United Nations Environment Programme

Distr.
LIMITED

UNEP/OzL.Pro/ExCom/10/32/Add.1
10 June 1993

ORIGINAL: ENGLISH

Executive Committee of
the Multilateral Fund for the
Implementation of the Montreal Protocol

Tenth Meeting
Montreal, 28–30 June 1993

Addendum

PROJECT PROPOSALS: EGYPT

This addendum includes the comments and recommendations from the Fund Secretariat on the Project Proposals for Egypt.

GENERAL COMMENTS

1. The foam sector in Egypt consumes 722 tonnes of CFCs. The Executive Committee has already approved five projects in the foam sector for Egypt, resulting in the elimination of 329 tonnes of CFCs.

2. The Government of Egypt has prepared three new investment project proposals in the foam sector in co-operation with UNDP and UNIDO. These project proposals are submitted for consideration of the Executive Committee. They are:

- Elimination of CFC-11 in the Manufacture of Molded Flexible Polyurethane Foam at Modern Building Carpentry Co (Mobica)

- Elimination of CFC-11 in the Manufacture of Molded Rigid Polyurethane Foam at Cairo Light Industries Co (Olympic Electric)

- Phase-out of the use of CFC-12 in the Manufacture of Extruded Polystyrene Foam at Advanced Chemical Engineering Systems (Advechem).

3. The Fund Secretariat reviewed these project proposals in consultation with UNDP, UNIDO and their consultants as well as with the Government of Egypt.

4. The implementation of these projects will result in the elimination of 291 tonnes ODP bringing the total elimination in this sector to 620 tonnes ODP.

5. A total of US $1,404,000 is recommended for approval in the foam sector as follows:

- Mobica Co. (US $434,000);
- Olympic Electric Co. (US $970,000);

6. The consideration of the project for Advechem is recommended to be deferred until the project is revised.

PROJECT EVALUATION SHEET

COUNTRY OR REGION:	Egypt
PROJECT TITLE:	Elimination of CFC-11 in the manufacture of Molded Rigid Polyurethane Foam at Cairo Light Industries Co ("Olympic Electric")
BUDGET:	US $1,095,000 (Fixed Project Costs)
INCREMENTAL COSTS:	US $1,095,000 (Fixed Project Costs)
COST EFFECTIVENESS[1]:	US $12.53/Kg. ODP
PROJECT DURATION:	18 months for implementation of 100% CFC free technology; 10-year project life.
IMPLEMENTING AGENCY:	UNDP
NATIONAL COORDINATING AGENCY:	Egyptian Environment Affairs Agency (EEAA)
TECHNICAL REVIEW COMPLETED:	YES _X_ NO _

SECRETARIAT'S COMMENTS

1. A technical review was provided following by UNDP the submission of the project document by the Government of Egypt.

2. The incremental costs are those related to costs of investment and technical assistance. There is no net material costs included in the incremental costs. The company will absorb the expected increase in material prices and the additional preventive maintenance costs.

3. The project will result in an estimated annual phase-out of 75 tons of CFC-11.

4. The two-phase conversion to CFC-free technology was chosen by Olympic Electric. In the first phase, 50 percent of CFC-11 will be replaced by carbon dioxide. In the second phase, the remaining CFC will be replaced by HCFC-141b. The project can be compared with similar HCFC-141b conversion projects submitted by the World Bank for Thailand. The Cost effectiveness determined as the ratio of incremental costs to the estimated annual saving of ODP is US $12.53/Kg ODP in the case of Egypt. The cost effectiveness in four HCFC-141b

---

1 Determined as the ratio of incremental costs to the estimated annual saving of ODP ($\$/ODP_{Kg}$).

conversion projects with similar amount of ODS phased out in the refrigeration sector for Thailand ranges from US $17.4 to 50.7 per Kg ODP phased out. This comparison is in favour of the project for Egypt.

5. Olympic Electric Company has requested US $200,000 for process changes (dies, molds, etc.) under the budget item 5108. The required mold shape and design adjustments are related to expected decrease in insulation properties of a new polyurethane insulating material. However, project proposal does not contain detailed information which can justify the requested level of funding.

The technical reviewer who visited the Olympic Electric Company has estimated the cost of required adjustments at the level of US $80,000.

The incremental costs of the project have been adjusted accordingly on the basis of these estimates.

SECRETARIAT'S RECOMMENDATION

6. The project is recommended for final approval of funding in the amount of US $940,000.

PROJECT EVALUATION SHEET

COUNTRY OR REGION:	Egypt
PROJECT TITLE:	Elimination of CFC-11 in the manufacture of Molded Flexible Polyurethane Foam at Modern Building Carpentry Co (Mobica)
BUDGET:	US $740,000 (Fixed Project Costs)
INCREMENTAL COSTS:	US $740,000 (Fixed Project Costs)
COST EFFECTIVENESS[1]:	US $21.70/Kg. ODP saved
PROJECT DURATION:	18 months, 10-year project life.
IMPLEMENTING AGENCY:	UNDP
NATIONAL COORDINATING AGENCY:	Egyptian Environment Affairs Agency (EEAA)
TECHNICAL REVIEW COMPLETED:	YES _X_ NO _

SECRETARIAT'S COMMENTS

1. A technical review was provided following the submission of the project document.

2. The all water blowing system will be applied to eliminate 20 tonnes of CFC-11 used in the manufacture of molded flexible polyurethane foams at Mobica Company.

3. This project is similar to those approved by the Executive Committee for other Egyptian molded foam manufacturers (Taki-Vita and Technopol); it is not as cost effective (Taki-Vita: US $5.88/Kg ODP saved and Technopol: US $11.72/Kg ODP saved). The low cost effectiveness of Mobica Co. may be explained by the fact that the project covers conversion to non CFC technology at two production lines manufacturing two different products at two different location.

4. The incremental costs cover costs of investments and related activities. Although operational costs are not requested, the project document indicates that an increase in material

---

1 Determined as the ratio of incremental costs to the estimated annual saving of ODP ($\$/ODP_{Kg}$).

4. The incremental costs cover costs of investments and related activities. Although operational costs are not requested, the project document indicates that an increase in material costs and additional higher maintenance costs of about US $60,000 per year are expected which accounts for the absence of cost savings. The company will absorb these costs.

5. The existing epoxy molds are considered to be insufficient for the new system. The company feels that they need to be replaced. However, according to the technical review, the new molds would improve quality of the product. The expected operational benefits would have to be calculated and would most likely compensate for the related costs. It is recommended that the company would absorb these costs.

SECRETARIAT'S RECOMMENDATION

6. The project is recommended for final approval of funding in the amount of US $434,000 as an amendment to the 1993 UNDP Work Programme.

PROJECT EVALUATION SHEET

COUNTRY OR REGION:	Egypt
PROJECT TITLE:	Phase-Out of the Use of CFC-12 in the Manufacture of Extruded Polystyrene Foam in Advance Chemical Engineering System (ADVECHEM)
BUDGET:	US \$589,919 (Fixed Project Costs) US \$1,418,568 (Operating Cost for Three Years) US \$2,008,487 (Total Request)
INCREMENTAL COSTS:	US \$2,008,487 (Project Costs)
COST EFFECTIVENESS[1]:	US \$5.79/Kg. ODP saved
PROJECT DURATION:	11 months
IMPLEMENTING AGENCY:	UNIDO
NATIONAL COORDINATING AGENCY:	Egyptian Environment Affairs Agency (EEAA)
TECHNICAL REVIEW COMPLETED:	YES _X_ NO _

SECRETARIAT'S COMMENTS

1. This project was first submitted to be considered by the Executive Committee at its Ninth Meeting. However it was agreed with UNIDO during the Fourth Co-ordination Meeting held on 4-5 February 1993, that the project should be revised by UNIDO and that funds for preparing the project would be requested. US $100,000 was approved by the Executive Committee for UNIDO to prepare this and three other investment projects in the foam sector in Egypt.

2. A revised proposal was developed by UNIDO and submitted by the Government of Egypt (UNEP/OzL.Pro/ExCom/10/32). The revised project document was not supported by the required independent technical review.

---

1 Determined as the ratio of incremental costs to the estimated annual saving of ODP (\$/ODP_{Kg}). For CFC-12, ODS = ODP

3. In its review of the project proposal, the Secretariat raised several issues related to the eligibility and/or cost of some of the project components and communicated its views to UNIDO. UNIDO recognized that it was not possible to provide more accurate estimates at the present time.

4. An independent technical review (Annex 1) of the proposal was prepared for the Secretariat. The review has challenged the necessity of production line equipment changes, the level of estimated operational costs, the start-up cost analysis, and the cost of the technical assistance component.

SECRETARIAT'S RECOMMENDATION

5. Based on the above comments, the Secretariat recommends that consideration of this project should be deferred until the project is revised.