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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Thirty-first Meeting
Geneva, 5-7 July 2000

PROJECT PROPOSAL: PHILIPPINES

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

Foam

•	Phaseout of CFC-11 by conversion to HCFC-141b in the manufacture or rigid polyurethane foam (sprayfoam) at Prescon Construction & Development	UNDP

PROJECT EVALUATION SHEET
PHILIPPINES

SECTOR: Foam ODS use in sector (1999): 377.9 ODP tonnes

Sub-sector cost-effectiveness thresholds: Rigid US $7.83/kg

Project Titles:

(a) Phaseout of CFC-11 by conversion to HCFC-141b in the manufacture or rigid polyurethane foam (sprayfoam) at Prescon Construction & Development

Project Data	**Rigid**
	Prescon
Enterprise consumption (ODP tonnes)	35.00
Project impact (ODP tonnes)	31.70
Project duration (months)	26
Initial amount requested (US $)	248,211
Final project cost (US $):	
Incremental capital cost (a)	105,000
Contingency cost (b)	10,500
Incremental operating cost (c)	151,815
Total project cost (a+b+c)	267,315
Local ownership (%)	100%
Export component (%)	0%
Amount requested (US $)	248,211
Cost effectiveness (US $/kg.)	7.83
Counterpart funding confirmed?	
National coordinating agency	Department of Environment
Implementing agency	UNDP

Secretariat's Recommendations	
Amount recommended (US $)	
Project impact (ODP tonnes)	
Cost effectiveness (US $/kg)	
Implementing agency support cost (US $)	
Total cost to Multilateral Fund (US $)	

PROJECT DESCRIPTION

Sector Background

- Latest available total ODS consumption (1999)*	2,279.89 ODP tonnes
- Baseline consumption of Annex A Group I substances (CFCs)	3,055.90 ODP tonnes
- Consumption of Annex A Group I substances for the year 1999	2,087.58 ODP tonnes
- Baseline consumption of CFCs in foam sector	361.12 ODP tonnes
- Consumption of CFCs in foam sector in 1999	345.36 ODP tonnes
- Funds approved for investment projects in foam sector as of end of 1999	US $3,701,674.00
- Quantity of CFC to be phased out in investment projects in foam sector as of end of 1999	469.80 ODP tonnes
- Quantity of CFC phased out in investment projects in foam sector as of end of 1999	464.00 ODP tonnes
- Quantity of CFC to be phased out in investment projects in foam sector approved in 1999	0.00 ODP tonnes
- Funds approved for investment projects in the foam sector in 1999	US $0.00

*As reported to the Fund Secretariat in April 2000.

Rigid Foam

Prescon

1. Prescon uses 35 ODP tonnes of CFC-11 per year (average 1996-1998) in the production of rigid polyurethane foam for insulation of beer brewery formulation tanks, and insulation of pipes, roofs and other structures. Under this project, the production will be converted to HCFC-141b technology. The company operates four low-pressure sprayfoam dispensers 18-20 years old, which are to be replaced with high-pressure units at the cost of US $25,000 each (US $100,000), and one high-pressure dispenser, which is to be retrofitted (US $5,000). The company will contribute US $20,000 for the age of the baseline dispensers. Other costs include trials (US $10,000) and technology transfer (US $10,000). Incremental operating cost for two years of US $151,815 is requested. This amount includes cost associated with 7% increase in density amounting US $127,190.

Justification for the use HCFC-141b

2. Justification for the use of HCFC-141b by the company has been provided in the project document and as an annex to the document, including projected “techno-economic” impact. It is stated that detailed discussions on issues associated with the use of HCFC in Multilateral Fund

projects were held with the enterprises prior to the preparation of the projects, and this informed their choice of the technology.

3. A copy of the justification annexed to the projects and the letter of the Government of Philippines supporting the choice of HCFC-141b are attached to this evaluation.

Impact of projects

4. 31.7 ODP tonnes will be phased out from the project. This will eliminate 9.2% of Philippines 1999 consumption of Annex A Group I substances.

5. There will be a residual consumption of 3.3 ODP tonnes as a result of the use of HCFC-141b.

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

COMMENTS

1. The Fund Secretariat and UNDP discussed the cost of replacement of the low pressure spray foam dispensers and agreed to US $18,000 per dispenser. This resulted in incremental capital cost of US $84,700 including contingency and taking account of the company's contribution of US $5,000 per machine to account for their old age. The total project cost, therefore, became US $236,515. This includes the amount of US $127,190 of the incremental operating cost associated with increase in density.

2. The eligible incremental operating cost of the project could not be determined in view of the claim for density increase in the projects. The incremental operating cost and the total project costs will be determined following a decision by the Executive on how to treat foam densities in rigid and flexible molded foam projects.

3. In view of the issue of foam density, the project is submitted for individual consideration pending a decision by the Sub-Committee on Project Review.

Summary of project costs

Agreed incremental capital cost	US $84,700
Incremental operating cost with cost for density increase	US $151,815

ANNEX I

Additional Justification for Using HCFC Technology

The UNDP technical expert appraised the enterprise in this project in August 1999, prior to the preparation of this project document, and had discussions with the company's representatives about the choice of technology for replacing the existing CFC-based technology. The enterprise was briefed in detail about the following:

(a) An overview of the available interim (low ODP) and permanent (zero ODP) replacement technologies.
(b) The "techno-economic impact" of each technology on the products manufactured, and the processes and practices employed.
(c) Possible implications of each technology, in terms of its known impact on environment, health and safety, such as ozone depleting potential, global warming potential, occupational health, etc.
(d) It was emphasized to these enterprises that HCFC technologies are interim technologies due to their residual ODP and therefore may continue to adversely affect the environment, although at a lower rate than CFCs.
(e) It was further explained that HCFCs may become controlled substances under present or future international conventions and will therefore also need to be phased out at a future date, and any investments required for their phase-out and for conversion to a permanent technology will have to be borne by the enterprises themselves.

The main conclusions reached by the enterprise through discussions with the UNDP technical expert were:

1. Water based formulations are not locally available, and do not offer adequate insulating properties for the application. Maintenance of the insulating value of the finished product is extremely important to the enterprise.

2. Pentane can't be used for the sprayfoam application. The mobile nature of the sprayfoam operation makes it unsafe, because the conditions can't be controlled.

3. While n-pentane could theoretically be used for the insulation half-shells, the location of the factory does not permit use of the flammable substance. It would also be a very expensive conversion. The enterprise is not willing or able to undertake such a large financial burden.

4. The company would like to use the same technology for both the sprayfoam and the insulation half-shell applications.

In view of the above, the technology selected is HCFC-141b based systems in the interim, until permanent technology (either water based of HFC-based systems) are available locally.

Projected Techno-economic Impact of Zero-ODP Technologies

The projected impact of applying various zero-ODP technologies with respect to the selected technology (HCFC-141b) in this project is summarized as below:

Water based technologies are not available locally, and even if available, would not provide adequate insulating values of the finished product. Therefore, the costs associated with water-based technology are not considered.

HFC-134a based systems are not offered in the applicable regional area and are not a feasible zero-ODP option.

Liquid HFC based systems do not meet requirements on maturity and availability at the present time.

Pentane could technically be used for the insulation half-shell manufacturing operation, but since the option is not feasible due to factory location, the costs were not calculated and are irrelevant.

Thus, the selection of HCFC-141b based systems, as the preferred conversion technology, is justified taking into account all the technical, commercial and cost factors.

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Dr. Omar El-Arini
Chief
Multilateral Fund Secretariat
1800 McGill College Ave
27th Floor, Montreal
Quebec, Canada

10th May,2000

Dear Dr. El-Arini,

In line with decision 27/13 of the Executive Committee and in recognition of Article 2F of the Montreal Protocol, the Government of the Philippines:

- Verifies that it has reviewed the specific situation at Prescon and states that based on the prevailing circumstances at Prescon at the present time, the conversion of this enterprise require the use of HCFC-141b for the interim period as stipulated in the Montreal Protocol.

- Confirms that the Government and the recipient enterprise understood that no funding would be available from the MLF for the future conversion from HCFC's for the said enterprise whenever such a conversion to other alternatives will be required.

Thank you and regards.

Ms Agnes Goze
Environmental Management Bureau
Philippines Ozone Desk
Manila, Philippines