



**United Nations
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Programme**



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

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PROJECT PROPOSAL: LEBANON

This document includes the comments and recommendations from the Fund Secretariat on the following project:

Refrigeration

- Phasing out of CFCs at Lebanese Modern Industrial and Trading Co.

UNIDO

PROJECT EVALUATION SHEET LEBANON

SECTOR: Refrigeration ODS use in sector (1995): 640 ODP tonnes

Sub-sector cost-effectiveness thresholds: Domestic US \$13.76/kg

Project Titles:

Phasing out of CFCs at Lebanese Modern Industrial and Trading Co.

Project Data	Domestic
	Lebanese Modern Industry & Trading
ODS phase-out (ODP tonnes)	135
Proposed project duration (Yrs)	1.5
Incremental capital cost (US\$)	1,024,261
Contingency (%)	10
Incremental operational cost (US\$)	288,860
Total project cost (US\$)	1,313,121
Local ownership (%)	100
Export component (%)	
Amount requested (US\$) {Original	2,147,802
{Revised	1,313,121
Cost effectiveness (US\$/kg)	9.73
National Coordinating Agency	Ministry of Environment
Implementing Agency	UNIDO
Technical review completed?	Yes

Secretariat's Recommendations	
Amount recommended (US \$)	1,313,121
Project impact (ODP tonnes)	135
Cost effectiveness (US \$/kg)	9.73
Implementing Agency support cost (US\$)	170,706
Total cost to Multilateral Fund	1,483,827

PROJECT DESCRIPTION

Phasing out of CFCs at Lebanese Modern Industrial and Trading Co.

1. ODS consumption in the refrigeration sector is 504 MT. Lebanese Modern Industrial and Trading Co. is the only domestic and commercial refrigerator producer in Lebanon. The company has two factories.
2. The project covers conversion of two factories to non-ODP technologies. Implementation of the project will greatly contribute to the 1999 freeze in Lebanon.
3. The chosen replacement for both factories are: cyclopentane as a blowing agent and HFC-134a as a refrigerant. The project also includes the redesign of the refrigeration systems for all present models and the conversion of both plants. Model redesign will cover activities such as prototype, performance testing, trial manufacturing and adaptation, as well as reliability tests.
4. The conversion of the production facilities covers the refrigeration systems, insulation foam blowing system as well as the HFC-134a recovery/recycling at the repairing line within the plant only.
5. Incremental operating costs are requested for a six month duration.

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

COMMENTS

1. Implementation of the project will greatly contribute to the 1999 freeze in Lebanon.
2. The chosen technologies are proven.
3. The Secretariat discussed with UNDP the eligibility and incrementality of all cost items.

RECOMMENDATIONS

1. The Fund Secretariat recommends blanket approval of the project with associated support costs at the funding level shown in the table below:

	Project Cost US \$	Support Cost US \$	Implementing Agency
Phasing out of CFCs at Lebanese Modern Industrial and Trading Co.	1,303,121	170,706	UNIDO