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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Ninety-fifth Meeting
Montreal, 4-8 December 2024
Items 9(c) and (d) of the provisional agenda[1]

PROJECT PROPOSALS: RWANDA

This document consists of the comments and recommendation of the Secretariat on the following project proposals:

Phase-out

• HCFC phase-out management plan (stage II, second tranche)	UNEP and UNIDO	Blanket approval

Phase-down

• Kigali HFC implementation plan (stage I, first tranche)	UNEP and UNIDO	Individual consideration

[1] UNEP/OzL.Pro/ExCom/95/1

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

Rwanda

(I) PROJECT TITLE	AGENCY	MEETING APPROVED	CONTROL MEASURE
HCFC phase-out plan (stage II)	UNEP (lead), UNIDO	86th	100% phase-out by 2030

(II) LATEST ARTICLE 7 DATA (Annex C, Group I)	Year: 2023	1.21 ODP tonnes

(III) LATEST COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)									Year: 2023
Chemical	Aerosol	Foam	Fire-fighting	Refrigeration		Solvent	Process agent	Lab use	Total sector consumption
				Manufacturing	Servicing				
HCFC-22					1.21				1.21

(IV) CONSUMPTION DATA (ODP tonnes)			
2009-2010 baseline:	4.10	Starting point for sustained aggregate reductions:	4.10
CONSUMPTION ELIGIBLE FOR FUNDING			
Already approved:	4.10	Remaining:	0.00

(V) ENDORSED BUSINESS PLAN		2024	2025	2026	Total
UNEP	ODS phase-out (ODP tonnes)	0.60	0.00	0.00	0.60
	Funding (US $)	211,310*	0	0	211,310*
UNIDO	ODS phase-out (ODP tonnes)	0.42	0.00	0.00	0.42
	Funding (US $)	122,570*	0	0	122,570*

*Including US $79,100 for UNEP and US $32,100 for UNIDO for additional activities to maintain energy efficiency (decision 89/6)

(VI) PROJECT DATA			2020	2021-2023	2024*	2025-2026	2027	2028-2029	2030	Total
Montreal Protocol consumption limits (ODP tonnes)			2.67	2.67	2.67	1.33	1.33	1.33	0.00	n/a
Maximum allowable consumption (ODP tonnes)			2.67	2.00	2.00	1.33	1.33	1.33	0.00	n/a
Funding agreed in principle (US $)	UNEP	Project costs	90,000	0	217,000	0	83,000	0	60,000	450,000
		Support costs	11,700	0	28,210	0	10,790	0	7,800	58,500
	UNIDO	Project costs	70,000	0	83,000	0	17,000	0	0	170,000
		Support costs	6,300	0	7,470	0	1,530	0	0	15,300
Funds approved by ExCom (US $)		Project costs	160,000	0	0	0	0	0	0	160,000
		Support costs	18,000	0	0	0	0	0	0	18,000
Total funds recommended for approval at this meeting (US $)		Project costs	0	0	300,000	0	0	0	0	35,680
		Support costs	0	0	35,680	0	0	0	0	35,680

*Funding for 2024 includes US $100,000, plus agency support costs of US $13,000, for UNEP, for additional activities to maintain energy efficiency (decision 89/6)

Secretariat's recommendation:	Blanket approval

PROJECT DESCRIPTION

1. On behalf of the Government of Rwanda, UNEP as the lead implementing agency has submitted a request for funding for the second tranche of stage II of the HCFC phase-out management plan (HPMP), at a total cost of US $335,680, consisting of US $217,000, plus agency support costs of US $28,210, for UNEP and US $83,000, plus agency support costs of US $7,470, for UNIDO.[2] The submission includes a progress report on the implementation of the first tranche, the verification report on HCFC consumption for 2020 to 2023, a request for funding additional activities to maintain energy efficiency in the refrigeration servicing sector,[3] and the tranche implementation plan for 2025 to 2027.

Report on HCFC consumption

2. The Government of Rwanda reported a consumption of 1.21 ODP tonnes of HCFCs in 2023, which is 70.5 per cent below the country's HCFC baseline for compliance. The 2019-2023 HCFC consumption is shown in table 1.

Table 1. HCFC consumption in Rwanda (2019-2023 Article 7 data)

HCFC-22	2019	2020	2021	2022	2023	Baseline
Metric tonnes (mt)	34.4	31.05	27.75	23.65	22.06	74.77
ODP tonnes	1.89	1.71	1.53	1.30	1.21	4.10

3. The HCFC consumption of Rwanda has decreased over the period 2019 to 2023 mainly due to strong control and monitoring of HCFC consumption, implementation of training and capacity-building activities that resulted in the reduction in HCFC consumption, faster adoption of alternatives and higher market uptake of lower-/low-global-warming potential (GWP) alternatives mainly in the commercial refrigeration and air-conditioning (RAC) sector. This uptake is expected to increase further during stage I of the Kigali HFC implementation plan (KIP) which has also been submitted for consideration at the 95th meeting.

Country programme implementation report

4. The Government of Rwanda reported HCFC sector consumption data under the 2023 country programme (CP) implementation report that is consistent with the data reported under Article 7 of the Montreal Protocol.

Verification report

5. The verification report confirmed that the Government was implementing a licensing and quota system for HCFC imports and exports and that the total consumption of HCFCs reported under Article 7 of the Montreal Protocol for 2020 to 2023 was correct (as shown in table 1 above). The verification concluded that Rwanda had established a robust regulation to control the import of HCFCs and other ozone-depleting substances (ODS), with a structured process for issuing quotas and import licenses. The verification report recommended continued consultations with enforcement authorities and importers for strong implementation of monitoring and controls on HCFCs including online monitoring and reporting systems, continued participation in informal prior informed consent (iPIC), awareness and outreach programmes on the reduction in availability of HCFCs, alternatives to HCFCs as well as timely reporting of HCFC imports

[2] As per the letter of 21 August 2024 from the Rwanda Environment Management Authority (REMA) of the Ministry of Environment of Rwanda to the Secretariat.

[3] In line with decision 89/6, low-volume-consuming countries can include in their HPMPs additional activities for the introduction of alternatives to HCFCs with low or zero global-warming potential and for maintaining energy efficiency in the refrigeration servicing sector.

and periodic inspections of importers and traders of HCFCs. These activities would be implemented during the second tranche of stage II of the HPMP.

Status of implementation of stage I of the HCFC phase-out management plan

6. Stage I of the HPMP was completed on 1 September 2021. The project completion report was submitted on 30 May 2023.

Progress report on the implementation of the first tranche of stage II of the HCFC phase-out management plan

Legal framework

7. The Government of Rwanda has established a licensing and quota system for HCFCs, and has banned since 1 January 2015, the import of HCFC-based equipment. Since February 2021, the existing e-registry system includes the licensing process for HFCs. Imports of HCFCs, HFCs and their blends are strictly prohibited without proper authorization from REMA.

Refrigeration servicing sector

8. During the implementation period, the following activities were implemented:

(a) A total of 478 trainees that included customs officers, clearing agents, and cargo inspectors were trained on controls and monitoring of HCFCs and preventing illegal trade of HCFCs and other controlled substances under the Montreal Protocol. The Ozone Online System has been developed to streamline product registration, ensuring that products meet standards for minimum energy efficiency and low GWP; this system helps regulate and track the environmental impact of products, promoting the adoption of energy-efficient and environment-friendly technologies.

(b) A total of 117 RAC technicians were trained on Montreal Protocol activities and the safe handling of flammable gases, and 67 RAC technicians were trained on best refrigeration practices. A consultant was engaged to support the national ozone unit (NOU) to prepare the training tools and manual for technical and scientific trainings of RAC technicians and custom officers and provide those trainings to local young scientists and RAC technicians.

(c) Rwanda has two training centres, the Integrated Polytechnic Regional College (IPRC) Kigali and the Africa Centre for sustainable cooling and cold chain (ACES). ACES has started a training programme for farmers and RAC technicians. The ACES programme was launched in 2020 by the Governments of Rwanda and the United Kingdom of Great Britain and Northern Ireland, UNEP, the Centre for Sustainable Cooling of the United Kingdom, bringing together a consortium of leading universities from the United Kingdom and international universities, and the University of Rwanda. The NOU is currently discussing a memorandum of understanding for training with the IPRC training centres.

(d) Awareness workshops for the adoption of RAC equipment based on low-GWP refrigerants were conducted. The National Product Registration (NPR) system is being developed to streamline and enhance product registration processes. Three capacity building workshops were conducted to support green procurement practices. The list of end-users for the programme to promote efficient operations of the equipment has been finalized, including five-star hotels and large commercial buildings. These entities are targeted to adopt ODS alternatives, aiming to enhance their energy efficiency and reduce environmental impact.

Project implementation and monitoring

9. A total of US $5,000 has been disbursed for planning, monitoring and coordinating different activities under the HPMP such as the training programmes, awareness programmes and other activities.

Level of fund disbursement

10. As of September 2024, the total funds of US $160,000 approved so far (US $90,000 for UNEP and US $70,000 for UNIDO), had been fully disbursed.

Implementation plan for the second tranche of stage II of the HCFC phase-out management plan

11. The following activities will be implemented between January 2025 and December 2027:

(a) Strengthen enforcement of ODS regulations including capacity enhancement of 30 enforcement officers and facilitate border dialogue for controlling HCFC imports and preventing illegal trade (UNEP) (US $15,000);

(b) Update customs training curriculum and polytechnic college's curriculum (UNEP) (US $10,000);

(c) Develop and implement technical standards for the safe use of low-GWP refrigerants, including publication and printing of the RAC standards; conduct two training sessions for 30 participants to build the capacity of NOU, standards officers, environmental inspectors and other key stakeholders for the development and enforcement of technical standards in the RAC sector; conduct three sensitization campaigns for RAC technicians, importers, industries and the public on the technical standards to enhance compliance; conduct monitoring inspections on imported RAC equipment and refrigerants to ensure compliance with the technical standards (UNEP) (US $17,000);

(d) Strengthen capacity of RAC technicians and establish of a certification scheme through the following activities: engage an expert to facilitate the establishment of the certification scheme for the RAC servicing sector; conduct stakeholder consultations on formulation of an effective RAC certification scheme; build capacity of 20 key stakeholders involved in the certification process on the different steps and impact of the certification; and conduct six training sessions for 30 RAC technicians on good servicing practices (UNEP) (US $30,000);

(e) Strengthen RAC training centres and establish four additional centres of excellence and a recovery and reuse scheme through the procurement and installation of tools and equipment in one central unit and four provincial centres and the engagement of national experts to provide technical support for the installation and operation of those tools and equipment; training of technicians in four provincial centres; establish a refrigerant reclamation centre in Kigali (UNIDO) (US $75,000);

(f) Development and implementation of the NPR system; train the technology providers and other enforcement agencies through three workshops on product registration system; capacity building for green procurement and sensitizing the general public on the benefits of adopting and using green RAC systems (UNEP) (US $20,000);

(g) Technology promotion for end-users for the adoption of low-GWP HCFC alternative technologies through training of the identified beneficiaries of the proposed end-user programme (UNIDO) (US $8,000);

(h) Activities to maintain energy efficiency: These activities are described in detail in the following section (UNEP) (US $100,000); and

(i) Project monitoring and reporting (UNEP) (US $25,000) with the following cost breakdown: staff and consultant (US $15,000), travel (US $5,000) and meetings and other activities (US $5,000).

Activities to maintain energy efficiency in the refrigeration servicing sector

12. The project related to energy efficiency, submitted in line with decision 89/6, has been designed to strengthen Rwanda's institutional and technical capacity to implement minimum energy performance standards (MEPS) in the RAC sector through enhanced cooperation among relevant institutions and stakeholders and policy development to promote energy efficiency. The description and proposed cost breakdown of activities to maintain energy efficiency in the sector are presented in table 2.

Table 2. Additional activities proposed to maintain energy efficiency in the servicing sector

Activity	Performance indicators	Cost (US $)
Cooperation and collaboration for policy strengthening and introduction of MEPS		
Organize educational field visit for key stakeholders, including representatives from the NOU, ACES, Rwanda Energy Group, and customs officials on the establishment of labelling system and energy efficiency standards	Improved understanding of different aspects involved in the establishment and implementation of labelling system and energy efficiency standards and design of implementation strategy	30,000
Subtotal		**30,000**
Capacity building of different stakeholders		
One workshop for 50 customs officers focusing on enhancing their ability to enforce MEPS at the borders, ensuring that all imported RAC equipment comply with national energy efficiency standards	Training and capacity building support for ensuring that all imported RAC equipment comply with national energy efficiency standards	10,000
Two workshops for 30 RAC technicians on the skills and knowledge needed to install, maintain, and repair energy efficient and low-GWP RAC systems so that these equipment operate at optimal energy efficiency	Training and capacity building support for RAC technicians to ensure that they are able to install, maintain and repair equipment safely and effectively and ensure that the equipment operate at the designed energy efficiency level	21,000
Subtotal		**31,000**
Awareness and outreach programmes to maximize public awareness and acceptance of MEPS and energy-efficient technologies in the RAC sector		
Production of two high-quality videos to highlight the benefits of MEPS and energy efficient technologies in the RAC sector for the general public, including consumers, technicians, educators, and importers, for dissemination through social media platforms, government websites, local television, and during community events	Greater awareness among national stakeholders on MEPS for RAC equipment, adoption of energy efficient low-GWP refrigerant-based technologies and operating equipment in an energy efficient manner	20,000
Banners on the benefits of energy efficient RAC technologies and MEPS to be placed in high-traffic areas such as markets, bus terminals, schools, and community centres. One roadshow featuring live demonstrations of energy efficient RAC technologies (e.g., real-time demonstrations, interactive displays) including information sharing by training centres to enhance learning experiences		16,000

Activity	Performance indicators	Cost (US $)
Demonstration in high-population localities, such as village meetings, local market days, and religious events, to enhance awareness on energy efficient RAC equipment and hands-on experience on how to read MEPS labels		3,000
Subtotal		**39,000**
Total		**100,000**

13. The above-mentioned activities would be implemented over a period of 18 months in close consultations with relevant stakeholders and in coordination with ongoing KIP and HPMP activities.

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

Progress report on the implementation of the first tranche of stage II of the HCFC phase-out management plan

Legal framework

14. The Government of Rwanda has already issued HCFC import quotas for 2024 at 1.13 ODP tonnes, which is lower than the Montreal Protocol control targets and the maximum allowable consumption set in the Agreement for the year.

Implementation plan for the second tranche of stage II of the HCFC phase-out management plan

Technical and cost issues

15. Upon request for clarifications, UNEP explained that the certification system for RAC service technicians is currently under development and is expected to be fully established by the end of 2025. Further, improvement in training infrastructure at the training institutions would expedite effective implementation of this system. This certification system would facilitate safe and effective servicing of RAC equipment using low-GWP alternatives technologies.

16. On the training of service technicians on energy efficiency and energy efficient operations of equipment, UNEP explained that as part of the second tranche of the HPMP, training will focus on promoting energy efficient operations for equipment utilizing HCFCs and low-GWP alternatives; it will target identified end users, providing them with practical skills and knowledge on optimizing equipment performance and reducing energy consumption, and ensuring proper handling of refrigerants. Thus, the goal is to enhance efficiency and support the transition away from HCFCs and promote sustainable practices in the refrigeration sector.

17. UNEP clarified that the equipment support would be provided to the four training centres; the type of equipment as well as the details of the quantity of equipment would be determined after undertaking a needs assessment for the training centres.

Activities to maintain energy efficiency in the refrigeration servicing sector

18. In line with decision 89/6(d), UNEP has included in the tranche implementation plan the specific actions, performance indicators and funding associated with additional activities to maintain energy efficiency. The additional activities would complement those planned under the HPMP relating to the strengthening of national standards for equipment. The main activities under this project include enhancing engagement of relevant stakeholders handling energy efficiency in different activities implemented under

the HPMP and other Montreal Protocol activities, raising public awareness on energy efficiency and adoption of low-GWP refrigerant-based RAC equipment and fostering collaboration between the NOU and energy efficiency authorities.

Funding from non-MLF funding sources

19. UNEP explained that funding from the Green Climate Fund (GCF) is available for establishment of the consultative process for senior stakeholders to guide sustainable cooling activities in Rwanda, inform the national stakeholders on the benefits and opportunities of energy efficient and climate-friendly cooling, develop the implementation framework for MEPS and labels for room air conditioners and refrigerators to address programmatic needs, develop the market surveillance scheme with the product registration system to oversee products sold in the market, design the innovative business model to unlock finance for energy efficient and climate-friendly cold chain solutions at the living laboratory and for proper recycling associated with used cooling products, prepare a cold chain equipment procurement plan at the living laboratory, and share the lessons learned from the readiness grant under the GCF with other interested countries in the East African Community and the Southern African Development Community regions through regional webinars.

20. The additional activities to maintain energy efficiency submitted in line with decision 89/6 would be designed in a complementary manner with existing initiatives, filling gaps particularly relating to technician know-how on energy efficiency and general awareness on energy efficient low-GWP refrigerant-based alternatives and enhancing stakeholder collaboration to maximize overall impact on energy efficiency goals. UNEP also explained that during the development of the energy efficiency project under decision 89/6, consultations with the national stakeholders developing energy efficiency standards, enforcement authorities and industry representatives were held to align the objectives and share insights, ensuring activities complement ongoing efforts in energy efficiency and refrigerant management under the GCF project.

Gender policy implementation

21. In line with the Multilateral Fund's operational policy on gender mainstreaming, the NOU has encouraged the engagement of women in the implementation of HPMP activities and training programmes and initiated efforts to collect gender disaggregated data. The NOU is undertaking targeted activities to promote participation of women in different activities and would continue to undertake different steps to promote implementation of gender mainstreaming.

Updated Agreement

22. In view of the inclusion of funding for additional activities to maintain energy efficiency in the refrigeration servicing sector and the accordingly revised funding schedule, the Agreement between the Government of Rwanda and the Executive Committee has been updated. Specifically, Appendix 2-A has been revised and paragraph 17 has been added to indicate that the updated Agreement supersedes that reached at the 86th meeting by decision 86/79, as contained in annex I to the present document. The full updated Agreement will be appended to the final report of the 95th meeting.

Sustainability of the HCFC phase-out and assessment of risks

23. The Government of Rwanda continues to implement policies for controlling HCFC imports and consumption in line with the Montreal Protocol commitments and the targets outlined in its Agreement with the Executive Committee. Main activities contributing to the sustainability of HCFC phase-out include promotion of low-/lower-GWP alternatives as replacement options for HCFC-based equipment, training of technicians on best practices, and implementation of certification system for technicians. The adoption of low-GWP technologies while phasing out HCFCs, has been supported through RAC technician training on

the safe handling of low-GWP refrigerants and low-GWP refrigerant-based equipment. In addition, the activities to maintain energy efficiency in the refrigeration servicing sector proposed along with this tranche request will result *inter alia* in better institutional coordination among stakeholders handling energy efficiency and the NOU, and greater awareness on implementation of energy efficiency related activities while phasing down HFCs.

Conclusion

24. The Government of Rwanda has reduced its consumption of HCFCs to 1.21 ODP tonnes in 2023 which is 70.5 per cent below the HCFC baseline for compliance and 39.5 per cent below the Agreement target for that year. As of September 2024, all funds approved under the first tranche were disbursed. The Government of Rwanda continues to implement and strengthen its HCFC licensing and quota system. Training would be conducted to strengthen the capacity of service technicians. The Government would establish the certification scheme for RAC technicians by the end of 2025 and this would facilitate the adoption of good service practices and safe transition to low-GWP alternatives. During the second tranche of stage II, the HPMP will continue to contribute to strengthening the capacity of service technicians and customs officers and raise awareness on the use of low-GWP refrigerants.

RECOMMENDATION

25. The Fund Secretariat recommends that the Executive Committee note:

(a) The progress report on the implementation of the first tranche of stage II of the HCFC phase-out management plan (HPMP) for Rwanda;

(b) The submission of additional activities to maintain energy efficiency in the refrigeration servicing sector in the amount of US $100,000, plus agency support costs of US $13,000, for UNEP; and

(c) That the Fund Secretariat has updated the Agreement between the Government of Rwanda and the Executive Committee, as contained in annex I to the present document, specifically: Appendix 2-A, based on the inclusion of funding for additional activities to maintain energy efficiency in the refrigeration servicing sector referred to in subparagraph (b) above; and paragraph 17 that has been added to indicate that the updated Agreement supersedes that reached at the 86th meeting by decision 86/79.

26. The Fund Secretariat further recommends blanket approval of the second tranche of stage II of the HPMP for Rwanda, and the corresponding 2025-2027 tranche implementation plan, at the funding levels shown in the table below.

	Project title	Project funding (US $)	Support costs (US $)	Implementing agency
(a)	HCFC phase-out management plan (stage II, second tranche)	217,000	28,210	UNEP
(b)	HCFC phase-out management plan (stage II, second tranche)	83,000	7,470	UNIDO

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

Rwanda

PROJECT TITLE	AGENCY
Kigali HFC implementation plan (stage I)	UNEP (lead), UNIDO

LATEST ARTICLE 7 DATA (Annex F)	Year: 2023	107.05 mt	222,119 CO_2-eq tonnes

SECTORAL HFC CONSUMPTION DATA (CO_2-eq tonnes) AND ACTIVITIES								
	Aerosol	Foam	Fire-fighting	AC and refrigeration			Solvent	Other
				Manufacturing			Servicing		
				Refrigeration	AC	Other			
Latest CP report (2023)							222,119		
KIP stage I activities as agreed (Y/N)							Y		

AVERAGE 2020-2022 HFC CONSUMPTION IN SERVICING	116.95 mt	254,008 CO_2-eq tonnes

BASELINE CONSUMPTION DATA (CO_2-eq tonnes)	2020	2021	2022	Average 2020-2022
HFC annual consumption	268,616	266,728	226,680	254,008
HCFC baseline (65%)				84,188
HFC baseline				338,197

HFC CONSUMPTION ELIGIBLE FOR FUNDING	
Starting point for sustained aggregate reductions	n/a
Previously approved HFC phase-down investment projects	No
Aggregate reductions from previously approved projects (CO_2-eq tonnes)	n/a

PROJECT DATA AS AGREED			2024*	2025	2026	2027	2028	2029	Total
Consumption (CO_2-eq tonnes)	Montreal Protocol limits		338,197	338,197	338,197	338,197	338,197	304,377	n/a
	Maximum allowable		338,197	338,197	338,197	338,197	338,197	254,008	n/a
	Maximum allowable (%)		100	100	100	100	100	75	n/a
Amounts recommended in principle (US $)	UNEP	Project costs	48,400	0	0	44,000	0	17,600	110,000
		Support costs	6,292	0	0	5,720	0	2,288	14,300
	UNIDO	Project costs	27,500	0	0	44,000	0	5,500	77,000
		Support costs	3,575	0	0	5,720	0	715	10,010
	Total project costs		75,900	0	0	88,000	0	23,100	187,000
	Total support costs		9,867	0	0	11,440	0	3,003	24,310
	Total funds		85,767	0	0	99,440	0	26,103	211,310

***** Recommended for approval at the present meeting

Reduction from remaining consumption eligible for funding stage I in CO_2-eq tonnes	n/a

Secretariat's recommendation:	Individual consideration

PROJECT DESCRIPTION

27. The present document contains the following sections:

I. Summary of the proposal as submitted

II. Background: Implementation status of the country's HCFC phase-out management plan and previous HFC-related projects

III. HFC consumption: Overview of the country's HFC consumption levels, trends, and sectoral uses

IV. Stage I of the Kigali HFC implementation plan, as submitted: Overarching strategy and plan of implementation for the first tranche

V. Secretariat's comments, including the agreed cost of activities

VI. Recommendation

I. Summary of the proposal as submitted

28. On behalf of the Government of Rwanda, UNEP as the lead implementing agency has submitted a request for stage I of the KIP, at a total cost of US $192,100, consisting of US $100,000, plus agency support costs of US $13,000 for UNEP and US $70,000, plus agency support costs of US $9,100 for UNIDO, as originally submitted.[4]

29. The implementation of stage I of the KIP will assist the Government of Rwanda in meeting the target of 10 per cent reduction from its HFC baseline consumption by 1 January 2029.

30. The first tranche of stage I of the KIP being requested at this meeting amounts to US $77,970, consisting of US $44,000, plus agency support costs of US $5,720 for UNEP and US $25,000, plus agency support costs of US $3,250 for UNIDO, as originally submitted, for the period of January 2025 to December 2027.

II. Background

Status of implementation of the HCFC phase-out management plan

31. Table 3 presents information on the HPMP in Rwanda as of November 2024.

Table 3. HPMP implementation status for Rwanda

	Stage I	Stage II
Meetings when HPMP was approved/updated	64th	86th
Reduction from baseline	35% by 2020	100% by 2030
Total project cost (US $)	280,000	520,000
Date of completion (actual/planned)	31 December 2021	31 December 2031

[4] As per the letter of 14 August 2024 from REMA of the Ministry of Environment of Rwanda to the Secretariat.

Status of implementation of previous HFC-related activities

32. Table 4 presents an overview of activities implemented in Rwanda in the context of the Kigali Amendment that have been funded by the Multilateral Fund.

Table 4. Previously approved HFC-related activities in Rwanda

Approval meeting	Project title	Implementing agency	Cost (US $)	Date of completion
74th	Survey of ODS alternatives	UNEP	40,000	May 2017
80th	Enabling activities for HFC phase-down	UNEP/Italy	95,000	October 2021

III. HFC consumption overview

HFC consumption levels

33. Rwanda only imports HFCs for use in the servicing sector. The most consumed substances in 2023 were HFC-134a (38.3 per cent of total HFC consumption in CO_2-equivalent (CO_2-eq) tonnes), R-404A (38.2 per cent), R-410A (10.8 per cent), R-407C (9.8 per cent), and other HFCs (2.9 per cent). Table 5 presents the country's HFC consumption as reported to the Ozone Secretariat under Article 7 of the Montreal Protocol.

Table 5. HFC consumption in Rwanda (2019–2023 Article 7 data)

HFC	GWP	2019	2020	2021	2022	2023
Metric tonnes (mt)						
HFC-134a	1,430	215.00	58.90	56.30	60.74	59.53
R-404A	3,922	80.20	32.10	33.00	22.10	21.65
R-407A	2,107	6.50	0.00	0.60	1.20	1.18
R-407C	1,774	12.00	18.30	12.60	12.48	12.23
R-410A	2,088	8.30	12.40	13.80	11.70	11.46
R-507A	3,985	6.70	0.04	1.10	1.02	1.00
Total (mt)		**328.70**	**121.74**	**117.40**	**109.24**	**107.05**
CO_2-eq tonnes						
HFC-134a	1,430	307,450	84,227	80,509	86,858	85,128
R-404A	3,922	314,512	125,883	129,413	86,667	84,903
R-407A	2,107	13,696	0	1,264	2,528	2,486
R-407C	1,774	21,286	32,461	22,351	22,138	21,694
R-410A	2,088	17,326	25,885	28,808	24,424	23,923
R-507A	3,985	26,700	159	4,384	4,065	3,985
Total (CO_2-eq tonnes)		**700,970**	**268,616**	**266,728**	**226,680**	**222,119**

Established HFC baseline

34. The Government of Rwanda reported the Article 7 data for 2020-2022. The country's HFC consumption baseline was established at 338,197 CO_2-eq tonnes by adding 65 per cent of its HCFC baseline (expressed in CO_2-eq tonnes) to its average HFC consumption in 2020-2022, as shown in table 6.

Table 6. HFC baseline calculation for Rwanda (CO_2-eq tonnes)

Baseline calculation components	2020	2021	2022
HFC annual consumption	268,616	266,728	226,680
HFC average consumption in 2020-2022			254,008
HCFC baseline (65%)			84,188
HFC baseline			**338,197**

Country programme implementation report

35. The sectoral HFC consumption data provided by the Government of Rwanda in its CP implementation report for 2023 is consistent with the data reported under Article 7 of the Montreal Protocol.

HFC consumption trends

36. The country has experienced an overall decrease in HFC consumption from 2020 to 2022, which can be attributed to both market shifts towards lower-GWP alternatives and the impact of the COVID-19 pandemic. As the global economy began to recover in 2021 and 2022, there was a gradual resumption of activities; at the same time, the market also started adopting lower-/low-GWP refrigerant technologies and this resulted in an overall decreasing consumption of HFCs.

HFC consumption by sector

37. HFCs are mainly consumed for servicing in commercial refrigeration (64.1 per cent in mt and 67.6 per cent in CO_2-eq tonnes), followed by domestic refrigeration (19.2 per cent in mt and 13.3 per cent in CO_2-eq tonnes), transport refrigeration (10.9 per cent in mt and 13.2 per cent in CO_2-eq tonnes), and other subsectors, as shown in tables 7 and 8.

Table 7. HFC consumption in Rwanda in the refrigeration and AC servicing subsectors in mt (2022)

Sector		HFC-134a	R-404A	R-407A	R-407C	R-410A	R-507A	Total	Share of total (%)
Refrigeration and AC servicing									
Refrigeration subsectors									
Domestic		20.52	0.00	0.00	0.45	0.00	0.00	20.97	19.2
Commercial	Stand-alone units	15.80	10.32	0.80	8.01	0.00	1.02	35.95	32.9
	Condenser units (simplex)	10.55	5.20	0.40	2.81	2.40	0.00	21.36	19.6
	Centralized systems	6.80	1.17	0.00	1.21	3.59	0.00	12.77	11.7
	Subtotal	*33.15*	*16.69*	*1.20*	*12.03*	*5.99*	*1.02*	*70.08*	*64.1*
Transport		6.65	5.22	0.00	0.00	0.00	0.00	11.87	10.9
Air-conditioning subsectors									
Domestic		0.00	0.00	0.00	0.00	0.43	0.00	0.43	0.4
Commercial		0.00	0.00	0.00	0.00	3.60	0.00	3.60	3.3
Mobile		0.42	0.19	0.00	0.00	1.69	0.00	2.30	2.1
Total		**60.74**	**22.10**	**1.20**	**12.48**	**11.71**	**1.02**	**109.25**	**100**

Table 8. HFC consumption in Rwanda in the refrigeration and AC servicing subsectors in CO_2-eq tonnes (2022)

Sector		HFC-134a	R-404A	R-407A	R-407C	R-410A	R-507A	Total	Share of total (%)
Refrigeration and AC servicing									
Refrigeration subsectors									
Domestic		29,344	0	0	798	0	0	30,142	13.3
Commercial	Stand-alone units	22,594	40,471	1,686	14,209	0	4,065	83,024	36.6
	Condenser units (simplex)	15,087	20,392	843	4,985	5,010	0	46,316	20.4
	Centralized systems	9,724	4,588	0	2,146	7,494	0	23,953	10.6
	Subtotal	*47,405*	*65,451*	*2,529*	*21,340*	*12,504*	*4,065*	*153,293*	*67.6*
Transport		9,510	20,471	0	0	0	0	29,980	13.2

Sector	HFC-134a	R-404A	R-407A	R-407C	R-410A	R-507A	Total	Share of total (%)
Air-conditioning subsectors								
Domestic	0	0	0	0	898	0	898	0.4
Commercial	0	0	0	0	7,515	0	7,515	3.3
Mobile	601	745	0	0	3,528	0	4,874	2.1
Total	**86,858**	**86,667**	**2,528**	**22,138**	**24,445**	**4,065**	**226,701**	**100**

*The difference between the total in this table and Article 7 data for 2022 reported in table 5 is due to estimation of use; this can be different from consumption measured as import minus exports.

Refrigeration and air-conditioning servicing sector

38. There are approximately 461 technicians (including 24 women) from both the formal (323 technicians) and informal (138 technicians) sectors consuming HFCs in Rwanda. The informal technicians provide service in all of the RAC sector but the majority work in mobile air-conditioning (MAC) and transport refrigeration. Only 129 RAC technicians were trained on good refrigeration practices. Rwanda has one RAC association, the Rwanda Heating Ventilation Air-conditioning and Refrigeration Cooperative (R-HVAC-RC) Technicians and Engineers Association, which is registered at the national level as a private organization but not yet certified as per the requirements of the standards in the RAC servicing sector.

39. Rwanda has three vocational training schools namely, the IPRC of Kigali, the Kigali Technical Training Centre (centre of excellence) and the New Century Career Training Institute, which train about 12, 68 and 49 RAC technicians, respectively, annually and which have 10 trainers in total. Currently, the RAC training curriculum of these vocational schools does not include adequate training content on good refrigeration practices; consequently, there is a need to build capacity of the graduate trainees, and to mainstream good refrigeration practices in the new training programme.

40. The certification process of RAC technicians will involve, but will not be limited to, training RAC technicians in the transportation, storage, maintenance and handling of low-GWP refrigerants to allow innovative business trade in emerging technologies. These activities were initiated in February 2024.

Domestic, commercial and transport refrigeration servicing

41. HFC-134a, and HC-600a are used in domestic refrigerators, water coolers and freezers, with HC-600a dominating the market for new domestic refrigerators. R-404A, HFC-134a and HCFC-22 are the main refrigerants used in the commercial refrigeration applications.

Domestic and commercial air-conditioning servicing

42. R-410A is mainly used in residential and commercial air conditioners; the survey results show that there is very limited quantity of HFC-32-based air conditioners in the country.

Mobile air-conditioning servicing

43. The MAC sector includes refrigerated trucks and air-conditioning units for cars. The survey indicates that 120 technicians (including four females) work in MAC. Occasionally, due to lack of awareness, some R-404A is used for servicing mobile air conditioners; this issue has been brought to the attention of the service technicians and awareness and outreach programmes have been conducted to avoid such practices. Most vehicles in the local market are older models; however, since 2010, there has been a significant increase in new vehicles.

IV. Stage I of the Kigali HFC implementation plan as submitted

Institutional, policy and regulatory framework

44. REMA, through the NOU, is responsible for implementing and coordinating all activities under the Montreal Protocol and of monitoring and reporting on the implementation of those activities to different stakeholders. The National Steering Committee was established to control, monitor and manage the reduction and phase-out of ODS as well as the phase-down of HFCs. In addition to REMA, the NOU works closely with key stakeholders namely, the National Ozone Steering Committee, the Refrigeration Association, importers and distributors and enforcement agencies which comprises the Rwanda Revenue Authority, the Rwanda Standards Board and the Rwanda Investigation Bureau, the Rwanda Inspectorate, Competition and Consumer Protection Authority, the Association of Clearing and Forwarding, the R-HVAC-RC Technicians, Environmental Practitioners, Engineers Association and the Rwanda National Police.

45. During the KIP, the NOU will continue to work closely with the already existing institutional arrangement which is being used for the implementation of stage II of the HPMP.

Phase-down strategy for stage I of the Kigali HFC implementation plan

Overarching strategy

46. The primary focus of the strategy as submitted is to achieve the freeze and the 10 per cent reduction step by 2029, considering provisions of decision XXXV/16 of the Meeting of the Parties[5] as relevant. To sustainably achieve this target, Rwanda would prioritize activities based on the needs of the different sectors (i.e., refrigeration, air-conditioning, MAC), and define different actions needed for sustainable HFC phase-down in coordination with activities undertaken under the HPMP. The main activities that would be implemented include capacity building efforts including institutional organizational development (skills development); continuous training for service technicians and enforcement officers including updating curricula; awareness campaigns and communication with the industry stakeholders; a demonstration project for the adoption of low-GWP technologies; and support to the local associations.

Proposed reductions

47. The estimated growth rate in consumption of HFCs in Rwanda, keeping in view the national consumption level in 2022 and technology trends, is given in the table below.

Table 9. HFC consumption forecast under unconstrained scenario, Montreal Protocol limits and proposed HFC reductions under stage I (CO_2-eq tonnes)

	2022*	2023*	2024	2025	2026	2027	2028	2029
HFC consumption forecast (annual growth rate of 3 per cent**)	226,680	222,119	228,783	235,646	242,715	249,997	257,497	265,222
Montreal Protocol HFC consumption limits	n/a	n/a	338,197	338,197	338,197	338,197	338,197	304,377
Proposed HFC consumption under the KIP	n/a	n/a	338,197	338,197	338,197	338,197	338,197	304,377
Proposed reduction in HFC consumption from baseline (%)	n/a	n/a	0	0	0	0	0	10

* As per Article 7.

** Growth is calculated based on inputs from the survey and consultations with UNEP and is applied on 2022 consumption.

[5] To address the impacts of the COVID-19 pandemic on HFC baseline consumption for certain Article 5 countries including Rwanda, the Meeting of the Parties *inter alia* decided that the Implementation Committee under the Non-Compliance Procedure of the Montreal Protocol should defer, until 2026 data becomes available, any consideration of compliance status with regard to control measures for consumption of Annex F substances on the understanding that the countries will continue to make every effort to comply with these control measures.

Proposed activities

48. The different elements of the KIP for Rwanda with their cost breakdown are presented below:

(a) *Regulatory framework and control mechanisms*: Strengthen the HFC licensing and quota system in the RAC sector; technical assistance in the adoption of standards of refrigerants and promotion of sustainable cooling; training of 60 customs officers and other enforcement agents on regulations and best practices in the RAC sector; strengthen record-keeping to customs officers and reporting by RAC businesses; conduct RAC market monitoring, annual and mid-term surveys on technology trends in RAC equipment for providing inputs for the development of policies and regulations; promote the sustainable cooling and cold chain for food and vaccine and energy efficiency equipment (UNEP) (US $30,000);

(b) *Organizational development for the RAC sector*: Technical assistance of RAC technicians to formalize their statutes and training in best practices in business development; technical training in curriculum for design and product development for RAC technicians and heating, ventilation, and air-conditioning (HVAC) companies; conduct two three-day training workshops for 30 refrigeration technicians each; conduct a training programme for 30 informal technicians to upgrade their knowledge in handling flammable gas; conduct training for 30 farmers and health care staff aimed at promoting the sustainable cooling and cold chain for food and vaccine with ACES; conduct teaching programme for 10 technicians to promote the energy efficiency equipment; conduct training of trainers for the RAC sector (UNEP) (US $60,000);

(c) *Refrigeration sector*: Conduct awareness training sessions aimed at raising capacity of RAC end users and adoption of best practices of small and medium enterprises; purchase, installation and knowledge technology transfer for a demonstration unit in commercial refrigeration equipment using lower-GWP technology and development of a framework of recovery and recycling (UNIDO) (US $25,000);

(d) *Air-conditioning sector*: Technical assistance for supply and installation of RAC units to training centres as well as laboratory testing for RAC equipment for use during training programmes; prepare and conduct the awareness raising campaign to end-users (e.g., hotels, commercial buildings) (UNIDO) (US $25,000); and

(e) *MAC sector and gender mainstreaming in the RAC sector*: Planning and promotion of recovery and recycling in the MAC sector through training and supply of 10 recovery units to MAC workshops; conducting sensitization campaigns on gender mainstreaming in the RAC sector; technical assistance in gendered environmental entrepreneurship in the RAC sector (UNIDO) (US $20,000).

Project implementation, coordination and monitoring

49. The NOU, the National Ozone Committee, and the Refrigeration Association will monitor the implementation of the KIP activities, and imports of HFCs and HFC-based equipment. The NOU will produce quarterly reports on progress in the implementation of the KIP. The cost of those activities for UNEP amounts to (US $10,000), and includes staff and consultants (US $3,000), travel (US $2,000), meetings and other activities (US $5,000).

Gender policy implementation

50. The Government of Rwanda is committed to implementing the Multilateral Fund's operational policy on gender mainstreaming during the KIP as it recognizes the importance of gender equality, women empowerment and women involvement in the implementation of the programmes. The Government has made good strides in developing policies and strategies to support women empowerment and the advancement of gender equality, and mechanisms have been instituted to support their implementation. As part of the plan, the Government will conduct sensitization campaigns on gender mainstreaming in the RAC sector and technical assistance in gendered environmental entrepreneurship in the RAC sector.

Coordination of activities in the servicing sector under HCFC phase-out and HFC phase-down plans

51. Activities in the service sector under stage II of the HPMP and stage I of the KIP would be coordinated to maximize complementarity and avoid duplication. During HPMP implementation, the activities relating to capacity building, training and other related activities would be carried out to minimize adoption of HFC-based technologies and would be designed and implemented to avoid duplication. During the KIP, activities will focus on training technicians in refrigeration applications and the MAC sector on minimizing wastage of HFCs and the safe adoption of low-GWP technologies. Further, under both the KIP and the HPMP, activities relating to awareness and information outreach and development of standards and other measures for the adoption of sustainable low-GWP technologies would be designed in a holistic manner to maximize understanding of the different target audiences, including on the adoption of low-GWP energy efficient technologies. Gender mainstreaming activities would also be implemented in a synergistic manner.

Total cost of stage I of the Kigali HFC implementation plan

52. The budget for stage I has been proposed at US $170,000. The costs of activities in the refrigeration servicing sector have been proposed in line with decision 92/37.

53. The proposed activities and cost of stage I of the KIP are summarized in table 10.

Table 10. Proposed cost of activities to be implemented in stage I of the KIP for Rwanda (US $)

Particular	Implementing agency	Cost (US $)
Regulatory framework and control mechanisms	UNEP	30,000
Organizational development for the RAC sector	UNEP	60,000
Refrigeration sector	UNIDO	25,000
Air-conditioning sector	UNIDO	25,000
MAC sector and gender mainstreaming in the RAC sector	UNIDO	20,000
Project implementation, coordination and monitoring	UNEP	10,000
Total		**170,000**

Implementation of the first tranche of stage I of the Kigali HFC implementation plan

54. The first funding tranche of stage I of the KIP, in the total amount of US $69,000, will be implemented between January 2025 and December 2027 and will include the following activities:

(a) *Regulatory framework and control mechanisms*: Strengthen the HFC licensing and quota system in the RAC sector; technical assistance in the adoption of standards of refrigerants and promotion of sustainable cooling; training of 30 customs officers and other enforcement agents on regulations and best practices in the RAC sector; conduct RAC market monitoring, annual and mid-term surveys and training of users on the Ozone Information System; promote energy efficiency equipment (UNEP) (US $16,000);

(b) *Organizational development for the RAC sector*: Technical assistance of RAC technicians to formalize their statutes and training in best practices in business development; technical training in curriculum for design and product development for RAC technicians and HVAC companies; conduct two three-day training workshops for 30 refrigeration technicians each; training programme for 30 informal technicians to upgrade their knowledge in handling flammable gas (six months training at technical schools); training of 20 farmers and health care staff aimed at promoting the sustainable cooling and cold chain for food and vaccine with ACES (UNEP) (US $23,000);

(c) *Refrigeration sector*: Purchase, installation and knowledge technology transfer for a demonstration unit on lower-GWP technology and development of framework of recovery and recycling of equipment (UNIDO) (US $10,000);

(d) *MAC sector*: Planning and promotion of recovery and recycling in the MAC sector, supply recovery units to MAC workshops (UNIDO) (US $15,000); and

(e) Project coordination and monitoring (UNEP) (US $5,000) with the following cost breakdown: staff and consultants (US $1,500), travel (US $1,000), meetings and other activities (US $2,500).

SECRETARIAT'S COMMENTS AND RECOMMENDATION

V. Comments

Overarching strategy

55. After observing the trends in its HFC consumption and technology, and following consultations between UNEP and the Secretariat, the Government of Rwanda agreed to revise its HFC consumption target for 2029 to the value equal to the HFC component of the baseline consumption, representing a reduction by 25 per cent of its baseline. In light of this, in line with decision 92/44, the Government of Rwanda has expressed strong commitment to supporting reductions in HFC consumption in advance of Montreal Protocol targets.[6] Details of the discussions and the basis for this decision are presented in paragraph 59 below.

Institutional, policy and regulatory framework

HFC licensing and quota system

56. In line with decision 87/50(g), UNEP has confirmed that Rwanda has an established and enforceable system of licensing and quotas for monitoring HFC imports/exports in place. The quotas will be allocated to the authorised HFC importers based on the HFC consumption targets under stage I of the KIP. The imports of HFCs are monitored by the NOU in coordination with relevant national stakeholders.

Regulations on import of HFC-based equipment

57. To reduce dependence on HFC-134a-based domestic refrigerators and R-410A-based air conditioners, UNEP informed the Secretariat that the Government of Rwanda, after consultations with the national stakeholders and following the adoption of MEPS regulations, would implement a ban on the import and sale of such equipment by 1 January 2027. Regarding HFC-based stand-alone commercial refrigeration equipment, UNEP indicated that the Government would continue consultations with national

[6] As per the letter of 21 October 2024 from REMA of the Ministry of Environment of Rwanda to the Secretariat.

stakeholders on the availability of cost-effective low-GWP refrigerant alternatives and would define future steps in reducing dependence on such equipment.

58. In addition, the Government would implement other measures such as control on sales of HFCs to certified technicians and outreach measures for different users to fast-track adoption of low-/lower-GWP alternatives in different applications. It was agreed that along with the submission of each tranche of stage I of the KIP, UNEP would provide an update on the status of implementation of regulations relating to the prohibition of HFC-134a-based domestic refrigerators and R-410A-based air conditioners, and other regulatory measures relating to consumption of HFCs.

Targets for HFC consumption reduction

59. The Secretariat discussed with UNEP details of the estimates of HFC consumption growth under the business-as-usual (BAU) scenario in Rwanda, noting that the growth was initially estimated at 3 per cent per annum. Following these discussions with UNEP, it was agreed to use 3 per cent as the estimated growth rate of HFC consumption under the BAU scenario. Based on this, the Secretariat had discussions with UNEP on whether the Government of Rwanda had considered having more ambitious targets that could contribute to an early phase-down of HFCs. UNEP explained that the Government of Rwanda proposes to follow a cautious approach to avoid the risks of exceeding HFC consumption targets. Based on the consultations, the Government agreed to revise the HFC consumption target for 2029 to the value equal to the HFC component of the baseline consumption. This would result in a reduction of HFC consumption by 25 per cent of the country's baseline by 2029.

Technical and cost-related issues

Certification of service technicians

60. Regarding the certification of technicians, UNEP informed the Secretariat that Rwanda has put in place related mechanisms such as standards, and the NOU is continuing its collaboration with the Rwanda Technical and Vocational Education and Training Board, the Rwanda Standards Board and the Rwanda Governance Board, as well as the Rwanda Cooperative Agency to continue the certification process of RAC technicians that started in February 2024. The Government is also planning to implement regulations after consultations with the relevant national stakeholders, which would result in greater controls on sale of refrigerants to certified technicians and ensure the hiring of certified technicians for servicing certain categories of equipment.

Linkage with ACES and National cooling action plan (NCAP)

61. The Secretariat requested clarifications on how ACES, established with support from the Government of the United Kingdom of Great Britain and Northern Ireland, would contribute to sustained implementation of KIP activities. UNEP explained that the centre would provide support for training and technical capacity building of service technicians and other relevant stakeholders and demonstrate low-GWP energy efficient technologies. It would also provide technical support for awareness and outreach programmes undertaken by the Government of Rwanda under the KIP for faster adoption of the technology.

62. On linkages with NCAP, UNEP explained that NCAP covers a range of activities relating to cooling that include technology promotion of low-GWP technologies in different applications, interventions on strengthening cold chain, adoption of energy efficient equipment in refrigeration, air-conditioning and heat pump applications and other capacity building activities. The activities implemented under the KIP and the HPMP would contribute to achieving different objectives of NCAP.

Agreed costs

63. Keeping in view the Government of Rwanda's plan to control HFC consumption and achieve an HFC consumption target that is equivalent to the HFC component of the HFC baseline consumption and noting that this would result in a consumption reduction by 25 per cent of the country's baseline, it was agreed that the Government would request a funding level in the amount of US $187,000 for stage I of the KIP, which is 10 per cent above the level proposed in line with decision 92/37. This resulted in increasing the targets for the training of customs officers and technicians from 60 each to 70, each. Considering the above, table 11 presents the revised budget for stage I.

Table 11. Agreed cost of activities to be implemented during stage I of the KIP in Rwanda (US $)

Particular	Implementing agency	Original cost (US $)	Revised cost (US $)
Regulatory framework and control mechanisms	UNEP	30,000	33,000
Organizational development for the RAC sector	UNEP	60,000	66,000
Refrigeration sector	UNIDO	25,000	27,500
Air-conditioning sector	UNIDO	25,000	27,500
MAC sector and gender mainstreaming in the RAC sector	UNIDO	20,000	22,000
Project implementation, coordination and monitoring	UNEP	10,000	11,000
Total		**170,000**	**187,000**

Project management unit

64. Funding for the project implementation, coordination and monitoring was agreed at US 11,000 (US $4,000 for staff and consultants, US $2,000 for travel, and US $5,000 for meetings and other activities) calculated at 5.9 per cent of the project costs.

Total project cost

65. At the total cost of US $187,000, stage I of the KIP for Rwanda will result in a reduction of 84,189 CO_2-eq tonnes from the country's HFC baseline consumption.

66. Stage I of the KIP will be implemented in three tranches. The schedule of HFC phase-down and HCFC phase-out commitments and of the KIP and HPMP tranches, and the activities of stage II of the HPMP and stage I of the KIP are presented in annex II and annex III, respectively, to the present document.

Implementation plan for the first tranche of the Kigali HFC implementation plan

67. Based on the revised funding for stage I of the KIP, the first funding tranche of stage I has been revised to US $75,900 (US $48,400 for UNEP and US $27,500 for UNIDO) and will include the following breakdown:

(a) Regulatory framework and control mechanisms (UNEP) (US $17,600);

(b) Organizational development for RAC sector (UNEP) (US $25,300);

(c) Refrigeration sector (UNIDO) (US $11,000);

(d) MAC sector (UNIDO) (US $16,500); and

(e) Project coordination and monitoring (UNEP) (US $5,500).

Risk of non-compliance and flexibility provided by the Meeting of the Parties (decision XXXV/16)

68. At the 35th Meeting of the Parties to the Montreal Protocol, the parties addressed the impact of the COVID-19 pandemic on the HFC baseline of countries that (a) have experienced demonstrated reductions in their respective levels of consumption of HFCs during the years 2020-2022, as compared to 2018-2019; (b) are expected to have calculated levels of consumption of HFCs in 2024 that exceed their respective calculated baselines; and (c) have expressed concern in writing to the Ozone Secretariat regarding the impact of the COVID-19 pandemic on their baselines. Accordingly, as mentioned above, decision XXXV/16 established *inter alia* that the Implementation Committee under the Non-Compliance Procedure of the Montreal Protocol should defer, until 2026 data becomes available, any consideration of compliance status with regard to control measures for consumption of HFCs for eight countries, including Rwanda, on the understanding that the countries will continue to make every effort to comply with these control measures.

69. As one of the Parties listed in decision XXXV/16 of the Meeting of the Parties, Rwanda is sensitive towards ensuring it remains compliant with its HFC phase-down commitments; the Government would implement relevant regulatory measures and implement project activities to minimize HFC consumption growth in the country. Further, the Government is planning to achieve a reduction of 25 per cent of the baseline after carefully reviewing its HFC consumption levels and the future technology trends taking into account the planned KIP activities.

70. The Secretariat notes that the Government of Rwanda intends to make every effort to comply with the Montreal Protocol control measures and that it has proposed in its KIP that its annual HFC consumption levels do not surpass the Montreal Protocol targets.

71. In light of decision XXXV/16, the Secretariat would seek guidance from the Executive Committee on the procedure to be followed if the HFC consumption level for the years 2024 or 2025 was above the Montreal Protocol control limits.

Co-financing

72. UNEP informed that details of potential co-financing opportunities and levels were difficult to assess at this stage and that the Government of Rwanda would continue to seek potential opportunities for co-financing under the KIP. UNEP also informed that a portion of funds under the readiness project funded by GCF is proposed to be used for implementing a product registry system for large commercial RAC equipment; the data available under this registry would be used appropriately for implementation of relevant activities under the KIP.

2024-2026 business plan of the Multilateral Fund

73. UNEP and UNIDO are requesting US $187,000, plus agency support costs, for the implementation of stage I of the KIP for Rwanda. The total value of US $85,767, including agency support costs, requested for the period of 2024–2026, is US $5,085 above the amount in the business plan.

Sustainability of the HFC phase-down and assessment of risks

74. UNEP explained that the Government of Rwanda would implement a strong HFC licensing and quota system, and this would ensure that the supply of HFCs is controlled in line with its targets under stage I of the KIP. Further, the Government would implement capacity building and training activities for service technicians in the refrigeration sector and the air-conditioning sector, in an integrated manner with the HPMP activities, and this would facilitate adoption of low-GWP alternatives in different applications. It would also implement policies and regulations for prohibiting the import and sale of HFC-based domestic refrigeration equipment and R-410A-based air-conditioning equipment by 1 January 2027. Regarding

commercial refrigeration, the Government would continue to consult the industry on implementing prohibition of import and sale of HFC-based equipment. Further, ACES would be used for capacity building of trainers for training refrigeration service technicians and technicians engaged in onsite installation and assembly, and to provide ongoing support for the implementation of low-GWP energy efficient refrigerant-based technologies in RAC applications. These interventions would result in continued decrease in HFC consumption and achievement of targets under stage I of the KIP.

Impact on the climate

75. The activities proposed, including promoting the adoption of low-GWP alternatives in different refrigeration applications, adoption of good practices to reduce consumption of HFCs, indicate that the implementation of stage I of the KIP will reduce refrigerant emissions into the atmosphere, resulting in climate benefits. While the Secretariat is not able to provide an estimate of the avoided emissions from the implementation of the KIP at the present meeting, by 2029 Rwanda will have reduced its annual HFC emissions by approximately 84,189 CO_2-eq tonnes, calculated as the difference between the HFC baseline for compliance and the 2029 target, assuming that all consumed HFCs would eventually have been emitted.

Draft Agreement

76. A draft Agreement between the Government of Rwanda and the Executive Committee for stage I of the KIP has not been prepared as the Agreement template is still under consideration by the Executive Committee.

77. If the Executive Committee so wishes, the funds for stage I of the KIP for Rwanda could be approved in principle, and funds for the first tranche could be approved on the understanding that the Agreement would be prepared and presented at a future meeting, before the submission of the second tranche, and once the Agreement template has been approved.

VI. Recommendation

78. The Executive Committee may wish to consider:

(a) Approving, in principle, stage I of the Kigali HFC implementation plan (KIP) for Rwanda for the period 2024-2029 to reduce HFC consumption by at least 25 per cent of the country's baseline by 2029, in the amount of US $211,310, consisting of US $110,000, plus agency support costs of US $14,300, for UNEP and US $77,000, plus agency support costs of US $10,010, for UNIDO, as reflected in the schedule contained in annex II to the present document;

(b) Noting the strong commitment of the Government of Rwanda to supporting reductions in HFC consumption in advance of the Montreal Protocol targets;

(c) Also noting that, if the HFC consumption level for Rwanda for the years 2024 or 2025 was above the Montreal Protocol control limits or the maximum allowable consumption in the future Agreement between the Government of Rwanda and the Executive Committee, on the understanding that the Government of Rwanda would continue to make every effort to meet those control limits, the Secretariat would inform and seek guidance from the Executive Committee on the procedure to follow in light of decision XXXV/16;

(d) Approving the first tranche of stage I of the KIP for Rwanda and the corresponding tranche implementation plan, in the amount of US $85,767, consisting of US $48,400, plus agency support costs of US $6,292, for UNEP and US $27,500, plus agency support costs of US $3,575, for UNIDO; and

(e) Requesting the Government of Rwanda, UNEP, UNIDO and the Secretariat to finalize the draft Agreement between the Government of Rwanda and the Executive Committee for the reduction in consumption of HFCs, including the information contained in the annex referred to in subparagraph (a) above, and to submit it to a future meeting once the KIP Agreement template has been approved by the Executive Committee.

Annex I

TEXT TO BE INCLUDED IN THE AGREEMENT BETWEEN THE GOVERNMENT OF RWANDA AND THE EXECUTIVE COMMITTEE OF THE MULTILATERAL FUND FOR THE REDUCTION IN CONSUMPTION OF HYDROCHLOROFLUOROCARBONS IN ACCORDANCE WITH STAGE II OF THE HCFC PHASE-OUT MANAGEMENT PLAN

(Relevant changes are in bold font for ease of reference)

17. This updated Agreement supersedes the Agreement reached between the Government of Rwanda and the Executive Committee at the 86th meeting of the Executive Committee.

APPENDIX 2-A: THE TARGETS, AND FUNDING

Row	Particulars	2020	2021-2023	2024	2025-2026	2027	2028-2029	2030	Total
1.1	Montreal Protocol reduction schedule of Annex C, Group I substances (ODP tonnes)	2.67	2.67	2.67	1.33	1.33	1.33	0.00	n/a
1.2	Maximum allowable total consumption of Annex C, Group I substances (ODP tonnes)	2.67	2.00	2.00	1.33	1.33	1.33	0.00	n/a
2.1	Lead IA (UNEP) agreed funding (US $)	90,000	0	**217,000**	0	83,000	0	60,000	**450,000**
2.2	Support costs for Lead IA (US $)	11,700	0	**28,210**	0	10,790	0	7,800	**58,500**
2.3	Cooperating IA (UNIDO) agreed funding (US $)	70,000	0	83,000	0	17,000	0	0	170,000
2.4	Support costs for Cooperating IA (US $)	6,300	0	7,470	0	1,530	0	0	15,300
3.1	Total agreed funding (US $)	160,000	0	**300,000**	0	100,000	0	60,000	**620,000**
3.2	Total support costs (US $)	18,000	0	**35,680**	0	12,320	0	7,800	**73,800**
3.3	Total agreed costs (US $)	178,000	0	**335,680**	0	112,320	0	67,800	**693,800**
4.1.1	Total phase-out of HCFC-22 agreed to be achieved under this Agreement (ODP tonnes)								2.66
4.1.2	Phase-out of HCFC-22 to be achieved in the previous stage (ODP tonnes)								1.09
4.1.3	Remaining eligible consumption for HCFC-22 (ODP tonnes)								0.00
4.2.1	Total phase-out of HCFC-123 agreed to be achieved under this Agreement (ODP tonnes)								0.00
4.2.2	Phase-out of HCFC-123 to be achieved in the previous stage (ODP tonnes)								0.06
4.2.3	Remaining eligible consumption for HCFC-123 (ODP tonnes)								0.00
4.3.1	Total phase-out of HCFC-141b agreed to be achieved under this Agreement (ODP tonnes)								0.00
4.3.2	Phase-out of HCFC-141b to be achieved in the previous stage (ODP tonnes)								0.16
4.3.3	Remaining eligible consumption for HCFC-141b (ODP tonnes)								0.00
4.4.1	Total phase-out of HCFC-142b agreed to be achieved under this Agreement (ODP tonnes)								0.00
4.4.2	Phase-out of HCFC-142b to be achieved in the previous stage (ODP tonnes)								0.13
4.4.3	Remaining eligible consumption for HCFC-142b (ODP tonnes)								0.00

***Date of completion of stage I: 1 September 2021**

Annex II

SCHEDULE OF HFC PHASE-DOWN AND HCFC PHASE-OUT COMMITMENTS AND FUNDING TRANCHES UNDER THE KIGALI HFC IMPLEMENTATION PLAN AND THE HCFC PHASE-OUT MANAGEMENT PLAN FOR RWANDA

Kigali HFC implementation plan (stage I)

Row	Particulars	2024	2025	2026	2027	2028	2029	Total
1.1	Montreal Protocol reduction schedule of Annex F substances (CO_2-eq tonnes)	338,197	338,197	338,197	338,197	338,197	304,377	n/a
1.2	Maximum allowable total consumption of Annex F substances (CO_2-eq tonnes)	338,197	338,197	338,197	338,197	338,197	254,008	n/a
2.1	Lead IA (UNEP) agreed funding (US $)	48,400	0	0	44,000	0	17,600	110,000
2.2	Support costs for Lead IA (US $)	6,292	0	0	5,720	0	2,288	14,300
2.3	Cooperating IA (UNIDO) agreed funding (US $)	27,500	0	0	44,000	0	5,500	77,000
2.4	Support costs for Cooperating IA (US $)	3,575	0	0	5,720	0	715	10,010
3.1	Total agreed funding (US $)	75,900	0	0	88,000	0	23,100	187,000
3.2	Total support costs (US $)	9,867	0	0	11,440	0	3,003	24,310
3.3	Total agreed costs (US $)	85,767	0	0	99,440	0	26,103	211,310

HCFC phase-out management plan (stage II)

Row	Particulars	2020	2021-2023	2024	2025-2026	2027	2028-2029	2030	Total
1.1	Montreal Protocol reduction schedule of Annex C, Group I substances (ODP tonnes)	2.67	2.67	2.67	1.33	1.33	1.33	0.00	n/a
1.2	Maximum allowable total consumption of Annex C, Group I substances (ODP tonnes)	2.67	2.00	2.00	1.33	1.33	1.33	0.00	n/a
2.1	Lead IA (UNEP) agreed funding (US $)	90,000	0	117,000	0	83,000	0	60,000	350,000
2.2	Support costs for Lead IA (US $)	11,700	0	15,210	0	10,790	0	7,800	45,500
2.3	Cooperating IA (UNIDO) agreed funding (US $)	70,000	0	83,000	0	17,000	0	0	170,000
2.4	Support costs for Cooperating IA (US $)	6,300	0	7,470	0	1,530	0	0	15,300
3.1	Total agreed funding (US $)	160,000	0	200,000	0	100,000	0	60,000	520,000
3.2	Total support costs (US $)	18,000	0	22,680	0	12,320	0	7,800	60,800
3.3	Total agreed costs (US $)	178,000	0	222,680	0	112,320	0	67,800	580,800

Annex III

SIMULTANEOUS IMPLEMENTATION OF THE HCFC PHASE-OUT MANAGEMENT PLAN AND THE KIGALI HFC IMPLEMENTATION PLAN IN RWANDA

	HPMP – stage II		KIP – stage I		HPMP+KIP combined cost (US $)
Category of activity	**Activity**	**Cost (US $)**	**Activity**	**Cost (US $)**	
Regulatory framework	Strengthening the enforcement of ODS regulations	50,000	Regulatory framework and control mechanisms for HFC phase-down	33,000	80,000
Development of codes of practice	Development and implementation of technical standards for safe use of low-GWP refrigerants	50,000			50,000
Training of refrigeration technicians	Updating of customs training curriculum and polytechnic college's curriculum	50,000			50,000
Training of RAC technicians	Strengthening capacity of RAC technicians and establishment of a certification scheme	80,000	Organizational development and training and capacity building for KIP implementation in RAC Sector	66,000	140,000
Centres of excellence	Strengthening RAC training centres including establishment of four additional centres of excellence and a recovery and reuse scheme	150,000			150,000
	Development and implementation of the National Product Registration system and capacity building for green procurement	50,000			50,000
Technology promotion	Technology promotion for end-users for adoption of low-GWP HCFC alternative technologies	20,000	Refrigeration, air conditioning and MAC and RAC technical assistance and gender mainstreaming	77,000	90,000
Coordination and monitoring	Monitoring and reporting	70,000	Coordination and management	11,000	80,000
Total		**520,000***		**187,000**	**707,000**
Percentage of total (%)		**73.5**		**26.5**	**100**

* Excluding US $100,000 for additional activities to maintain energy efficiency (decision 89/6) submitted to the present meeting.