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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Thirty-seventh Meeting
Montreal, 17-19 July 2002

PROJECT PROPOSAL: PAKISTAN

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

Solvent

- Conversion of cleaning installations from carbon tetrachloride (CTC) to tetrachloroethylene (PER) at Riaz Electric Ltd., Lahore

UNIDO

**PROJECT EVALUATION SHEET
PAKISTAN**

SECTOR: Solvent ODS use in sector (1999): 567 ODP tonnes

Sub-sector cost-effectiveness thresholds: n/a

Project Titles:

- (a) Conversion of cleaning installations from carbon tetrachloride (CTC) to tetrachloroethylene (PER) at Riaz Electric Ltd., Lahore

Project Data	CTC	
	Riaz Electric	
Enterprise consumption (ODP tonnes)		10.02
Project impact (ODP tonnes)		10.02
Project duration (months)		24
Initial amount requested (US \$)		170,079
Final project cost (US \$):		
Incremental capital cost (a)		90,183
Contingency cost (b)		9,018
Incremental operating cost (c)		22,877
Total project cost (a+b+c)		122,078
Local ownership (%)		100%
Export component (%)		0%
Amount requested (US \$)		
Cost effectiveness (US \$/kg.)		12.18
Counterpart funding confirmed?		Yes
National coordinating agency	Ministry of Environment, Local Govrnmnt & Rural Dev	
Implementing agency	UNIDO	

Secretariat's Recommendations	
Amount recommended (US \$)	122,078
Project impact (ODP tonnes)	10.02
Cost effectiveness (US \$/kg)	12.18
Implementing agency support cost (US \$)	15,870
Total cost to Multilateral Fund (US \$)	

SECTOR BACKGROUND

1. The total consumption in the solvent sector reported by Pakistan in its 1999 report on progress with implementation of its country programme is 566.8 ODP tonnes. The total is made up of 564.3 ODP tonnes of CTC and 2.5 ODP tonnes of TCA. These figures are consistent with Pakistan's 2000 consumption report under Article 7. The only projects approved in the solvent sector in Pakistan have been for the phase-out of CFC-113 (two projects for a total of 59.6 ODP tonnes). The project below has a total consumption of 10.02 ODP tonnes of CTC.

PROJECT DESCRIPTION

2. The objective of this project is to eliminate the use of 10.02 ODP tonnes of CTC as a solvent in the cleaning of heat exchangers at Riaz Electric Ltd., Lahore. The enterprise is entirely locally owned and reports no export activity. Riaz manufactures refrigeration equipment, and the heat exchangers are used in the refrigerators and freezers produced there.

3. Riaz was the beneficiary of a project approved at the 19th Meeting for US \$822,987 to phase-out 38 tonnes of CFC-11 and 10 tonnes of CFC-12. The project is still under implementation by UNIDO.

4. The baseline equipment for the solvent cleaning operation consists of open baths containing CTC and funnels for directing the CTC into the pipes and tubes to be cleaned. The CTC is re-used until it becomes too dirty and is then disposed of into open drains.

5. The use of CTC will be phased-out by a conversion to a vacuum cleaning and degreasing unit using perchloroethylene (PER) as a solvent. The main capital cost items requested are a vacuum cleaning and degreasing unit (US \$90,000), a cooling water generator (US \$15,000) and a compressor (US \$2,000). Other costs include civil works (US \$7,500), testing (US \$2,000), training (US \$3,000) and transportation (US \$5,350).

6. Incremental operating costs for a period of four years are requested at a level of US\$ 27,794.

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

COMMENTS

7. The Secretariat discussed with UNIDO a number of issues related to the choice of technology, the technological upgrade involved (not provided for in the project as submitted), the specifications of the cleaning unit and the costs associated with installation. Agreement was reached on a 35 percent technological upgrade counterpart contribution towards the cleaning unit and its accessories, and the deletion of costs associated with refurbishment of the workshop. The incremental capital cost of the project has been agreed as US \$99,201, including 10 percent contingency costs. Proposed changes to maintenance costs were removed from determination of the incremental operating cost which was re-assessed as US \$22,877 for four years. The cost

effectiveness is US \$12.18, which is a reasonable figure considering the relatively low consumption of the enterprise.

RECOMMENDATION

8. Blanket approval of the project for Riaz is recommended at the level of cost indicated below, including agency support costs.

	Project Title	Project Funding (US\$)	Support Cost (US\$)	Implementing Agency
(a)	Conversion of cleaning installations from carbon tetrachloride (CTC) to tetrachloroethylene (PER) at Riaz Electric Ltd., Lahore	122,078	15,870	UNIDO
