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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Thirty-fifth Meeting
Montreal, 5-7 December 2001

PROJECT PROPOSAL: SYRIA

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

Refrigeration:

• Conversion from CFC-11 to HCFC-141b and from CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at Al-Saad Refrigeration	UNDP

PROJECT EVALUATION SHEET
SYRIA

SECTOR: Refrigeration ODS use in sector (2000): 865 ODP tonnes

Sub-sector cost-effectiveness thresholds: Commercial US $15.21/kg

Project Titles:

(a) Conversion from CFC-11 to HCFC-141b and from CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at Al-Saad Refrigeration

Project Data	**Commercial**
	Al-Saad
Enterprise consumption (ODP tonnes)	21.25
Project impact (ODP tonnes)	20.09
Project duration (months)	30
Initial amount requested (US $)	195,241
Final project cost (US $):	
Incremental capital cost (a)	114,500
Contingency cost (b)	11,450
Incremental operating cost (c)	74,884
Total project cost (a+b+c)	200,834
Local ownership (%)	100%
Export component (%)	0%
Amount requested (US $)	166,323
Cost effectiveness (US $/kg.)	8.28
Counterpart funding confirmed?	Yes
National coordinating agency	National Ozone Unit
Implementing agency	UNDP

Secretariat's Recommendations	
Amount recommended (US $)	166,323
Project impact (ODP tonnes)	20.09
Cost effectiveness (US $/kg)	8.28
Implementing agency support cost (US $)	21,622
Total cost to Multilateral Fund (US $)	187,945

PROJECT DESCRIPTION

Sector Background

Latest available total ODS consumption (2000)	1,712.40 ODP tonnes
Baseline consumption of Annex A Group I substances (CFCs)	2,224.60 ODP tonnes
Consumption of Annex A Group I substances for the year 2000	1,174.70 ODP tonnes
Baseline consumption of CFCs in refrigeration sector	775.17 ODP tonnes
Consumption of CFCs in refrigeration sector in 2000	865.00 ODP tonnes
Funds approved for investment projects in refrigeration sector as of end of 2000	US $10,214,586.00
Quantity of CFC to be phased out in investment projects in refrigeration sector as of end of 2000	679.08 ODP tonnes

1. The total ODS consumption in the refrigeration sector for the year 2000, according to the Government of Syria, was 865 ODP tonnes, including 308 ODP tonnes used for manufacturing new equipment and 557 ODP tonnes used for servicing. The servicing sector is covered by the Refrigerant Management Plan which was approved by the Executive Committee and is currently under implementation by GTZ.

2. The Executive Committee has approved about US $10,214,586 for 20 projects to phase out 679.08 ODP tonnes of CFC for enterprises manufacturing refrigeration equipment in the refrigeration sector.

3. One commercial refrigeration project has been submitted by the UNDP for consideration at the 35th Meeting of the Executive Committee.

Al-Saad

4. The enterprise consumes 15.75 ODP tonnes of CFC-11 and 5.50 ODP tonnes of CFC-12 (in 1999) in the manufacture of commercial refrigeration equipment. The enterprise manufactures walk-in coolers and freezers, cold stores and refrigerated and insulated truck bodies. Al-Saad operates a low-pressure foam dispenser, assorted foaming moulds and jigs, portable refrigerant charging machines, vacuum pumps and leak detectors in the baseline.

5. The total phase out of 21.25 ODP tonnes of CFC-11 and CFC-12 will be achieved by converting CFC-11 based technology to HCFC-141b as the foam blowing agent and CFC-12 to HFC-134a as the refrigerant. Under the current project, a high-pressure dispenser will replace the existing low-pressure foaming machine. The enterprise will require provision of an industrial charging unit, new vacuum pumps and leak detectors suitable for HFC-134a duty. Other costs include redesign, testing, trials, technical assistance and training. Incremental operating costs are requested by the enterprise reflecting the higher cost of chemicals and an increase in foam density.

6. In accordance with decisions of the Executive Committee on the use of HCFCs, a letter of transmittal from the Government of Syria endorsing the use of HCF-141b by the companies is attached

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

COMMENTS

7. The proposal includes a request for technical assistance and training (for both foam and refrigerant parts), which amounts to US $20,000. The Secretariat requested explanations from UNDP regarding high costs of this project component. UNDP provided a breakdown of technical assistance and training costs. These costs are primarily associated with the services of international and local consultants.

8. The Secretariat has noticed also that the costs of trials which are claimed in the proposal are unjustifiably high (US $10,000 per enterprise). The Secretariat has requested detailed breakdown of costs of trials from UNDP. The information provided by UNDP in this regard indicated that some of the components included in the cost of trials constitute elements of capital cost, which may or may not be eligible for funding.

9. The Secretariat discussed these issues with UNDP and agreed to eliminate cost components that are not associated with technical assistance, trials and testing, and to retain these cost components that are needed for the implementation of the projects.

RECOMMENDATIONS

10. The Secretariat recommends blanket approval of the projects at the funding level indicated below.

	Project Title	Project Funding (US$)	Support Cost (US$)	Implementing Agency
(a)	Conversion from CFC-11 to HCFC-141b and from CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at Al-Saad Refrigeration	166,323	21,622	UNDP

SYRIAN ARAB REPUBLIC
MINISTRY OF ENVIRONMENT

الجمهورية العربية السورية
وزارة الدولة لشؤون البيئة

Re: HCFC-141B JUSTIFICATION

Dear Sir,

The government of Syria recognizes the technology choice is HCFC-141b even though this alternative is considered to be an interim substitute. This is due to safety and economic reasons of the SMEs. Most of the SMEs particularly in commercial refrigeration Subsector, have non-conducive environment to install flammable materials such as cyclo-pentane. The working space is always congested along with a lot mechanical works on-going.
Majority of the workers are ignorant of the safety procedures and therefore the industries refuse to take the risk of fire hazard of their factories and neighborhood. Another factor limiting HC technology is the economy aspects whereby plan modification is required that incur huge capital investment to the SMEs. At present economic situation, the industries are not able to provide capital investment on safety as this cost is not covered under the MLF financial assistance due to policy on cost effectiveness and Since HCFC 141b technology is the only affordable technology to replace CFCs, the Government supports this choice of technology by SMEs as interim solution.

The Government understands that the three projects submitted by UNDP to the 32nd meeting of the ExCom must convert to an ODS free technology at their own expense in the future as required under the Montreal Protocol.

Damascus, 30 September , 2000

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