 of decision XXVIII/2 (decision 84/87(b))
48	ExCom/86/91	Analysis of information on the incremental costs and their duration, and the cost effectiveness of all approved investment projects in the relevant manufacturing sectors and sub-sectors (decision 84/87(a))
49	ExCom/86/92	Paper on ways to operationalize paragraph 16 of decision XXVIII/2 and paragraph 2 of decision XXX/5 of the Parties (decision 84/88)
50	ExCom/86/93	Framework for consultations with relevant funds and financial institutions to explore the mobilization of additional financial resources for maintaining or enhancing energy efficiency when replacing HFCs with low global-warming potential refrigerants in the refrigeration and air-conditioning sector (decision 84/89)
51	ExCom/86/94	Key aspects related to HFC-23 by-product control technologies (decisions 84/90 and 84/91)
52	ExCom/86/95	Key aspects related to HFC-23 by-product control technologies: Argentina
53	ExCom/86/96	Key aspects related to HFC-23 by-product control technologies: Mexico