UNITED NATIONS **EP** 



United Nations Environment Programme Distr. GENERAL



UNEP/OzL.Pro/ExCom/60/46 11 March 2010

**ORIGINAL: ENGLISH** 

EXECUTIVE COMMITTEE OF THE MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL Sixtieth Meeting Montreal, 12-15 April 2010

OUTSTANDING HCFC ISSUES: CUT-OFF DATE, LEVEL OF INCREMENTAL OPERATING COSTS, FUNDING PROVIDED TO THE SERVICING SECTOR, AND INCREMENTAL CAPITAL COSTS (DECISION 59/46)

# **Background**

- At its 58<sup>th</sup> Meeting, the Executive Committee considered an analysis of outstanding HCFC policy issues including, among other things, second-stage conversion, starting points for aggregate reductions, and eligible incremental costs for HCFCs (UNEP/OzL.Pro/ExCom/58/47). A contact group was convened to discuss and resolve those outstanding issues. The contact group was able to fully discuss the issues of second-stage conversion and starting points for aggregate reductions in HCFC consumption during the 58<sup>th</sup> Meeting. The resulting text agreed in principle by the contact group was forwarded to the Executive Committee in document UNEP/OzL.Pro/ExCom/59/52 without square brackets. With regard to eligible incremental costs for HCFC phase-out in the refrigeration servicing sector the contact group considered that, during the first stage of HPMP implementation, funding would be allowed for countries in which the greater part of HCFC consumption was in that sector. It was proposed that the required level of consumption in the servicing sector should be at 90 per cent of total consumption for this to be considered the greater part of HCFC consumption; however, final agreement on the level was not reached. Similarly, commitments for reaching the freeze in HCFC consumption, the 10 per cent reduction or the 35 per cent reduction were proposed, without reaching final agreement. On this basis, the draft text of the decision (with square brackets on those issues) was also included in document UNEP/OzL.Pro/ExCom/59/52 and submitted to the 59<sup>th</sup> Meeting.
- 2. As had been agreed by the Executive Committee at its 58th Meeting, the contact group on outstanding HCFC policy issues was reconvened immediately preceding the 59th Meeting of the Executive Committee to continue its deliberations. The contact group considered document UNEP/OzL.Pro/ExCom/59/52, which contained the text agreed in principle, the bracketed draft decision text, and a summary of still outstanding issues, which included:
  - (a) Cut-off date for installation of HCFC-based manufacturing equipment;
  - (b) Second-stage conversion (i.e., enterprises that were converted from CFC to HCFC technology through the Multilateral Fund);
  - (c) Starting points for aggregate reductions in HCFC consumption;
  - (d) Eligible incremental costs of HCFC-phase-out projects (in the foam sector, the refrigeration and air-conditioning manufacturing sector, the refrigeration servicing sector and the aerosol, fire extinguisher and solvent sectors).

# Summary of discussions during the 59th Meeting

- 3. During the 59<sup>th</sup> Meeting, the discussions of the contact group focused on the cut-off date and the eligible incremental costs of HCFC phase-out projects with regard to the foam, air-conditioning and commercial refrigeration subsectors. Although no agreement was reached, the divergence regarding the levels of incremental operating costs proposed by members from both Article 5 and non-Article 5 countries was reduced.
- 4. At the 59<sup>th</sup> Meeting, upon a request by the contact group, the Secretariat presented a further analysis of HCFC phase-out in the refrigeration servicing sector. The analysis focused on Article 5 countries with a total ODS consumption below 360 metric tonnes, and proposed a different funding approach for those countries, as an alternative to the proposal discussed by the contact group during the 58<sup>th</sup> Meeting. However, due to time constraints, the contact group was unable to consider the analysis presented by the Secretariat.

# Content of the present document

5. This document presents the status of the criteria for funding HCFC phase-out in the consumption sector negotiated by the contact group during the 59<sup>th</sup> Meeting. For ease of reference, the new text introduced during the negotiations is highlighted. The document also includes two annexes:

Annex I: A summary of the progress on negotiations on incremental operating costs and cut-off dates during the 59<sup>th</sup> Meeting;

Annex II: A summary of the further analysis on HCFC phase-out in the refrigeration servicing sector, including a new funding approach that was presented at the 59<sup>th</sup> Meeting. Annex II also includes a proposal to adjust the text of the decision on the refrigeration servicing sector contained in document UNEP/OzL.Pro/ExCom/59/52 to reflect the new funding approach. During its deliberations, the Executive Committee may wish to consider the draft text of the decision as presented in Annex II.

# Status of criteria for funding HCFC phase-out in the consumption sector

6. In determining criteria for funding HCFC phase-out in the consumption sector in Article 5 countries, the Executive Committee decided:

#### Cut-off date

- (a) Not to consider any projects to convert to HCFC-based capacity installed after [2005] or [21 September 2007];
- (b) [Not to consider any projects to convert HCFC-based capacity installed after 21 September 2007; [and for the Executive Committee to consider [review] all eligible projects that will come forward with installed capacity prior to this date];
- (c) For the first stage of the HPMP, to consider projects to convert HCFC capacity installed between 2005 [December 2006] and 21 September 2007 [on the basis of] [taking into account] [subject to] funding available through the Multilateral Fund and national circumstances, recognizing the agreement in decision XIX/6 of the Nineteenth Meeting of the Parties that funding shall be stable and sufficient].

## Second-stage conversion

- (d) To apply the following principles in regard to second-stage conversion projects for the first stage of HPMP implementation to achieve the 2013 and 2015 HCFC phase-out compliance targets, to be reviewed by the Executive Committee no earlier than the last meeting in 2013:
  - (i) Full funding of eligible incremental costs of second-stage conversion projects will be considered in those cases where an Article 5 Party clearly demonstrates in its HPMP that such projects are necessary to comply with the Montreal Protocol HCFC targets up to and including the 35 per cent reduction step by 1 January 2020 and/or are the most cost-effective projects measured in ODP tonnes that the Party concerned can undertake in the manufacturing sector in order to comply with these targets;

(ii) Funding for all other second-stage conversion projects not covered under paragraph (d)(i) above will be limited to funding for installation, trials, and training associated with those projects;

# Starting points for aggregate reductions in HCFC consumption

- (e) To establish the starting points for aggregate reductions in HCFC consumption, for those Article 5 countries that submit projects in advance of their assessed baseline, at the time of submission of either the HCFC investment project or the HPMP, whichever is first submitted for the consideration of the Executive Committee;
- (f) To allow Article 5 countries to choose between the most recent reported HCFC consumption under Article 7 of the Montreal Protocol at the time of the submission of the HPMP, and/or the investment project and the average of consumption forecast for 2009 and 2010, in calculating starting points for aggregate reductions in HCFC consumption;
- (g) To adjust the agreed starting points for aggregate reductions in HCFC consumption in cases where calculated HCFC baselines based on reported Article 7 data are different from the calculated starting point based on the average consumption forecast for 2009-2010;

## Eligible incremental costs of HCFC phase-out projects

- (h) To apply the following principles in regard to eligible incremental costs of HCFC phase-out projects for the first stage of HPMP implementation to achieve the 2013 and 2015 HCFC phase-out compliance targets, subject to a review in 2013:
  - (i) When preparing HCFC phase-out projects in the foam, refrigeration and air-conditioning sectors, bilateral and implementing agencies shall use the technical information contained in document UNEP/OzL.Pro/ExCom/55/47 as a guide;
  - (ii) The current cost-effectiveness threshold values used for CFC phase-out projects shall be used as guidelines during the development and implementation of the first stage of HPMPs measured in metric kg [and countries will have the flexibility to allocate the approved funding [between incremental capital costs and incremental operating costs] within the threshold];
  - [(ii)bis: When calculating incremental capital costs, [the cost associated with climate friendly technology will be taken into account, as appropriate], [Article 5 countries will be provided with sufficient funding to cover incremental capital cost above the threshold] to enable them to introduce climate-friendly technology taking into account the safety requirements];

[[Incremental] costs associated with safety requirements and [introduction of climate friendly technology] [climate benefits] shall be provided to Article 5 countries above the cost effectiveness thresholds];

[Funding of up to 10 [20] [35] percent above the cost-effectiveness threshold will be provided for projects in the foam sector<sup>1</sup> which require the implementation of safety measures in order to gain additional co-benefits to the climate];

# HCFC phase-out in the foam sector

- (iii) Incremental operating costs for projects in the foam sector will be considered at [US \$xx/metric kg (as per the values in the table below)] of HCFC consumption to be phased out at the manufacturing enterprise [for a transitional period of one year] [two years] [three months];
- (iv) For group projects linked to systems houses, incremental operating costs will be calculated on the basis of the total HCFC consumption of all downstream foam enterprises to be phased out;

# HCFC phase-out in the refrigeration and air-conditioning manufacturing sector

- (v) Incremental operating costs for projects in the air conditioning sub-sector will be considered at [US \$xx/metric kg (as per the values in the table below)] of HCFC consumption to be phased out at the manufacturing enterprise [for a transitional period of xx months] [one year];
- (vi) Incremental operating costs for projects in the commercial refrigeration sub-sector will be considered at [US \$xx/metric kg (as per the values in the table below)] of HCFC consumption to be phased out at the manufacturing enterprise [for a transitional period of xx months] [one year];
- (vii) Consistent with decision 31/45, incremental operating costs will not be considered for enterprises categorized under the refrigeration equipment assembly, installation and charging sub-sector;

	IOC (US \$/kg) <sup>2</sup>						
Party	HCFC-141b foam	HCFC-142b foam	Air conditioning	Commercial refrigeration	Cut off date		
Convener	1.73	1.60	5.93	4.63	2006		
Article 5	1.73	1.60	6.50	4.06	2007		
Non-Article 5	1.73	1.60	5.93	4.63	2006		
Non-Article 5	1.40	1.20	5.93	3.50	2007]		

# HCFC phase-out in the refrigeration servicing sector

(viii) Article 5 countries [that have up to 90 percent of HCFC consumption in the refrigeration servicing sector measured in ODP tonnes] must include in their HPMP, as a minimum:

a) A commitment to meeting, without further requests for funding, at least the freeze in 2013 and [the 10 per cent reduction step in 2015] or [the 35

<sup>2</sup> A summary on the progression of the negotiations on incremental operating costs and cut-off dates is presented in Annex I to this document.

<sup>&</sup>lt;sup>1</sup> The Executive Committee might wish to consider deleting the reference to the foam sector, as some HCFC alternative technologies for the refrigeration and air-conditioning sectors might also require the implementation of safety measures.

- per cent reduction by 2020] in the refrigeration servicing sector. This shall include a commitment by the country to restrict imports of HCFC-based equipment if necessary to achieve compliance with the reduction steps and to support relevant phase-out activities;
- b) Mandatory reporting, by the time funding tranches for the HPMP are requested, on the implementation of activities undertaken in the refrigeration servicing sector in the previous year, as well as a thorough and comprehensive work plan for the implementation of the following tranche's activities;
- c) A description of the roles and responsibilities of major stakeholders, as well as the lead implementing agency and the cooperating agencies, where applicable;
- (ix) Article 5 countries that have [up to 90 percent of HCFC consumption in the refrigeration servicing sector measured in ODP tonnes] will be provided funding consistent with the table below on the understanding that project proposals will still need to demonstrate that the funding level is necessary to achieve the 2013 and [2015], or [2020] phase-out targets:

	Level of HCFC consumption in the servicing sector (*)							
Activities							(****)	
	Below 20	Up to 100	Up to 300	Up to 500	Up to 1,000	Up to 5,000	Up to 8,000	Above
rectivities	m. tonnes	m. tonnes	m. tonnes	m. tonnes	m. tonnes	m. tonnes	m. tonnes	<del>8,000 m.</del>
	(1.1 odp t)	(5.5  odp t)	(16.5 odp t)	(27.5  odp t)	(55odp t)		(440 odp t)	tonnes (440
						(273 oup t)	( <del>110 oup t)</del>	<del>odp t)</del>
Legislation	10,000	10,000	10,000	20,000	30,000	50,000	50,000	80,000
Customs training	30,000	40,000	50,000	60,000	80,000	120,000	140,000	160,000
Technicians training	40,000	60,000	70,000	100,000	160,000	240,000	300,000	400,000
Technical assistance(**)	50,000	100,000	300,000	500,000	1,000,000	5,000,000	8,000,000	11,000,000
Monitoring (***)	20,000	40,000	90,000	140,000	250,000	1,000,000	1,700,000	2,300,000
Total (in US \$)	150,000	250,000	520,000	820,000	1,520,000	6,410,000	10,190,000	13,940,000

<sup>(\*)</sup> Figures represent maximum amounts for each group.

- (x) Article 5 countries that have [up to 90 percent of HCFC consumption in the refrigeration servicing sector measured in ODP tonnes], and that receive funding consistent with the above table, will have flexibility in utilizing the resources available under the refrigeration servicing sector to address specific needs that might arise during project implementation to facilitate the smoothest possible phase-out of HCFCs;
- (xi) Article 5 countries with HCFC consumption in both the manufacturing and refrigeration servicing sectors, and having [less than 90 percent of their HCFC consumption in the refrigeration servicing sector measured in ODP tonnes], should first address consumption in the manufacturing sector to achieve the 2013 and 2015 phase-out targets. However, if such countries clearly demonstrate that they require assistance in the refrigeration servicing sector to comply with these targets, funding for these activities, such as training, will be calculated at

<sup>(\*\*)</sup> For countries with an HCFC consumption above 20 metric tonnes (1.1 ODP tonnes), actual amount should be prorated according to the level of HCFC consumption in the servicing sector.

<sup>(\*\*\*)</sup> For countries with an HCFC consumption above 20 metric tonnes (1.1 ODP tonnes), actual amount should be calculated as 20 per cent of the total cost of the activities.

<sup>(\*\*\*\*)</sup> No longer applicable as per sub-paragraph (xi) below.

US\$4.50/metric kg, which will be deducted from their starting point for aggregate reductions in HCFC consumption;

# HCFC phase-out in the aerosol, fire extinguisher and solvent sectors

(xii) The eligibility of incremental capital and operating costs for HCFC phase-out projects in the aerosol, fire extinguisher and solvent sectors will be considered on a case-by-case basis.

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#### Annex I

## Summary of the progress of negotiations on incremental operating costs and cut-off dates

1. One of the issues discussed by the contact group on HCFC policy issues during the 58<sup>th</sup> Meeting was related to the incremental operating costs of HCFC phase-out projects. At the conclusion of the 58<sup>th</sup> Meeting, Article 5 and non-Article 5 Parties proposed different levels of incremental operating costs for the foam (HCFC-141b and HCFC-142b), air conditioning and commercial refrigeration sub-sectors as shown in the table below. These levels were forwarded (in square brackets) to the 59<sup>th</sup> Meeting in document UNEP/OzL.Pro/ExCom/59/52.

Party	HCFC-141b foam	HCFC-142b foam	Air conditioning	Commercial refrigeration	Cut off date
Article 5	2.40	2.40	8.00	6.50	2007
Non-Article 5	1.18	1.13	3.51	3.25	2007
Non-Article 5	1.18	1.13	4.00	3.50	2005

2. The contact group reconvened at the 59<sup>th</sup> Meeting and continued its discussion on the basis of the levels on incremental operating costs proposed during the 58<sup>th</sup> Meeting. Several new levels of incremental operating costs were proposed, slightly reducing the divergence between the two sets of levels each time. However, on the last day of the negotiations, the levels proposed by the two groups of Parties were still far apart, as shown in the table below.

Party	HCFC-141b foam	HCFC-142b foam	Air conditioning	Commercial refrigeration	Cut off date	
Article 5	2.25	2.00	7.35	5.85	2007	
Non-Article 5	1.20	1.20	4.50	3.40	2007	

3. Given this situation, the convener of the contact group proposed another set of levels of incremental operating costs, calculated as the middle point (average) of the last values proposed by each group of Parties, as shown in the table below. The convener also proposed a cut-off date of 2006.

Party	HCFC-141b foam	HCFC-142b foam	Air conditioning	Commercial refrigeration	Cut off date
Convener	1.73	1.60	5.93	4.63	2006

4. Negotiations within the contact group continued on the basis of the levels proposed by the convener. However, the contact group could not reach an agreement within the time available. The final levels proposed by the two groups of countries, shown in the table below, are being forwarded to the 60<sup>th</sup> Meeting in the present document.

Party	HCFC-141b foam	Air conditioning		Commercial refrigeration	Cut off date
Convener	1.73	1.60	5.93	4.63	2006
Article 5	1.73	1.60	6.50	4.06	2007
Non-Article 5	1.73	1.60	5.93	4.63	2006
Non-Article 5	1.40	1.20	5.93	3.50	2007

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#### Annex II

# Further analysis of HCFC phase-out in the refrigeration servicing sector presented to the 59<sup>th</sup> Meeting of the Executive Committee

## Background

1. Further to a request by the contact group on outstanding HCFC policy issues, at the 59<sup>th</sup> Meeting the Secretariat presented a further analysis of HCFC consumption in the refrigeration servicing sector in Article 5 countries. The analysis focused on countries with a total HCFC consumption of 360 metric tonnes

# Methodology and analysis

2. The analysis proposed to use past experience regarding funding levels for servicing sector activities to determine funding for HCFC phase-out activities in this sector. As a result, Article 5 countries were divided into nine groups according to their total levels of CFC consumption in the refrigeration servicing sector as shown in the table below. For each group, the number of Article 5 countries and the total funding levels (\$Total) approved for completely phasing out CFC consumption in the servicing sector were provided. For each group of countries, the minimum (\$MIN) and maximum (\$MAX) levels of approved funding were provided, and the average (\$AVG) funding level was calculated. Noting the variation in the calculated average funding levels for countries with a consumption between 80 and 120 metric tonnes (group 5) in reference to countries in groups 4 and 6, an "adjusted" value was proposed (adjusted values are very similar to average values for countries in all groups except group 5).

Group	Consumption (metric tonnes)	No. of countries	\$Total	\$MIN	\$MAX	\$AVG	\$Adjusted
1	>=0 <10	25	5,341,425	62,000	477,300	213,657	220,000
2	>10 <15	7	3,302,129	329,400	635,956	471,733	470,000
3	>15 <40	25	15,060,688	169,655	1,325,645	602,428	600,000
4	>40 <80	15	11,800,014	114,985	1,202,309	786,668	800,000
5	>80 <120	7	8,472,369	871,470	1,729,780	1,210,338	900,000
6	>120 <160	3	2,894,594	855,374	1,064,747	964,865	950,000
7	>160 <200	4	3,750,795	696,956	1,118,825	937,699	1,000,000
8	>200 <320	4	4,411,630	682,055	1,453,925	1,102,908	1,100,000
9	>320 <360						1,200,000

#### Funding levels proposed

- 3. From the above analysis, it was noted that the cost-effectiveness of phase-out activities in countries with consumption above 220 metric tonnes was less than US \$5/kg, which represented the cost effectiveness used for funding CFC phase-out in the refrigeration servicing sector in non-LVC countries. Therefore, it was proposed to calculate the funding needs for countries with consumption of over 200 metric tonnes (i.e., groups 8 and 9) using the value of US \$5/kg. On this basis, the maximum funding levels for countries in groups 8 and 9 were adjusted to an upper limit of US \$1.6 million and US \$1.8 million, respectively.
- 4. Extra effort would be required from Article 5 countries to meet the freeze and the 10 per cent reduction in HCFC consumption. Therefore, a funding level increment of 10 to 20 per cent of the funding estimated to meet the 10 per cent reduction was suggested. No funding adjustments were proposed to meet the compliance consumption levels after 2015. The outcome of this analysis is summarized in the table below.

	Consumntion	Total funding Funding up to 201			US\$)	Eunding un to
Group	Consumption (metric tonnes)	(US\$)	No adjustment	10% adjustment	20% adjustment	Funding up to 2020 (US\$)
1	>=0<10	220,000	22,000	24,200	26,400	77,000
2	>10 <15	470,000	47,000	51,700	56,400	164,500
3	>15 <40	600,000	60,000	66,000	72,000	210,000
4	>40 <80	800,000	80,000	88,000	96,000	280,000
5	>80 <120	900,000	90,000	99,000	108,000	315,000
6	>120 <160	950,000	95,000	104,500	114,000	332,500
7	>160 <200	1,000,000	100,000	110,000	120,000	350,000
8	>200 <320	1,600,000	160,000	176,000	192,000	560,000
9	>320 <360	1,800,000	180,000	198,000	216,000	630,000

5. For countries with consumption of up to 10 metric tonnes, the levels of funding being proposed might not be sufficient to implement all the activities to meet the 2015 and 2020 compliance targets. It was therefore suggested that funding levels might be increased to a level similar to that of countries with consumption of between 10 and 15 metric tonnes.

#### Proposed adjustment to the text of the decision

- 6. The proposal for funding HCFC phase-out in the refrigeration servicing sector, made by the contact group at the 58<sup>th</sup> Meeting, and forwarded in brackets for consideration by the Executive Committee at its 59<sup>th</sup> and present Meeting, deals with countries where at least 90 per cent of the total HCFC consumption is in the refrigeration servicing sector. Under that proposal, the 2013 and 2015 compliance levels could be met mainly through activities addressing the servicing sector. The alternative proposal, which was presented to the contact group at the 59<sup>th</sup> Meeting but was not considered due to lack of time, deals with countries with a total HCFC consumption below 360 metric tonnes, most of which have consumption largely in the refrigeration servicing sector with some countries having consumption in the manufacturing sector (mainly foam). Those countries could meet the 2013 and 2015 compliance levels by phasing out consumption in the servicing sector alone, in the manufacturing sector alone, or a combination of both. In order to reflect that, the text of the decision for funding HCFC phase-out in the refrigeration servicing sector, as contained in document UNEP/OzL.Pro/ExCom/59/52, would need to be adjusted as follows:
  - (xiii) Article 5 countries that have a total HCFC consumption of up to 360 metric tonnes must include in their HPMP, as a minimum:
    - a) A commitment to meeting, without further requests for funding, at least the freeze in 2013 and the 10 per cent reduction step in 2015 [and the 35 per cent reduction step in 2020]. This shall include a commitment by the country to restrict imports of HCFC-based equipment if necessary to achieve compliance with the reduction steps and to support relevant phase-out activities;
    - b) Mandatory reporting, by the time funding tranches for the HPMP are requested, on the implementation of activities undertaken in the refrigeration servicing sector and in the manufacturing sector when applicable, in the previous year, as well as a thorough and comprehensive annual work plan for the implementation of the following activities associated with the next tranche;

- A description of the roles and responsibilities of major stakeholders, as well as the lead implementing agency and the cooperating agencies, where applicable;
- (xiv) Article 5 countries that have a total HCFC consumption of up to 360 metric tonnes will be provided funding consistent with the level of consumption in the refrigeration servicing sector as shown in the table below, on the understanding that project proposals will still need to demonstrate that the funding level is necessary to achieve the 2013 and 2015, and [2020] phase-out targets:

Consumption	Fun	Funding up to 2020 (US\$)					
(metric tonnes)*	No adjustment	10% adjustment	20% adjustment	2020 (US\$)			
>=0<10	22,000	24,200	26,400	77,000			
>10 <15	47,000	51,700	56,400	164,500			
>15 <40	60,000	66,000	72,000	210,000			
>40 <80	80,000	88,000	96,000	280,000			
>80 <120	90,000	99,000	108,000	315,000			
>120 <160	95,000	104,500	114,000	332,500			
>160 <200	100,000	110,000	120,000	350,000			
>200 <320	160,000	176,000	192,000	560,000			
>320 <360	180,000	198,000	216,000	630,000			

- (\*) Level of HCFC consumption in the refrigeration servicing sector
- (xv) Article 5 countries that have a total HCFC consumption of up to 360 metric tonnes and that receive funding consistent with the above table, will have flexibility in utilizing the resources available to address specific needs that might arise during project implementation to facilitate the smoothest possible phase-out of HCFCs;
- (xvi) Article 5 countries that have a total HCFC consumption of up to 360 metric tonnes, used in both the manufacturing and refrigeration servicing sectors, could submit HCFC phase-out investment projects in accordance to prevailing policies and decisions of the Multilateral Fund, in addition to funding for addressing HCFC consumption in the servicing sector;
- (xvii) Article 5 countries that have a total HCFC consumption above 360 metric tonnes, used in both the manufacturing and refrigeration servicing sectors, should first address consumption in the manufacturing sector to meet the reduction steps in 2013 and 2015. However, if such countries clearly demonstrate that they require assistance in the refrigeration servicing sector to comply with these targets, funding for these activities, such as training, will be calculated at US\$4.50/metric kg, which will be deducted from their starting point for aggregate reductions in HCFC consumption.

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