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

Twenty-first Meeting
Montreal, 18-20 February 1997

PROJECT PROPOSAL: URUGUAY

This document includes the comments from the Fund Secretariat on the following project:

Refrigeration

- Manufacture of parallel-flow condensers for air conditioning systems in vehicles that use HFC-134a at Panasco World Bank

PROJECT EVALUATION SHEET URUGUAY

SECTOR: **REFRIGERATION**
 MAC

ODS use in sector (1995): 16 ODP tonnes

Project Title:

Manufacture of parallel-flow condensers for air conditioning systems in vehicle that use HFC-134a at Panasco, S.A

Project Data	PANASCO, S.A.
ODS phase-out (ODP tonnes)	N/A
Proposed project duration (Yrs)	1 year
Incremental capital cost (US \$)	544,945
Incremental operational cost (US \$)	-
Total project cost (US \$)	544,945
Amount requested (US \$) {Original}	544,945
{Revised}	337,062
Cost effectiveness (US \$/kg)	N/A
National Coordinating Agency	Governmental Ozone Technical Commission
Implementing Agency	World Bank
Technical review completed?	Yes

<i>Secretariat's Recommendations</i>	
Amount recommended (US \$)	
Project impact (ODP tonnes)	N/A
Cost effectiveness (US \$/kg)	N/A
Implementing Agency support cost (US\$)	
Total cost to Multilateral Fund	

PROJECT DESCRIPTION

1. The project will enhance the existing production of parallel flow-design condensers for HFC-134a refrigerant.
2. In 1995, the company's manufactured components (168,000 units/year), radiators and panels (7,200 units/year) and some CFC-12 and HCFC-134a condensers (a total of 900 units/year) for the automobile industry. In 1996, production of condensers increased to 2,200 condensers based on the new refrigerant (about 145 percent increase).
3. The company is the only enterprise in the country engaged in the production of MAC condensers. The company sells the condensers to two national assemblers who then sell the assembled MAC units to the automotive industry. The compressors are supplied by Nippondenso, Brazil, hoses and fittings are provided by Paranoa, Brazil, and the evaporator unit is manufactured by Valco, France.
4. In 1995, as an experimental programme, the enterprise started manufacturing with its own resources condensers with flat fins for MAC units using HFC-134a refrigerant. The selected design was determined to satisfy only over and interim period the demand of HFC-134-based condensers using the existing basic equipment. The company is requesting financial support to obtain the correct manufacturing equipment to meet the industry standards.
5. The World Bank has requested that the Executive Committee be advised that this enterprise will be competing in future in the export market with other enterprises from the Mercosur group of countries who have already received funding for MAC projects.
6. The major piece of equipment required for conversion of condensers to HFC-134a refrigerant is a brazing furnace. Quotations from two manufacturers of brazing furnaces were considered during project preparation: one by Seco/Warwick at a cost of US \$378,000, and another by Camlaw Limited at a cost of US \$353,400. Each furnace is the smallest unit built by each company.
7. The enterprise will modify the infrastructure of the building and services necessary to implement the conversion at its own resources.

SECRETARIAT'S COMMENTS AND CONCLUSION

COMMENTS

1. The project proposal was first submitted to the Executive Committee at its 20th Meeting. Serious concerns were expressed in the Sub-Committee on Project Review, including inter alia, the apparent lack of compliance with Decision 17/6 (project proposals in the MAC sub-sector should emanate from the manufacturers of MAC units themselves, not the manufacturers of component parts), the high cost of the project in comparison with its very limited ODS phase-out, its overall impact on the entire MAC sector, its contribution to helping Uruguay meet the 1999 freeze for CFC consumption as required by the Montreal Protocol, and whether or not the incremental costs were eligible under the existing guidelines.
2. Subsequently, the Executive Committee decided not to approve the project and invited the World Bank to re-examine the project, addressing the concerns raised by the Sub-Committee, with a view to possibly presenting it again to a future meeting (Decision 20/28).
3. The World Bank reviewed the project proposal and adjusted the requested funding from US \$544,945 to US \$337,062; the difference will be financed by the enterprise. The World Bank also reported that the Ministry of Housing, Land and Environment has drafted a decree which proposes prohibiting the manufacture and sale of CFC-12 MAC systems in the country as of January 1999.
4. With regard to the issues of compliance with Decision 17/6 the World Bank has provided advice from the Government of Uruguay that the level of condenser production by the enterprise will satisfy the country's domestic requirements and the project will achieve the complete phaseout of CFCs in the MAC sector in Uruguay. By an official communication from the Government of Uruguay, it was also confirmed that no funding will be requested from the Multilateral Fund for any of the other components in the MAC system, namely compressors, evaporators, hoses and fittings.
5. With regard to assisting Uruguay to meet the 1999 freeze, no additional information has been provided in the revised project. It is to be noted, however, that the Executive Committee has already approved 12 investment projects that will lead to the elimination of 182 tonnes of ODS, equivalent to 58 per cent of the total ODS consumption reported in Uruguay country programme (314 ODP tonnes).
6. The Fund Secretariat queried the eligibility of cost for the furnace, as it has a capacity of about three times the level of the 1996 production of 2,200 condensers (or eight times the level of the 1995 production of 900 units). The Secretariat noted, however, that the annual production capacity for condensers stated in the project document is around 7,000 units, similar to the production output of the furnace requested, and that the enterprise has proposed funding 50 percent of the cost of the furnace.

7. The Secretariat also questioned whether the new equipment would be used for manufacturing other components not related to CFC phase-out, currently produced by the enterprise, since it will provide the opportunity to adopt new production technology in the manufacture of many of the enterprises other products. The Government advised that the enterprise was committed to deploy the new equipment solely for the manufacture of condensers.

8. The project document states that assistance is being sought from the Fund because the new HFC-134a condensers produced through the enterprise's own resources are considered to be technically unsatisfactory. An increase in production of these condensers (from 600 units in 1995 to 2,200 units in 1996) does not seem consistent with the product being unsatisfactory, however the World Bank has advised that future orders will not be forthcoming if the technology is not changed.

9. Cost-effectiveness figures are not provided for MAC projects as they do not produce any direct phase out. However, considering the future consumption of CFC-12 which might be eliminated through implementation of this project (about 2,750 kg considering 2,200 condensers manufactured in 1996), a notional cost-effectiveness for this project would be US \$123/kg (compared to US \$198/kg in the original proposal).

SECRETARIAT'S CONCLUSION

1. The Executive Committee may wish to take the above comments into account when considering the revised proposal submitted by the World Bank.