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EXECUTIVE COMMITTEE OF  
THE MULTILATERAL FUND FOR THE  
IMPLEMENTATION OF THE MONTREAL PROTOCOL  
Forty-fourth Meeting  
Prague, 29 November-3 December 2004

**PROJECT PROPOSAL: LAO PEOPLE'S DEMOCRATIC REPUBLIC**

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

Foam

- Conversion from CFC-11 in the manufacture of boxfoam (FPF) and insulated containers (RPF) at Prasert Sofa Shop Co., Ltd.

UNDP

**PROJECT EVALUATION SHEET – NON-MULTI-YEAR PROJECTS**  
**COUNTRY: LAO PEOPLE’S DEMOCRATIC REPUBLIC**

**PROJECT TITLE** **BILATERAL/IMPLEMENTING AGENCY**

Conversion from CFC-11 in the manufacture of boxfoam (FPF) and insulated containers (RPF) at Prasert Sofa Shop Co., Ltd.	UNDP
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<b>NATIONAL CO-ORDINATING AGENCY</b>	Science, Technology & Environment Agency
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**LATEST REPORTED CONSUMPTION DATA FOR ODS ADDRESSED IN PROJECT**

**A: ARTICLE-7 DATA (ODP TONNES, 2003, AS OF SEPT. 2004)**

Annex AI, CFC	35.27		

**B: COUNTRY PROGRAMME SECTORAL DATA (ODP TONNES, 2003 AS OF MAY 2004)**

ODS Name	Sub-sector/quantity	Sub-sector/quantity	Sub-sector/quantity	Sub-sector/quantity
CFC-11	Foam: 25			

<b>CFC consumption remaining eligible for funding (ODP tonnes)</b>	N/a for LVCs
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<b>CURRENT YEAR BUSINESS PLAN ALLOCATIONS</b>	Funding US \$ million	Phase-out ODP tonnes
	0.15	16

<b>PROJECT TITLE:</b>	<b>Conversion from CFC-11 in the manufacture of boxfoam (FPF) and insulated containers (RPF)</b>
<b>ODS use at enterprise (ODP tonnes):</b>	12.25
<b>ODS to be phased out (ODP tonnes):</b>	12.25
<b>ODS to be phased in (ODP tonnes):</b>	
<b>Project duration (months):</b>	24
<b>Initial amount requested (US \$):</b>	192,360
<b>Final project cost:</b>	
Incremental Capital Cost (US \$)	139,500
Contingency (10%) (US \$)	13,950
Incremental Operating Cost (US \$)	31,210
Total Project Cost (US \$)	184,660
<b>Local ownership (%):</b>	100%
<b>Export component (%):</b>	0%
<b>Requested grant (US \$):</b>	184,660
<b>Cost-effectiveness (US \$/kg):</b>	15.07
<b>Implementing agency support cost (US \$):</b>	16,619
<b>Total cost of project to Multilateral Fund (US \$):</b>	201,279
<b>Status of counterpart funding (Y/N):</b>	
<b>Project monitoring milestones included (Y/N):</b>	Y

<b>SECRETARIAT’S RECOMMENDATION</b>	Approval at the costs indicated above with conditions
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## **PROJECT DESCRIPTION**

1. On behalf of the Government of Lao, UNDP has submitted to the 44<sup>th</sup> Meeting of the Executive Committee a project called " Conversion from CFC-11 in the manufacture of boxfoam (FPF) and insulated containers (RPF) at Prasert Sofa Shop Co., Ltd.". This project will lead to the phase-out of 12.25 ODP tonnes of CFC-11 in the country. It will provide urgently needed assistance to the Government of Lao to meet its 2005 and 2007 compliance targets for CFC consumption.

### **Flexible slabstock foam / Polyurethane rigid foam**

#### Prasert Sofa Shop Co., Ltd.

2. Prasert Sofa Co., Ltd. processes CFC-11 as a blowing agent in the manufacture of slabstock foam for furniture, bedding and upholstery, and rigid foam for insulated containers. The company consumed an average of 12.25 tonnes of CFC-11 and 5.5 tonnes of methylene chloride in 2001-2003. The production is to be converted to water/additives-based technology. It is proposed to replace four existing handmix configurations by one semi-automatic boxfoam unit with exhaust and metering of the hazardous/critical components and one low-pressure dispenser at a cost of US \$161,150, including technology transfer, trials and contingency. The project's total cost has been calculated to be US \$192,360 with incremental operating cost of US \$31,210 and cost-effectiveness of US \$15.70/kg. The amount of US \$192,360 was requested as the grant for the project.

## **SECRETARIAT'S COMMENTS AND RECOMMENDATION**

### **COMMENTS**

3. UNDP on behalf of the Government of Lao received, at the 39<sup>th</sup> Meeting of the Executive Committee, US \$5,000 for the formulation of a terminal phase-out project in the foam sector. While Lao is presently in compliance with the provisions of the Montreal Protocol, UNDP has informed the Secretariat that in order to comply with the 2005 reduction requirements, a phase-out project is urgently needed by Lao. UNDP indicated further that they are presently not in a position to submit a terminal project for Lao's foam sector, but could submit this investment project. The Government will list any remaining enterprises in the foam sector in the Country Programme update currently under preparation.

4. Lao, a low-volume-consuming country, has reported under Article 7 its 2003 CFC consumption data to be 35.27 ODP tonnes; the consumption allowed in 2005 is 21.7 tonnes. The present information available indicates a remaining CFC consumption of 25 tonnes for the foam sector in Lao, of which the project addresses 12.25 tonnes.

5. The weighted average of the cost effectiveness thresholds for flexible and rigid foam, in respect of other projects in the foam sector is 6.56 \$/kg, while this project has a cost effectiveness of 15.70 \$/kg. However, the Lao People's Democratic Republic is a low-volume consuming country, therefore no cost-effectiveness threshold applies (Decision 17/11). For

LVCs, a number of foam projects have been approved, in several cases with significantly less advantageous levels of cost effectiveness, and with up to more than twice the value being considered for this very small project. The country is currently in significant danger of non-compliance for both 2005 and 2007 CFC reduction targets. This project would address 28% of the country's baseline consumption and 43% of the difference between the 2003 consumption and the 2007 compliance target. The Fund Secretariat considers therefore that a recommendation for approval for this project is justified under those circumstances.

6. The Secretariat noted that the project description is targeted at moving away from methylene chloride (MC), which is also reflected in the calculation of the incremental operating costs. Nevertheless, the project proposal indicates that in cases of certain technical difficulties, the company might have to resort to MC technology. It is also known that the low operational costs of MC-based foam production present a certain incentive to use MC technology – at least in the absence of incentives such as enforced health regulations.

7. The Secretariat identified some technical and cost issues to be addressed by UNDP. These issues were discussed and agreed between the Secretariat and UNDP. The amounts of US \$153,450 and US \$31,210 were agreed as incremental capital and operating costs respectively, with a total project cost of US \$184,660 and cost-effectiveness of US \$15.07/kg. The incremental capital costs include a contingency of 10%.

## RECOMMENDATION

8. The Fund Secretariat recommends approval of the project with associated support costs at the funding level shown in the table below, with the provision that the approval is conditional on the incremental operating costs (IOCs), amounting to US \$31,210, not being paid until six months after technical completion of the project. At that time the complete phase-out of CFC-11 and the ratio of conversion to water/additives technology will be determined on location by the Implementing Agency. IOCs will be calculated proportionally to this ratio. However if the ratio falls under 33%, no IOCs will be paid out. Any unpaid IOC funds will be transferred to the Multilateral Fund at the time of the project's financial completion.

	<b>Project Title</b>	<b>Project Funding (US\$)</b>	<b>Support Cost (US\$)</b>	<b>Implementing Agency</b>
(a)	Conversion from CFC-11 in the manufacture of boxfoam (FPF) and insulated containers (RPF) at Prasert Sofa Shop Co., Ltd.	184,660	16,619	UNDP

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