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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 PROPOSALS: MOROCCO

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

Refrigeration:

• Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at the First Clim Co.	UNIDO
• Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at the Etablissement Lahdar	UNIDO
• Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at the Climatisation et Froid Loudaya (CFL)	UNIDO

PROJECT EVALUATION SHEET
MOROCCO

SECTOR: Refrigeration ODS use in sector (1999): 331.46 ODP tonnes

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

Project Titles:

(a) Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at the First Clim Co.
(b) Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at the Etablissement Lahdar
(c) Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at the Climatisation et Froid Loudaya (CFL)

Project Data	**Commercial**		
	First Clim	**Lahdar**	**Loudaya**
Enterprise consumption (ODP tonnes)	9.36	7.77	15.89
Project impact (ODP tonnes)	8.97	7.37	15.03
Project duration (months)	24	24	24
Initial amount requested (US $)	135,383	101,451	198,312
Final project cost (US $):			
Incremental capital cost (a)	114,000	69,000	114,000
Contingency cost (b)	2,600	5,900	10,400
Incremental operating cost (c)	18,658	26,551	52,912
Total project cost (a+b+c)	135,258	101,451	177,312
Local ownership (%)	100%	100%	100%
Export component (%)	0%	0%	0%
Amount requested (US $)	135,258	101,451	177,312
Cost effectiveness (US $/kg.)	15.09	13.76	11.80
Counterpart funding confirmed?	Yes	Yes	Yes
National coordinating agency	Ministere de l'Industrie Commerce et l'Artisanat		
Implementing agency	UNIDO		

Secretariat's Recommendations			
Amount recommended (US $)	135,258	101,451	177,312
Project impact (ODP tonnes)	8.97	7.37	15.03
Cost effectiveness (US $/kg)	15.09	13.76	11.80
Implementing agency support cost (US $)	17,584	13,189	23,051
Total cost to Multilateral Fund (US $)	152,842	114,640	200,363

PROJECT DESCRIPTION

Sector Background

Latest available total ODS consumption (2000)	1,456.60 ODP tonnes
Baseline consumption of Annex A Group I substances (CFCs)	802.30 ODP tonnes
Consumption of Annex A Group I substances for the year 2000	564.00 ODP tonnes
Baseline consumption of CFCs in refrigeration sector	248.80 ODP tonnes
Consumption of CFCs in refrigeration sector in 1999	331.46 ODP tonnes
Funds approved for investment projects in refrigeration sector as of end of 2000	US $1,283,197.00
Quantity of CFC to be phased out in investment projects in refrigeration sector as of end of 2000	89.55 ODP tonnes

1. The Executive Committee has approved about US $1,283,197 for 8 projects to phase out 89.55 ODP tonnes of CFC for enterprises manufacturing refrigeration equipment in the refrigeration sector.

2. Three additional projects for enterprises in the commercial refrigeration sub-sector in Morocco have been submitted by UNIDO for consideration at the 35th Meeting of the Executive Committee.

3. The three enterprises (Loudaya, First Clim, and Etablissement Lahdar) consume 24.5 ODP tonnes of CFC-11 and 8.52 ODP tonnes of CFC-12 (average of 1997-1999) in the manufacture of commercial refrigeration equipment. All of the enterprises manufacture similar equipment (chest freezers and commercial refrigerators), and operate low-pressure foam dispensers, assorted foaming jigs, production and portable refrigerant charging machines, vacuum pumps and leak detectors in the baseline.

4. The total phase out of 33.02 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 projects, high-pressure dispensers will replace the existing low-pressure foaming machines at Loudaya and First Clim. At Lahdar, the existing low-pressure foaming machine will be scrapped and replaced by a low-pressure dispenser. All enterprises will require provision of industrial or portable charging units, new vacuum pumps and retrofitting of existing vacuum pumps and leak detectors suitable for HFC-134a duty. Other costs include re-design, testing, trials, technical assistance and training. Incremental operating costs are requested by the enterprises reflecting the higher cost of chemicals and an increase in foam density.

5. In accordance with decisions of the Executive Committee on the use of HCFCs, the letter of transmittal from the Government of Morocco endorsing the use of HCFC-141b by the companies is attached.

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

COMMENTS

6. The Secretariat discussed with UNIDO replacement of the 9 year old low pressure foaming machine at Lahdar with a new low-pressure dispenser. UNIDO provided adequate explanations. The cost of installation of foam dispensers requested in First Clim and Loudaya proposals were recognised as ineligible since this cost is included in the cost of dispensers.

RECOMMENDATIONS

7. 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 CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at the First Clim Co.	135,258	17,584	UNIDO
(b)	Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at the Etablissement Lahdar	101,451	13,189	UNIDO
(c)	Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at the Climatisation et Froid Loudaya (CFL)	177,312	23,051	UNIDO

GOVERNMENT NOTE OF TRANSMITTAL OF INVESTMENT PROJECTS TO THE EXECUTIVE COMMITTEE OF THE MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL

PROJECT(S) OF THE GOVERNMENT OF THE KINGDOM OF MOROCCO

The Government of the Kingdom of Morocco requests UNIDO to submit the project(s) listed in Table 1 below to the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol for consideration at its 35th Meeting.

Section I ODS Consumption Data

1. The ODS consumption figures of the projects has/have been validated by the National Ozone Unit (NOU).

2. The consumption data have been retained in the records of the NOU for reference and/or future verification.

3. The Government has been advised by the NOU that the agreement to the projects indicates a commitment to ensure that the validated phase out figures were realized and yielded a sustained reduction from the 2000 consumption of 33.02 ODP tonnes for the refrigeration sector.

Table 1: Projects Submitted to the 34th Meeting of the Executive Committee by UNIDO

Project Title/Sector	Type of ODS	Consumption (ODP Tonnes), (2000)	Amount to be Phased Out (ODP Tonnes), (2003)
Refrigeration Sector			
Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration at the Climatisation et Froid Loudaya (CFL), Morocco / com ref.	CFC-11 & CFC-12	15.89	15.03
Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration at the Etablissement Lahdar, Morocco/ com ref.	CFC-11 & CFC-12	07.77	07.37
Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration at the First Clim Co., Morocco / com ref.	CFC-11 & CFC-12	9.36	8.97
Total		**33.02**	**31.37**

Section II: Other Relevant Actions Arising from Decision 33/2

4. It is understood that, in accordance with the relevant guidelines, the funding received for a project would be partly or fully returned to the Multilateral Fund in cases where technology was changed during implementation of the project without informing the Fund Secretariat and without approval by the Executive Committee;

5. The National Ozone Unit undertakes to monitor closely, in cooperation with customs authorities and the environmental protection authorities, the importation and use of CFCs and to combine this monitoring with occasional unscheduled visits to importers and recipient manufacturing companies to check invoices and storage areas for unauthorized use of CFCs.

6. The National Ozone Unit will cooperate with the relevant implementing agencies to conduct safety inspections where applicable and keep reports on incidences of fires resulting from conversion projects.

Section III: Projects Requiring the Use of HCFCs for Conversion

7. In line with Decision 27/13 of the Executive Committee and in recognition of Article 2F of the Montreal Protocol, the Government

   (a) has reviewed the specific situations involved with the projects; *CFL, Ets. Lahdar and First Clim Co.* as well as its HCFC commitments under Article 2F; and

   (b) has nonetheless determined that, at the present time, the projects needed to use HCFCs for an interim period with the understanding that no funding would be available for the future conversion from HCFCs for the companies involved.

Name and signature of responsible Officer:

Designation: Le Chef de la Division des Industries Chimiques et Parachimiques

Date: 29 AOUT 2001

Signé : Abderrahim CHAKOUR.

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Projects of the Government of the Kingdom of Morocco *Date:* 29 AOUT 2001