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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Fifty-eighth Meeting
Montreal, 6-10 July 2009

PROJECT PROPOSAL: EGYPT

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

Foam

- Validation/Demonstration of low cost options for the use of hydrocarbons as foaming agent in the manufacture of PU foams — UNDP

PROJECT EVALUATION SHEET – NON-MULTI-YEAR PROJECT
EGYPT

PROJECT TITLE(S)	BILATERAL/IMPLEMENTING AGENCY
(a) Validation/Demonstration of low cost options for the use of hydrocarbons as foaming agent in the manufacture of PU foams	UNDP

NATIONAL CO-ORDINATING AGENCY	Egypt Environmental Affairs Agency (EEAA)

LATEST REPORTED CONSUMPTION DATA FOR ODS ADDRESSED IN PROJECT

A: ARTICLE-7 DATA (ODP TONNES, 2007, AS OF MAY 2009)

HCFCs	433.2		

B: COUNTRY PROGRAMME SECTORAL DATA (ODP TONNES, 2008, AS OF MAY 2009)

ODS			
HCFC-22	229.8	HCFC-123	0.0
HCFC-141b	106.7		
HCFC-142b	15.8		

CFC consumption remaining eligible for funding (ODP tonnes)	0.0

CURRENT YEAR BUSINESS PLAN ALLOCATIONS		Funding US $ million	Phase-out ODP tonnes
	(a)	Based on decision 55/43 (e)	n/a

PROJECT TITLE:	
ODS use at enterprise (ODP tonnes):	
ODS to be phased out (ODP tonnes):	n/a
ODS to be phased in (ODP tonnes):	n/a
Project duration (months):	8
Initial amount requested (US $):	473,000
Final project costs (US $):	473,000
Incremental Capital Cost:	430,000
Contingency (10 %):	43,000
Incremental Operating Cost:	
Total Project Cost:	473,000
Local ownership (%):	100%
Export component (%):	0%
Requested grant (US $):	473,000
Cost-effectiveness (US $/kg):	n/a
Implementing agency support cost (US $):	35,475
Total cost of project to Multilateral Fund (US $):	508,475
Status of counterpart funding (Y/N):	n/a
Project monitoring milestones included (Y/N):	Y

SECRETARIAT'S RECOMMENDATION	For Individual Consideration

PROJECT DESCRIPTION

1. On behalf of the Government of Egypt, UNDP has submitted to the 58h Meeting of the Executive Committee a pilot project for the validation/demonstration of low cost options for the use of hydrocarbons as a foaming agent in the manufacture of polyurethane foams. The total cost of the project is US $473,000 plus agency support costs of US $35,475.

2. The objective of this project is to develop, optimize, validate and disseminate low-cost systems for the use of hydrocarbons in the manufacture of polyurethane rigid insulation and integral skin foams. If successfully validated, the optimized technology will contribute to the availability of cost-effective options that are needed to implement HCFC phase-out, particularly at small and medium size enterprises (SMEs).

3. The project includes the following components:

(a) Development, optimization and validation/demonstration of premixed, stabilized hydrocarbon systems that could be used directly by foam manufacturers (UNDP will contract this project component out to a qualified chemical supplier through competitive bidding);

(b) Development of a three-component foam dispenser, capable of directly injecting hydrocarbons (pentane or cyclopentane blends), through a qualified manufacturer of foam equipment;

(c) Demonstration and optimization of the hydrocarbon pre-blended polyol system and the three-component foam dispenser at a foam manufacturer;

(d) Dissemination of the results of the hydrocarbon pre-blended polyol system and the three-component foam dispenser.

4. The total cost of the project has been estimated at US $473,000, with the breakdown shown in the table below as originally submitted:

Description	**US $**
Project management	20,000
Technology transfer and training	40,000
Testing equipment	55,000
Production equipment development	125,000
Pre-blended system preparation	100,000
Peer review	60,000
Technology dissemination workshops	30,000
Contingencies (10 per cent)	43,000
Total	**473,000**

5. The project will be implemented in 8 months. It will not require a second phase, as hydrocarbon-based technologies have been used for several years worldwide.

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

6. The Secretariat reviewed the project in light of the policy paper on the revised analysis of relevant cost considerations surrounding the financing of HCFC phase-out submitted to the 55th Meeting.

7. Noting that the project consists only of one phase and involves testing of the hydrocarbon-based system to be developed and the new dispenser in one foam manufacturing enterprise, it could be considered as an investment project rather than a demonstration project. UNDP indicated that it had initially considered developing the project as a two-phase pilot project consisting of selecting a domestic systems house and validating the technology in phase 1, and subsequently demonstrating the validated technology for all relevant foam applications in phase 2. Since hydrocarbon-based technologies in foam applications have been used for several years worldwide, there was no need to validate them. The demonstration aspect of the project is linked to the scale of the project. Up until now, due to cost constraints, hydrocarbon-based technologies could only be applied in large foam enterprises with ODS consumption of at least 50 tonnes.

8. During the discussion with UNDP, it was noted that the systems house that was selected to develop the hydrocarbon-based polyol was owned by a multinational corporation, and was therefore not eligible for funding. UNDP pointed out that, except for the systems house that was selected to implement the project, all other polyurethane systems houses in Egypt were fully owned by multinational corporations. However, after project preparation was completed, the Government of Egypt and UNDP were informed that the locally owned systems house has a tentative agreement to be acquired by a multinational enterprise, and was therefore no longer interested in participating in the project. UNDP seriously considered relocating the project to another country, but realized that this would cause a major delay in its implementation. Furthermore, UNDP also noted that in most Article 5 countries, hydrocarbon systems are generally owned by multinational systems house and, therefore, relocation would not solve the issue. Accordingly, and in full agreement with the Government of Egypt, it was decided that the best option was to contract out the development of the pre-blended hydrocarbon systems without the involvement of any systems houses to avoid the foreign ownership issue, as well as the design of the three-component foam dispenser, through a competitive bidding process to qualified suppliers of systems and equipment on the Egyptian market, and demonstrate both in a locally-owned foam manufacturing plant. If successfully implemented, and HCFC-141b is actually phased out at the selected foam enterprise, this amount will be deducted from the HCFC consumption eligible for funding. The optimized technology could be introduced in any market through local systems houses in all Article 5 countries. UNDP also noted that this approach has the advantage of cost savings inherent to competitive bidding that includes the use of existing testing equipment, direct demonstration and the use of highly qualified contractors.

9. The Secretariat, views that the proposal as submitted did not give due consideration to technology transfer and information dissemination. The results of the demonstration project on the pre-mixed hydrocarbon-based polyol and the three-component foam dispenser should be provided to a large number of stakeholders in the country and in other relevant Article 5 countries. Consequently, UNDP proposed to conduct a regional workshop focusing not only on the result of this project but also providing information on the other technology validation projects for methyl formate and methylal. Site visits to the local foam manufacturing plant where the technology will be demonstrated would be included. Participants will include national stakeholders, representatives from the Fund Secretariat and implementing agencies, as well as foam experts who will be involved in preparing HCFC foam projects.

10. The Secretariat and UNDP also discussed cost-related issues. It was agreed to expand the activities related to technology transfer and information dissemination within the same level of funding being requested. This was achieved by partially reducing the requests for project management, training

and peer review, without compromising the objective and scope of the project. The revised project cost as agreed is shown in the table below:

Description	**US $**
Project management	10,000
Technology transfer and training	30,000
Testing equipment	55,000
Production equipment development	125,000
Pre-blended system preparation	100,000
Peer review	60,000
Technology dissemination workshops	50,000
Contingencies (10 per cent)	43,000
Total	**473,000**

RECOMMENDATION

11. Noting that through its decision 55/43 (e), the Executive Committee invited bilateral and implementing agencies, as a matter of urgency, to prepare and submit a limited number of specific projects involving systems houses and/or chemical suppliers for the development, optimization and validation of chemical systems for use with non-HCFC blowing agents, the potential use of low-cost hydrocarbon-based systems to replace HCFCs used in foam applications in Article 5 countries, and in light of the comments by the Secretariat, the Executive Committee may wish to consider approving the validation/demonstration of low-cost options for the use of hydrocarbons as foaming agent in the manufacture of polyurethane foams at a cost of US $473,000 plus agency support costs of US $35,475 for UNDP.
