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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Ninety-sixth Meeting
Montreal, 26-30 May 2025
Item 7(b) of the provisional agenda[1]

REPORTS ON PROJECTS WITH SPECIFIC REPORTING REQUIREMENTS WITH OUTSTANDING ISSUES FOR INDIVIDUAL CONSIDERATION

An overview

1. Table 1 lists three reports with specific reporting requirements submitted to the 96th meeting which, after the Secretariat's review, present outstanding issues and require the Executive Committee to consider them individually.

Table 1. Reports on projects with specific reporting requirements with outstanding issues

Country	Project title	Issue	Paragraphs
A. Report related to a request for cancellation of various projects			
Nicaragua	Multilateral Fund-supported projects	Request from the Government to cancel ongoing projects	2-6
B. Report related to an energy efficiency project (decision 91/65)			
Honduras	Pilot project to maintain and/or improve the energy efficiency of replacement technologies and equipment in the context of HFC phase-down (non-investment activities): Introduction of low-global-warming-potential energy-efficient refrigeration technology in processed food distribution centres	Change of beneficiary	7-13
C. Report related to an HFC project			
Jordan	Report on the project for the conversion from HFC to propane of the facility manufacturing large commercial unitary roof-top air-conditioning units of up to 400 kW at Petra Engineering Industries Co.	Non-submission of alternative proposal	14-24

[1] UNEP/OzL.Pro/ExCom/96/1

A. Report related to a request for cancellation of various projects

<u>Nicaragua: Request from the Government to cancel ongoing projects</u> (UNEP, UNIDO)

Background

2. On 18 February 2025, UNIDO and UNEP received a request from the Ministry of Environment and Natural Resources of Nicaragua informing the decision to finalize the following projects:

(a) Institutional strengthening (phase XI)

(b) HCFC phase-out management plan (HPMP) (stage II, second tranche) and verification report

(c) Kigali HFC implementation plan

(d) Pilot project on enhancing energy efficiency while phasing down HFCs

(e) Preparation of national inventory of banks of waste-controlled substances and development of a plan for management of these substances

3. In the case of UNEP, the agency held discussions with the focal point nominated to coordinate this matter, and upon confirmation of the Government's intention to cancel UNEP's projects, UNEP submitted the project cancellation request to the Secretariat. The associated return of unused fund balances is contained in document UNEP/OzL.Pro/ExCom/96/4.

4. In the case of UNIDO, by the time of issuance of the present document, the agency was seeking clarification from the Government on their request. On this basis, UNIDO has not requested the cancellation of its projects and will provide an update on them as soon as additional information is received.

Secretariat's comments

5. The Secretariat noted the request from the Government of Nicaragua and raised several questions that would need clarification if the projects from both agencies were to be cancelled, including whether the country would still commit to the maximum allowable consumption levels established in the HPMP Agreement, which are lower than the Montreal Protocol targets, and how the country will comply with its data reporting requirements. The Secretariat is at present waiting for further information from UNIDO on the status of its projects.

Recommendation

6. The Executive Committee may wish:

(a) To note the request from the Government of Nicaragua to cancel ongoing projects being implemented by UNEP and UNIDO;

(b) To note that as part of the report on balances at the 96th meeting, funds have been returned by UNEP for the following projects for Nicaragua listed in annex III to document UNEP/OzL.Pro/ExCom/96/4: NIC/EEF/92/TAS/50, NIC/SEV/92/INS/51, NIC/DES/93/PRP/52, NIC/EEF/93/DEM/54, NIC/KIP/93/TAS/55 and NIC/PHA/94/TAS/58;

(c) To request UNIDO to provide at the 97th meeting clarification on the status of projects in Nicaragua being implemented by UNIDO; and

(d) To request the Secretariat to follow up with the Government of Nicaragua on matters relating to Multilateral Fund-supported projects.

B. Report related to an energy efficiency project (decision 91/65)

Honduras: Pilot project to maintain and/or improve the energy efficiency of replacement technologies and equipment in the context of HFC phase-down (non-investment activities): Introduction of low-global-warming-potential energy-efficient refrigeration technology in processed food distribution centres (UNIDO)

Background

7. Pursuant to decision 91/65, at the 95th meeting, the Executive Committee approved a pilot project for the introduction of energy-efficient refrigeration technology with low global-warming potential (GWP) in processed food distribution centres in Honduras in the total amount of US $278,068, plus agency support costs of US $19,465, for UNIDO.[2] The pilot project aimed to avoid the use of low-efficiency HFC-based refrigeration systems, originally planned for a new distribution centre of Congelados de Honduras, by installing and commissioning a low-GWP energy-efficient (R-290/glycol/carbon dioxide (CO_2)) commercial refrigeration system in the centre.

Proposed change of beneficiary

8. UNIDO submitted a report on the implementation of the project indicating the need to consider a different beneficiary. The report details that after project approval, a collaboration agreement was drafted between the enterprise, the Government and UNIDO, and a technical visit to the technology provider's plant was conducted. However, the enterprise later decided to increase its production capacity by 30 per cent, significantly raising project cost and energy consumption associated with the proposed refrigeration system. Additionally, the enterprise faced challenges in obtaining environmental permits, construction authorizations and utility connections, leading to significant delays and no established date for the works.

9. Given these challenges, the Government and UNIDO considered alternative beneficiaries for demonstrating energy-efficient refrigeration systems using R-290/glycol/CO_2. After evaluating candidates, the Government and UNIDO selected a shrimp processing plant (Granjas Marinas) with compatible technical conditions. The plant can implement the approved solution: a propane/glycol chiller to serve the processing room (18°C) and conservation rooms (-5°C), and a CO_2 compressor rack dedicated to the freezing area (-32°C). Located in a region with high ambient temperatures, the plant employs 1,932 people, including 1,352 women, enhancing the project's social impact by promoting gender inclusion and supporting livelihoods in a vulnerable area.

Secretariat's comments

10. The Secretariat discussed with UNIDO the impact of changing the project's beneficiary, noting that it was originally designed around Congelados de Honduras. UNIDO provided information about the newly selected plant's cooling capacity, equipment type, expected energy efficiency savings, co-financing confirmation and duration (within the 36 months initially planned). This information indicated that the two facilities were similar in all relevant aspects. Specifically:

(a) The plant's refrigeration capacity is only 5 per cent higher than that of the original beneficiary, allowing the overall project costs to remain within the approved funding;

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[2] Document UNEP/OzL.Pro/ExCom/95/57 and decision 95/78

(b) Preliminary assessments estimate energy savings of approximately 10 per cent, consistent with the original proposal;

(c) Unlike the previous enterprise, which aimed to establish new cooling capacity to avoid additional HFC usage, the current enterprise proposes replacing equipment that uses R-404A refrigerant, directly contributing to the HFC phase-down; and

(d) The new beneficiary has confirmed commitment to providing the required co-financing and properly decommissioning the existing R-404A-based systems, including the environmentally sound management of recovered refrigerant.

11. Based on the information provided, the Secretariat considers that the proposal with the alternative beneficiary is likely to preserve the project's technical, environmental, and financial objectives. Furthermore, the newly identified beneficiary will be directly contributing to the HFC phase-down. It is also noted that in some other pilot projects, the final beneficiaries had not been determined by the time of approval and the agencies selected them based on the parameters of the approved project. The process that UNIDO has followed in this case is similar to the approach used in those projects.

12. On this basis, the Secretariat recommends that the Executive Committee note the change of beneficiary.

Recommendation

13. The Executive Committee may wish to note:

(a) The report on the pilot project to improve the energy efficiency of replacement technologies and equipment in the context of HFC phase-down (non-investment activities): Introduction of low-global-warming-potential energy-efficient refrigeration technology in processed food distribution centres in Honduras; and

(b) The change of beneficiary for the pilot project specified in subparagraph (a) above from Congelados de Honduras to Granjas Marinas shrimp processing plant, on the understanding that this change would not involve significant modifications to the project approved by decision 95/78 and would not incur additional costs to the Multilateral Fund.

C. Report related to an HFC project

<u>Jordan: Report on the project for the conversion from HFC to propane of the facility manufacturing large commercial unitary roof-top air-conditioning units of up to 400 kW at Petra Engineering Industries Co.</u> (UNIDO)

Background

14. At its 81st meeting, the Executive Committee approved a project for the conversion from HFC (HFC-134a, R-407C, R-410A) to propane (R-290) of the facility manufacturing large commercial unitary roof-top air-conditioning (AC) units of up to 400 kW at Petra Engineering Industries Co. (Petra) in Jordan, in the amount of US $1,637,610, plus agency support costs, for UNIDO (decision 81/62).

15. Petra is the largest manufacturer of AC units and the only manufacturer of unitary roof-top AC units in the country. The project was designed to simulate, design, test, and convert the production of unitary roof-top AC units using R-290 to replace HFC-based units of up to 400 kW (114 tonnes of refrigeration) used for commercial and industrial applications.

16. At the 90th meeting, UNIDO reported that the enterprise had not manufactured any large commercial unitary roof-top AC units based on R-290. The Executive Committee decided to note that Petra would report, through UNIDO, separately and for each year, through the completion of the project, the annual sales of R-290-based large commercial unitary roof-top AC units in Article 5 countries and in non-Article 5 countries, and to extend the date of completion of the project to 31 July 2025 (decision 90/25(b)(ii) and (c)). Since then, the enterprise has had only one sale of R-290-based large commercial unitary roof-top AC units, reported to the 95th meeting.

17. In order to enable the enterprise to use the converted manufacturing lines to manufacture R-290-based equipment and avoid requesting the closure of the project, discussions took place during the 95th meeting to use the converted line to instead manufacture R-290-based chillers. The Executive Committee decided to invite UNIDO, on behalf of the Government of Jordan, to submit a proposal to the 96th meeting for Petra to use the equipment provided under the project to manufacture R-290 chillers, on the understanding that no additional funds would be approved for the project; no more than US $50,000 could be reallocated, if justified, from the remaining US $113,089 approved incremental operating costs (IOCs) for additional incremental capital costs; the proposal should include commitments and activities the enterprise could undertake to promote the sale and uptake of R-290 chillers to ensure the sustainability of the manufacturing conversion; and any remaining IOCs approved for the project would be paid upon confirmation of sales of either R-290 commercial unitary roof-top AC units or R-290 chillers (decision 95/23).

18. UNIDO, on behalf of the Government of Jordan, and following discussions with the enterprise, decided not to submit a proposal to the 96th meeting for Petra to use the equipment provided under the project to manufacture R-290 chillers as invited through decision 95/23.

Progress report

19. Regarding the sale of the R-290-based large commercial unitary roof-top AC unit reported to the 95th meeting, UNIDO reported that the unit was manufactured and installed and has been operational since February 2025. Petra has not since received any further orders for the R-290-based units.

Secretariat's comments

20. The Secretariat enquired about the reasons that the enterprise decided not to submit a proposal to manufacture R-290 chillers. UNIDO listed several reasons that lead to this conclusion, including lack of market demand in Jordan and other Article 5 countries; perceived safety and liability issues preventing consultants and building owners from adopting flammable refrigerants such as R-290; lack of regulatory support, such as building codes, to facilitate their adoption; and limited remaining funds to address and overcome these challenges.

21. While UNIDO intends to return the funds by 31 July 2025 in line with decision 90/25(c), Petra had expressed interest in exploring an alternative use of the funds that would contribute to the project's long-term objective without any direct sales commitments. Specifically, to support training and awareness through targeted outreach activities and capacity-building sessions for consultants, engineers, and building owners to promote the safe and energy-efficient use of R-290 in large-scale systems; and a demonstration project to replace an existing chiller at the enterprise with an R-290-based chiller to demonstrate the effectiveness of the R-290 technology.

22. The proposal for a demonstration project had also been presented to the Secretariat during discussions leading up to the 95th meeting. In particular, the enterprise would replace one of the three R-134a-based air-cooled chillers currently serving the management and engineers' building, each with a capacity of 300 kW and refrigerant charge of 110 kg, with an R-290-based unit; install a data logging system to monitor its performance and compare it against that of the remaining HFC-134a-based chillers; and

assess the replacement unit's efficiency and operational benefits. The chiller would be used for employee training, marketing, and end-user demonstrations. The primary focus would be to encourage adoption of R-290-based chillers and increase awareness of their benefits, and not for the conversion of manufacturing lines for the full manufacture of these units.

23. While noting with appreciation the proposal by the enterprise for an alternative use of the funds that would contribute to the project's long-term objective, the proposal is not in line with decision 95/23(c).

Recommendation

24. The Executive Committee may wish to request UNIDO to return the remaining balances from the project for the conversion from HFC to propane of the facility manufacturing large commercial unitary roof-top air-conditioning units of up to 400 kW at Petra Engineering Industries Co. by 31 July 2025 in line with decision 90/25(c).