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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Twenty-fifth Meeting
Montreal, 29-31 July 1998

PROJECT PROPOSALS: ARGENTINA

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

Foam

- Conversion to low index/additive (LIA) technology in the manufacture of flexible boxfoam (FMF) at Rozen S.R.L. UNDP

Refrigeration

- Substituting CFCs by HCFC-141b and HFC-134a in manufacturing of domestic and commercial refrigerators at El Dorado, S.A. World Bank

PROJECT EVALUATION SHEET

ARGENTINA

SECTOR: FOAM ODS use in sector (1997): 150 ODP tonnes

Sub-sector cost-effectiveness thresholds: Flexible Slabstock US \$/kg

Project Titles:

Conversion to Low Index Additive (LIA) Technology in the Manufacture of Flexible Boxfoam (FBF) at Rozen S.R.L.

Project Data	Integral Skin	
	Rozen S.R.L.	
ODS phase-out (ODP tonnes)		19.6
Proposed project duration (months)		24
Incremental capital cost (US \$)		126,500
- including contingency (%)		10
Incremental operational cost (US \$)		43,610
Total project cost (US \$)		170,110
Local ownership (%)		100
Export component (%)		0
Amount requested (US \$) {Original}		122,100
{Revised}		
Cost effectiveness (US \$/kg)		6.23
National Coordinating Agency	OPROZ	
Implementing Agency	UNDP	
Technical review completed?	Yes	

Secretariat's Recommendations:		
Amount recommended (US \$)		122,100
Project impact (ODP tonnes)		19.6
Cost effectiveness (US \$/kg)		6.23
Implementing Agency support cost (US \$)		15,873
Total cost to Multilateral Fund (US \$)		137,973

PROJECT DESCRIPTION

(a) ROZEN S.R.L. - Conversion to Low Index/Additive (LIA) Technology in the Manufacture of Flexible Boxfoam (FBF).

1. It is reported that the yearly CFC consumption in Argentina is increasing much faster than the average economic growth. This is said to be due to the development of the Mercosur markets, which has resulted in an increased demand for refrigerated transport, refrigerated storage and automotive air conditioning; new regulations of the health authorities requiring that perishable food be transported in isotherm utilizing specialized refrigeration equipment and newly emerging applications of foams such as packaging, shoes, automotive industry, etc.
2. The Argentine foam industry consumed in 1992, the base year of the country programme, 1,484 ODP tonnes of CFCs. CFC-11 was the dominant substance (1,275 tonnes) followed by CFC-12 (209) tonnes. The flexible foam sector (slabstock, molded, semi-rigid) consumed 566 tonnes of CFC-11 in 1992, while it is estimated to consume 694 in 1996. The country programme calls for the phase out of CFCs in non-insulating foams in or before 1998.
3. There are 8 manufacturers operating continuous production slabstock lines. In addition, there are about 25 producers using "single block" production equipment, about 7 of them have considerable flexible foam production and therefore CFC consumption while the rest of them are very small producers.
4. Eight flexible slabstock foam projects have been approved to phase out 617 ODP tonnes CFC-11 in Argentina. 19 tonnes have been phased out.
5. Rozen S.R.L. is a 100% Argentine company founded in 1982 and started foam production in 1987. It produced 1,440 tonnes of foam in 1997 of which 453 tonnes utilized 19.6 tonnes of CFC. Methylene chloride is also currently used by the company to produce foam. Rozen operates a Zelaya-Zuniga boxfoam installed in 1991.
6. The capital cost of the project includes retrofit of the boxfoam metering system (US \$65,000), ventilation (US \$30,000) and technology transfer, training and trials (US \$20,000). Incremental operational cost amounted to US \$43,610. The incremental operational cost was recalculated based on the approved methylene chloride method.
5. A letter signed by the company indicating acceptance by the company of the project and its commitment to completely phase out CFCs, dispose of any replaced equipment and allow inspections by UNDP.

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS**COMMENTS**

1. The incremental operational cost calculated based on the methylene chloride resulted in the amount of US \$63,600. Clarification has been sought from the UNDP. The total project cost exceeds the threshold funding, and the level of incremental operational cost will not have any influence on the eligible funding level. Therefore the project was recommended for approval.

RECOMMENDATION(S)

1. The Fund Secretariat recommends blanket approval of the project with the funding level and associated support cost as indicated below.

Project Title	Project Cost US \$	Support Cost US \$	Implementing Agency
Conversion to Low Index Additive (LIA) Technology in the Manufacture of Flexible Boxfoam (FBF) at Rozen S.R.L.	122,100	15,873	UNDP

SECTOR:	REFRIGERATION	ODS use in sector (1992):	762 ODP tonnes
Sub-sector cost-effectiveness thresholds:	Domestic		US \$13.76/kg

Conversion to non CFC technology in manufacture of domestic and commercial refrigerators at El Dorado S.A.

<i>Secretariat's Recommendations:</i>	
Amount recommended (US \$)	176,000
Project impact (ODP tonnes)	12.8
Cost effectiveness (US \$/kg)	13.75
Implementing Agency support cost (US \$)	22,880
Total cost to Multilateral Fund (US \$)	198,880

PROJECT DESCRIPTION

Conversion to non CFC technology in manufacture of domestic and commercial refrigerators at El Dorado S.A.

1. According to the project document, total ODP consumption in 1992 in the domestic refrigeration sub-sector was 762 ODP tonnes, including 190 tonnes of CFC-12 for production of new equipment, 250 tonnes of CFC-12 for servicing and 322 tonnes of CFC-11 for insulation foam. The production of domestic refrigerators in 1992, the base year for the Country Programme, was 761,000 units. Production was growing thereafter up to about 1,000,000 units in 1996. The Executive Committee approved 17 investment projects on conversion of manufacturers of new equipment in this sub-sector for Argentina with ODP phase out target of 562.7 ODP tonnes.

2. The following statement is made in El Dorado proposal:

“An unrestricted demand for CFCs in the domestic refrigeration sector would result in an estimated consumption of 1,170 tonnes by the year 2000. For this reason, to ensure the 1999 freeze of ODS required by the MP, the Argentine government, as was announced in the Country Programme, will phase out the use of CFCs in new equipment in the refrigeration sector and in the foam sector by January 1st, 2000. The first projects already approved in this sector will be completed during 1999. This project and others submitted in 1998 are expected to be completed before the year 2000. Thus, the remaining CFC consumption in this sector will be for servicing of installations (responsible for the 75% of the refrigeration sector).”

3. The installed capacity of the enterprise is 15,000 units/year. The last 12 month production is 12,050 units with total ODP consumption 12.8 ODP tonnes.

4. The implementation of the project will eliminate the use of CFCs in the manufacturing of domestic refrigerators and freezers at El Dorado S.A., located in Salto Grande, in the Republic of Argentina. The CFC-11 used (11.8 MT) as the foaming agent in the production of insulating foams will be replaced by HCFC-141b, and the CFC-12 (2.2 MT) used in refrigeration circuit will be replaced by HFC-134a. A net reduction of 10.6 ODP tons of CFC-11 (considering the residual ODP of HCFC-141b) and 2.2 tons of CFC-12 will be eliminated per year (12.8 tons ODP). The requested grant will be used to convert the production lines, start-up and tests of the new models, and to train personnel. No funds for incremental operating costs are being requested.

5. Several substitute technologies in the foam operation have been considered by the enterprise, including cyclopentane. HCFC-141b-based technology was selected according to the following justification.

“ The cyclopentane- based technology was found to be prohibitive from the safety cost standpoint, both at the foaming head and where electrically heated fixtures are used. The

interim HCFC solution provides the energy efficiency required. The HCFC-141b alternative offers the lowest investment and commercial availability in Argentina. El Dorado will use HCFC-141b as an interim option and HFC-134a or HFC-245/HFC-365 as a final solution. The final solution will take some time to implement, and the final decision will be taken according to the ultimate trends in the Argentina market. El Dorado is aware that it will bear the costs associated with a final solution.”

6. El Dorado requests US \$ 176,000 (the maximum allowed by the threshold for the sub-sector) to be approved by the Executive Committee. The enterprise is aware that it will need to finance the balance of the project cost, including operating cost.

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

COMMENTS

1. The project contains a statement that this project is expected to be completed before the year 2000 contributing to the 1999 freeze.
2. The chosen technologies are proven. The justification for the use of HCFC-141b is provided by the enterprise.
3. The Secretariat has reviewed the project. All the requested cost are recognized as eligible for funding.

RECOMMENDATION

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

Project Title	Project Cost US \$	Support Cost US \$	Implementing Agency
Conversion to non CFC technology in manufacture of domestic and commercial refrigerators at El Dorado S.A.	176,000	22,880	World Bank