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Executive Committee of
the Multilateral Fund for the
Implementation of the Montreal Protocol
Twenty-sixth Meeting
Cairo, 11-13 November 1998

PROJECT PROPOSALS: THAILAND

This document consists of the comments and recommendations of the Fund Secretariat on the following projects:

Foam

• Conversion from CFC-11 to methylene chloride/LIA technology in the manufacture of flexible polyurethane boxfoam at P. Chongcharoen	UNDP
• Conversion from CFC-11 to water based and HCFC-141b technology in the manufacture of polyurethane foam at J.S. Industry Co. Ltd.	UNDP
• Conversion from CFC-11 to water based and HCFC-141b technology in the manufacture of polyurethane foam (flexible molded, integral skin) at World Plaster/Europlan Furniture Co	UNDP
• Conversion from CFC-11 to HCFC-141b technology in the manufacture of rigid polyurethane foam at Lohr Trade & Consulting PTS Ltd.	UNDP
• Conversion from CFC-11 to HCFC-141b technology in the manufacture of rigid polyurethane foam at Ohm Intertrade L.P.	UNDP
• Conversion from CFC-11 to HCFC-141b technology in the manufacture of rigid polyurethane foam at Sahakij Comos L.P.	UNDP
• Conversion from CFC-11 to HCFC-141b technology in the manufacture of rigid polyurethane foam at Suwan Polymer L.P.	UNDP
• Conversion from CFC-11 to HCFC-141b technology in the manufacture of rigid polyurethane foam at Urethane	UNDP

Refrigeration

• Program to reduce the usage of CFC-11 and CFC-12 in chiller servicing by replacing CFC-based chillers with HFC-134a and HCFC-123 chillers at Electricity Generating Authority (EGAT)	World Bank

PROJECT EVALUATION SHEET
THAILAND

SECTOR: FOAM ODS use in sector (1991): 1,570 ODP tonnes

Sub-sector cost-effectiveness thresholds: Flexible US $6.23/kg Integral Skin US $16.86/kg
Rigid US $7.83/kg

Project Titles:

(a) Conversion from CFC-11 to methylene chloride/LIA technology in the manufacture of flexible polyurethane boxfoam at P. Chongcharoen
(b) Conversion from CFC-11 to water based and HCFC-141b technology in the manufacture of polyurethane foam at J. S. Industry Co. Ltd.
(c) Conversion from CFC-11 to water based and HCFC-141b technology in the manufacture of polyurethane foam (flexible molded, integral skin) at World Plaster/Europlan Furniture Co.
(d) Conversion from CFC-11 to HCFC-141b technology in the manufacture of rigid polyurethane foam at Lohr Trade & Consulting PTS Ltd.
(e) Conversion from CFC-11 to HCFC-141b technology in the manufacture of rigid polyurethane foam at Ohm Intertrade L.P.
(f) Conversion from CFC-11 to HCFC-141b technology in the manufacture of rigid polyurethane foam at Sahakij Comos L.P.
(g) Conversion from CFC-11 to HCFC-141b technology in the manufacture of rigid polyurethane foam at Suwan Polymer L.P.
(h) Conversion from CFC-11 to HCFC-141b technology in the manufacture of rigid polyurethane foam at Urethane

Project Data	**Flexible**	**Integral Skin**	**Flexible/ Integral Skin**	**Rigid**				
	Choncharoen	J. S. Industry	World Plaster	Lohr	Ohm	Sahakij	Suwan	Urethane
ODS (CFC-11) phase out (ODP tonnes)	24	98	25.7	15	21	52	64	18.7
Proposed project duration (months)	24	24	24	24	24	24	24	24
Incremental capital cost (US$)	121,000	192,500	180,500	22,000	55,000	132,000	88,000	79,200
- including contingency (%)	10	10	4.6	10	10	10	10	10
Incremental operational cost (US$)	9,500	271,400	13,400	86,000	109,600	179,000	210,370	19,445
Total project cost (US$)	130,500	463,900	193,900	108,000	164,600	311,000	298,370	98,645
Local ownership (%)	100	100	100	100	100	100	100	100
Export component (%)	0	0	0	0	0	0	0	0
Amount requested (US$) {Original}	136,000	463,900	193,900	106,500	148,800	311,000	332,300	113,000
{Revised}	130,500						298,370	98,645
Cost effectiveness (US$/kg.)	5.44	4.98	7.69	7.83	7.83	6.39	5.14	5.64
National Coordinating Agency	Hazardous Substances Control Division Department of Industrial Works (DIW)							
Implementing Agency	UNDP							
Technical review completed?	Yes							
Secretariat's Recommendations								
Amount recommended (US $)	130,500	Pending	Pending	93,210	146,350	Pending	298,370	98,645
Project Impact (ODP tonnes)	24			13.6	19		58	17.5
Cost effectiveness (US $/kg)	5.44			6.85	7.7		5.14	5.64
Implementing Agency support cost (US$)	16,965			12,117	19,026		38,788	12,824
Total cost to Multilateral Fund	147,465			105,327	165,376		337,158	111,469

PROJECT DESCRIPTION

(a) Conversion from CFC-11 to methylene chloride/LIA technology in the manufacture of flexible polyurethane boxfoam at P. Chongcharoen

(b) Conversion from CFC-11 to water based and HCFC-141b technology in the manufacture of polyurethane foam at J. S. Industry Co. Ltd.

(c) Conversion from CFC-11 to water based and HCFC-141b technology in the manufacture of polyurethane foam (flexible molded, integral skin) at World Plaster/Europlan Furniture Co.

(d) Conversion from CFC-11 to HCFC-141b technology in the manufacture of rigid polyurethane foam at Lohr Trade & Consulting PTS Ltd.

(e) Conversion from CFC-11 to HCFC-141b technology in the manufacture of rigid polyurethane foam at Ohm Intertrade L.P.

(f) Conversion from CFC-11 to HCFC-141b technology in the manufacture of rigid polyurethane foam at Sahakij Comos L.P.

(g) Conversion from CFC-11 to HCFC-141b technology in the manufacture of rigid polyurethane foam at Suwan Polymer L.P.

(h) Conversion from CFC-11 to HCFC-141b technology in the manufacture of rigid polyurethane foam at Urethane

General

1. CFC-11 consumption in the rigid foam sector in Thailand in 1991 was 1,510 ODP tonnes, primarily CFC-11 and to a lesser extent CFC-12. No recent sector consumption data have been reported by Thailand. The country programme progress report for 1997 submitted by Thailand does not provide sector breakdown. Thailand's CFC consumption for 1996 was reported to be 6,041 ODP tonnes, and it is expected that ODS consumption in 1997 will be the average of 1995 and 1996 at 7,420 ODP tonnes. 35 projects amounting to about US $9 million have been approved to phase out 1,525 ODP tonnes of CFC-11 and CFC-12 in the foam sector. 365 ODP tonnes are reported to have been phased out.

2. One flexible slabstock, two integral skin and five rigid foam projects have been submitted for consideration at the 26th Meeting. The eight projects will eliminate 299 ODP tonnes of CFC-11. It is stated in the projects that the elimination of quantities of CFC-11 targeted in the projects will enable Thailand to meet the 1999 freeze obligation of the Montreal Protocol.

3. All the enterprises are 100% Thai-owned.

4. Impact of the projects: UNDP indicates in all the projects that the elimination of the targeted quantities of CFC in the projects is important in helping Thailand to meet its obligations with the Montreal Protocol.

Flexible Slabstock Foam

(a) Conversion from CFC-11 to methylene chloride/LIA technology in the manufacture of flexible polyurethane boxfoam at P. Chongcharoen

5. P. Chongcharoen produces flexible polyurethane boxfoam for use in the production of mattresses and furniture. It currently operates three locally made boxfoam units purchased in 1994. Its average consumption of CFC-11 from 1995-1997 was 24 tonnes.

6. The company will phaseout its use of CFC-11 in the manufacture of flexible polyurethane foam by converting to methylene chloride and low index additive (LIA) technology. The project costs include replacement of the existing boxfoam dispensers by a semi-automatic boxfoam unit (US $95,000). Other costs include trials (US $10,000), training and technology transfer (US $10,000) and contingency (US $11,500). The project also includes incremental operating costs for four years (US $9,500).

Integral Skin Foam

(b) Conversion from CFC-11 to water based and HCFC-141b technology in the manufacture of polyurethane foam at J. S. Industry Co. Ltd.

7. J. S. Industry Inc. was founded in 1985. It manufactures high density rigid and semi-rigid integral skin foam for automotive components including steering wheels, bumpers, spoilers, head and arm rests, side door and side kick panels. It used the average of 98.3 tonnes CFC-11 in 1995-1997. The company operates one low pressure machine installed in 1992 and two high pressure machines installed in 1978 and 1989.

8. J. S. Industry Co. Ltd. will phaseout its use of CFC-11 by converting to water-based systems for both the rigid and integral skin applications, with some use of HCFC-141b in the lower density integral skin foam applications. The project costs include retrofit of the two high pressure dispensers with temperature control (US $40,000), and a 5 component premixer (US $85,000). Other costs include trials (US $20,000), verification testing (US $10,000), training and technology transfer (US $20,000) and contingency (US $17,500). The incremental operating cost for two years amounts to US $271,400. A correction factor of 10% to account for evaporative losses of CFC-11 is included in the calculation of the incremental operating cost.

(c) Conversion from CFC-11 to water based and HCFC-141b technology in the manufacture of polyurethane foam (flexible molded, integral skin) at World Plaster/Europlan Furniture Co.

9. World Plaster/Europlan Furniture Co. Inc. was founded in 1993. It manufactures both flexible and rigid integral skin foam for furniture, cornices, automotive cushions, and spoilers. It used the average of 25.2 tonnes CFC-11 in 1995 to 1997. In 1997 the company commissioned one low pressure machine to replace its hand pouring process with the view to converting the CFC use in flexible molded foam production to all-water process. By 1998 the company had completed the CFC-11 phase out in this production.

10. The company will phaseout the use of CFC-11 in the manufacture of integral skin foam through conversion to water-based systems to the extent possible, with the balance by HCFC-141b as an interim option. The project costs include retroactive funding of the new low-pressure machine purchased at US $43,000, a 5-component blender (US $85,000) as well as reclamping of 50 molds (US $10,000). Other costs include trials (US $10,000), training and technology transfer (US $20,000) and contingency (US $12,500). Incremental operating cost for two years is US $13,400 which includes a 30% "correction factor" for evaporative losses of CFC-11.

Rigid Foam

11. All the rigid foam enterprises started production between the years 1978 and 1995. Most of them are currently using low pressure machines of various makes, capacities and ages, or no baseline equipment at all (Sahakij Comos L.P.). In most projects it is proposed to replace the existing low-pressure machines with high pressure ones, while the high-pressure machines will be retrofitted. All the enterprises will convert to interim use of HCFC-141b with a likely permanent solution being water-based formulations. The length of the transitional period is not indicated. The cost of 10 % increase in foam density is included in the operational costs.

Justification for the Use of HCFC-141b

12. UNDP indicates in the project documents that:

(a) The enterprises have chosen to employ HCFC-141b as an interim solution. The only viable alternative to HCFC-141b at the current time is water-based formulations. However, with the water-based formulations, a density increases of 20-30% would be required for safe processing, and the insulation value would suffer 35-40%. The result would be a product that could not be sold commercially. Pentane based systems are far too costly for this application. Although water-based systems are improving, HCFC-141b will probably be necessary until HFC based systems are available in the market.

(b) The enterprises have been informed of the available technical options. They have also been informed that HCFC's are transitional substances, and that under present Multilateral Fund rules, they will not be able to seek additional funding from the Multilateral Fund later to convert to zero-ODP technologies.

(e) Conversion from CFC-11 to HCFC-141b technology in the manufacture of rigid polyurethane foam at Ohm Intertrade L.P.

13. Ohm Intertrade L.P. is in the business of sprayfoam boat insulation. It uses one locally made low pressure sprayfoam machine (1994). The company will phase out the use of the 21 tonnes per year of CFC-11 by converting to HCFC-141b foam system as an interim solution, until full development of the ODS-free water-blown technology. The costs will cover the replacement of the low-pressure machine by a high pressure one at US$ 35,000. The replaced equipment will be destroyed. Production trials, training, and technology transfer costs amount to US$ 20,000. The incremental operating costs for two years amount to US$ 109,600, related to an increased in density of 10 %.

(f) Conversion from CFC-11 to HCFC-141b technology in the manufacture of rigid polyurethane foam at Sahakij Comos L.P.

14. Sahakij Comos L.P. manufactures insulated polyurethane containers, as well as polyethylene bins and containers, and other plastic products. The company has no baseline equipment. It will phaseout the use of CFC-11 through conversion to HCFC-141b foam system as an interim solution, until the ODS-free water blown technology becomes fully developed. Capital costs include the purchase of a high-pressure dispenser with 50 % enterprise contribution at US$ 70,000, and a 2 component premixer at US$ 15,000. Training and technical assistance (TTA), namely training, technology transfer and trials amount to US$ 35,000. Contingency costs amount to US$ 12,000. The project also includes incremental operating costs (US$ 179,000) for two years. A density increases of about 10 % is necessary for safe production with HCFC-141b.

(g) Conversion from CFC-11 to HCFC-141b technology in the manufacture of rigid polyurethane foam at Suwan Polymer L.P.

15. Suwan Polymer L.P. is a rigid sprayfoam contractor for the shipping and boating industry, buoys, roof insulation, poultry farm insulation, etc. The company currently operates with 6 Gusmer FF1600 sprayfoam dispensers (all from 1992, except two which are from 7-1995 and 1998), one Gusmer H 2000 (1993), and one Gusmer H-II (1992) spray foam dispensers. The two Gusmer FF1600 dispensers purchased after mid-1995 are not eligible for any action under this program. It will phaseout the use of CFC-11 by switching to the use of HCFC-141b as an interim solution, with a likely permanent solution being water-based formulations. Capital costs include the retrofit of the 4 Gusmer FF1600 eligible at US$ 20,000, the retrofit of the Gusmer H-2000 dispenser at US$ 10,000, and the replacement of one Gusmer H-II dispenser at US$ 30,000. It is not clear is the dispensers in question are low- or high-pressure ones. Training and technical assistance (TTA), namely training, technology transfer and trials, and safety amount to US$ 20,000. Contingencies amount to US$ 8,000. The project also includes incremental operating costs (US$ 264,500) for two years. A 10 % density increase is expected.

(h) Conversion from CFC-11 to HCFC-141b technology in the manufacture of rigid polyurethane foam at Urethane

16. Urethane is a rigid sprayfoam contractor for the shipping and boating industry. The company currently uses two low pressure machines, Hennecke (1976) and a locally made one (1988). It will phaseout the use of CFC-11 through conversion to HCFC-141b foam system as an interim solution, until the ODS-free water blown technology becomes fully developed. The project capital costs cover the replacement of the two low pressure machines by high pressure dispensers at US$ 50,000) and the purchase of a premixer at US$ 15,000. Training and technical assistance (TTA), namely training, technology transfer and trials amount to US$ 15,000. Contingencies amount to US$ 8,000. The project also includes incremental operating costs (US$ 25,000) for two years. A 10 % density increase is necessary for the lower density product.

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

COMMENTS

1. Sector consumption data: The sector consumption which is based on 1991 data is too old and may not be relevant in the consideration of the relative impact of approved projects on the country's ODS phase out.

2. Following discussions with UNDP certain inadequacies relating to project presentation such as the project titles and project monitoring milestones were rectified. The affected projects have been revised and resubmitted.

Flexible Slabstock Boxfoam

Chongcharoen

3. The project costs were agreed. The cost of trials was agreed as US $5,000 instead of US $10,000 originally budgeted.

Integral Skin Foam

J. S. Industry Co, World Plaster/Europlan Furniture Co.

4. It was agreed that the multi-component premixer in each of the projects should be costed at US $44,000 instead of US $85,000 based on quotations received from some major equipment suppliers.

5. Since the calculation of incremental operational costs for both projects include a correction factor for evaporative losses (10% for J. S. Industry and 30% for World Plaster), the level of these costs will be subject to the outcome of the consideration of this issue at the 26th Meeting.

6. The projects' capital costs were agreed as US $147,000 for J. S. Industry and US $122,400 for World Plaster. In the case of World Plaster UNDP was requested to base the cost of the new equipment as well as trials and technology transfer and training on actual costs incurred by the company. The cost of trials, technology transfer and training were stated to be about US $20,000.

Rigid Foam

7. Incremental capital costs for all the projects were agreed as follows:

	US $
Lohr Trade	22,000
Ohm Intertrade	55,000
Sahakij Comos	121,000
Suwan Polymer	88,000
Urethane	79,200

8. Where applicable it was agreed to include the cost of 7.5% additional foam for increase in density, instead of 10% originally included in the calculations.

9. The incremental operational costs of Lohr Trade, Ohm Intertrade, Suwan Polymer and Urethane were agreed as US $71,095, US $91,350, US $210,370, and US $19,445 respectively. The total project costs for these companies are therefore US $93,095, US $146,350, US $298,370, and US $98,645 respectively.

10. The incremental operational cost calculation for Sahakij Comos included correction factor for evaporative losses of 30%. The level of incremental operational costs will also depend on the outcome of the discussion on the issue.

RECOMMENDATIONS

1. The Fund Secretariat recommends blanket approval of the Chongcharoen, Lohr Trade, Ohm Intertrade and Suwan Polymer projects with the funding levels and associated support costs as indicated in the table below.

Project Title	Project Cost US $	Support Cost US $	Implementing Agency
Conversion from CFC-11 to methylene chloride/LIA technology in the manufacture of flexible polyurethane boxfoam at P. Chongcharoen	130,500	16,965	UNDP
Conversion from CFC-11 to water based and HCFC-141b technology in the manufacture of polyurethane foam at J. S. Industry Co. Ltd.	Pending		UNDP
Conversion from CFC-11 to water based and HCFC-141b technology in the manufacture of polyurethane foam (flexible molded, integral skin) at World Plaster/Europlan Furniture Co.	Pending		UNDP
Conversion from CFC-11 to HCFC-141b technology in the manufacture of rigid polyurethane foam at Lohr Trade & Consulting PTS Ltd.	93,210	12,117	UNDP
Conversion from CFC-11 to HCFC-141b technology in the manufacture of rigid polyurethane foam at Ohm Intertrade L.P.	146,350	19,026	UNDP

Project Title	Project Cost US $	Support Cost US $	Implementing Agency
Conversion from CFC-11 to HCFC-141b technology in the manufacture of rigid polyurethane foam at Sahakij Comos L.P.	Pending		UNDP
Conversion from CFC-11 to HCFC-141b technology in the manufacture of rigid polyurethane foam at Suwan Polymer L.P.	298,370	38,788	UNDP
Conversion from CFC-11 to HCFC-141b technology in the manufacture of rigid polyurethane foam at Urethane	98,645	12,824	UNDP

PROJECT EVALUATION SHEET
THAILAND

SECTOR: REFRIGERATION ODS use in sector (1995): 739 ODP tonnes

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

Project Titles:
Programme to reduce the usage of CFC-11 and CFC-12 in chiller servicing by replacing CFC- based chillers with HFC-134a and HCFC-123 chillers.

Project Data	**Refrigeration**
	Chiller replacement (E.G.A.T.)
ODS phase-out (ODP tonnes)	488.4
Proposed project duration (months)	48
Incremental capital cost (US $)	4,950,000
- including contingency (%)	N/A
Incremental operational cost (US $)	209,066
Total project cost (US $)	5,159,066
Local ownership (%)	100
Export component (%)	0
Amount requested (US $) {Original}	2,475,000
{Revised}	
Cost effectiveness (US $/kg)	not calculable
National Coordinating Agency	Department of Industrial Works, Ministry of Industry Kingdom of Thailand
Implementing Agency	The World Bank
Technical review completed?	Yes

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

PROJECT DESCRIPTION

Programme to reduce the usage of CFC-11 and CFC-12 in chiller servicing by replacing CFC- based chillers with HFC-134a and HCFC-123 chillers

Background

1. The project was first submitted by the World Bank to the 23rd Executive Committee Meeting in November 1997 at which time the Executive Committee decided:

> "To request the World Bank to consider how innovative funding could be applied to this or a similar project"; and,
>
> "That any project along these lines should be considered in the context of the paper on concessional loans currently being prepared by the World Bank."
>
> **(Decision 23/30)**

2. The project was resubmitted to the 25th Meeting in July 1998 by the World Bank as a pilot project together with the IFC's study on the scope for a non-grant financing facility for ODS phaseout. The 25th Meeting was informed that the Thailand project would involve a revolving loan which would be financed 50 per cent by the Multilateral Fund and 50 per cent by Global Environment Facility (GEF). (See paragraph 108 of the Report of the 25th Meeting of the Executive Committee.)

Description

3. The project proposes to pilot a financing scheme to replace CFC-11 and CFC-12 chillers in Thailand with high-energy efficient chillers using HFC-134a and HCFC-123 as refrigerants.

4. Currently there are about 1,500 CFC-based chillers, which were installed before 1993 after which new CFC-based chillers were no longer available in Thailand. With about 500 kg. of CFC used in each chiller, the total consumption of CFC of these chillers is about 700 MT. With a running time of 12 hours a day and 365 days a year, the chillers have an average annual CFC leakage rate of around 10 percent of CFC, or 50 kg per chiller. Servicing these chillers will consume somewhere around 70 MT of virgin CFC every year. In addition to reducing CFC demand for servicing, the project will recover and recycle the CFC from the replaced chillers to be used for servicing the existing chillers, thus reducing the demand for virgin CFC. Most of these chillers have a remaining lifetime of 10-15 years.

5. The project is to be implemented in two phases. The current proposal covers Phase 1 which requests US $2.5 million from the Multilateral Fund and a co-financing of US $2.5 million from the GEF as start-up fund in the form of an interest-free loan to purchase 24 new CFC-free chillers and to set up a revolving fund to demonstrate the economics and technical/institutional feasibility of the proposed arrangements. The replacement of these 24 chillers will result in direct phaseout of 13.2 ODP tons of CFC. The owners of the buildings

whose chillers will be replaced in Phase 1 will commit themselves to paying back the cost of the new chillers with the energy savings from the new chillers on monthly basis for 10-15 years. If this demonstration phase is successful, an additional US $25 million would be raised by EGAT on commercial terms to replace another 420 chillers.

6. Phase 1 will be evaluated at the end of 3 years according to a set of criteria, and the results will determine the continuation or the termination of the project. However, the project promises to pay back the loan of US $2.5 million in the beginning of the 4th year irrespective of whether the project will go on to the second phase.

7. Co-financing from GEF is made conditional on approval of US $2.5 million from the Multilateral Fund.

SECRETARIAT'S COMMENTS

COMMENTS

Payback period

1. According to the assumptions provided on the economics of the project, the payback period should be between 4.5 to 5 years with an estimated annual return of about 22 percent. Therefore, the estimate of paying back the loan at the beginning of the 4th year may be on the optimistic side.

Nature of funding

2. The proposal is not very clear on whether the Multilateral Fund is requested to provide a loan or grant to be internalized as a loan by EGAT.

3. If this is a loan request, it is necessary to know who is the borrower, EGAT or the Government of Thailand (represented by the Ministry of Industry)?

4. Who provides the guarantee for the loan, the Government of Thailand, another institution in Thailand or the World Bank?

Implications

5. The current policy of the Multilateral Fund on chillers which was adopted at the 12th Meeting in 1993 emphasizes refrigerant containment through better operation and maintenance. One of the major suppliers of chillers estimated the cost of containment to be around US $30,000 per unit. Chiller replacement is recommended only when the significant energy savings from the more efficient CFC free chillers are taken into consideration. The rationale behind this policy is to reduce in the short term the CFC-emission to the extent possible and at the same time let the existing chillers run their full lifetime to reduce the cost of premature retirement.

6. The Thai project is the first project under the Multilateral Fund, which would provide funding to the refrigeration end-users. While this would certainly positively impact on the servicing tail requirement, it may however produce significant demand on the resources of the Fund. Just for the chiller sector in Thailand, the project proposal estimates a funding requirement of about US $90 million. The paper submitted by the Secretariat to the 12th Meeting in 1993 estimated that there were about 8,000 CFC-11 and 2,000 CFC-12 chiller units in operation in Article 5 countries and another 700 units were being installed every year. The 1,500 units in Thailand represent about 10 percent of the total in Article 5 countries.

7. To have a better understanding of how non-grant financing operate within the context of the Multilateral Fund, the Executive Committee may consider to:

(a) Work out the management procedures for handling loan requests as against grant requests.

(b) Request the World Bank to provide an annual update on the status of the project and to draw lessons learned based on the following information.

(i) Whether actual savings are equal or greater than originally anticipated.

(ii) CFCs from old chillers are properly recovered, recycled, and reused in servicing remaining chillers.

(iii) Possible replicability for future initiatives.