

**United Nations
Environment
Programme**Distr.
GENERALUNEP/OzL.Pro/ExCom/95/80
13 November 2024

ORIGINAL: ENGLISH



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 9(d) of the provisional agenda¹

PROJECT PROPOSALS: UGANDA

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 |
|---|----------------|------------------|

Energy efficiency

- | | | |
|---|--|--------------------------|
| • Pilot project to maintain and/or enhance the energy efficiency of replacement technologies and equipment in the context of HFC phase-down (non-investment activities) | Government of the United Kingdom of Great Britain and Northern Ireland | Individual consideration |
|---|--|--------------------------|

¹ UNEP/OzL.Pro/ExCom/95/1

Pre-session documents of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol are without prejudice to any decision that the Executive Committee might take following issuance of the document.

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

Uganda

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

(II) LATEST ARTICLE 7 DATA (Annex C, Group I)	Year: 2023	0.07 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					0.07				0.07

(IV) CONSUMPTION DATA (ODP tonnes)			
2009-2010 baseline:	0.20	Starting point for sustained aggregate reductions:	0.20
CONSUMPTION ELIGIBLE FOR FUNDING			
Already approved:	0.20	Remaining:	0.00

(V) ENDORSED BUSINESS PLAN		2024	2025	2026	Total
UNEP	ODS phase-out (ODP tonnes)	0.02	0.00	0.00	0.00
	Funding (US \$)	169,500*	0	0	169,500*
UNIDO	ODS phase-out (ODP tonnes)	0.02	0.00	0.00	0.00
	Funding (US \$)	95,320*	0	0	95,320*

*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)			0.13	0.13	0.13	0.065	0.065	0.065	0.00	n/a
Maximum allowable consumption (ODP tonnes)			0.13	0.10	0.10	0.065	0.065	0.065	0.00	n/a
Funding agreed in principle (US \$)	UNEP	Project costs	60,000	0	180,000	0	75,000	0	45,000	360,000
		Support costs	7,800	0	23,400	0	9,750	0	5,850	46,800
	UNIDO	Project costs	63,000	0	58,000	0	42,000	0	0	163,000
		Support costs	5,670	0	5,220	0	3,780	0	0	14,670
Funds approved by ExCom (US \$)		Project costs	123,000	0	0	0	0	0	0	123,000
		Support costs	13,470	0	0	0	0	0	0	13,470
Total funds recommended for approval at this meeting (US \$)		Project costs	0	0	238,000	0	0	0	0	238,000
		Support costs	0	0	28,620	0	0	0	0	28,620

* 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 Uganda, 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 \$266,620, consisting of US \$180,000, plus agency support costs of US \$23,400, for UNEP and US \$58,000, plus agency support costs of US \$5,220, for UNIDO.² The submission includes a progress report on the implementation of the first tranche, the verification report on HCFC consumption for 2019 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 Uganda reported a consumption of 0.07 ODP tonnes of HCFCs in 2023, which is 65 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 Uganda (2019-2023 Article 7 data)

HCFC-22	2019	2020	2021	2022	2023	Baseline
Metric tonnes (mt)	1.27	1.04	1.16	1.21	1.30	3.64
ODP tonnes	0.07	0.06	0.06	0.07	0.07	0.20

3. Uganda's overall HCFC consumption has been decreasing since the implementation of HPMP activities. HCFC consumption is also being replaced with alternatives such as HFCs, hydrocarbon (HC), CO₂, and ammonia, in domestic, commercial and industrial applications. The small gradual increase in HCFC consumption observed between 2021 and 2023 is a result of the country's economy stabilizing after the COVID-19 pandemic.

Country programme implementation report

4. The Government of Uganda 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 2019 to 2023 was correct (as shown in table 1 above). The verification concluded that Uganda has adequate legislations to comply with the reduction targets outlined in the Agreement between the Government and the Executive Committee. The Customs Department of the Uganda Revenue Authority continues to play a critical role in implementing the legislations, especially in monitoring and controlling the imports of HCFCs. Furthermore, the Government of Uganda has an enforceable licensing and quota system with a robust system for monitoring the imports of HCFCs, which includes the registration of importers and a requirement for them to keep records and submit annual import data to the national ozone unit (NOU). The country continues to make progress towards implementing the activities approved under the HPMP, with its consumption between 2019-2023 below the maximum allowable levels for those years.

² As per the letter of 19 August 2024 from the National Environment Management Authority (NEMA) of Uganda 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.

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

6. Stage I of the HPMP was completed on 31 December 2021. The project completion report was submitted on 25 April 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 Uganda ratified the Kigali Amendment on 21 June 2018.

8. In 2024, a technical committee on the management of ozone-depleting substances and products was constituted, comprising members from the NOU/NEMA, the Customs Department at the Uganda Revenue Authority, the Uganda National Association of Refrigeration and Air-conditioning (UNARA), and the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF). The committee is responsible for processing authorizations, including ensuring that annual import quotas are not exceeded.

9. An advanced draft of the report on the “Review of the quota, licensing and data monitoring system” was produced. A developer was engaged to create the Uganda Electronic Single Window platform, enabling all stakeholders involved in ODS monitoring, including the NOU/NEMA, to interface. The platform, effective since 2023, is hosted by the Uganda Revenue Authority. Additionally, two refrigerant identifiers were procured and delivered to NEMA and UNARA.

10. A total of 30 customs officers (including 10 females) were trained on HCFC control measures and implementation of the informal Prior Informed Consent (iPIC) mechanism, with a focus on low-global-warming-potential (GWP) alternatives and the associated new harmonized systems (HS) codes; 50 other law enforcement officers were trained from the NOU, the Ministry of Energy and Mineral Development (MEMD), the Ministry of Trade, Industry and Cooperatives, and MAAIF; 50 importers (including 10 females) were trained on low-GWP alternatives and associated new HS codes.

11. At its 86th meeting, the Executive Committee noted the commitment of the Government of Uganda to implement regulations to prohibit import and sale of HCFC-based equipment by 1 January 2024 and enforce national standards for refrigeration and air-conditioning (RAC) equipment using energy-efficient low-GWP technologies from 1 January 2024, after necessary national consultations (decision 86/83(c)). As of the writing of this document, the national standards have been implemented. However, the regulations to prohibit import and sale of HCFC-based equipment are still pending.

Refrigeration servicing sector

12. During the first tranche, the following activities were implemented:

- (a) Three workshops (25 participants each) were conducted to build capacity of the NOU, standards officers, environment inspectors, and other relevant regulating agencies on technical standards for the RAC sector. Two workshops (25 participants each) were conducted to sensitize importers and the public. A total of 60 technicians and 15 trainers were trained on good servicing practices for RAC equipment; 86 technicians and 16 trainers were trained on handling flammable refrigerants. Development of the technical guide on the adopted standards after stakeholders’ consultations is currently under progress;
- (b) One meeting was held with relevant institutions and stakeholders on procurement of green RAC systems. It was agreed that any procurement involving ODS will require clearance

from the NOU before proceeding. Three radio shows and one television show were held to sensitize the public, and a plan is being prepared to sensitize other ministries, departments and agencies. However, the policy on green procurement with a focus on RAC systems is not yet in place;

- (c) A certification scheme for RAC technicians was established, with levels ranging from 1 to 5. As technicians progress and develop their skills, they can achieve higher levels, progressing from domestic to industrial RAC expertise. Three training workshops were organized for capacity building and awareness of 60 RAC technicians on good servicing practices. The certification process and national code of practice for servicing RAC systems are being upgraded. Two new centres of excellence were established, and RAC training tools⁴ were procured and delivered to these centres. A refrigerant reclaiming centre was established with UNARA and is operational. Continuous training programmes were established at six vocational training colleges; toolkits and equipment were distributed to six training institutions; and
- (d) One sensitization meeting/workshop and one capacity building workshop were conducted for end users in the industrial and commercial RAC sector.

Project implementation and monitoring

13. Project monitoring is done by the NOU and the Monitoring and Evaluation Department of NEMA, with the cooperation of UNEP. The total funds of US \$5,000 approved under this component were disbursed for overall project coordination, management, monitoring, and reporting (US \$3,000) and stakeholder engagement (US \$2,000).

Level of fund disbursement

14. As of October 2024, the total funds of US \$123,000 approved so far (US \$60,000 for UNEP and US \$63,000 for UNIDO) had been fully disbursed.

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

15. The following activities will be implemented between January 2025 and December 2027:
- (a) Conduct training sessions for 30 trainers on HCFC monitoring, control and reporting, and prevention of illegal trade; two workshops for 50 law enforcement officers on regulations for HCFC control and monitoring, and viable HCFC alternative technologies (UNEP) (US \$25,000); procurement of two refrigerant identifiers (UNIDO) (US \$10,000);
 - (b) Conduct 20 consultative sessions with national stakeholders to finalize the technical standards in the RAC sector for the safe use of energy-efficient low-GWP alternative technologies and equipment; five training workshops for 300 participants for capacity building of the NOU, standards officers, environmental inspectors and other key stakeholders related to enforcement of standards; and eight awareness workshops for RAC technicians, importers, industry representatives and the public to enhance compliance with the standards (UNEP) (US \$15,000);
 - (c) Conduct one training workshop for 25 procurement officers on criteria to be implemented during procurement of green RAC systems (UNEP) (US \$5,000);

⁴ Recovery unit, cylinder, vacuum pump, manifold set, vacuum gauge, electronic scale, leak detector, and other tools.

- (d) Conduct 10 training workshops for 300 RAC technicians on good servicing practices and safe servicing of equipment when using flammable refrigerants (UNEP) (US \$20,000);
- (e) Four field visits to sensitize end users on the safe handling of HCFC alternatives and compliance measures (UNEP) (US \$10,000); awareness activities for promoting low-GWP technologies (UNIDO) (US \$10,000);
- (f) Provide support to two new centres of excellence with training equipment (e.g., refrigerant recovery equipment, refrigerant cylinders, refrigerant identifiers, safety equipment and tools) and upgrade five existing centres of excellence through the procurement of tools for training technicians on using flammable refrigerants (UNIDO) (US \$38,000);
- (g) Activities to maintain energy efficiency: These activities are described in detail in the following section (UNEP) (US \$100,000); and
- (h) Project monitoring (UNEP) (US \$5,000) with the following cost breakdown: US \$3,000 for coordination and monitoring and US \$2,000 for consultative meetings, and other operational activities.

Activities to maintain energy efficiency in the refrigeration servicing sector

16. Uganda has been making efforts to enhance energy efficiency while sustaining the phase-out of HCFCs and preparing for the phase-down of HFCs. The project related to energy efficiency, submitted in line with decision 89/6, has been designed to strengthen the capacity of relevant stakeholders on energy efficiency in the RAC sector and enhance coordination among key stakeholders to promote energy efficiency and low-GWP alternatives in the RAC sector.

17. Uganda is currently developing minimum energy performance regulations for the cooling sector and will further develop labelling standards.

18. Awareness of minimum energy performance standards (MEPS) is key to ensuring that industry, retailers, trainers, technicians, importers, and the public make informed decisions not only to protect the ozone layer but also to benefit from energy savings and associated cost reductions. Additionally, collaboration with relevant government agencies responsible for energy issues and building the capacity of enforcement agencies to monitor labelling is essential for improving energy efficiency in the RAC sector. The project aims to build this enabling environment while the country is in the process of developing MEPS.

19. The project aims to improve coordination and collaboration among stakeholders (NOU, line ministries, departments, and agencies) to promote energy efficiency and the use of low-GWP technologies in the RAC sector and build their capacity in these areas. The project will provide training to custom officers, RAC technicians, and trainers on energy efficiency, which will further support the adoption of MEPS, currently under development. Additionally, the project will develop relevant materials and programmes to create awareness about energy efficiency and low-GWP technologies and organize outreach activities to sensitize sector-specific stakeholders such as utility agencies, building designers, and construction companies, as well as the general public. Finally, the project will evaluate consumer awareness through a survey, collecting and analyzing data from at least 1,000 households to identify barriers to adopting energy-efficient low-GWP technologies.

20. The description and proposed cost breakdown of activities to maintain energy efficiency in the sector include:

Capacity-building for key stakeholders

- (a) Coordination and collaboration through conducting a survey/assessment on the promotion of energy-efficient low-GWP technologies, involving the NOU, relevant ministries, departments and agencies (US \$18,000);
- (b) Training of customs and trade authorities through updating of training materials and organization of one workshop for 30 customs officers on monitoring imports of refrigeration, air-conditioning and heat-pump equipment and products requiring labelling, with emphasis on refrigerant type, charge quantity, GWP and flammability, among other elements (US \$16,000);
- (c) Updating of training materials and conduct two workshops for the training of 30 RAC trainers and technicians on energy efficiency (US \$23,000);
- (d) Organization of an information exchange session for other technical experts (including utility agencies, building designers, building developers, and construction companies) with 50 participants, promoting the use of energy-efficient low-GWP technologies (US \$3,000);

Outreach and impact assessment

- (e) Development of outreach materials: two awareness videos on labelling programmes and two infographics to raise public awareness about GWP, energy efficiency labels, and their financial and environmental benefits (US \$10,000);
- (f) Awareness session for importers on national labelling requirements and the importance of importing energy-efficient appliances (US \$10,000); and
- (g) Evaluation of consumer behaviour including assessment of barriers: the survey will collect data from 1,000 households to understand consumers' awareness of low GWP and energy efficiency, and assess the barriers to adopting energy-efficient low-GWP equipment (US \$20,000).

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

21. The Government of Uganda has already issued HCFC import quotas for 2025 at 0.04 ODP tonnes, which is lower than the Montreal Protocol control targets.

22. Regarding the delay in implementing regulations to prohibit the import and sale of HCFC-based equipment, UNEP informed the Secretariat that the Government of Uganda plans to implement these regulations by 1 January 2026. It was agreed that UNEP would submit a report on the status of implementation of these regulations as part of its 2024 financial and progress report to be submitted at the second meeting of 2025.

Refrigeration servicing sector

23. Progress was made in customs training, RAC technicians' training, establishing two centres of excellence, developing a certification scheme, procuring tools for training institutions and raising public awareness. However, there was slow progress in developing the green procurement policy, upgrading national codes of practice for servicing RAC systems, and developing the national technical guide on standards for the safe use of low-GWP refrigerants. UNEP confirmed that these activities are ongoing and will be integrated and completed during the implementation of the second tranche. The update of the national codes of practice is planned to be finalized in 2025.

Activities to maintain energy efficiency in the refrigeration servicing sector

24. 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.

25. UNEP confirmed that there are no other activities being implemented with funding from sources other than the Multilateral Fund (MLF) that could be overlapping with the additional activities to maintain energy efficiency.

26. Upon request for clarification, UNEP confirmed that the training manuals will be updated on the aspects of energy efficiency during the implementation of the project, and it will be used for future trainings.

27. Overall, the project will support Uganda in achieving the country's objective of contributing to the development of the national cooling plan, the development of MEPS and promoting low-GWP energy-efficient technologies, thereby contributing to Nationally Determined Contributions (NDCs). The project will also raise awareness about the adoption of low-GWP refrigerants, which will, in turn, promote faster adoption of these products as HCFCs are being replaced in various applications. Additionally, it will strengthen the capacity of relevant stakeholders, including the government and the private sector, further encouraging the adoption of MEPS within the sector, benefiting both the energy sector and efforts to protect the ozone layer. Furthermore, these activities will be complemented by the pilot project to maintain and/or enhance energy efficiency in the context of HFC phase-down (decision 91/65), also submitted to the present meeting (paragraphs 35 to 55). This will be achieved by facilitating the penetration of HC technology through demonstrations in supermarkets and building the sector's capacity for low-GWP technologies by strengthening the capacity of training institutes and technicians.

Gender policy implementation

28. In line with decisions 84/92(d) and 90/48(c), the Government of Uganda is taking measures to implement the Multilateral Fund's operational policy on gender mainstreaming and achieve gender balance in project implementation and monitoring activities. A comprehensive needs assessment was conducted to encourage women's participation in the RAC sector. Special training sessions exclusively for women technicians are also being organized. The RAC programmes noted an increase in enrollment of women technicians. The Government of Uganda has implemented a gender mainstreaming policy across all economic sector, ensuring an inclusive environment.

Updated Agreement

29. 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 Uganda 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 86/83, 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

30. The Government of Uganda continues to control and monitor the implementation of national regulations relating to HCFC import licensing and quotas. Through ongoing training of various stakeholders involved in HCFC phase-out and the enforcement of relevant regulations, the consumption of HCFCs is controlled and remains below the targets in the country's Agreement with the Executive Committee. The Government would continue to develop relevant policies, such as green procurement, and implement training to build the capacity of customs officers in enforcement and service technicians in good service practices. The activities planned under the project component pursuant to decision 89/6, once approved and implemented, would further strengthen the awareness and adoption of sustainable energy-efficient low-GWP technologies. The above activities are expected to contribute to the further reduction of HCFC consumption and ensure sustained HCFC phase-out.

Conclusion

31. Uganda's HCFC consumption in 2023 is 0.07 ODP tonnes, which is 65 per cent below the HCFC baseline for compliance. The Government is implementing the licensing and quota system for the import of HCFCs and is working closely with customs and enforcement authorities, which plays a critical role in the implementation of the legislations, especially in monitoring and controlling imports of HCFCs. Although there were delays in some activities during the first tranche due to the COVID-19 pandemic, the Government continued to implement steps to achieve sustained HCFC phase-out and increase the adoption of HCFC-free alternatives in the RAC sector. The total funds approved under the first tranche have been fully disbursed. Under the second tranche, the Government would continue to implement activities to strengthen the capacity of customs and enforcement officers, develop and implement technical standards for the safe use of low-GWP refrigerants, develop the green procurement policy for RAC systems, conduct training activities for service technicians and master trainers, provide tools and other equipment to support training institutions, and continue awareness and gender mainstreaming activities. These activities would support achieving the HCFC reduction target as committed, build the overall capacity of the sector on low-GWP technologies, and promote the systematic adoption of HCFC-free alternatives. The Government of Uganda plans to submit stage I of its Kigali HFC implementation plan (KIP) to the 96th meeting.

32. The project submitted in line with decision 89/6(b) would assist the country in the development of MEPS and the labelling programme through capacity building of stakeholders in the RAC sector and coordination with other ministries relevant for energy efficiency standards and labelling. This will, in turn, create awareness about energy efficiency in the sector, develop synergies with relevant government and private sector stakeholders, and create an enabling environment for energy efficiency and MEPS.

RECOMMENDATION

33. 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 Uganda;
- (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;
- (c) That the Fund Secretariat has updated the Agreement between the Government of Uganda 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 86/83; and

- (d) That UNEP will submit a report on the status of implementation of regulations to prohibit import and sale of HCFC-based equipment as part of its 2024 financial and progress report to be submitted at the second meeting of 2025.

34. The Fund Secretariat further recommends blanket approval of the second tranche of stage II of the HPMP for Uganda, 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)	180,000	23,400	UNEP
(b)	HCFC phase-out management plan (stage II, second tranche)	58,000	5,220	UNIDO

**PILOT PROJECT TO MAINTAIN AND/OR ENHANCE THE ENERGY EFFICIENCY
OF REPLACEMENT TECHNOLOGIES AND EQUIPMENT IN THE CONTEXT
OF HFC PHASE-DOWN (NON-INVESTMENT ACTIVITIES)**

PROJECT DESCRIPTION

Background

35. On behalf of the Government of Uganda, the Government of the United Kingdom of Great Britain and Northern Ireland has submitted, in line with decision 91/65, a request for a pilot project to maintain and/or enhance the energy efficiency of replacement technologies and equipment in the context of HFC phase-down (non-investment activities), in the amount of US \$498,200, plus agency support costs of US \$64,766, as originally submitted.⁵

Energy efficiency pilot project

36. Information on Uganda's status of ratification of the Kigali Amendment, the policy, regulatory and institutional frameworks for the implementation of the Montreal Protocol, HCFC consumption, and relevant activities from the request for the second tranche of the HPMP, including the request for funding for energy efficiency related activities under decision 89/6, submitted to the current meeting, is available in paragraphs 2 to 20 of the present document.

Policy, regulatory and institutional framework

37. MEMD is leading the regional MEPS working group at the East African Community level. Currently, Uganda does not have MEPS for the commercial refrigeration sector.

Project objectives

38. The pilot project proposal on energy efficiency aims to improve the deployment of energy-efficient commercial refrigeration equipment using R-290 as a refrigerant. This strategy aligns with the long-term KIP strategy in terms of facilitating the adoption of energy-efficient low-GWP alternatives in commercial refrigeration applications.

Proposed activities

39. The following activities, as submitted, have been proposed to be implemented between January 2025 and December 2026:

- (a) Introduction of energy-efficient low-GWP commercial refrigeration equipment in Standard Supermarket Limited (SSL): Procurement and installation of 16 display cabinets and seven R-290-based semi-plug-in multi-decks with glass doors and outdoor gas cooler; and provision of technical support for project implementation and monitoring energy efficiency performance of the equipment. Additionally, 36 R-600a/R-290-based horizontal freezers and 14 plug-in R-290-based bottle coolers, civil works, and spares and maintenance of equipment would be provided with funding from SSL (Government of the United Kingdom) (US \$440,200) (co-financing by SSL) (US \$344,000); and
- (b) Equipment support and technical assistance for training technicians on energy-efficient HC-based equipment: Procurement of equipment to training centre, including one semi-plug-in R-290 multi-deck chiller without glass doors, one outdoor gas cooler, two small-sized R-290 horizontal freezers, two plug-in R-290 bottle coolers, and one

⁵ As per the letter of 5 September 2024 from NEMA to the Secretariat.

monoblock⁶ for medium-temperature cold room; provision of technical support for the training of trainers; training of 80 technicians in close coordination with UNARA and the NOU on good service practices and safe use of flammable refrigerants; and revision of the training curriculum to include HC-based equipment used in supermarkets. Additionally, Kyambogo University proposes to provide co-financing for trainer support, training centre facilities (including tools for training), and other administrative and management costs. This is proposed as an optional component (Government of the United Kingdom) (US \$58,000) (co-financing by Kyambogo University) (US \$75,000).

40. The project is estimated to result in a 40 per cent reduction in energy consumption. The results, based on monitoring energy efficiency performance, would be widely shared with relevant stakeholders through various awareness and outreach activities. This would facilitate the widespread adoption of this technology. Given the expected high growth in medium- and large-size supermarkets in Uganda and its plan to implement HFC phase-down, this project would result in a reduction in HFC consumption growth in supermarkets and the adoption of energy-efficient low-GWP technologies in the country.

Total cost of the pilot project

41. The total cost of the project to maintain and/or enhance the energy efficiency of replacement technologies and equipment in the context of HFC phase-down amounts to US \$498,200, plus agency support costs, and the project is expected to be completed within 24 months after approval.

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

COMMENTS

42. The Secretariat has reviewed the project proposal in light of the activities and criteria under decisions 89/6 and 91/65.

43. In line with decision 91/65, confirmation from the Government of Uganda has been obtained: that the NOU will coordinate with relevant energy efficiency authorities and national standards bodies to facilitate the consideration of refrigerant transition when developing energy efficiency standards in the relevant sectors/applications; that, if Uganda has mobilized or were to mobilize funding from sources other than the MLF for energy efficiency components when phasing down HFCs, the project will not result in the duplication of activities among those funded by the MLF and those funded from other sources; that information on project progress, results and key learning will be made available, as appropriate; and that the date of completion of the project will be set as no more than 24 months after the date of approval by the Executive Committee and that a detailed project report will be submitted to the Executive Committee within six months of the date of completion of the project.

Policy, regulatory and institutional framework

44. The Secretariat requested clarifications on whether the proposed project would lead to the development and enforcement of MEPS and whether the regulatory processes would include periodic upgrades of the MEPS. The Government of the United Kingdom explained that once the ongoing development of MEPS for air conditioners and domestic refrigeration equipment is completed, the focus could shift to creating MEPS for commercial refrigeration equipment. The energy efficiency performance results from the project would provide inputs to the Government of Uganda for the future development of MEPS in commercial refrigeration applications.

⁶ Refrigeration equipment pre-charged with refrigerant and containing all components required for cooling (i.e., compressor, condenser, evaporator, expansion valves and fans) in a single unit.

45. On enhancing implementation of energy-efficient technology in supermarket applications, the Government of the United Kingdom explained that the proposed project will continue to advocate for MEPS specifically for commercial refrigeration in supermarkets, through the NOU and MEMD. The project's monitoring and verification component will provide a framework for logging and monitoring energy use, thereby assessing the energy performance of equipment in various supermarket systems. This will facilitate energy audits of the equipment and demonstrate potential savings from adopting energy-efficient HC-based technologies. Consequently, this would promote the adoption of HC-based energy-efficient technologies.

46. Regarding the regional impact of the project, the Government of the United Kingdom explained that energy-efficient low-GWP refrigerant-based technologies are being demonstrated in various countries under their HPMPs, KIPs and pilot projects pursuant to decision 91/65. Results from these projects, including those for Uganda, would be publicized in network and global meetings on refrigeration to encourage widespread adoption.

Regional initiatives for MEPS development

47. MEMD is leading the regional MEPS working group at the East African Community level. At the regional level, MEPS for air conditioners and domestic refrigerators are under development, and the Government of Uganda plans to adopt these MEPS nationally. Additionally, the Government of the United Kingdom has discussed with United for Efficiency (U4E) the development of MEPS for the commercial refrigeration sector and the Government of Uganda has shown interest in this initiative. Furthermore, under the project related to energy efficiency submitted in line with decision 89/6, Uganda will engage in awareness and capacity-building activities related to energy efficiency in commercial refrigeration and the development of MEPS for this sector.

Technical and cost-related issues

48. Regarding the choice of beneficiary supermarket, the Government of the United Kingdom explained that SSL was selected in close consultation with the NOU and UNARA. SSL is a locally owned supermarket chain with a significant size and multiple branches in Kampala. They are committed to adopting HC-based energy-efficient refrigeration equipment and have proposed to invest US \$344,000 as co-financing for the project's implementation. The Government of the United Kingdom also clarified that while there is some usage of HC-based equipment in supermarkets (e.g., bottle coolers), the penetration of such technology in the country is limited. Therefore, this project would facilitate faster adoption of HC-based commercial refrigeration equipment in the market.

49. Regarding the integration of the current project with other climate-change initiatives, the Government of the United Kingdom explained that this project would contribute to greenhouse gas emission reductions in Uganda and would be accounted for under the country's NDCs.

50. Regarding energy efficiency activities funded by non-MLF sources, the Government of the United Kingdom mentioned that two projects (the Green Cooling Initiative III (through the International Climate Initiative) and the Green Room AC project (yet to be commissioned)) would be implemented with a focus on RAC equipment, including R-290-based air conditioners. These projects will provide training and policy advice on energy efficiency. The current pilot project would be designed and implemented to maximize complementarity with these projects such as through training, capacity-building and awareness activities.

51. Regarding the optional training activities proposed under the project, the Government of the United Kingdom explained that these activities are complementary and would help technicians understand and adopt safe maintenance and servicing practices. The Government of the United Kingdom clarified that activities for the safe adoption of HC-based equipment would be proposed under the KIP, which is currently at an advanced stage of preparation. Following consultations, the Government of the United Kingdom

agreed to remove this component from the current submission. Furthermore, it was agreed that the monoblock R-290 equipment support would be removed from the funding request.

52. Table 2 provides the revised activities and agreed funding for the pilot project to maintain energy efficiency in the servicing sector.

Table 2. Total cost of the energy efficiency pilot project for Uganda as agreed (US \$)

Particulars	Requested funding from MLF (as submitted)	Requested funding from MLF (as agreed)
Procurement of 16 display cabinets and seven R-290-based semi-plug-in multi-decks with glass doors and outdoor gas cooler	346,200	341,200
Logistics including shipment, certification and inspection	35,000	35,000
Technical support for installation and commissioning and project management/monitoring	39,000	39,000
Contingency	20,000	20,000
Equipment support and technical assistance for training technicians on energy-efficient HC-based equipment	58,000	0
Total	498,200	435,200

Agreed cost of the pilot project

53. The cost of the project was agreed at US \$435,200, plus agency support costs of US \$56,576 for the Government of the United Kingdom.

Sustainability of the pilot project and assessment of risks

54. By implementing the current pilot project, the performance of energy-efficient HC-based commercial refrigeration equipment in supermarkets would be demonstrated to relevant national stakeholders. The project would include elements to record and report energy consumption and the energy performance of HC-based equipment. The beneficiary proposes to invest approximately US \$344,000 as co-financing for the procurement of additional HC-based equipment and the implementation of related activities (e.g., civil works, disposal of existing equipment). This demonstrates the beneficiary's commitment to adopting HC-based technology in place of equipment based on R-404A, R-407A and HFC-134a. The results of the project would be used to develop MEPS for commercial refrigeration equipment. Awareness and outreach activities, in cooperation with the beneficiary and UNARA, as well as relevant regional awareness activities, would promote the widespread adoption of this technology in the country and the region. Furthermore, training activities for handling HC-based equipment, which would be implemented under the KIP planned to be submitted in 2025, would enhance the capacity of technicians to service HC-based refrigeration equipment. Thus, this project would result in faster adoption of energy-efficient HC-based commercial refrigeration equipment and support Uganda's adoption of MEPS in commercial refrigeration equipment.

RECOMMENDATION

55. The Executive Committee may wish to consider approving the pilot project to maintain and/or enhance the energy efficiency of replacement technologies and equipment in the context of HFC phase-down (non-investment activities) for Uganda, in the amount of US \$435,200, plus agency support costs of US \$56,576 for the Government of the United Kingdom of Great Britain and Northern Ireland, noting:

- (a) That the Government of Uganda had committed to the conditions referred to in decision 91/65(b)(iv)b. to (b)(iv)d.; and

- (b) That the project would be operationally completed no later than 31 December 2026 and a detailed project report would be submitted to the Executive Committee within six months of the date of completion of the project.

Annex I

TEXT TO BE INCLUDED IN THE UPDATED AGREEMENT BETWEEN THE GOVERNMENT OF UGANDA 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 Uganda 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)	0.13	0.13	0.13	0.065	0.065	0.065	0.00	n/a
1.2	Maximum allowable total consumption of Annex C, Group I substances (ODP tonnes)	0.13	0.10	0.10	0.065	0.065	0.065	0.00	n/a
2.1	Lead IA (UNEP) agreed funding (US \$)	60,000	0	180,000	0	75,000	0	45,000	360,000
2.2	Support costs for Lead IA (US \$)	7,800	0	23,400	0	9,750	0	5,850	46,800
2.3	Cooperating IA (UNIDO) agreed funding (US \$)	63,000	0	58,000	0	42,000	0	0	163,000
2.4	Support costs for Cooperating IA (US \$)	5,670	0	5,220	0	3,780	0	0	14,670
3.1	Total agreed funding (US \$)	123,000	0	238,000	0	117,000	0	45,000	523,000
3.2	Total support costs (US \$)	13,470	0	28,620	0	13,530	0	5,850	61,470
3.3	Total agreed costs (US \$)	136,470	0	266,620	0	130,530	0	50,850	584,470
4.1.1	Total phase-out of HCFC-22 agreed to be achieved under this Agreement (ODP tonnes)								0.13
4.1.2	Phase-out of HCFC-22 to be achieved in the previous stage (ODP tonnes)								0.07
4.1.3	Remaining eligible consumption for HCFC-22 (ODP tonnes)								0.00

*Date of completion of stage I: 31 December 2021