



**United Nations  
Environment  
Programme**

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EXECUTIVE COMMITTEE OF  
THE MULTILATERAL FUND FOR THE  
IMPLEMENTATION OF THE MONTREAL PROTOCOL  
Forty-fourth Meeting  
Prague, 29 November-3 December 2004

**PROJECT PROPOSAL: ALGERIA**

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

Refrigeration

- Conversion for CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the last group of commercial refrigerator manufactures (refrigeration sector terminal project)

UNIDO

## PROJECT EVALUATION SHEET – NON-MULTIYEAR PROJECTS

COUNTRY: Algeria

## PROJECT TITLE

## BILATERAL/IMPLEMENTING AGENCY

Conversion for CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the last group of commercial refrigerator manufactures (refrigeration sector terminal project)	UNIDO
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NATIONAL CO-ORDINATING AGENCY	Ministère de l'Intérieur, des collectivités locales et de l'environnement
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## LATEST REPORTED CONSUMPTION DATA FOR ODS ADDRESSED IN PROJECT

## A: ARTICLE-7 DATA (ODP TONNES, 2003, AS OF 21 OCTOBER 2004)

Annex A, Group I, CFCs	1,762.3		
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## B: COUNTRY PROGRAMME SECTORAL DATA (ODP TONNES, 2003, AS OF 19 MAY 2004)

ODS Name	Aerosol sector	Foam sector	Refrigeration sector	Solvent sector
CFC-11	10	726	34	
CFC-12	196.5		699	
CFC-113				78
CFC-114	23			
CFC-115			19	

CFC consumption remaining eligible for funding (ODP tonnes)	252.8
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CURRENT YEAR BUSINESS PLAN ALLOCATIONS	Funding US \$ million	Phase-out ODP tonnes
	0.43	35.2

<b>PROJECT TITLE:</b>	<b>Conversion for CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the last group of commercial refrigerator manufactures</b>
<b>ODS use at enterprise (ODP tonnes):</b>	73.6
<b>ODS to be phased out (ODP tonnes):</b>	72.8
<b>ODS to be phased in (ODP tonnes):</b>	0.8
<b>Project duration (months):</b>	28
<b>Initial amount requested (US \$):</b>	754,374
<b>Final project cost:</b>	
Incremental Capital Cost (US \$)	540,000
Contingency (10%) (US \$)	49,000
Incremental Operating Cost (US \$)	
Total Project Cost (US \$)	589,000
<b>Local ownership (%):</b>	100%
<b>Export component (%):</b>	0%
<b>Requested grant (US \$):</b>	589,000
<b>Cost-effectiveness (US \$/kg):</b>	8.09
<b>Implementing agency support cost (US \$):</b>	44,175
<b>Total cost of project to Multilateral Fund (US \$):</b>	633,175
<b>Status of counterpart funding (Y/N):</b>	
<b>Project monitoring milestones included (Y/N):</b>	Y

<b>SECRETARIAT'S RECOMMENDATION</b>	Blanket approval at the costs indicated above
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## PROJECT DESCRIPTION

1. 2003 CFC consumption in the refrigeration sector in Algeria was 744 ODP tonnes. Consumption in this sector is addressed through ongoing investment projects and the refrigerant management plan approved by the Executive Committee at its 37th Meeting. Consumption of 315 MT is used by unorganized small-sized refrigeration companies and will be addressed through the measures to be undertaken by the Government of Algeria. No request for funding from the Multilateral Fund will be submitted in regard to phasing out this consumption.
2. The remaining consumption in the sector of 73.6 ODP tonnes belongs to 43 medium- and small-sized companies manufacturing commercial refrigeration equipment. UNIDO has submitted the terminal umbrella project for the conversion of these remaining 43 enterprises with similar backgrounds to non-ODS technologies.
3. Two enterprises use low-pressure foaming machines in their foaming operations. The remaining companies are using pre-blended polyol and employ manual handling of polyurethane foam components or apply prefabricated polystyrene for insulation of part of their production. The enterprises carry out refrigerant-related operations using vacuum pumps, semi-automatic or portable charging machines and leak detectors in the equipment baseline.
4. The total phase-out of 15.24 ODP tonnes of CFC-11 and 58.35 ODP tonnes of CFC-12 will be achieved by converting CFC-11 based technology to HCFC-141b as the foam blowing agent, and CFC-12 based refrigeration systems to HFC-134a as the refrigerant. Under the current project, the existing low-pressure foaming machines will be replaced with high-pressure dispensers. All the enterprises will require provision of industrial or portable charging units, new or retrofitted vacuum pumps and leak detectors suitable for HFC-134a duty. Other costs include redesigning main models, testing, trials and training. Incremental costs are requested by the enterprises to cover the higher cost of chemicals and components.

### Justification for the use of HCFC-141b

5. Justification for the use of HCFC-141b based on technological and economic analysis of each enterprise's operations is provided in the project document. UNIDO indicated that the choice of HCFC-141b as interim technology was made by the enterprises following a discussion with them on available alternatives and relevant decisions of the Executive Committee regarding the use of HCFC-141b as an interim substitute foam blowing agent.
6. In accordance with relevant decisions of the Executive Committee on the use of HCFCs, a letter of transmittal from the Government of Algeria endorsing the use of HCFC-141b by the companies has been submitted and is attached.

## SECRETARIAT'S COMMENTS AND RECOMMENDATION

### COMMENTS

7. The Fund Secretariat requested confirmation from UNIDO regarding the proposal's impact on remaining CFC consumption in the refrigeration sector in Algeria. UNIDO confirmed that, with the approval of the terminal umbrella project in the commercial refrigeration manufacturing sector, no further requests for assistance with phase-out in the refrigeration sector would be submitted to the Executive Committee by the Government of Algeria.

8. The Secretariat noted that no data was provided in the proposal in relation to the level of production of each company. Theoretical average CFC consumption was used in calculating incremental operating costs (IOC) for the enterprises, broken down into three groups according to their CFC consumption. The Secretariat raised the issue of eligibility of the requested IOC. It was agreed that, in accordance with Decision 25/50, incremental operating costs are not eligible for funding. These costs were removed from the project request.

### RECOMMENDATION

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

	Project Title	Project Funding (US\$)	Support Cost (US\$)	Implementing Agency
(a)	Conversion for CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the last group of commercial refrigerator manufactures (refrigeration sector terminal project)	589,000	44,175	UNIDO

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الجمهورية الجزائرية الديمقراطية الشعبية  
REPUBLIQUE ALGERIENNE DEMOCRATIQUE ET POPULAIRE



Ministère de L'Aménagement  
du Territoire et de L'Environnement

وزارة تهيئة الإقليم و البيئة

Secrétariat Générale

الأمانة العامة

الجزائر في : 02 OCT. 2004.....

رقم / 1464

**UNIDO**

**Subject :** investment project to be submitted to the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol for consideration at its 44<sup>th</sup> Meeting.

The Government of Algeria 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 44<sup>th</sup> 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 2003 consumption of 73.59 ODP tonnes for the refrigeration sector.

*Projects of the Democratic People's Republic of Algeria*

Date: ~~02 OCT. 2004~~

**Table 1: Projects Submitted to the 44<sup>th</sup> 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)
<b>Refrigeration Sector</b>			
Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a Technology in the Last Group of Commercial Refrigeration Manufacturers in Algeria Refrigeration Sector Terminal Project	CFC-11 & CFC-12	73.59	72.775
<b>Total</b>		<b>73.59</b>	<b>72.775</b>

**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.

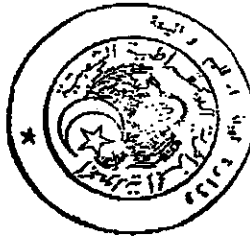
*Projects of the Democratic People's Republic of Algeria*

Date: 02 OCT 2004

**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 as detailed in the project document 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.

Si youcef Mohamed



الأمين العام

سي يوسف

Date : 01/10/2004

Si youcef Mohamed

Secrétaire Général du Ministère de l'Aménagement du Territoire et de l'Environnement

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Projects of the Democratic People's Republic of Algeria

Date: 02 OCT 2004