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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
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Item 9(d) of the provisional agenda¹

PROJECT PROPOSAL: CAMEROON

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)

UNIDO

¹ UNEP/OzL.Pro/ExCom/94/1

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 – NON-MULTI-YEAR PROJECT**Cameroon****PROJECT TITLE****BILATERAL/IMPLEMENTING AGENCY**

(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)	UNIDO
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PROJECT OBJECTIVE

To foster enhanced collaboration between the National Ozone Unit (NOU), the Electricity Sector Regulatory Agency (ARSEL), and the Standards and Quality Agency (ANOR) in developing minimum energy performance standards (MEPS) and equipment labelling for refrigerators and air-conditioners.

NATIONAL CO-ORDINATING AGENCY	Ministry of Environment, Protection of Nature and Sustainable Development (Ministry of Environment)
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LATEST ARTICLE 7 DATA (Annex F)	Year: 2023	1,955.15 mt	3,579,009 CO ₂ -eq tonnes
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Particular	Non-investment activities	
	Units	
HFC used by the servicing sector (2023 country programme data)	1,955.15 mt	3,579,009 CO ₂ -eq tonnes
Project duration (months):	24 months	
Initial amount requested (US \$):	120,000	
Final project costs (US \$)	120,000	
Implementing agency support cost (US \$):	10,800	
Total cost of project to Multilateral Fund (US \$):	130,800	
Energy efficiency savings (US \$/KwH):	N/A	
Status of counterpart funding (Y/N):	Y	
Project monitoring milestones included (Y/N):	Y	
Minimum energy performance standards available for the relevant sector (Y/N):	N	

SECRETARIAT'S RECOMMENDATION	Individual consideration
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**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

1. On behalf of the Government of Cameroon, UNIDO 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 \$120,000, plus agency support costs of US \$10,800, as originally submitted.²

Status of implementation of energy efficiency-related activities funded by the Multilateral Fund

2. The implementation of the enabling activities for the implementation of the Kigali Amendment for HFC phase-down³ included activities to raise awareness on HFC phase-down and energy efficiency improvement and to review codes and standards for the efficient use of HFCs and ODS alternatives in the value chain organized training. The Kigali HFC Implementation Plan (KIP) approved at the 92nd meeting⁴ includes technology demonstration initiatives for low-global-warming-potential (GWP) alternatives which are also showcasing the benefits of energy-efficient practices and the code of good practice and training for refrigeration and air-conditioning (RAC) technicians includes energy efficiency considerations.

Energy efficiency pilot project

3. Cameroon has ratified all of the amendments to the Montreal Protocol, including the Kigali Amendment on 24 August 2021. The HFC baseline for Cameroon has been established at 4,760,203 CO₂-equivalent tonnes (CO₂-eq tonnes), which the country has committed to reducing by at least 30 per cent in 2030. The Government of Cameroon reported a consumption of 3,579,009 CO₂-eq tonnes of HFCs in 2023, which is 25 per cent lower than the established baseline.

Policy, regulatory and institutional framework

4. The Electricity Sector Regulatory Agency (ARSEL) is responsible for regulating, controlling, and monitoring the electricity sector, under the authority of the Ministry of Water Resources and Energy (Ministry of Energy). The national standards and quality agency of Cameroon is the Standards and Quality Agency (ANOR), which operates under the technical supervision of the Ministry of Mines, Industry and Technological Development (Ministry of Industry). ANOR is responsible for developing, implementing, and promoting standards and quality across various sectors. In the present project, technical specifications would be drafted for testing laboratories to be installed at an ANOR facility in the future.

5. Although the Law 2011/022 regulates the electricity sector and outlines the policy for implementing a minimum energy performance standards (MEPS) programme, there are no MEPS or labelling requirements in place for RAC equipment in Cameroon. Preliminary discussions were held with the Ministry of Energy about establishing MEPS for RAC equipment, and an inter-ministerial agreement will be exchanged to formalize the inter-institutional cooperation required to discuss and agree on the roadmap and draft proposal of the MEPS and labelling.

² As per the letter of 5 February 2024 from the Ministry of Environment, Protection of Nature and Sustainable Development of Cameroon to UNIDO.

³ Decision 80/41

⁴ Decision 92/34

Project objective

6. The objective of the project is to foster enhanced collaboration between the national ozone unit (NOU), ARSEL and ANOR in establishing a roadmap toward the adoption of MEPS and equipment labelling for refrigerators and air conditioners, and to ensure that the MEPS design supports low-GWP technologies. This initiative aims to mitigate barriers related to capacity building and policy development, thereby facilitating the approval and enforcement of MEPS and labelling for domestic refrigerators and residential air conditioners across Cameroon.

Proposed activities

7. The activities as initially proposed are as follow:
- (a) Conduct a regulatory gap analysis and report for the establishment of the MEPS, consult stakeholders and prepare the draft regulation for the consideration of the competent authorities (US \$10,000);
 - (b) Consult regional stakeholders, importers and retailers, and conduct a comparative analysis of the technical requirements and user friendliness of RAC labelling in other countries; define test methods in compliance with ISO standards for each category of equipment (US \$42,000);
 - (c) Prepare a report on the estimated impact of the introduction of MEPS and labelling based on market surveillance and the expected behaviour change of end users induced by the labelling (US \$28,000);
 - (d) Prepare a roadmap for the implementation of MEPS and labelling in consultation with ARSEL and ANOR; strengthen the institutional and technical capacities of ARSEL and ANOR; review existing climate and energy-efficiency policies to ensure linkages and synergies (US \$15,000); and
 - (e) Draft terms of reference (TOR) for the construction of laboratories for measuring the performance and calculating the energy efficiency of RAC equipment (US \$25,000).

Total cost of the pilot project

8. The total cost of the project to maintain and enhance the energy efficiency of replacement technologies and equipment in the context of HFC phase-down amounts to US \$120,000, plus agency support costs, and would be implemented between June 2024 and June 2026.

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

COMMENTS

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

10. In line with decision 91/65, confirmation has been obtained from the Government of Cameroon 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 Cameroon has mobilized or were to mobilize funding from sources other than the Multilateral Fund for energy-efficiency components when phasing down HFCs, the project will not result in the duplication of activities among those funded by the Multilateral Fund 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

11. In response to the Secretariat's enquiry regarding whether the proposed project would result in the development and enforcement of MEPS and whether the regulatory processes would include periodic upgrades of the MEPS, UNIDO explained that the project would undertake the development of MEPS, including stakeholder consultations at the national level on different aspects of MEPS development, enforcement and periodic update/upgrade, keeping in view the technical and market characteristics of various products. However, it would not result in the enforcement of MEPS as such, as that would encompass activities relating to stakeholder agreement and approval by multiple Government authorities which would require more time.

12. UNIDO confirmed that ARSEL and ANOR had been consulted periodically during the different steps for developing the current project proposal, and that their views had been appropriately incorporated into the project components. UNIDO also explained that implementing this project would further strengthen institutional coordination with ARSEL and ANOR, which would facilitate the implementation of additional policies and regulations on energy efficiency while phasing down HFCs.

Regional initiatives for MEPS development

13. UNIDO explained that Cameroon had joined the United for Efficiency project to harmonize regional MEPS for air conditioners and residential refrigeration appliances⁵ in the South and Central African regions; and indicated that the current proposal would facilitate the domestic adaptation of those MEPS and the strengthening of national capacities on MEPS and labelling.

14. The Secretariat also sought clarifications on whether the Economic Community of Central African States (ECCAS)⁶ harmonizes MEPS among all its members or whether each country could adopt MEPS according to its particular circumstances. UNIDO informed that ECCAS has yet to adopt decisions on MEPS and labelling; thus, through this project, Cameroon could become a regional leader in promoting MEPS and labelling if it successfully implements them. No additional conditions due to regional MEPS are expected to affect the implementation of the project.

Technical and cost-related issues

15. Relating to the connection between the present proposal and activities under the KIP, UNIDO explained that implementing this project would create linkages to the implementation of the activities under stage I of the KIP. This linkage would help the NOU ensure that MEPS design supports low-GWP technologies and would assist in the market transition to low-GWP, energy-efficient technologies. Furthermore, UNIDO clarified that the Government would take steps, to the extent feasible, to incorporate the promotion of energy efficiency in RAC equipment in different approved projects (e.g., demonstration projects for low-GWP alternatives to HCFCs and HFCs, and training activities) and would continue to

⁵ For air conditioners, the harmonized standard applies to all new electrical non-ducted single-split, self-contained air-cooled air conditioners, air-to-air reversible heat pumps and portable air conditioners, with a rated cooling output of at or below 16 kW placed on the market for any application. It also specifies the maximum GWP of the refrigerants used (e.g., $GWP \leq 750$ for ductless split air conditioners and $GWP \leq 150$ for self-contained and portable air conditioners) and an ozone depletion potential (ODP) of zero for all product types.

⁶ ECCAS is made up of eleven Member States, including Cameroon, and it is one of the eight Regional Economic Communities of regional integration in Africa

explore the possibility of promoting the adoption of low-GWP and energy-efficient alternatives through green procurement policies under the KIP.

16. Regarding the present project's integration within other climate-change initiatives, UNIDO understands that the project's involvement of the country's climate-change officers, and the results of the project itself would effectively showcase the country's climate-change initiatives. Therefore this project, which falls within the 32 ideas proposed in Cameroon's Nationally Determined Contributions (NDC), is contributing to the national objective of 35 per cent emission reduction by 2030. Furthermore, the NOU will ensure that other HFC phase-down and energy-efficiency activities are integrated into the NDC in the next update.

17. With regard to funding from non-MLF sources for activities related to energy efficiency in the context of the HFC phase-down, UNIDO pointed out that there are currently no projects covering energy efficiency in the context of HFC phase-down. UNIDO highlighted a project funded by the Global Environment Facility (GEF) and other sources that had supported the establishment of a regional centre⁷ in Africa to promote renewable energy and energy efficiency in each economic community. However, no funding has been identified so far to establish testing facilities at ANOR, underscoring the need for new projects to be developed in the future for this purpose.

18. UNIDO has also indicated that the German Development Agency (GIZ) implemented the Ozone and Climate-Friendly Cooling in West and Central Africa (ROCA) project in Burkina Faso, Cameroon, Mali, and Senegal. This project aimed to increase the use of green cooling technologies at the country level, improve the policy and regulatory framework, and build capacity in the use of these technologies. The project conducted baseline studies in Cameroon to analyze current and future cooling demand, the technologies currently being used, and the availability of alternatives on the market. Since the ROCA project produced an output that could replace the initial activity intended to estimate the impacts of the MEPS and labelling, as per internal discussions between UNIDO and the Government of Cameroon, UNIDO proposed replacing that activity in the original proposal by activities to strengthen the institutional and technical capacities of ARSEL and ANOR. This replacement is recommended by the Secretariat on the understanding that it would streamline the project's activities and ensure the most effective use of resources.

19. The Secretariat discussed with UNIDO details of the steps for coordinating, monitoring and reporting on project activities, and requested more details about the proposal and the definition of intermediate goals. UNIDO confirmed that a progress report would be drafted annually and within the KIP tranches, and that the KIP monitoring and coordination team would be involved in implementing and reporting on this project. Table 1 provides the revised activities and agreed funding for the pilot project to maintain energy efficiency in the servicing sector:

Table 1. Cost of the energy efficiency pilot project for Cameroon as agreed

Activities	Cost (US \$)
Conduct at least two collaborative meetings among ARSEL, ANOR and the NOU and interviews with the key stakeholders to develop a gap analysis report identifying additional policies, capacities, testing facilities, and resources required to establish and enforce the MEPS	10,000
Prepare a report containing a comparative analysis of technical requirements of MEPS and labelling established both at the regional level and in other countries outside of the region; hire an international specialist to advise ANOR and ARSEL on the establishment of the MEPS and labelling, as well as on the testing methods in compliance with ISO standards per category of equipment; conduct at least two stakeholder consultation rounds with importers and retail stores on the MEPS and labelling plan; and draft a MEPS and labelling proposal ⁸ for domestic refrigerators and residential air-conditioners for the consideration of the competent authorities	42,000

⁷ Centre for Renewable Energy and Energy Efficiency for Central Africa (CEREEAC).

⁸ Labels should also include the name of the refrigerant, its GWP and ODP (if any).

Activities	Cost (US \$)
Prepare a roadmap for the implementation of MEPS and labelling in consultation with ARSEL and ANOR; strengthen the institutional and technical capacities of the Ministry of Environment, Ministry of Energy, Ministry of Industry, NOU, ARSEL and ANOR through three tailored training courses for government officers on the energy-efficiency co-benefits of low-GWP refrigerants, MEPS and labelling, and testing of RAC equipment; conduct joint technical training on the MEPS and labelling at the regional and subregional level as appropriate; and review existing climate and energy-efficiency policies to ensure that interlinkages between different stakeholders produce synergies	43,000
Draft TOR for setting up laboratories to measure the performance and calculate energy efficiency of refrigerators and air-conditioning equipment	25,000
Draft meeting and training reports as needed and two annual progress reports on project implementation and a final report.	0
Total	120,000

Sustainability of the pilot project and assessment of risks

20. By implementing this pilot project proposal to draft the energy-efficiency regulatory framework while implementing the KIP, the main country stakeholders will gain experience in identifying challenges and opportunities related to institutional coordination, assessing the market response to energy-efficient technology, and determining the performance of energy-efficient RAC equipment. Furthermore, the capacity building of the NOU and institutions involved in energy efficiency and standards will highlight challenges in the enforcement of MEPS and identify solutions that could address those challenges and facilitate the inclusion of refrigerants' GWP in designing and implementing those standards. This would help support the adoption of low-GWP-refrigerant-based and energy-efficient technologies in domestic refrigeration and residential air-conditioning applications. Activities related to the HCFC phase-out management plan, particularly relating to end-user incentive programmes, would be integrated with the implementation of the pilot project's activities. Regarding external risks, UNIDO anticipates a lack of institutional and technical capacities that might cause delays in the relevant institutions' decisions or actions. To address these risks, the NOU and UNIDO will systematically monitor and assess project progress, identify potential issues that could delay projects and take relevant corrective actions to ensure timely completion of the project. This will be done in coordination with the relevant personnel from ANOR and ARSEL to ensure timely intervention.

RECOMMENDATION

21. The Executive Committee may wish to consider:

- (a) 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 Cameroon, in the amount of US \$120,000, plus agency support costs of US \$10,800 for UNIDO, noting:
 - (i) That the Government of Cameroon has committed to the conditions referred to in decision 91/65(b)(iv) b. to (b)(iv) d.; and
 - (ii) That the project would be operationally completed no later than 30 June 2026, and a detailed project report would be submitted to the Executive Committee within six months of the date of completion of the project.