

Distr.
LIMITED

UNEP/OzL.Pro/ExCom/18/23
30 October 1995

ORIGINAL: ENGLISH

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

Eighteenth Meeting
Vienna, 22-24 November 1995

PROJECT PROPOSAL: COSTA RICA

This document includes the Comments and Recommendations from the Fund Secretariat on the following project:

- Elimination of CFCs 11 and 12 in the manufacture of Domestic Refrigerators at Atlas Electrica S.A.

UNIDO

PROJECT EVALUATION SHEET COSTA RICA

SECTOR: REFRIGERATION ODS use in sector (1993): 290 ODP tonnes

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

Project Title: Elimination of CFCs 11 and 12 in the Manufacture of Domestic Refrigerators at Atlas Electrica.

Project Data	Domestic Refrigeration
	Atlas Electrica
ODS phase-out (ODP tonnes)	27.25
Proposed project duration (Yrs)	1.5
Incremental capital cost (US\$)	210,000
Contingency (%)	10
Incremental operational cost (US\$)	165,000
Total project cost (US\$)	375,000
Local ownership (%)	100
Export component (%)	0
Amount requested (US\$) {Original	476,450
{Revised	375,000
Cost effectiveness (US\$/kg)	13.76
National Coordinating Agency	COGO
Implementing Agency	UNDP
Technical review completed?	Yes

<i>Secretariat's Recommendations</i>	
Amount recommended (US \$)	375,000
Project impact (ODP tonnes)	27.25
Cost effectiveness (US \$/kg)	13.76
Implementing Agency support cost (US\$)	48,750
Total cost to Multilateral Fund	423,750

PROJECT DESCRIPTION

Elimination of CFCs 11 and 12 in the Manufacture of Domestic Refrigerators at Atlas Electrica.

1. Total CFC-11 and CFC-12 consumption is estimated to be 240 ODP tonnes in the refrigeration sector. About 200 ODP tonnes of CFC-12 is consumed in refrigeration for initial charge and service of refrigeration equipment. About 80 per cent of this amount is used for service.

2. Atlas Electrica is the only enterprise identified as being engaged in the manufacture of domestic refrigerators in Costa Rica.

3. The project covers phase out of 20.4 ODP tonnes of CFC-11 and 6.9 ODP tonnes of CFC-12 by converting to HFC-134a as a refrigerant and HCFC-141b as a blowing agent.

4. The conversion will involve retrofitting existing equipment wherever possible and replacing equipment suitable for new technologies, as well as cost of commissioning, start-up and training.

5. The following justifications were provided by Atlas Electrica for the use of HCFC-141b:

- proven technology in both processing and product performance
- environmentally acceptable
- available in Costa Rica
- a technology that can be implemented safely and cost effectively by Atlas Electrica within the existing factory configuration

6. The selection of HCFC-141b technology by Atlas Electrica is supported by COGO. Atlas Electrica understands that HCFC-141b is an interim solution which will require a change to an appropriate zero-ODP technology (either cyclopentane, or another commercially developed and acceptable alternative) at some future date. Atlas Electrica also understands and accepts that the costs associated with that subsequent technology change will be funded from its own resources.

7. The enterprise requested partial financing of eligible incremental operating costs.

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

COMMENTS

1. The chosen technologies are proven. The choice of HCFC technology in foaming operations is justified.
2. The Secretariat discussed with UNDP the eligibility and incrementality of all cost items. The project budget has been adjusted accordingly.

RECOMMENDATIONS

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

Project	Project Cost US \$	Support Cost US \$	Implementing Agency
Elimination of CFCs 11 and 12 in the Manufacture of Domestic Refrigerators at Atlas Electrica.	375,000	48,750	UNDP

2. The Fund Secretariat further recommends that the project be included in the Consolidated List.