



**United Nations
Environment
Programme**

Distr.
LIMITED

UNEP/OzL.Pro/ExCom/42/32
24 February 2004



ORIGINAL: ENGLISH

EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Forty-second Meeting
Montreal, 29 March - 2 April 2004

PROJECT PROPOSALS: EL SALVADOR

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

Refrigeration:

Refrigerant management plan update:

- | | |
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| • Technical assistance for the refrigeration subsectors | UNDP |
| • Certification and licensing of refrigeration technicians | UNDP |
| • Strengthening the legal framework | UNDP |
| • Monitoring programme | UNDP |

PROJECT EVALUATION SHEET

SECTOR: Refrigeration ODS use in sector (2000): 101.6 ODP tonnes

Sub-sector cost-effectiveness thresholds: n/a

Project Titles: Refrigerant management plan update:

- (a) Technical assistance for the refrigeration subsectors*
- (b) Certification and licensing of refrigeration technicians
- (c) Strengthening the legal framework
- (d) Monitoring programme

Project Data	Refrigerant management plan			
	(a)	(b)	(c)	(d)
Enterprise consumption (ODP tonnes)				
Project impact (ODP tonnes)	56.5			
Project duration (months)	48	48	24	48
Initial amount requested (US \$)	310,700	77,000	21,000	41,000
Final project cost (US \$):				
Incremental capital cost (a)	231,700	77,300	0	41,000
Contingency cost (b)				
Incremental operating cost (c)				
Total project cost (a+b+c)	231,700	77,300	0	41,000
Local ownership (%)	100%	100%	100%	100%
Export component (%)	0%	0%	0%	0%
Amount requested (US \$)				
Cost effectiveness (US \$/kg.)	4.10			
Counterpart funding confirmed?	n/a	n/a	n/a	n/a
National coordinating agency	Ozone Protection Office, Ministry of Environment			
Implementing agency	UNDP			

Secretariat's Recommendations				
Amount recommended (US \$)	231,700	77,300	0	41,000
Project impact (ODP tonnes)	56.5			
Cost effectiveness (US \$/kg)	4.10			
Implementing agency support cost (US \$)	20,853	6,957		3,690
Total cost to Multilateral Fund (US \$)	252,553	84,257	0	44,690

*The title of the subproject in the RMP project proposal, as submitted, was "End-Users Incentive Programme".

PROJECT DESCRIPTION

Background

1. The Government of El Salvador submitted for consideration by the Executive Committee at its 42nd Meeting a project proposal for a refrigerant management plan (RMP) update at a cost of US \$472,700.

2. Since the commencement of the implementation of the El Salvador country programme, CFC consumption has decreased from 277.8 ODP tonnes in 1997 to 101.6 ODP tonnes in 2002 (over 176.2 ODP tonnes), even though the projects approved under the Multilateral Fund accounted for a direct reduction in consumption of only 58 ODP tonnes of CFCs. This overall reduction enabled the country to achieve the 1999 CFC freeze by 1997 and the 2005 CFC reduction target by 1999. However, El Salvador will need to phase out an additional 56 ODP tonnes of CFCs in order to comply with the 2007 phase-out target.

Refrigeration servicing sector

3. The total CFC consumption in El Salvador is concentrated in the refrigeration servicing sector, since all manufacturers of refrigeration equipment have been converted to non-CFC technologies. In 2002, the CFC consumption reported under Article 7 was 101.6 ODP tonnes of CFCs. About 57 per cent of the total CFC consumption in the country is for servicing domestic refrigerators (about 180,000 CFC-12 based units) and 38 per cent is for servicing MAC units (46,800 CFC-based MAC units). The remaining consumption (5 per cent) is for servicing CFC-based commercial and industrial refrigeration systems.

4. The refrigeration equipment is serviced by approximately 1,200 technicians in 500 workshops. The Ozone Protection Office has maintained a registry of 127 workshops in the country with a total CFC consumption of about 80 ODP tonnes (about 80 per cent of the total consumption). The remaining workshops are informal sites operating from private houses and garages, distributed throughout the country, and consume 20 per cent of the total CFCs in the country.

5. The use of CFC-11 for cleaning refrigeration systems continues to be a common practice in the servicing sector mainly due to lack of a better and cost-effective cleaning agent, (the cost of the smallest nitrogen cylinder is more than US \$100/unit).

6. The current prices of refrigerants (January 2004) in El Salvador are: US \$5.28/kg for CFC-11; US \$6.91/kg for CFC-12; US \$7.34/kg for HCFC-22; and US \$7.03/kg for HFC-134a.

Policy and regulations

7. The legal framework for the implementation of the Montreal Protocol in El Salvador is comprised of the following:

- (a) The Environment Law and its General Regulation, that enable the Ministry of Environment to elaborate and coordinate the execution of national plans for protection of the ozone layer; and
- (b) The Decree 38 from the Ministry of Environment (June 2000), which establishes the Special Regulation on Control of ODS, containing the ODS Import Licensing and Quota System, and the Green Seal for CFC-free products.

Approved activities in the refrigeration servicing sector

8. The activities so far implemented in the refrigeration servicing sector in El Salvador are:

- (a) The RMP project, approved at the 25th Meeting of the Executive Committee (UNEP and UNDP) which included training programmes for custom officers and refrigeration service technicians; a recovery and recycling programme; and monitoring activities;
- (b) A MAC and refrigerated transport technical assistance programme in Central America (El Salvador, Honduras, Nicaragua and Panama), approved at the 24th Meeting as bilateral cooperation by the Government of the United States.

9. Through the above projects, 185 recovery machines were distributed among 127 servicing workshops and 6 recycling centers were established; 100 technicians received training in recovery and recycling principles and handling of equipment; and ten MAC service workshops received a recovery/recycling machine. Also, 225 refrigeration technicians were trained in good servicing practices and 130 customs officers were trained (six CFC detectors will be distributed to customs departments in the first semester of 2004 to improve control of illegal CFC imports).

10. The amount of CFCs recovered at the national level was only 2.1 ODP tonnes (about 6 per cent of the amount expected to be recovered). The low rate of recovery was due to CFCs being imported at very low prices, which reduced the economic incentive of recycling (this situation has changed, since the current prices of CFC-12 and HFC-134a are almost the same); the absence of enforcement measures to make recovery operations mandatory; and ODS importers who were chosen as the recycling operators, do not have an incentive to function as recycling centers because it is easier and more profitable to sell virgin CFCs.

RMP update

11. The following activities are proposed in the RMP update project (as submitted):
- (a) An end-users incentive programme (US \$310,700), which consists of an incentive programme for end-users, basic equipment for workshops to replace the use of CFC-11 with nitrogen for flushing operations; and basic service tools for the registered workshops;
 - (b) Certification and licensing of refrigeration technicians (US \$77,000), to enforce good maintenance and servicing practices among refrigeration technicians, so reducing the use of virgin CFCs;
 - (c) Strengthening the legal framework (US \$21,000), by improving the operation of the ODS licensing system and modifications to the existing legal framework for implementation of the Montreal Protocol in the country;
 - (d) Monitoring programme (US \$41,000), to ensure the effectiveness of the proposed activities through regular monitoring and application of corrective measures when necessary.
12. The El Salvador RMP update project was submitted with an official letter from the Government of El Salvador (from the Ministry of the Environment and Natural Resources), stating the Government's commitment to achieve at least the 50 per cent reduction in consumption of CFCs by 2005 and the 85 per cent reduction by 2007.

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS**COMMENTS**

13. The Secretariat noted the thorough analysis undertaken by the Government of El Salvador, with the assistance of UNDP, resulting in the submission of a comprehensive project proposal. The Secretariat also noted that through ODS phase out activities implemented in El Salvador, CFC consumption has been reduced from 277.8 ODP tonnes in 1997 to 101.6 ODP tonnes in 2002, which is below the 2005 CFC phase out target.

14. The Secretariat discussed with UNDP the long-term sustainability and cost-effectiveness of the incentive programme for end-users as presented in the project proposal (US \$310,700, about 70 per cent of the total project cost), for the following reasons:

- (a) Of the total CFC consumption in the country, only 3.5 ODP tonnes are used for servicing commercial/fisheries refrigeration systems, where the incentive programme could be applied;
- (b) The actual amount of CFC refrigerant that has been recovered at the national level is very low due to, among others, the availability of CFC-12 at low prices;

- (c) The potential amount of CFCs to be recovered is mainly from MAC units which are frequently serviced due to the poor condition of the vehicles and the state of the road network; and
- (d) The proposal for replacing the CFC-11 cylinders with a nitrogen tank might not be technically feasible due to the weight (70 kg) of the smallest cylinder in the market.

15. Based on the above observations, the Secretariat suggested that, within the level of funding available for the El Salvador RMP update (US \$350,000 according to Decision 31/48), UNDP examine the merits of providing more resources for eligible activities to phase out CFC consumption in El Salvador (e.g., basic tooling for the servicing workshops which are registered in the country; training on good servicing practices for a larger number of technicians; legal and technical support to ban the use of CFC for servicing non-CFC refrigeration systems).

16. Subsequently, UNDP revised the project proposal to provide more basic service tools and incentives to technicians and with less emphasis on incentives for end-users, promote recovery/recycling operations using the equipment already available in the country, and establish an enforcement and monitoring system. The replacement of CFC-11 with nitrogen will concentrate on the main service workshops with better infrastructure and higher CFC-11 consumption; also, main distributors of nitrogen cylinders are considering the feasibility of supplying nitrogen in smaller containers (this will help other technicians to replace the use of CFC-11).

17. The revised RMP update project consists of the following activities

- (a) Technical assistance for the refrigeration subsectors (US \$231,700),
- (b) Certification and licensing of refrigeration technicians (US \$77,300); and
- (c) Monitoring programme (US \$41,000).

RECOMMENDATIONS

18. The Fund Secretariat recommends blanket approval of the projects at the funding level indicated below, on the understanding that:

- (a) The Government of El Salvador would have flexibility in utilizing the resources available under the technical assistance for the refrigeration sub-sectors, to address specific needs that might arise during project implementation;
- (b) To the extent possible, the incentive programme for end-users and the technical assistance for the refrigeration sub-sectors would be implemented in stages so that resources can be diverted to other activities, such as additional training or procurement of service tools, if the proposed results are not achieved; and

(c) UNDP would provide appropriate monitoring throughout project implementation.

	Project Title	Project Funding (US\$)	Support Cost (US\$)	Implementing Agency
(a)	Technical assistance for the refrigeration subsectors	231,700	20,853	UNDP
(b)	Certification and licensing of refrigeration technicians	77,300	6,957	UNDP
(c)	Monitoring programme	41,000	3,690	UNDP
