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

PROJECT PROPOSALS: NIGERIA

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

Foam

- | | |
|---|------|
| • Phaseout of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Pesaco Chemical Industries Ltd. | UNDP |
| • Phaseout of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Bodefoam Industries Ltd. | UNDP |
| • Phaseout of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Chemical & Wire Manufacturers Nig. Ltd. | UNDP |
| • Phaseout of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Confidence Products and Services Ltd | UNDP |
| • Phaseout of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Marta Industries (Nig.) Ltd | UNDP |
| • Phaseout of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Okin Foam Ltd. | UNDP |
| • Phaseout of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Orbit Foam Ltd. | UNDP |
| • Phaseout of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Group Enterprises Nig. Ltd. (Polly Foam) | UNDP |

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|---|--|------|
| • | Phaseout of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Universal Foam Ltd. | UNDP |
| • | Phaseout of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Yinka-Oba Foam Nig. Ltd. | UNDP |
| • | Phaseout of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Olufoam and Plastic Industries Ltd. | UNDP |

Refrigeration

- | | | |
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| • | Replacement of refrigerant CFC-12 with HFC-134a and foam blowing agent CFC-11 with cyclopentane in the manufacture of domestic refrigeration appliances at A.G. Leventis | UNIDO |
| • | Replacement of CFC-12 with HFC-134a and foam blowing agent CFC-11 with cyclopentane in the manufacture of domestic refrigeration appliances at Kolinton Technical Industries | UNIDO |
| • | Replacement of refrigerant CFC-12 with HFC-134a and foam blowing agent CFC-11 with cyclopentane in the manufacture of domestic refrigeration appliances at New Ltd. | UNIDO |

PROJECT EVALUATION SHEET NIGERIA

SECTOR: FOAM ODS use in sector (1995): 663 ODP tonnes

Sub-sector cost-effectiveness thresholds: Flexible Slabstock US \$6.23/kg

Project Titles:

- (a) Phaseout of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Bodefoam Industries Ltd.
- (b) Phaseout of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Chemical & wire Manufacturers Nig. Ltd.
- (c) Phaseout of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Confidence Products and Services Ltd.
- (d) Phaseout of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Group Enterprises Nig. Ltd (Polly Foam).
- (e) Phaseout of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Marta Industries (Nig.) Ltd.
- (f) Phaseout of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Okin Foam Ltd.

Project Data	Flexible Slabstock					
	Bodefoam	Chemical & Wire	Confidence	Group Enterprises	Marta	Okin
ODS (CFC-11) phase out (ODP tonnes)	35.3	37.1	27.3	26.0	32.0	25.3
Proposed project duration (months)	24	24	24	24	24	24
Incremental capital cost (US\$)	156,200	178,200	161,700	161,700	152,900	156,200
- including contingency (%)	10	10	10	10	10	10
Incremental operational cost (US\$)	(19,800)	(13,700)	(19,400)	(32,800)	(22,300)	(23,000)
Total project cost (US\$) {Original}	151,728	180,893	157,387	140,308	170,554	150,701
{Revised}	136,400	164,500	142,300	128,900	130,600	133,200
Local ownership (%)	100	100	100	100	100	100
Export component (%)	0	0	0	0	0	0
Amount requested (US\$)	136,400	164,500	142,300	128,900	130,600	133,200
Cost effectiveness (US\$/kg.)	3.86	4.43	5.21	4.96	16.978	5.26
National Coordinating Agency	Federal Environmental Protection Agency					
Implementing Agency	UNDP					
Technical review completed?	Yes					
Secretariat's Recommendations						
Amount recommended (US \$)	136,400	164,500	142,300	128,900	130,600	133,200
Project Impact (ODP tonnes)	35.3	37.1	27.3	26	32	25.3
Cost effectiveness (US \$/kg)	3.86	4.43	5.21	4.96	4.08	5.26
Implementing Agency support cost (US\$)	17,732	21,385	18,499	16,757	16,978	17,316
Total cost to Multilateral Fund	154,132	185,885	160,799	145,657	147,578	150,516

PROJECT EVALUATION SHEET NIGERIA

SECTOR: FOAM ODS use in sector (1995): 663 ODP tonnes

Sub-sector cost-effectiveness thresholds: Flexible Slabstock US \$6.23/kg

Project Titles:

- (g) Phaseout of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Olufam and Plastic Industries Ltd.
- (h) Phaseout of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Orbit Foam Ltd.
- (i) Phaseout of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Pesaco Chemical Industries Ltd.
- (j) Phaseout of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Universal Foam Ltd.
- (k) Phaseout of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Yinka-Oba Foam Nig. Ltd.

Project Data	Flexible Slabstock				
	Olufam	Orbit	Pesaco	Universal	Yinka-Oba
ODS (CFC-11) phase out (ODP tonnes)	21.0	25.1	23.4	30.6	30.0
Proposed project duration (months)	24	24	24	24	24
Incremental capital cost (US\$)	117,700	156,200	161,700	156,200	206,800
- including contingency (%)	10	10	10	10	10
Incremental operational cost (US\$)	(33,100)	(21,000)	(35,300)	(20,900)	(21,500)
Total project cost (US\$) {Original}	130,830	144,979	136,000	173,804	179,509
{Revised}	84,600	135,200	126,400	135,300	185,300
Local ownership (%)	100	100	100	100	100
Export component (%)	0	0	0	0	0
Amount requested (US\$)	84,600	135,200	126,400	135,300	185,300
Cost effectiveness (US\$/kg.)	4.03	5.39	5.40	4.42	6.18
National Coordinating Agency	Federal Environmental Protection Agency				
Implementing Agency	UNDP				
Technical review completed?	Yes				
Secretariat's Recommendations					
Amount recommended (US \$)	84,600	135,200	126,400	135,300	185,300
Project Impact (ODP tonnes)	21	25.1	23.4	30.6	30
Cost effectiveness (US \$/kg)	4.03	5.39	5.4	4.42	6.18
Implementing Agency support cost (US\$)	10,998	17,576	16,432	17,589	24,089
Total cost to Multilateral Fund	95.598	152,776	142.832	152.889	209.389

PROJECT DESCRIPTION

- (a) Phaseout of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Bodefoam Industries Ltd.
- (b) Phaseout of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Chemical & wire Manufacturers Nig. Ltd.
- (c) Phaseout of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Confidence Products and Services Ltd.
- (d) Phaseout of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Group Enterprises Nig. Ltd (Polly Foam).
- (e) Phaseout of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Marta Industries (Nig.) Ltd.
- (f) Phaseout of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Okin Foam Ltd.
- (g) Phaseout of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Olufoam and Plastic Industries Ltd.
- (h) Phaseout of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Orbit Foam Ltd.
- (i) Phaseout of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Pesaco Chemical Industries Ltd.
- (j) Phaseout of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Universal Foam Ltd.
- (k) Phaseout of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Yinka-Oba Foam Nig. Ltd.

General

1. CFCs consumption in the Nigerian foam industry was 663 tonnes ODP in 1995. CFC-11 was the dominant substance. Sector consumption data for 1995 indicate that flexible PUF slabstock made up 74 % of CFC consumption.
2. Eleven projects to phase out 278 ODP tonnes of CFC-11 in the flexible foam sub-sector have been submitted to the 26th Meeting. Fourteen projects costing about US \$2.36 million have already been approved to phase out 520 tonnes of CFC in the country, bringing the total amount of CFC to be phased in the foam sector to 798 tonnes. UNDP indicates that approval of these projects will result in the elimination of the CFC-11 by the end of 1999 and will help Nigeria meet its obligations with the Montreal Protocol.
3. No consumption data have been reported for 1996 and 1997 but the 1995 data indicate a total consumption of 1,536 tonnes.
4. The eleven enterprises are all 100% Nigerian owned. They produce flexible slabstock foam for the manufacture of mattresses and other furniture applications. One company (Chemical and Wire) operates a conventional foaming unit, two companies (Olufoam and Marta Industries) operate boxfoams, the rest have one maxfoam line each except Yinka-Oba which has a boxfoam in addition to the maxfoam.

5. Two other companies operate only boxfoams. All enterprises started production of foams before July 1995.

6. Production at all these companies is to be converted to methylene chloride technology. The conversion costs of all the companies include installation of the enclosure and upgrade of ventilation system of the production lines and curing areas, the installation of a methylene chloride storage and metering system, the installation of a storage and metering system for the softening additive, and electrical control system. The project costs vary between US\$ 149,000 and US\$ 185,000. All the projects include incremental operating savings, which range between US\$ 9,846 and US\$ 33,400.

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

COMMENTS

1. Inadequacies identified in the original project documents, including inappropriately defined project monitoring milestones, insufficient baseline information on equipment, process, and product lines and on replaced equipment to be destroyed or rendered unusable, were subsequently rectified by UNDP and the project documents revised.

2. The amounts of US \$10,000 – US \$15,000 which had been allocated for electrical control systems in each project were considered ineligible incremental capital cost, since these should be part of the equipment modification cost. However, it was agreed to include the amounts of US \$5,000 and US \$8,000 for safety equipment for boxfoam and conventional maxfoam units, respectively.

3. In view of the number of projects involved the amount of US \$10,000 was agreed as the cost of technology transfer and training of each project instead of US \$15,000 included in each project. The trial costs were agreed as US \$ 10,000 – US \$15,000 depending on the volume of output, except for Yinka-Oba with two production facilities, which should be US \$20,000.

4. For Marta Industries, Olufam and Universal Industries for which some aspects of the incremental cost of equipment modifications were considered to be ineligible, such costs were revised following discussions of the projects.

MARTA INDUSTRIES

5. The company currently operates two boxfoam units which it intends to replace with a maxfoam unit at its own expense. It was agreed that the eligible cost of equipment modifications should be based on its current baseline equipment instead of the planned maxfoam unit. Therefore, the cost of the machine enclosure should be US \$30,000 per boxfoam unit for a total of US \$60,000, instead of the US \$80,000 originally budgeted for this item.

OLUFOAM AND PLASTIC INDUSTRIES

6. Olufoam also currently operates one boxfoam unit which it will replace with a maxfoam unit at its own cost. Similarly, the cost of machine enclosure was based on the boxfoam unit at US \$30,000 instead of US \$70,000 as originally indicated in the project.

UNIVERSAL FOAM LTD.

7. The company operates a Viking 375 maxfoam unit similar to other companies in the group. As the company's situation was similar to the others it was agreed the cost of machine enclosure should be US \$70,000 as in the other projects, instead of US \$86,000 as originally budgeted.

RECOMMENDATIONS

The Fund Secretariat recommends blanket approval of the eleven projects (Bode Foam, Chemical and Wire Manufacturers, Confidence Products, Group Enterprises, Marta Industries, Okin Foam, Olufoam, Orbit Foam, Pesaco, Universal Foam and Yinka-Oba Foam) with the level of funding and associated support costs as indicated in the table below:

Project Title	Project Cost US \$	Support Cost US \$	Implementing Agency
Phaseout of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Bodefoam Industries Ltd.	136,400	17,732	UNDP
Phaseout of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Chemical & Wire Manufacturers Nig. Ltd.	164,500	21,385	UNDP
Phaseout of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Confidence Products and Services Ltd.	142,300	18,499	UNDP
Phaseout of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Group Enterprises Nig. Ltd (Polly Foam).	128,900	16,757	UNDP
Phaseout of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Marta Industries (Nig.) Ltd.	130,600	16,978	UNDP
Phaseout of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Okin Foam Ltd.	133,200	17,316	UNDP
Phaseout of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Olufoam and Plastic Industries Ltd.	84,600	10,998	UNDP
Phaseout of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Orbit Foam Ltd.	135,200	17,576	UNDP
Phaseout of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Pesaco Chemical Industries Ltd.	126,400	16,432	UNDP

Project Title	Project Cost US \$	Support Cost US \$	Implementing Agency
Phaseout of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Universal Foam Ltd.	135,300	17,589	UNDP
Phaseout of CFC-11 by conversion to methylene chloride in the manufacture of flexible polyurethane foam at Yinka-Oba Foam Nig. Ltd.	185,300	24,089	UNDP

PROJECT EVALUATION SHEET NIGERIA

SECTOR: REFRIGERATION ODS use in sector (1996): 708 ODP tonnes

Sub-sector cost-effectiveness thresholds: Domestic US \$13.76/kg

Project Titles:

- (a) Replacement of Refrigerant CFC-12 with HFC-134a and foam blowing agent CFC-11 with cyclopentane, in the manufacture of domestic refrigeration appliances at NEW Ltd.
- (b) Replacement of Refrigerant CFC-12 with HFC-134a and foam blowing agent CFC-11 with cyclopentane, in the manufacture of domestic refrigeration appliances at A.G. Leventis
- (c) Replacement of Refrigerant CFC-12 with HFC-134a and foam blowing agent CFC-11 with cyclopentane, in the manufacture of domestic refrigeration appliances at Kolinton Technical Industries

Project Data	Domestic		
	NEW	Leventis	Kolinton
ODS phase-out (ODP tonnes)	20.9	19.1	39.5
Proposed project duration (months)	24	24	18
Incremental capital cost (US \$)	361,770	334,070	595,848
- including contingency (%)	10	10	10
Incremental operational cost (US \$)	0	0	78,500
Total project cost (US \$)	361,770	334,070	674,348
Local ownership (%)	100	57	100
Export component (%)	0	0	0
Amount requested (US \$) {Original}	384,870	199,315	716,324
{Revised}	361,770	190,420	674,348
Cost effectiveness (US \$/kg)	13.76	10.43	13.76
National Coordinating Agency	Federal Environment Protection Agency (FEPA)		
Implementing Agency	UNIDO		
Technical review completed?	Yes		

Secretariat's Recommendations:			
Amount recommended (US \$)	361,770	190,420	674,348
Project impact (ODP tonnes)	20.9	19.1	39.5
Cost effectiveness (US \$/kg)	13.76	10.43	13.76
Implementing Agency support cost (US \$)	47,030	24,755	87,665
Total cost to Multilateral Fund (US \$)	408,800	215,175	762,013

PROJECT DESCRIPTION

- (a) **Replacement of Refrigerant CFC-12 with HFC-134a and foam blowing agent CFC-11 with cyclopentane, in the manufacture of domestic refrigeration appliances at NEW Ltd.**
- (b) **Replacement of Refrigerant CFC-12 with HFC-134a and foam blowing agent CFC-11 with cyclopentane, in the manufacture of domestic refrigeration appliances at A.G. Leventis**
- (c) **Replacement of Refrigerant CFC-12 with HFC-134a and foam blowing agent CFC-11 with cyclopentane, in the manufacture of domestic refrigeration appliances at Kolinton Technical Industries**

1. Total consumption of ODS in Nigeria is around 2,000 MT per year for the last five years. It has been estimated that in 1996, 272 MT of CFC-11 was used in the production of insulation foams in the refrigeration sector, while about 436 MT of CFC-12 was used in the production of new refrigeration equipment as well as in servicing existing appliances. There are seven enterprises manufacturing domestic refrigeration appliances in Nigeria. Two projects were approved for the phase-out of 134 ODP tonnes in two major domestic refrigeration companies in Nigeria.

2. Implementation of the three projects submitted to the 26th Executive Committee will eliminate the use of 79.5 ODP tonnes in the domestic refrigeration sub-sector which will assist Nigeria according to UNIDO in meeting its obligations under the Montreal Protocol.

- (a) **Replacement of Refrigerant CFC-12 with HFC-134a and foam blowing agent CFC-11 with cyclopentane, in the manufacture of domestic refrigeration appliances at NEW Ltd.**

3. This proposal is to phase out 20.9 ODP tonnes of CFCs used in foam and refrigerant operations.

4. Nigeria Engineering Works (NEW) Ltd. was established in 1966. The company manufactures domestic refrigerators, freezers, and other domestic appliances. 13,700 refrigerators and freezers were produced in 1997.

5. NEW has a refrigeration service section. This section is not considered for conversion but will be considered during the recovery and recycling project at a country level.

6. The elimination of ODS in the production of refrigerators and freezers at NEW is proposed through the conversion of CFC-12 to HFC-134a as refrigerant, and CFC-11 to cyclopentane as a blowing agent for the polyurethane foam.

7. For the refrigeration system, four production evacuation and charging boards are to be replaced by new boards suitable for HFC 134a. Five existing vacuum pumps can be retrofitted after they are cleaned. Two existing leak detectors are to be replaced with one HFC-134a leak detector. The cost of performance test equipment is to be covered by the company.

8. The foam system requires a cyclopentane storage tank system, one new high pressure foaming machine with additional mixing head to replace the existing low pressure PUR foaming machine. One pre-mixing station suitable for cyclopentane operations is requested. Modifications to the foaming fixtures, jigs, and all machinery and explosion-proofing for all equipment that will come in contact with cyclopentane, or the cyclopentane/polyol mixture is required. Foaming jigs and plugs must be grounded. The necessary safety equipment is included under the requested funding.

9. The company will cover part of the safety cost and the incremental operating cost to meet the threshold value of cost effectiveness.

10. The company agrees that the old equipment or components that are replaced by new ones will have to be destroyed or rendered unusable. A certification of the destruction will be issued by an independent international inspection agency.

(b) Replacement of Refrigerant CFC-12 with HFC-134a and foam blowing agent CFC-11 with cyclopentane, in the manufacture of domestic refrigeration appliances at A.G. Leventis

11. A.G. Leventis which was established in 1968 is 57% Nigerian owned. The company manufactures domestic refrigerators, freezers, and HCFC-22 based window/split unit air conditioners and produced 13,000 refrigerators in 1997.

12. A.G. Leventis has a refrigeration service shop, which services about 2000 to 5000 refrigerators and freezers per year. The refrigeration service will not be considered in this proposal.

13. The elimination of ODS in the production of refrigerators and freezers at A.G. Leventis is proposed through the conversion of CFC-12 to HFC-134a as refrigerant, and CFC-11 to cyclopentane as a blowing agent for polyurethane foam.

14. The cost of conversion of the refrigeration system will be borne by the company, including new laboratory test facilities.

15. The foam system requires a cyclopentane storage tank with necessary piping and safety systems, one new high pressure foaming machine to replace the two low pressure PUR foaming machines. The standard mix head will be used for cabinet foaming, however, one more mix head is required for additional door foaming operation. One pre-mixing station is requested. Modifications to the foaming fixtures, jigs, and all machinery and explosion-proofing for all equipment that will come in contact with cyclopentane, or the cyclopentane/polyol mixture is required. The necessary safety equipment will be provided under the requested funding.

16. The company will cover the incremental operating cost to meet the threshold value of cost effectiveness.

(c) Replacement of Refrigerant CFC-12 with HFC-134a and foam blowing agent CFC-11 with cyclopentane, in the manufacture of domestic refrigeration appliances at Kolinton Technical Industries

17. Kolinton Technical Industries was established in 1968. It is 100% Nigerian owned, and produces domestic refrigerators, freezers, and other domestic appliances. The total installed production capacity is 70,000 units of household refrigerators and freezers per year. 25,000 refrigerators and freezers were produced in 1997.

18. Kolinton has two refrigeration service shops, which serviced about 6000 refrigerators and freezers in 1996. The refrigeration service will not be considered for conversion in this proposal.

19. Modifications to the refrigeration system include two new charging boards. Twelve existing vacuum pumps can be retrofitted after cleaning. One HFC-134a leak detector is requested to replace the two existing leak detectors. New test equipment is required to test the new refrigeration system.

20. The foam system requires a cyclopentane storage tank system. One new high pressure foaming machine with two mixing heads is requested to replace the existing two low pressure machines. One pre-mixing station is requested for cyclopentane operations. The necessary safety equipment is included in the proposal.

21. Incremental operating costs are requested for six months.

22. A list of equipment to be replaced and destroyed or rendered unusable will be prepared for the three projects after the completion of the bidding process for new equipment. The list will be attached to the completion reports with relevant certification of the undertaken destruction actions.

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

COMMENTS

1. The Secretariat discussed with UNIDO the incremental costs requested in the three proposals. For low pressure foaming machines nearing the end of their useful lifetime (two in Kolinton, one in New Ltd.), the incremental cost for replacement with new high-pressure dispensers were reduced in accordance with Decision 25/48.

2. The request for funding of additional mixing head in foaming operations in Leventis was recognized as ineligible. The capital cost was adjusted accordingly.

RECOMMENDATIONS

The Fund Secretariat recommends blanket approval of the three projects with the funding level and associated support cost as indicated below.

Project Title	Project Cost US \$	Support Cost US \$	Implementing Agency
Replacement of Refrigerant CFC-12 with HFC-134a and foam blowing agent CFC-11 with cyclopentane, in the manufacture of domestic refrigeration appliances at NEW Ltd.	361,770	47,030	UNIDO
Replacement of Refrigerant CFC-12 with HFC-134a and foam blowing agent CFC-11 with cyclopentane, in the manufacture of domestic refrigeration appliances at A.G. Leventis	190,420	24,755	UNIDO
Replacement of Refrigerant CFC-12 with HFC-134a and foam blowing agent CFC-11 with cyclopentane, in the manufacture of domestic refrigeration appliances at Kolinton Technical Industries	674,348	87,665	UNIDO