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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Ninety-second Meeting
Montreal, 29 May to 2 June 2023
Item 11(a)(ii) of the provisional agenda¹

**DRAFT GUIDELINES FOR FUNDING THE PHASE-DOWN OF HFCs IN ARTICLE 5
COUNTRIES INCLUDING CONSIDERATION OF OPERATIONALIZING
PARAGRAPH 24 OF DECISION XXVIII/2 AND DECISION 91/64(b)**

Introduction

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. Since the adoption of the Kigali Amendment, the Executive Committee has been discussing the cost guidelines for HFC phase-down, and the Secretariat has produced a number of documents to assist the Committee in its ongoing deliberations. The latest working documents issued for the consideration of the Committee members are:

¹ UNEP/OzL.Pro/ExCom/92/1

² Decision XXVIII/2 related to the amendment phasing down HFCs includes several elements that pertain to the operation of the Multilateral Fund, and thus are for the consideration of the Executive Committee.

³ Decision XXX/4: Progress by the Executive Committee of the Multilateral Fund in the development of guidelines for financing the phase-down of HFCs.

- (a) Draft template of the cost guidelines, first adopted at the 78th meeting on the understanding that it would be further developed, found in Annex I to the present document; and
- (b) The working text on the cost-effectiveness thresholds, previously considered at the 91st meeting and found in Annex II to the present document.

3. At its 80th meeting, the Executive Committee decided *inter alia* to continue using the draft template of the cost guidelines for HFC phase-down and the list of outstanding elements as working documents for future discussions, agreeing that the template could be further developed. The working document containing a list of outstanding elements as at the 84th meeting is included in Annex III to the present document by way of reference to previous discussions, while the updated list of outstanding issues is contained in table 1 below.

4. The Executive Committee continued its deliberations on the cost guidelines for the phase-down of HFCs in Article 5 countries at the in-person part II of the 89th meeting.⁴ The contact group established to discuss the matter held discussions on the cost-effectiveness thresholds, the starting point for HFC phase-down, and disposal-related issues, but did not reach conclusions. Subsequently, the Executive Committee agreed to continue discussions at its 90th meeting, based on the working texts prepared by the Secretariat that outlined the members' proposals.⁵

5. At the 90th meeting, the contact group achieved progress in its discussion of the cost-effectiveness thresholds for some manufacturing sectors and on the issue of disposal, as detailed in the relevant subsections below. The group remained inconclusive regarding the starting point for sustained aggregate reductions in HFC consumption and production, and the duration and level of incremental operating costs (IOCs). Accordingly, the Executive Committee agreed to pursue at the 91st meeting its consideration of the unresolved issues, based on the working documents being used by the contact group on the starting point for sustained aggregate reductions in HFC consumption and production and the cost-effectiveness thresholds.⁶

6. At the 91st meeting, the contact group continued to progress in its discussion of the starting point for sustained aggregate reductions in HFC consumption based on a presentation prepared by the Secretariat and on the cost-effectiveness thresholds. The group required additional discussions on the starting point, the cost-effectiveness thresholds for stationary air-conditioning (AC) and commercial refrigeration, and on the IOCs. Accordingly, the Executive Committee agreed to pursue, at its 92nd meeting, consideration of the unresolved issues, based on *inter alia* the working texts being used by the contact group,⁷ and requested the Secretariat to prepare for the 92nd meeting (decision 91/64):

- (a) A paper on the starting point for sustained aggregate reductions based on the discussions that took place at the 91st meeting in the contact group on the cost guidelines for the phase-down of HFCs; and
- (b) Information to assist the Executive Committee in defining what was to be considered "small and medium-sized enterprises" in the commercial AC manufacturing and commercial refrigeration manufacturing sectors.

7. The analysis of issues related to establishing the starting point for sustained aggregate reductions in HFC phase-down is contained in document UNEP/OzL.Pro/ExCom/92/46, while the information prepared by the Secretariat to assist the Executive Committee in establishing a definition of small and

⁴ UNEP/OzL.Pro/ExCom/89/6

⁵ Contained in Annex II (cost-effectiveness thresholds), Annex III (disposal) and Annex IV (starting point) to document UNEP/OzL.Pro/ExCom/89/16.

⁶ Paragraph 176 and Annexes XXIII and XXIV of document UNEP/OzL.Pro/ExCom/90/40

⁷ Contained in Annex XXXII of document UNEP/OzL.Pro/ExCom/91/72

medium-sized enterprises (SMEs) in the commercial AC and refrigeration manufacturing sectors is presented in section II of the present document.

8. The present summary of the progress of discussions on HFC phase-down cost guidelines⁸ consists of the following sections:

- I. Progress made and outstanding issues in the development of cost guidelines for the phase-down of HFCs
- II. Information to assist the Executive Committee in defining small and medium-sized enterprises in the commercial air-conditioning manufacturing and commercial refrigeration manufacturing sectors
- III. Recommendation

I. Progress made and outstanding issues in the development of cost guidelines for the phase-down of HFCs

A. Summary of the status of discussions and possible further actions on the HFC phase-down cost guidelines

Table 1. Status of discussions on the HFC phase-down cost guidelines as at the 92nd meeting

Elements of decision XXVIII/2	Paragraph	Status of discussions	Further actions
<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	Agreement not to include text in the draft template. ⁹	None
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	19	Text included in the draft template.* Element discussed at the 89 th , 90 th and 91 st meetings; paper on the starting	To agree on a methodology for establishing the starting point for sustained aggregate reductions, taking into consideration document

⁸ Complemented by related information in documents UNEP/OzL.Pro/ExCom/89/10/Rev.1 and UNEP/OzL.Pro/ExCom/89/10/Add.1 (cost-effectiveness thresholds), UNEP/OzL.Pro/ExCom/91/66 (disposal), UNEP/OzL.Pro/ExCom/92/44 (servicing sector), and UNEP/OzL.Pro/ExCom/92/46 (starting point).

⁹ Parties to the Montreal Protocol may identify other items to be added to the indicative list of incremental costs emanating from conversion to low-GWP alternatives.

Elements of decision XXVIII/2	Paragraph	Status of discussions	Further actions
production		point prepared based on discussions that took place at the 91 st meeting (decision 91/64(a)); working text as of the 90 th meeting reproduced for the 92 nd meeting in Annex IV to the present document.	UNEP/OzL.Pro/ExCom/92/46 and the working text contained in Annex IV.
Eligible incremental costs	15		
Consumption manufacturing sectors	15(a)	Text on categories of eligible costs included in the draft template.* Agreement on cost-effectiveness thresholds for some manufacturing sectors reached between the 89 th and the 91 st meetings and relevant working text (Annex II) and information on SMEs prepared for the 92 nd meeting (section II of the present document).	To continue discussions on establishing cost-effectiveness thresholds, IOCs and their duration in manufacturing sectors, taking into consideration the present document including the information on SMEs, background documents UNEP/OzL.Pro/ExCom/89/10/Rev1, UNEP/OzL.Pro/ExCom/89/10/Add.1, and the working text contained in Annex II.
Production sector	15(b)	Text on categories of eligible costs included in the draft template.*	To agree that the Sub-group on the Production Sector would consider, on a case-by-case basis, compensation for compliance-related control obligations for the production sector once official reporting of HFC production had been submitted by Article 5 countries.
Refrigeration servicing sector	15(c)	Text on categories of eligible costs included in the draft template.* Text of a draft recommendation and the levels of funding for LVC and non-LVC countries are being discussed in a separate contact group. The status of discussions as of the 91 st meeting and the relevant working document including the draft recommendation text and the working funding tables are contained in document UNEP/OzL.Pro/ExCom/92/44.	To consider levels and modalities of funding for the refrigeration servicing sector based on document UNEP/OzL.Pro/ExCom/92/44 and background document UNEP/OzL.Pro/ExCom/82/64. Issue to be discussed under agenda item 11(a)(i).
Energy efficiency	22	Energy efficiency discussed under a separate agenda item between the 83 rd and the 91 st meetings. Funding window established for pilot projects to maintain and/or enhance energy efficiency in the context of HFC phase-down (decision 91/65). Discussions to be continued at the 92 nd meeting.	To consider whether to include in the cost guidelines any decisions made with regard to energy efficiency under agenda item 11(b).
Capacity building to address safety	23	Text included in the draft template.*	To continue discussing safety-related details of capacity building jointly with discussions on the refrigeration servicing sector (decision 81/67(c)) under agenda item 11(a)(i).

Elements of decision XXVIII/2	Paragraph	Status of discussions	Further actions
Disposal	24	Flexibility provided for Article 5 countries to include in their HPMPs or KIPs activities related to the environmentally sound management of used or unwanted controlled substances, including disposal, taking into account paragraphs 19 to 24 of document UNEP/OzL.Pro/ExCom/89/9 and lessons learned from previous ODS disposal projects; and requested that deliberations on operationalizing paragraph 24 of decision XXVIII/2 continue in the context of discussions of HFC phase-down cost guidelines (decision 90/49(b)). Funding window established for preparing inventories of banks of used or unwanted controlled substances and developing plans for their collection, transport and disposal (decision 91/66).	To continue deliberations on operationalizing paragraph 24 of decision XXVIII/2, in the context of the discussion of the cost guidelines for the phase-down of HFCs in Article 5 countries.

*Annex I to the present document

B. Summary of the previous discussions on various components of the cost guidelines for the phase-down of HFCs

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”; the 11 key considerations outlined in Section IV of the document had informed the discussions of the contact group on the cost guidelines in the margins of the 82nd, 83rd, and 84th meetings.

10. The issues discussed by the contact group included *inter alia* units of measurement, different options for determining the starting point, the question of including HFCs contained in pre-blended polyols in the starting point, the inclusion of the HFC phase-down tail (20 per cent for Article 5 group 1 countries and 15 per cent for Article 5 group 2 countries), and whether sustained reductions from the starting point should be accounted on a substance-by-substance basis. In addition, at the 82nd meeting, the Executive Committee agreed to consider, during the development of cost guidelines for the phase-down of HFCs in Article 5 countries, how an enterprise’s interim use of high-global-warming-potential (GWP) technology that was not the approved low-GWP technology should be treated in relation to a country’s starting point for sustained aggregate reductions in HFC consumption (decision 82/55).

11. At its 89th meeting, the Executive Committee discussed the units of measurement and a methodology for determining the starting point for sustained reductions of HFCs and requested the Secretariat to prepare for the 90th meeting various scenarios in relation to the possible units of measurement and methodologies that might be used in determining the starting point.

12. At the 90th meeting, the Secretariat presented the requested information. The Executive Committee continued its discussions on the starting point for sustained aggregate reductions in HFC consumption and production without reaching a conclusion. Annex IV to the present document presents the relevant working text discussed by the Executive Committee at its 90th meeting.

13. At the 91st meeting, following a discussion of scenarios for establishing the starting point based on a presentation prepared by the Secretariat, the contact group resolved that a comprehensive analysis of the issue was needed, including illustrative examples. The analysis was to be based on nationally aggregated starting points rather than including as an option starting points specified by blend or substance, and it was also to consider a mechanism to take stock of the replacement of substances with high GWP by lower-GWP, HFC-based alternatives. Subsequently, the Executive Committee requested the Secretariat to prepare for the 92nd meeting a paper on the starting point for sustained aggregate reductions based on the discussions that took place at the 91st meeting in the contact group on the cost guidelines for the phase-down of HFCs (decision 91/64(a)).

Eligible incremental costs for the consumption manufacturing sector

14. Preliminary discussions on cost-effectiveness thresholds for the phase-down 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 the eligible incremental costs and agreed to consider approving a limited number of stand-alone HFC investment projects.

15. In line with decisions 78/3(g)¹⁰ and 79/45,¹¹ 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.¹²

16. Additional discussions were held at the 83rd meeting, where one member proposed that the cost-effectiveness thresholds be established through appropriate methodology, taking into account relevant information, decisions of the Executive Committee, and results of the implementation of stand-alone HFC investment projects;¹³ 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 incremental capital costs (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 in preparing 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

¹⁰ 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 ICCs and IOCs 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.

¹¹ Decision 79/45(a) states that projects submitted 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, have broad replicability to the country or region or sector, take into account geographic distribution, and must be fully implemented by no more than two years from the time of their approval; the relevant project completion reports should be comprehensive with detailed information on the eligible ICCs, IOCs, any possible savings incurred during the conversion and relevant factors that facilitated implementation; and 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.

¹² Projects at a total value of US \$13,397,249 (plus agency support costs) were approved in Argentina, Bangladesh, China, the Dominican Republic, Jordan, Lebanon, Mexico (two), Thailand and Zimbabwe to phase down 1,090 mt (1.63 million CO₂-eq tonnes) of HFCs.

¹³ A draft text to reflect this proposal was included in the working document of the contact group, contained in Annex XIV of document UNEP/OzL.Pro/ExCom/83/48 and in Annex III to the present document.

decisions 78/3(g), 79/45, and 81/53,¹⁴ and prioritizing projects in the stationary AC, commercial refrigeration, and mobile AC sectors (decision 84/53).

17. At the 89th meeting, the Secretariat presented document UNEP/OzL.Pro/ExCom/89/10/Rev.1, containing a summary of the ICCs, IOCs, and the cost-effectiveness of investment projects approved in particular for the refrigeration and air-conditioning (RAC) and foam manufacturing sectors; and document UNEP/OzL.Pro/ExCom/89/10/Add.1, presenting a preliminary analysis of the ICCs and IOCs incurred in the completed conversions of HFC-consuming enterprises. As no additional reports from completed projects approved pursuant to decision 78/3(g) have been received by the Secretariat, no update has been produced to the document.

18. At the 89th and 90th meetings, the contact group established to discuss the matter agreed that in the interim, cost-effectiveness thresholds would be used at US \$13.76/kg for the domestic refrigeration sector, and at US \$9.00/kg for the rigid polyurethane (PU) foam sector, with special consideration for SMEs, while the cost-effectiveness of projects in the flexible PU foam, integral skin, extruded polystyrene foam, aerosol, fire extinguisher, metered-dose inhaler, solvent, and mobile AC sectors would be considered on a case-by-case basis.

19. The group did not reach conclusions regarding the appropriate cost-effectiveness thresholds for projects in the stationary AC manufacturing domestic and commercial subsectors, and whether these should be considered together or separately. There was a common understanding that special consideration should be given to small enterprises in commercial refrigeration manufacturing, but additional information on what constituted a “small enterprise” in the sector was required; in addition, the group had not yet agreed on the cost-effectiveness threshold for the sector.

20. At the 91st meeting, the contact group agreed to consider projects regarding transport refrigeration on a case-by-case basis, to continue to discuss at the 92nd meeting thresholds for stationary AC and commercial refrigeration and IOCs on the basis of the working text used by the contact group (contained in Annex II to the present document), and to request the Secretariat to provide information to assist the Executive Committee in its consideration of what constitutes a small or medium-sized enterprise (SME) in the commercial AC manufacturing and commercial refrigeration manufacturing sectors. Accordingly, the Executive Committee requested the Secretariat to provide this information in decision 91/64(b).

Eligible incremental costs for the production sector

21. The Executive Committee agreed to include in the draft template of the cost guidelines for the phase-down of HFCs for the production sector, the categories of costs listed in subparagraph 15(b) of decision XXVIII/2 (decision 80/76(a)(iii)), as reflected in Annex I to the present document. In addition, at the 88th meeting, the Sub-group on the Production Sector considered under “Other matters” the development of HFC production sector guidelines. It was agreed that while it would be important for the Sub-group to eventually consider the issue, usually there would have been some official reporting by Article 5 countries before requesting the Secretariat to prepare a background document, and it was therefore suggested that the issue be revisited once there had been such reporting by the Parties concerned.

22. The Sub-group on the Production Sector would consider compensation for compliance-related control obligations for the production sector on a case-by-case basis once official reporting of HFC production had been submitted by Article 5 countries.

¹⁴ To invite bilateral and implementing agencies to prepare and present project proposals for conversion to alternatives to HFCs and promotion of new technologies, for submission 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; and that those projects about which concerns had been expressed at the 81st meeting could be resubmitted only if those specific concerns had been addressed.

Eligible incremental costs for the refrigeration servicing sector

23. Extensive discussions on matters related to the phase-down of HFCs in the refrigeration servicing sector were initiated at the 80th meeting. At its 82nd meeting, the Executive Committee considered a preliminary document UNEP/OzL.Pro/ExCom/82/64 on all aspects related to the refrigeration servicing sector that support the HFC phase-down, prepared in response to decision 80/76(c).¹⁵ During the discussions, members identified activities required in the refrigeration servicing sector beyond those already implemented under HCFC phase-out, including: building capacity on risk assessment and management of flammable refrigerants; activities in the assembly and installation subsector; 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.

24. At the 83rd meeting, the Executive Committee requested the Secretariat to prepare, for the 85th meeting, a document providing 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 that Article 5 countries have in implementing their servicing sector activities in line with their national circumstances and the planned and ongoing activities in their HCFC phase-out management plans (HPMPs) (decision 83/65(b)). At its 84th meeting, the Executive Committee further requested the Secretariat to take into account in its analysis the opportunities for integrated implementation of HCFC phase-out and HFCs phase-down in the refrigeration servicing sector (decision 84/86(b)(ii)).

25. The analysis had been accordingly prepared for the 86th meeting¹⁶ but due to the COVID-19 pandemic, it was discussed only between the 88th and the 91st meetings in a separate contact group from that established for the cost guidelines for HFC phase-down. As of the 91st meeting the group was discussing a text of a draft recommendation and the levels of funding for low-volume-consuming (LVC) and non-LVC countries. The status of discussions and the relevant working document including the draft recommendation text and the working funding tables are contained in document UNEP/OzL.Pro/ExCom/92/44.

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, but since the 83rd meeting, they have been included under a separate agenda item. Once the Executive Committee has finished its deliberations, it may wish to consider whether to include in its cost guidelines for the phase-down of HFCs in Article 5 countries any decisions adopted on energy efficiency.

Disposal

27. Discussions on disposal in the context of the HFC cost guidelines started at the 79th meeting,¹⁷ and continued at the 82nd meeting, when the Executive Committee considered the synthesis report on the completed pilot ozone-depleting-substances (ODSs) disposal projects.¹⁸ At the 84th meeting, the Secretariat was requested to prepare a synthesis report describing best practices and ways for the Executive Committee

¹⁵ To prepare a preliminary report taking into account previous policy documents, case studies, monitoring and evaluation reviews, and work undertaken in developing and implementing training and technical assistance programmes; 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 the minimum 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.

¹⁶ Documents UNEP/OzL.Pro/ExCom/86/89, UNEP/OzL.Pro/ExCom/88/72, UNEP/OzL.Pro/ExCom/89/8 and Add.1, respectively, discussed in detail in paragraphs 1-6 of document UNEP/OzL.Pro/ExCom/91/61.

¹⁷ UNEP/OzL.Pro/ExCom/79/14 and decision 79/18(e)

¹⁸ UNEP/OzL.Pro/ExCom/82/21

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 destruction¹⁹ and the synthesis report on pilot ODS disposal projects; other relevant projects implemented under the HPMPs; lessons learned from existing infrastructure; policies that could be used to establish the cost-effective management of stockpiles of used or unwanted controlled substances; external funding opportunities; and existing disposal programmes and partnerships (decision 84/87(b)).

28. The requested synthesis report was prepared and considered at the 89th meeting and subsequently deferred to the 90th meeting, when the Executive Committee decided to provide flexibility to Article 5 countries to include in their HPMPs and KIPs activities related to the environmentally sound management of used or unwanted controlled substances, including disposal, taking into account paragraphs 19 to 24 of document UNEP/OzL.Pro/ExCom/89/9 and lessons learned from previous ODS disposal projects. The Committee also requested the Secretariat to develop criteria for a funding window to provide Article 5 countries with assistance to prepare an inventory of banks of used or unwanted controlled substances and to develop a plan for the collection, transport and disposal (including consideration of recycling, reclamation and cost-effective destruction) of such substances, and to continue its deliberations on operationalizing paragraph 24 of decision XXVIII/2 of the Twenty-Eighth Meeting of the Parties in the context of the discussion of the cost guidelines for the phase-down of HFCs in Article 5 countries (decision 90/49).

29. Based on the relevant document prepared by the Secretariat for the 91st meeting,²⁰ the Executive Committee established a funding window for the preparation of national inventories of banks of used or unwanted controlled substances and a plan for the collection, transport and disposal of such substances, including consideration of recycling, reclamation and cost-effective destruction (decision 91/66).

II. Information to assist the Executive Committee in defining “small and medium-sized enterprises” in the commercial air-conditioning manufacturing and commercial refrigeration manufacturing sectors (decision 91/64(b))

30. At the 91st meeting, the Secretariat was requested to prepare for the 92nd meeting information to assist the Executive Committee in defining what was to be considered SMEs in the commercial AC manufacturing and commercial refrigeration manufacturing sectors.

31. Funding for the conversion of SMEs is often limited by their lower level of consumption, relative to larger enterprises.²¹ SMEs may also require additional technical assistance and training as they tend to have a more limited technical capacity. Formulating a definition of SMEs will allow the Executive Committee to ensure that funds are appropriately directed to those manufacturers that may require additional resources, relative to large enterprises.

Characteristics of small and medium-sized enterprises

32. What is considered an SME may vary across countries as there is no one universal definition. Governments may choose to define SMEs based on characteristics that are relevant in their country, which may include a combination of investment levels, number of employees, sales revenue, and other characteristics. Seeing as such information may not be readily available to bilateral and implementing agencies during the project preparation process, the Secretariat, with the assistance of an independent technical expert, identified the following characteristics of SMEs that would be simple and readily available to bilateral and implementing agencies:

¹⁹ UNEP/OzL.Pro/ExCom/84/11 and Corr.1

²⁰ UNEP/OzL.Pro/ExCom/91/66

²¹ Annex V contains the historical consideration of small and medium-sized enterprises by the Executive Committee.

- (a) *Level of HFC consumption:* To date, consumption had been used by the Executive Committee as the sole criterion for defining SMEs in the foam and aerosol sectors.²² This criterion has the advantage of using information that is readily available to agencies in the project preparation process. However, consumption by itself may not fully reflect the enterprises' technical capacity and ability to convert to new technologies;
- (b) *Manufacturing output:* The number of units manufactured by an enterprise may be another relevant consideration in determining whether an enterprise is an SME. Depending on the refrigerant charge per unit, an enterprise may have low consumption yet still manufacture a large number of units, and higher manufacturing output may require more personnel or higher levels of automation than are typically found in SMEs;
- (c) *Technical capacity:* Larger enterprises tend to have a higher level of technical capacity than SMEs. However, measuring that capacity is difficult. A proxy for the technical capacity of an enterprise could be the range of equipment types and the number of models manufactured. An enterprise that manufactures a wide range of equipment types and a large number of product models requires adequate technical capacity, knowledge, experience and capability to design the models and place them on the market, and is likely to be more capable of addressing the technical and marketing challenges associated with converting to a new technology. SMEs would be characterized by a narrow range of equipment types and a small number of product models;
- (d) *Financial capacity:* SMEs usually have limited financial capacity, which constrains their ability to invest in sales and marketing activities to promote new technologies and also limits their ability to influence supply chains for components and raw materials; and
- (e) *Foreign ownership and exports to non-Article 5 countries:* SMEs in commercial refrigeration and AC manufacturing are locally owned and cater predominantly to domestic markets. Some SMEs may also export the equipment they manufacture to Article 5 countries in the region; however, significant (greater than 10 per cent) exports to non-Article 5 countries are indicative of a higher level of technical capability.

Assessment of the criteria

33. Identifying a cut-off for defining SMEs based on two common characteristics used by Governments—sales revenue and number of employees—is difficult in the context of projects supported by the Multilateral Fund. This is due to the broad size range of Article 5 economies, which impacts sales, and the lack of readily available data on the number of employees within enterprises.

34. In the context of the HCFC phase-out, the Executive Committee has used consumption as the sole parameter to define SMEs in the foam sector. This definition may not fully capture the complexity of SMEs in Article 5 countries. It may also have resulted in inadvertently excluding some enterprises from the SME category and including some enterprises that would more appropriately be considered large-sized. However, it has proven to be a simple and practical proxy for identifying those enterprises that require additional funding relative to larger enterprises. Accordingly, the Secretariat proposes that consumption be used as a necessary but not sufficient characteristic to define SMEs in the commercial RAC sector.

35. The ratio of foam blowing agent to refrigerant in the past CFC and HCFC conversion projects (i.e., the ratio of CFC-11/CFC-12 or HCFC-141b/HCFC-22) ranged from 2:1 to 4:1. Based on the definition that SMEs in the PU foam manufacturing sector would have a consumption of up to 20 metric tonnes (mt)

²² See Annex I.

of foam blowing agent, this suggests a cut-off between 5 mt and 10 mt for SMEs in the commercial RAC manufacturing sector.

36. To narrow this range, the Secretariat consulted an independent technical expert and reviewed the ICCs incurred in converting 89 commercial RAC manufacturing enterprises with consumption of less than 20 mt of HCFC-22 in 10 countries, noting that while IOCs vary linearly with consumption, ICCs include certain costs that might change in a discontinuous manner based *inter alia* on the number of units manufactured, the range of products and their complexity, and other factors. For example, a large enterprise with high manufacturing output may require several vacuum pumps and an automatic charging machine to achieve the necessary manufacturing cycle time, while an SME producing lower quantities of equipment may be able to use a single vacuum pump and charge units manually. Thus, both the quantity (e.g., the number of vacuum pumps) and the type of equipment (e.g., automatic charging machine versus manual charging) needed for a conversion will vary across SMEs and large enterprises.

37. Based on the ICCs of the 89 enterprises, a pronounced change in the agreed ICCs is found between 5 and 6 mt. Noting the limited data available, and choosing to err on the side of being overly inclusive rather than inadvertently exclusive, given the challenges faced by SMEs in converting from HFCs in particular to flammable, toxic or high-pressure low-GWP alternatives, the Secretariat proposes a cut-off consumption threshold of 7 mt. For reference, an enterprise with a consumption of 7 mt of refrigerant manufacturing equipment with an average charge of 250 g/unit would manufacture 28,000 units per year.

38. The Secretariat considers consumption to be a necessary but insufficient criterion to identify those SMEs that may require additional funding to successfully and sustainably convert from HFCs. In particular, the Secretariat proposes that enterprises that are owned or partly owned by multinational corporations not be categorized as SMEs for funding purposes, given these enterprises' access to technical expertise, supply chains and capital. Similarly, enterprises that export their products to non-Article 5 countries likely present a higher level of technological involvement and financial capability in placing products in a competitive market, while noting that there could be exceptions to allow for exports of a small number of units on a trial basis. Accordingly, the Secretariat proposes that enterprises that export more than 10 per cent of their products to non-Article 5 countries not be categorized as SMEs for funding purposes.

39. In addition, the Secretariat notes that an enterprise may have multiple manufacturing lines but only wish to convert one of those lines. What is relevant in defining an SME is the consumption of the enterprise rather than just the consumption of the line to be converted. Moreover, an enterprise may have multiple manufacturing lines, only one of which consumes HFCs. For example, an enterprise may manufacture HFC-based commercial RAC equipment on one line, and non-HFC-based equipment on other lines. Accordingly, the Secretariat proposes that an enterprise that manufactures more than 40,000 units²³ of RAC equipment per year, irrespective of whether all such equipment is HFC-based, not be considered an SME for funding purposes.

40. It should be noted that some enterprises manufacturing both commercial RAC equipment and related components (such as compressors, fans, or vacuum pumps) could be inadvertently considered as SMEs based on their HFC consumption, despite significant manufacturing output of related components; however, it is not clear how many enterprises would fall into this category or how they could be identified and excluded.

41. In reviewing the 89 projects to convert commercial RAC manufacturing enterprises, the Secretariat noted that some of them included enterprises with consumption of less than 1 mt. The Executive Committee may wish to consider whether it wishes to define an additional category within SMEs: micro-enterprises with consumption of less than 1 mt. Such enterprises, which similarly could neither be multinationals nor

²³ Calculated based on a consumption of 7 mt and a refrigerant charge of 175 g/unit, a threshold below which commercial RAC equipment is not manufactured.

export their products to non-Article 5 countries, likely have a lower technical capability and would likely face greater challenges than larger enterprises in establishing the necessary supply chains to convert from HFCs. Given those additional challenges, micro-sized enterprises would likely be the last enterprises in the sector to convert. The Executive Committee may wish to note that converting such micro-enterprises would likely only be sustainable as part of an umbrella project that addressed all remaining enterprises in the sector. As such, any individual enterprise could be eligible for up to twice the agreed cost-effectiveness threshold, as long as the overall cost-effectiveness of the umbrella project fell within the sectoral threshold established by the Executive Committee; the umbrella project included all the remaining enterprises in a sector or subsector for which cost-effectiveness thresholds had been established; and it was understood that the country concerned would submit no further requests for funding from the Multilateral Fund for any enterprise in that sector or subsector, in line with decision 19/32(a).

Conclusion

42. The Executive Committee may wish to consider defining SMEs in the commercial RAC manufacturing sector as enterprises with HFC consumption of 7 mt or less manufacturing commercial AC or commercial refrigeration equipment, on the understanding that:

- (a) The entirety of HFC consumption by the enterprise will be considered, rather than just consumption of the line or the process to be converted;
- (b) An enterprise that manufactures more than 40,000 units of equipment per year, irrespective of whether all such equipment is HFC-based, will not be considered an SME for funding purposes; and
- (c) An enterprise will not be considered an SME if it is owned or partly owned by a multinational corporation, regardless of whether that corporation is Article-5-owned or not, if it exports more than 10 per cent of its products to non-Article-5 countries.

III. Recommendation

43. The Executive Committee may wish:

- (a) To note document UNEP/OzL.Pro/ExCom/92/45 on the draft guidelines for funding the phase-down of HFCs in Article 5 countries, including consideration of operationalizing paragraph 24 of decision XXVIII/2; and
- (b) To continue its deliberations on the guidelines for funding the phase-down of HFCs in Article 5 countries in light of document UNEP/OzL.Pro/ExCom/92/45.

Annex I

DRAFT TEMPLATE OF THE COST GUIDELINES FOR THE PHASE-DOWN OF HFCs (As of the 91st 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-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

WORKING TEXT ON THE COST-EFFECTIVENESS THRESHOLDS

(Annex XXXII to document UNEP/OzL.Pro/ExCom/91/72)

Cost-effectiveness (CE) thresholds for the CFC and HCFC phase-out

Sector	National ODS phase-out plans (UNEP/OzL.Pro/ExCom/16/20 para. 32)			HPMPs (decisions 60/44, 62/13 and 74/50)			TEAP (ExMOP 3)	Agreed CE (US \$/kg)
	Baseline substance	Main alternatives introduced	CE threshold (US \$/kg)	Baseline substance	Main alternatives introduced	CE threshold (US \$/kg)		
Domestic refrigeration (refrigerant and PU foam panel components)	CFC-12	HFC-134a R-600a	13.76	n.a.	n.a.	n.a.	8-10 [13.76] (Canada)	13.76
	CFC-11	HCFC-141b cyclopentane		HCFC-141b	Cyclopentane			
RAC domestic							7-9	
Commercial refrigeration (refrigerant and PU foam panel components)	CFC-12	HFC-134a	15.21	HCFC-22	HFC-32, R-290, HFC-134a, CO ₂ , NH ₃ , cascade systems	15.21*	10-15	[15.21 plus 25% for SMEs] [*] [49] [18**] [*] plus special consideration for small enterprises [<20 mt?]
	CFC-11	HCFC-141b cyclopentane water		HCFC-141b	Cyclopentane, water, MF, methylal, HFC-245fa, reduced HFOs			
Stationary AC (domestic AC manufacturing)	n.a	n.a	n.a	HCFC-22	R-410A, HFC-32, R-290	case-by-case	11-15 Stationary AC	[11][12**]/[13 **][*]
[Stationary AC (commercial)]								[13 **] (US) [case-by-case] [15.21 – 18**] [*] (India)
RAC transportation and industrial							10-15	Case-by-case
Rigid PU foam (including PU foam panel in commercial refrigeration)	CFC-11	HCFC-141b cyclopentane water	7.83	HCFC-141b	Cyclopentane, water, MF, methylal, HFC-245fa, reduced HFOs	7.83*,**	7-9	9**
Flexible PU foam	CFC-11	HCFC-141b cyclopentane water	6.23	HCFC-141b	Cyclopentane, water, MF, methylal, HFC-245fa, reduced HFOs	6.23*,**	7-9	case-by-case

Sector	National ODS phase-out plans (UNEP/OzL.Pro/ExCom/16/20 para. 32)			HPMPs (decisions 60/44, 62/13 and 74/50)			TEAP (ExMOP 3)	Agreed CE (US \$/kg)
	Baseline substance	Main alternatives introduced	CE threshold (US \$/kg)	Baseline substance	Main alternatives introduced	CE threshold (US \$/kg)		
Integral skin	CFC-11	HCFC-141b cyclopentane water	16.86	HCFC-141b	Cyclopentane, water, MF, methylal, HFC-245fa, reduced HFOs	16.86*,**	7-9	case-by-case
XPS foam	CFC-12	HFC-134a	8.22	HCFC-22/ HCFC-142b	HC, CO ₂	8.22*,**	7-9	case-by-case
Aerosol	CFC-12/ CFC-11	HC	4.40	HCFC-22/ HCFC-141b	HC, HFC-134a, HFC-152a, perchlorethylene, HFO		4-6	case-by-case
Fire extinguishing	Halon	ABC dry powder CO ₂	1.48	HCFC-123	No projects approved yet	case-by-case	3-5	case-by-case
Solvent	CFC-113	Heat cleaning, aqueous cleaning,	19.73	HCFC-141b	Iso-paraffin	case-by-case		case-by-case
Solvent	TCA	trichlorethylene, HC, others	38.50	n.a	n.a	n.a		case-by-case
Metered dose inhaler (MDI)	CFC-12/ CFC-11	HFC-134a	n.a	n.a	n.a	n.a		case-by-case
Mobile AC	CFC-12	HFC-134a	n.a	n.a	n.a	n.a	4-6	case-by-case
Stationary AC (domestic AC manufacturing)	n.a	n.a	n.a	HCFC-22	R-410A, HFC-32, R-290	case-by-case	11-15 Stationary AC	[11]/[13 **][*]
[Stationary AC (commercial)]								[13 **] (US) [ease-by-case] [15.21 – 18**] [*] (India)
Other RAC manufacturing (heat pumps, transport, chillers, industrial)	CFC-11/ CFC-12 (chillers)	HFC-134a/ HFC-123 (chillers)	n.a	HCFC-22	R-410A, HFC-32, R-290, CO ₂ , NH ₃ , cascade systems	case-by-case		

[* Funding of up to a maximum of 25 per cent above the cost-effectiveness threshold will be provided for projects when needed for the introduction of low-GWP [non-HFC/non controlled substances] alternatives (decision 60/44(f)(iv)).]

** For SMEs in the foam sector [with consumption of less than TBD/20 mt], the maximum would be up to [40/25] per cent above the cost-effectiveness threshold (decision 74/50(e)(iii)).

Annex III

OUTSTANDING ISSUES FOR FURTHER DISCUSSION BY THE EXECUTIVE COMMITTEE ON THE COST GUIDELINES FOR THE PHASE-DOWN OF HFCs
(The text contained in this Annex is as of the 84th meeting and has not been updated, except for the numbering of reference documents and the text in bold in section III)

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/89/10/Rev.1 and UNEP/OzL.Pro/ExCom/89/10/Add.1)

- (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/91/61)

- (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/91/66)

- (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 SECRETARIAT¹

In relation to the consumption manufacturing sector

(Reference documents: UNEP/OzL.Pro/ExCom/89/10/Rev.1 and UNEP/OzL.Pro/ExCom/89/10/Add.1)

- (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;]

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

III. OTHER GENERAL MATTERS RELATED TO HFC PHASE-DOWN ²

- (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; and
 - (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~~ **This text has been incorporated into the guidelines for the preparation of the Kigali HFC Implementation Plans for Article 5 countries noted by the Executive Committee at its 87th meeting (decision 87/50(h)); therefore, the text can be removed.**

[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].]

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

Annex IV

WORKING TEXT ON THE STARTING POINT FOR SUSTAINED AGGREGATE REDUCTIONS IN HFC CONSUMPTION AND PRODUCTION

(Annex XXXII to document UNEP/OzL.Pro/ExCom/91/72)

Methodology for determining the starting point for sustained aggregate reductions

1. 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. The issues discussed by the contact group included, *inter alia*:

- (a) The unit of measurement, where some members proposed to use metric tonnes (mt) to reflect the actual amount of HFCs consumed or produced, others proposed the use of CO₂-equivalent tonnes as best suited to measure the environmental impact of the phase-down activities, while others yet suggested using both units at first and making a definitive decision about which one to use once the pros and cons of each approach had been ascertained; [
 - preference for mt as that is how we understand costs and consistent with thresholds;
 - keep track separately of lower GWP alternatives that are phased in under projects funded by MLF;
 - preference for CO₂e as the obligations are in CO₂e;
 - keep track of both but note that costs are tied to mt;
 - don't know what end-point is if in mt;
 - second and third conversion is an important issue;
 - preference for both initially;
 - need to be consistent units between starting point and funding/cost effectiveness;
 - provide incentive for final conversion;
 - reductions to count toward compliance; use simpler approach]
- (b) Possible options for determining the starting point, where it was proposed to use the HFC baseline including the HFC and HCFC components, the HFC component, or an intermediate value between the two. It was also proposed that Article 5 countries could 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; [
 - add 5-10% of HFC consumption during the baseline years to account for growth;

- Secretariat to present data of 2019-2021 CP data to compare CO₂e and mt;
 - choose best years before the pandemic;
 - consider other years where data is available]
- (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;
- (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.

Annex V

HISTORICAL CONSIDERATION OF SMALL AND MEDIUM-SIZED ENTERPRISES BY THE EXECUTIVE COMMITTEE

1. The issue of phase-out at small and medium-sized enterprises (SMEs) had been discussed extensively by the Executive Committee during the CFC phase-out. At the 19th meeting, the Executive Committee considered document UNEP/OzL.Pro/ExCom/19/54 that described the approaches to phasing out ozone-depleting substances (ODSs) in SMEs and, based on an analysis of 104 approved projects, proposed to use consumption as a defining criterion for SMEs and suggested several additional criteria in the different foam subsectors. For example, an SME in the polyurethane foam sector was defined as an enterprise consuming less than 10 ODP tonnes/year of foam blowing agent, while in the extruded polyethylene/polystyrene subsector it would consume 25 ODP tonnes/year. However, no criteria were set for the commercial RAC sector in this document.
2. During the 20th to the 24th meetings, the Executive Committee requested the Secretariat, in cooperation with the implementing agencies and the target countries, to collect relevant data needed to refine the definition of SMEs based on the criteria for defining small, medium and large enterprises contained in document UNEP/OzL.Pro/ExCom/19/54. The Executive Committee also requested that recommendations be made regarding options to advance the phase-out in SMEs, including the possibility of establishing a funding window with appropriate cost-effectiveness thresholds. Relevant data was collected from target countries but proved to be insufficient for the Secretariat to refine the definition of SMEs at the time. At the 25th meeting, the Executive Committee approved a funding window of US \$10 million to facilitate pilot conversion at a significant group of small enterprises in the aerosol or foam sectors in non-low-volume-consuming countries only. In reviewing these projects, the definition proposed in document UNEP/OzL.Pro/ExCom/19/54 was used to define SMEs (decision 25/26).
3. Subsequently, in approving the cost guidelines for funding stage II of the HPMP at its 74th meeting, the Executive Committee decided that a maximum of up to 40 per cent above the cost-effectiveness threshold would be provided for SMEs in the foam sector with consumption of less than 20 metric tonnes (decision 74/50(c)(iii)).