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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Thirty-fifth Meeting
Montreal, 5-7 December 2001

# PROJECT PROPOSALS: IRAN

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

Foam:

| | |
|---|---|
| • Conversion of the use of CFC to LCD in the manufacture of flexible foam at Esfanj Jajerood foam company | Germany |
| • Phasing out of ODS in the manufacture of flexible slab stock foam through the use of liquid CO2 blowing technology at Abre Shomal Co. | UNIDO |
| • Conversion from CFC-11 to water-blown technology in the manufacture of flexible molded polyurethane foam at Sandalisazi Esfanje Ghalebi Iran | UNDP |

Refrigeration:

| | |
|---|---|
| • Conversion from CFC-11 to HCFC-141b technology and from CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at Alireza Abdolrezazadeh Co. | UNDP |
| • Conversion from CFC-11 to HCFC-141b technology and from CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at Havasaz Manufacturing & Industrial Co. | UNDP |
| • Conversion from CFC-11 to HCFC-141b technology and from CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at Sanaye Boroudati Maleki | UNDP |

| | |
|---|---|
| • Conversion from CFC-11 to HCFC-141b technology and from CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at Sarma Fan Co. | UNDP |
| • Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at the Abbaspour Company, Iran | UNIDO |
| • Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at the Darvish Mohamad Nazari company, Iran (Jahan Nama) | UNIDO |
| • Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of domestic and commercial refrigeration equipment at the Alborz Neishabour | UNIDO |
| • Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of domestic refrigeration equipment at the Ariz Pooyaye Sanat, Iran (Ariz Co.) | UNIDO |
| • Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of domestic refrigeration equipment at the Borna Sanat Arak | UNIDO |
| • Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of domestic refrigeration equipment at the Yaghoubali Bazdid Vahdati, Iran (Isun Co.) | UNIDO |
| • Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of commecial refrigeration equipment at the Sard Va Garm Iran | UNIDO |
| • Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at the Sardintous Co. | UNIDO |
| • Conversion from CFC-11 to HCF-141b and CFC-12 to HFC-134a technology in the manufacture of domestic and commercial refrigeration equipment at the Bouran Saz Karaj, Iran (Kohsar Co.) | UNIDO |
| • Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of domestic and commercial refrigeration equipment at the Moradi company | UNIDO |
| • Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at the Sherkate Taavoni 435, Iran (Khorsandi Co) | UNIDO |
| • Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at the Sarma Gostar Co. | UNIDO |
| • Conversion from CFC-11 to HCFC-141b technology and from CFC-12 to HFC-134a technology in the manufacture of domestic and commercial refrigeration equipment at Sain Electric Co. | UNDP |
| • Conversion from CFC-11 to HCFC-141b technology and from CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment and rigid foam at Mehran Sard Co. | UNDP |

| | |
|---|---|
| • Conversion from CFC-11 to HCFC-141b technology and from CFC-12 to HFC-134a technology in the manufacture of domestic and commercial refrigeration equipment at Ghotb Jonoub Industrial Group | UNDP |
| • Conversion from CFC-11 to HCFC-141b technology and from CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment and rigid foam at Tehran Sardsazi Industrial Co. | UNDP |
| • Conversion from CFC-11 to HCFC-141b technology and from CFC-12 to HFC-134a technology in the manufacture of domestic refrigerators at Garm Iran Co. | UNDP |
| • Conversion from CFC-11 to HCFC-141b technology and from CFC-12 to HFC-134a technology in the manufacture of domestic refrigerators at Parto Shiva Sanaat | UNDP |

# PROJECT EVALUATION SHEET
# IRAN

SECTOR: Foam ODS use in sector (2000): 1,520 ODP tonnes

Sub-sector cost-effectiveness thresholds: Flexible US $ 6.23 /kg
Integral skin US $ 16.86 /kg

***Project Titles***:

(a) Conversion of the use of CFC to LCD in the manufacture of flexible foam at Esfanj Jajerood foam company
(b) Phasing out of ODS in the manufacture of flexible slab stock foam through the use of liquid CO2 blowing technology at Abre Shomal Co.
(c) Conversion from CFC-11 to water-blown technology in the manufacture of flexible molded polyurethane foam at Sandalisazi Esfanje Ghalebi Iran

| **Project Data** | **Flexible slabstock** | **Flexible slabstock** | **Integral skin** |
|---|---|---|---|
| | **Esfanj** | **Abre Shomal** | **Sandalisazi** |
| Enterprise consumption (ODP tonnes) | | 90.40 | 22.40 |
| Project impact (ODP tonnes) | 89.00 | 90.40 | 22.40 |
| Project duration (months) | 16 | 18 | 30 |
| Initial amount requested (US $) | 499,299 | 552,148 | 199,820 |
| Final project cost (US $): | | | |
| Incremental capital cost (a) | 618,000 | 600,000 | 72,000 |
| Contingency cost (b) | 56,800 | 47,500 | 7,200 |
| Incremental operating cost (c) | -175,501 | -145,352 | 109,620 |
| Total project cost (a+b+c) | 499,299 | 502,148 | 188,820 |
| Local ownership (%) | 100% | 100% | 100% |
| Export component (%) | 0% | 0% | 0% |
| **Amount requested (US $)** | 499,299 | 502,148 | 188,820 |
| Cost effectiveness (US $/kg.) | 5.63 | 5.55 | 8.43 |
| Counterpart funding confirmed? | | Yes | |
| National coordinating agency | | Department of Environment | |
| Implementing agency | Germany | UNIDO | UNDP |

| ***Secretariat's Recommendations*** | | | |
|---|---|---|---|
| Amount recommended (US $) | | | 188,820 |
| Project impact (ODP tonnes) | | | 22.40 |
| Cost effectiveness (US $/kg) | | | 8.43 |
| Implementing agency support cost (US $) | | | 24,547 |
| Total cost to Multilateral Fund (US $) | | | 213,367 |

## PROJECT DESCRIPTION

Sector background

| | |
|---|---|
| - Latest available total ODS consumption (2000) | 5,693.30 ODP tonnes |
| - Baseline consumption of Annex A Group I substances (CFCs) | 4,571.70 ODP tonnes |
| - Consumption of Annex A Group I substances for the year 2000 | 4,156.50 ODP tonnes |
| - Baseline consumption of CFCs in foam sector | 2,400.00 ODP tonnes |
| - Consumption of CFCs in foam sector in 2000 | 1,520.00 ODP tonnes |
| - Funds approved for investment projects in foam sector as of end of July 2001 | US $ 8,429,179 |
| - Quantity of CFC to be phased out in investment projects in foam sector as of end of July 2001 | 1,986.10 ODP tonnes |
| - Quantity of CFC phased out from approved investment projects in the foam sector as of end of July 2001 (including CFC phased out in projects not yet reported as completed) | 1,200.00 ODP tonnes |
| - Quantity of CFCs in approved ongoing investment projects in the foam sector as of end of July 2001 | 786.1 ODP tonnes |
| - Quantity of CFCs remaining to be phased out in the foam sector as of end of July 2001 | 733.9 ODP tonnes |
| - Quantity of CFCs to be phased out in investment projects being submitted to the 35th ExCom (December 2001). | 201.8 ODP tonnes |
| - Quantity of CFCs remaining to be phased out in the foam sector by the end of 2001 | 532.1 ODP tonnes |

### Flexible Slabstock Foam

Abre Shomal and Esfanj Jajerood

1. Abre Shomal and Esfanj Jajerood consumed 90.4 tonnes and 89 tonnes of CFC-11 in 2000 respectively in the production of slabstock foam for mattresses and furniture applications using a 1975 PLA-MA and a 1987 locally-made continuos block foam machines respectively. The companies will convert their production to the use of liquid carbon dioxide technology. The total incremental capital cost of conversion for Abre Shomal including 10% contingency amounts to US $697,500 which includes US $330,000 for the LCD system, US $205,000 for other aincillary facilities, US $50,000 as technology license fee and US $45,000 for trials, technology transfer and training. The total incremental capital cost of Jajerood amounts to US $674,000, including US $478,000 for LCD system with ancillary facilities, US $50,000 for technology transfer fee and US $90,000 for trials, training and technology support. Incremental operating savings of US $145,352 and US $175,501 are realized in the Abre Shomal and Esfanj Jajerood projects respectively. The total project costs are US $552,148 and US $499,299

respectively. The Abre Shomal project is expected to be completed in 1 year and 6 months, while Esfanj Jajerood will be completed in 1 year and 4 months.

**Integral Skin**

Sandalisazi Estafaj-E-Ghalebi Iran

2. Sandalisazi consumed 22.4 ODP tonnes of CFC-11 in 2000. The enterprise manufactures flexible polyurethane moulded foam for automotive and furniture applications. It currently operates two low-pressure dispensers installed in 1975 and 1994. The enterprise will phase out the use of CFC-11 by converting to water-blown technology. The total incremental capital cost of the project is US $ 82,000, covering the retrofit of the existing low-pressure dispensers, mould heating system, mould upgradation, trials, technical assistance and training. Incremental operating cost of US $109,620 is requested. The project is expected to be completed in 2 years, and 6 months.

## SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

### COMMENTS

**Flexible Slabstock Foam**

LCD Technology

Abre Shomal (UNIDO) , Esfanj Jajerood (Germany - GTZ)

Technology license fee

3. The Secretariat discussed with the implementing agencies (GTZ and UNIDO) the issue of continued payment by the Multilateral Fund of the technology license fee given that over US $2.5 million has already been allocated for payment of the use of the technology. The consensus was that the license fee could be eliminated within the context of a review of the technology as well as the guidelines which were adopted on a trial basis. The issue is elaborated in the Overview of issues identified during project review.

4. The breakdown of the costs of the projects is as follows:

| Project | Incremental Capital Cost US $ | Incremental Operating Savings US $ | Total Project Cost US $ | License Fee US $ | Grant Total US $ |
|---|---|---|---|---|---|
| Abre Shomal | 649,500 | (145,352) | **502,148** | 50,000 | 552,148 |
| Esfanj Jajerood | 624,800 | (175,501) | **449,299** | 50,000 | 499,299 |

5. The projects are submitted for individual consideration on account of the issue raised above.

**Integral Skin**

6. The Secretariat and UNDP agreed on the cost of the Sandalisazi project as US $188,820 following review of the costs of trials and technical assistance.

## RECOMMENDATIONS

7. The Fund Secretariat recommends blanked approval of the Sandalisazi Esfanje Ghalebi Iran project with the level of funding and associated support cost as indicated below

| | Project Title | Project Funding (US$) | Support Cost (US$) | Implementing Agency |
|---|---|---|---|---|
| (c) | Conversion from CFC-11 to water-blown technology in the manufacture of flexible molded polyurethane foam at Sandalisazi Esfanje Ghalebi Iran | 188,820 | 24,547 | UNDP |

# PROJECT EVALUATION SHEET
# IRAN

SECTOR: Refrigeration ODS use in sector (2000): 5,693 ODP tonnes

Sub-sector cost-effectiveness thresholds: Commercial US $15.21/kg
Domestic US $13.76/kg
Rigid Foam US $7.83/kg

***Project Titles***:

(a) Conversion from CFC-11 to HCFC-141b technology and from CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at Alireza Abdolrezazadeh Co.
(b) Conversion from CFC-11 to HCFC-141b technology and from CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at Havasaz Manufacturing & Industrial Co.
(c) Conversion from CFC-11 to HCFC-141b technology and from CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at Sanaye Boroudati Maleki
(d) Conversion from CFC-11 to HCFC-141b technology and from CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at Sarma Fan Co.

| **Project Data** | **Commercial** | **Domestic/ Rigid Foam** | **Commercial/Domestic/ Rigid Foam** | |
|---|---|---|---|---|
| | **Alireza** | **Havasaz** | **Sanaye Boroudati** | **Sarma Fan** |
| Enterprise consumption (ODP tonnes) | 8.12 | 26.21 | 19.03 | 22.04 |
| Project impact (ODP tonnes) | 7.67 | 24.50 | 17.88 | 20.84 |
| Project duration (months) | 30 | 30 | 30 | 30 |
| Initial amount requested (US $) | 116,646 | 252,294 | 215,052 | 270,824 |
| Final project cost (US $): | | | | |
| Incremental capital cost (a) | 110,000 | 225,500 | 201,000 | 214,000 |
| Contingency cost (b) | 11,000 | 22,550 | 20,100 | 21,400 |
| Incremental operating cost (c) | 66,280 | 45,129 | 65,613 | 80,817 |
| Total project cost (a+b+c) | 187,280 | 293,179 | 286,713 | 316,217 |
| Local ownership (%) | 100% | 100% | 100% | 100% |
| Export component (%) | 0% | 0% | 0% | 0% |
| **Amount requested (US $)** | 116,646 | 252,294 | 215,052 | 267,075 |
| Cost effectiveness (US $/kg.) | 15.21 | 10.30 | 12.03 | 12.82 |
| Counterpart funding confirmed? | Yes | Yes | Yes | Yes |
| National coordinating agency | Ozone Layer Protection Center | Department of Environment | | |
| Implementing agency | UNDP | | | |

| ***Secretariat's Recommendations*** | | | | |
|---|---|---|---|---|
| Amount recommended (US $) | 116,646 | 252,294 | 215,052 | 267,075 |
| Project impact (ODP tonnes) | 7.67 | 24.50 | 17.88 | 20.84 |
| Cost effectiveness (US $/kg) | 15.21 | 10.30 | 12.03 | 12.82 |
| Implementing agency support cost (US $) | 15,164 | 32,798 | 27,957 | 34,720 |
| Total cost to Multilateral Fund (US $) | 131,810 | 285,092 | 243,009 | 301,795 |

# PROJECT EVALUATION SHEET
# IRAN

SECTOR: Refrigeration ODS use in sector (2000): 5,693 ODP tonnes

Sub-sector cost-effectiveness thresholds: Commercial US $15.21/kg
Domestic US $13.76/kg
Rigid Foam US $7.83/kg

***Project Titles***:

(e) Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at the Abbaspour Company, Iran
(f) Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at the Darvish Mohamad Nazari company, Iran (Jahan Nama)
(g) Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of domestic and commercial refrigeration equipment at the Alborz Neishabour
(h) Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of domestic refrigeration equipment at the Ariz Pooyaye Sanat, Iran (Ariz Co.)
(i) Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of domestic refrigeration equipment at the Borna Sanat Arak
(j) Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of domestic refrigeration equipment at the Yaghoubali Bazdid Vahdati, Iran (Isun Co.)

| **Project Data** | **Commercial** | | **Commercial/ Domestic** | **Domestic** | | |
|---|---|---|---|---|---|---|
| | **Abbaspour** | **Jahan Nama** | **Alborz Neishabour** | **Ariz** | **Borna Sanat Arak** | **Isun** |
| Enterprise consumption (ODP tonnes) | 10.14 | 9.67 | 16.61 | 7.87 | 8.31 | 10.85 |
| Project impact (ODP tonnes) | 9.73 | 9.28 | 15.96 | 7.57 | 8.00 | 10.47 |
| Project duration (months) | 28 | 28 | 28 | 28 | 28 | 28 |
| Initial amount requested (US $) | 144,506 | 139,160 | 200,669 | 86,365 | 108,238 | 131,605 |
| Final project cost (US $): | | | | | | |
| Incremental capital cost (a) | 114,000 | 114,000 | 157,500 | 72,000 | 97,000 | 114,000 |
| Contingency cost (b) | 10,400 | 5,200 | 14,750 | 6,200 | 2,350 | 5,200 |
| Incremental operating cost (c) | 19,806 | 20,770 | 17,419 | 8,165 | 8,888 | 12,405 |
| Total project cost (a+b+c) | 144,206 | 139,970 | 189,669 | 86,365 | 108,238 | 131,605 |
| Local ownership (%) | 100% | 100% | 100% | 100% | 100% | 100% |
| Export component (%) | 0% | 0% | 0% | 0% | 0% | 0% |
| **Amount requested (US $)** | 144,206 | 139,970 | 189,669 | 86,365 | 108,238 | 131,605 |
| Cost effectiveness (US $/kg.) | 14.83 | 15.08 | 11.88 | 11.40 | 13.52 | 12.56 |
| Counterpart funding confirmed? | Yes | Yes | Yes | Yes | Yes | Yes |
| National coordinating agency | Department of Environment | | | | | |
| Implementing agency | UNIDO | | | | | |

| ***Secretariat's Recommendations*** | | | | | | |
|---|---|---|---|---|---|---|
| Amount recommended (US $) | 144,206 | 139,970 | 189,669 | 86,365 | 108,238 | 131,605 |
| Project impact (ODP tonnes) | 9.73 | 9.28 | 15.96 | 7.57 | 8.00 | 10.47 |
| Cost effectiveness (US $/kg) | 14.83 | 15.08 | 11.88 | 11.40 | 13.52 | 12.56 |
| Implementing agency support cost (US $) | 18,747 | 18,196 | 24,657 | 11,227 | 14,071 | 17,109 |
| Total cost to Multilateral Fund (US $) | 162,953 | 158,166 | 214,326 | 97,592 | 122,309 | 148,714 |

# PROJECT EVALUATION SHEET
# IRAN

SECTOR: Refrigeration ODS use in sector (2000): 5,693 ODP tonnes

Sub-sector cost-effectiveness thresholds: Commercial US $15.21/kg
Domestic US $13.76/kg
Rigid Foam US $7.83/kg

***Project Titles***:

(k) Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at the Sard Va Garm Iran
(l) Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at the Sardintous Co.
(m) Conversion from CFC-11 to HCF-141b and CFC-12 to HFC-134a technology in the manufacture of domestic and commercial refrigeration equipment at the Bouran Saz Karaj, Iran (Kohsar Co.)
(n) Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of domestic and commercial refrigeration equipment at the Moradi company
(o) Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at the Sherkate Taavoni 435, Iran (Khorsandi Co)
(p) Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at the Sarma Gostar Co.

| **Project Data** | **Commercial** | | **Commercial/Domestic** | | **Commercial/Rigid Foam** | |
|---|---|---|---|---|---|---|
| | **Sard Va Garm** | **Sardintous** | **Kohsar** | **Moradi** | **Khorsandi** | **Sarma Gostar** |
| Enterprise consumption (ODP tonnes) | 8.68 | 10.70 | 9.97 | 6.60 | 5.64 | 9.75 |
| Project impact (ODP tonnes) | 8.39 | 10.28 | 9.63 | 6.38 | 5.40 | 9.25 |
| Project duration (months) | 28 | 28 | 28 | 28 | 28 | 28 |
| Initial amount requested (US $) | 125,350 | 154,946 | 131,119 | 82,400 | 82,107 | 127,587 |
| Final project cost (US $): | | | | | | |
| Incremental capital cost (a) | 107,500 | 114,000 | 104,500 | 69,000 | 69,500 | 92,500 |
| Contingency cost (b) | 2,625 | 10,400 | 4,725 | 5,900 | 2,975 | 1,115 |
| Incremental operating cost (c) | 15,225 | 21,479 | 11,301 | 7,500 | 9,632 | 6,769 |
| Total project cost (a+b+c) | 125,350 | 145,879 | 120,526 | 82,400 | 82,107 | 100,384 |
| Local ownership (%) | 100% | 100% | 100% | 100% | 100% | 100% |
| Export component (%) | 0% | 0% | 0% | 0% | 0% | 0% |
| **Amount requested (US $)** | 125,350 | 145,879 | 120,526 | 82,400 | 82,107 | 100,384 |
| Cost effectiveness (US $/kg.) | 14.95 | 14.19 | 12.52 | 12.91 | 15.18 | 10.80 |
| Counterpart funding confirmed? | Yes | Yes | Yes | Yes | Yes | Yes |
| National coordinating agency | Department of Environment | | | | | |
| Implementing agency | UNIDO | | | | | |

| ***Secretariat's Recommendations*** | | | | | | |
|---|---|---|---|---|---|---|
| Amount recommended (US $) | 125,350 | 145,879 | 120,526 | 82,400 | 82,107 | 100,384 |
| Project impact (ODP tonnes) | 8.39 | 10.28 | 9.63 | 6.38 | 5.40 | 9.25 |
| Cost effectiveness (US $/kg) | 14.95 | 14.19 | 12.52 | 12.91 | 15.18 | 10.80 |
| Implementing agency support cost (US $) | 16,296 | 18,964 | 15,668 | 10,712 | 10,674 | 13,050 |
| Total cost to Multilateral Fund (US $) | 141,646 | 164,843 | 136,194 | 93,112 | 92,781 | 113,434 |

# PROJECT EVALUATION SHEET
# IRAN

SECTOR: Refrigeration

ODS use in sector (2000): 5,693 ODP tonnes

Sub-sector cost-effectiveness thresholds:

| | |
|---|---|
| Commercial | US $15.21/kg |
| Domestic | US $13.76/kg |
| Rigid Foam | US $7.83/kg |

***Project Titles***:

(q) Conversion from CFC-11 to HCFC-141b technology and from CFC-12 to HFC-134a technology in the manufacture of domestic and commercial refrigeration equipment at Sain Electric Co.
(r) Conversion from CFC-11 to HCFC-141b technology and from CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment and rigid foam at Mehran Sard Co.
(s) Conversion from CFC-11 to HCFC-141b technology and from CFC-12 to HFC-134a technology in the manufacture of domestic and commercial refrigeration equipment at Ghotb Jonoub Industrial Group
(t) Conversion from CFC-11 to HCFC-141b technology and from CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment and rigid foam at Tehran Sardsazi Industrial Co.
(u) Conversion from CFC-11 to HCFC-141b technology and from CFC-12 to HFC-134a technology in the manufacture of domestic refrigerators at Garm Iran Co.
(v) Conversion from CFC-11 to HCFC-141b technology and from CFC-12 to HFC-134a technology in the manufacture of domestic refrigerators at Parto Shiva Sanaat

| **Project Data** | **Commercial /Domestic** | **Commercial /Domestic/ Rigid Foam** | **Commercial/ Rigid Foam** | | **Domestic** | |
|---|---|---|---|---|---|---|
| | **Sain Electric** | **Mehran Sard** | **Ghotb Jonoub** | **Sardsazi** | **Garm Iran** | **Parto Shiva** |
| Enterprise consumption (ODP tonnes) | 11.88 | 18.80 | 15.54 | 16.60 | 12.57 | 25.39 |
| Project impact (ODP tonnes) | 11.18 | 17.66 | 14.56 | 15.50 | 11.81 | 23.86 |
| Project duration (months) | 30 | 30 | 30 | 30 | 30 | 30 |
| Initial amount requested (US $) | 154,716 | 147,940 | 170,125 | 126,569 | 162,437 | 303,198 |
| Final project cost (US $): | | | | | | |
| Incremental capital cost (a) | 117,000 | 131,000 | 200,000 | 122,500 | 118,000 | 213,500 |
| Contingency cost (b) | 11,700 | 13,100 | 20,000 | 12,250 | 11,800 | 21,350 |
| Incremental operating cost (c) | 25,174 | 41,134 | 37,324 | 35,468 | 23,647 | 49,098 |
| Total project cost (a+b+c) | 153,874 | 185,234 | 257,324 | 170,218 | 153,447 | 283,948 |
| Local ownership (%) | 100% | 100% | 100% | 100% | 100% | 100% |
| Export component (%) | 0% | 0% | 0% | 0% | 0% | 0% |
| **Amount requested (US $)** | 152,024 | 144,715 | 170,125 | 125,244 | 153,447 | 283,948 |
| Cost effectiveness (US $/kg.) | 13.60 | 8.20 | 11.68 | 8.08 | 13.00 | 11.90 |
| Counterpart funding confirmed? | Yes | Yes | Yes | Yes | Yes | Yes |
| National coordinating agency | Department of Environment | | | | | |
| Implementing agency | UNDP | | | | | |

| ***Secretariat's Recommendations*** | | | | | | |
|---|---|---|---|---|---|---|
| Amount recommended (US $) | 152,024 | 144,715 | 170,125 | 125,244 | 153,447 | 283,948 |
| Project impact (ODP tonnes) | 11.18 | 17.66 | 14.56 | 15.50 | 11.81 | 23.86 |
| Cost effectiveness (US $/kg) | 13.60 | 8.20 | 11.68 | 8.08 | 13.00 | 11.90 |
| Implementing agency support cost (US $) | 19,763 | 18,813 | 22,116 | 16,282 | 19,948 | 36,913 |
| Total cost to Multilateral Fund (US $) | 171,787 | 163,528 | 192,241 | 141,526 | 173,395 | 320,861 |

## PROJECT DESCRIPTION

Sector Background

| | |
|---|---|
| Latest available total ODS consumption (2000) | 5,693.00 ODP tonnes |
| Baseline consumption of Annex A Group I substances (CFCs) | 4,571.70 ODP tonnes |
| Consumption of Annex A Group I substances for the year 2000 | 4,156.00 ODP tonnes |
| Baseline consumption of CFCs in refrigeration sector | 2,075.00 ODP tonnes |
| Consumption of CFCs in refrigeration sector in 2000 | 1,752.00 ODP tonnes |
| Funds approved for investment projects in refrigeration sector as of end of 2000 | US $25,700,000.00 |
| Quantity of CFC to be phased out in investment projects in refrigeration sector as of end of 2000 | 2,445.00 ODP tonnes |

8. In the domestic and commercial refrigeration sub-sectors, there are about 50 large and medium-sized manufacturers and many small-scale enterprises. The Executive Committee has approved about US $27.7 million for 64 projects to phase out 2,445 ODP tonnes of CFC for enterprises manufacturing refrigeration equipment in the refrigeration sector.

9. The 2000 ODS consumption in the refrigeration sector was reported by the National Ozone Unit to be 1,752 ODP tonnes, including both manufacturing of new equipment and servicing. About 976.6 ODP tonnes will potentially be phased out through implementation of ongoing approved projects. This leaves 775.4 ODP tonnes still to be addressed. Of which, about 447 ODP tonnes is consumed by very small enterprises and in the servicing sector and will be addressed through the implementation of the RMP, currently under preparation by UNIDO. The Government of Iran has provided the Secretariat with the updated list of remaining enterprises indicating their production levels and ODS consumption. About 329 ODP tonnes will need to be phased out through implementation of investment projects in the refrigeration manufacturing sub-sector.

Twenty-two refrigeration enterprises

10. Twenty-two domestic and commercial refrigeration projects for small- and medium-sized enterprises with similar backgrounds have been submitted for consideration at the 35$^{th}$ Meeting of the Executive Committee. Of these projects ten have been submitted by UNDP and twelve by UNIDO.

11. The 22 enterprises consume 223.94 ODP tonnes of CFC-11 and 74.49 ODP tonnes of CFC-12 (in 2000) in the manufacture of domestic and commercial refrigeration equipment. All of the enterprises manufacture similar equipment (refrigerators, domestic and commercial freezers, water coolers and refrigerator/freezer combo units), and operate low-pressure foam dispensers which are predominantly locally made, assorted foaming moulds and jigs, production and portable refrigerant charging machines, vacuum pumps and leak detectors in the baseline. In addition to low-pressure dispensers, Mehran Sard operates a mobile high-pressure foam dispenser in the baseline.

12. The total phase out of 273.8 ODP tonnes of CFC-11 and CFC-12 will be achieved by converting CFC-11 based technology to HCFC-141b as the foam blowing agent, and CFC-12 to HFC-134a as the refrigerant. Under the current projects, the existing low-pressure machines will be replaced by high-pressure dispensers at all the enterprises except Moradi, Pooyaye Sanat and Sherkate Tavoni, where they will be replaced by new low-pressure dispensers. All enterprises will require provision of industrial or portable charging units, new vacuum pumps and retrofitting of existing vacuum pumps and leak detectors suitable for HFC-134a duty. Other costs include re-design, testing, trials, technical assistance and training. Incremental operating costs are requested by the enterprises reflecting the higher cost of chemicals and an increase in foam density.

13. In accordance with decisions of the Executive Committee on the use of HCFCs, a letter of transmittal from the Government of Iran endorsing the use of HCF-141b by the companies is attached.

## SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

### COMMENTS

14. About 776 ODP tonnes still need to be addressed in the refrigeration sector in Iran. About 447 ODP tonnes are consumed by servicing and small scale enterprises which will be addressed through RMP, currently under preparation by UNIDO. The balance of 329 ODP tonnes belongs to the manufacturing sub-sector. Implementation of projects submitted to the 35$^{th}$ Executive Committee meeting will lead to the phase out of 273 ODP tonnes with a balance of 56 ODP tonnes to be addressed at a later stage.

15. Each project proposal includes a request for technical assistance and training (for both foam and refrigerant parts), which amounts to US $20,000 in UNDP projects and US $10,000 per enterprise in UNIDO projects. The Secretariat requested explanations from UNDP regarding high costs of this project component. UNDP provided a breakdown of technical assistance and training costs. These costs are primarily associated with the services of international and local consultants.

16. Similarly, there is a difference in costs of trials between projects for individual enterprises (US $10,000 per enterprise) and umbrella projects (US $5,000 per enterprise). The Secretariat has requested detailed breakdown of costs of trials from UNDP. The information provided by UNDP in this regard indicated that some of the components included in the cost of trials constitute elements of capital cost which may or may not be eligible for funding.

17. The Secretariat discussed these issues with UNDP and agreed to eliminate cost components that are not associated with technical assistance, trials and testing, and to retain the cost components that are needed for the implementation of the projects.

18. The Secretariat has indicated to UNIDO that the cost of installation of foaming dispensers in Al-Borz, Sardin, Abbaspour and Darvish are not eligible for funding since this cost is included in the cost of equipment. Budgets were revised accordingly.

19. Sarma Gostar is involved in production of refrigerated trucks and insulation panels for refrigerated compartments installed on these trucks. The Secretariat and UNIDO agreed that Decision 31/45 on the guidelines for the sub-sector for assembly, installation and charging of refrigeration equipment should apply in this project. Incremental operating costs (IOC) associated with production of cold stores (refrigerant part) were recognised as ineligible for funding. The cost-effectiveness threshold of US $7.83/kg ODP was applied to determine the level of eligible incremental costs for the rigid foam operations. The budget of the project was revised accordingly.

## RECOMMENDATIONS

20. The Secretariat recommends blanket approval of the projects at the funding level indicated below.

| | Project Title | Project Funding (US$) | Support Cost (US$) | Implementing Agency |
|---|---|---|---|---|
| (a) | Conversion from CFC-11 to HCFC-141b technology and from CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at Alireza Abdolrezazadeh Co. | 116,646 | 15,164 | UNDP |
| (b) | Conversion from CFC-11 to HCFC-141b technology and from CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at Havasaz Manufacturing & Industrial Co. | 252,294 | 32,798 | UNDP |
| (c) | Conversion from CFC-11 to HCFC-141b technology and from CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at Sanaye Boroudati Maleki | 215,052 | 27,957 | UNDP |
| (d) | Conversion from CFC-11 to HCFC-141b technology and from CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at Sarma Fan Co. | 267,075 | 34,720 | UNDP |
| (e) | Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at the Abbaspour Company, Iran | 144,206 | 18,747 | UNIDO |
| (f) | Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at the Darvish Mohamad Nazari company, Iran (Jahan Nama) | 139,970 | 18,196 | UNIDO |
| (g) | Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of domestic and commercial refrigeration equipment at the Alborz Neishabour | 189,669 | 24,657 | UNIDO |
| (h) | Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of domestic refrigeration equipment at the Ariz Pooyaye Sanat, Iran (Ariz Co.) | 86,365 | 11,227 | UNIDO |
| (i) | Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of domestic refrigeration equipment at the Borna Sanat Arak | 108,238 | 14,071 | UNIDO |
| (j) | Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of domestic refrigeration equipment at the Yaghoubali Bazdid Vahdati, Iran (Isun Co.) | 131,605 | 17,109 | UNIDO |

| | | | | |
|---|---|---|---|---|
| (k) | Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of commecial refrigeration equipment at the Sard Va Garm Iran | 125,350 | 16,296 | UNIDO |
| (l) | Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at the Sardintous Co. | 145,879 | 18,964 | UNIDO |
| (m) | Conversion from CFC-11 to HCF-141b and CFC-12 to HFC-134a technology in the manufacture of domestic and commercial refrigeration equipment at the Bouran Saz Karaj, Iran (Kohsar Co.) | 120,526 | 15,668 | UNIDO |
| (n) | Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of domestic and commercial refrigeration equipment at the Moradi company | 82,400 | 10,712 | UNIDO |
| (o) | Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at the Sherkate Taavoni 435, Iran (Khorsandi Co) | 82,107 | 10,674 | UNIDO |
| (p) | Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at the Sarma Gostar Co. | 100,384 | 13,050 | UNIDO |
| (q) | Conversion from CFC-11 to HCFC-141b technology and from CFC-12 to HFC-134a technology in the manufacture of domestic and commercial refrigeration equipment at Sain Electric Co. | 152,024 | 19,763 | UNDP |
| (r) | Conversion from CFC-11 to HCFC-141b technology and from CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment and rigid foam at Mehran Sard Co. | 144,715 | 18,813 | UNDP |
| (s) | Conversion from CFC-11 to HCFC-141b technology and from CFC-12 to HFC-134a technology in the manufacture of domestic and commercial refrigeration equipment at Ghotb Jonoub Industrial Group | 170,125 | 22,116 | UNDP |
| (t) | Conversion from CFC-11 to HCFC-141b technology and from CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment and rigid foam at Tehran Sardsazi Industrial Co. | 125,244 | 16,282 | UNDP |
| (u) | Conversion from CFC-11 to HCFC-141b technology and from CFC-12 to HFC-134a technology in the manufacture of domestic refrigerators at Garm Iran Co. | 153,447 | 19,948 | UNDP |
| (v) | Conversion from CFC-11 to HCFC-141b technology and from CFC-12 to HFC-134a technology in the manufacture of domestic refrigerators at Parto Shiva Sanaat | 283,948 | 36,913 | UNDP |

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TO :
FROM : OZONE OFFICE(IRAN)
PHONE NO. : 0015407782580
OCT. 12. 2001 2:44PM P 1
PHONE NO. : 009821 8361117



# GOVERNMENT NOTE OF TRANSMITTAL OF INVESTMENT PROJECTS TO THE EXECUTIVE COMMITTEE OF THE MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL

## PROJECT(S) OF THE GOVERNMENT OF THE ISLAMIC REPUBLIC OF IRAN

The Government of the Islamic Republic of Iran requests UNDP to submit the project(s) listed in Table 1 below to the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol for consideration at its 35th Meeting.

**Section I: ODS Consumption Data**

1. The ODS consumption figures of the projects has/have been validated by the National Ozone Unit (NOU).

2. The consumption data have been retained in the records of the NOU for reference and/or future verification.

3. The Government has been advised by the NOU that the agreement to the projects indicates a commitment to ensure that the validated phase out figures were realized and yielded a sustained reduction from the 2000 consumption of 134.14 ODP tonnes for the refrigeration sector.

**Table 1: Projects Submitted to the 35th Meeting of the Executive Committee by UNDP**

| Project Title/Sector | Type of ODS | Consumption (ODP Tonnes), (2000) | Amount to be Phased Out (ODP Tonnes), (2003) |
|---|---|---|---|
| Refrigeration Sector | | | |
| Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of domestic and commercial refrigeration at the Parto Shiva Sanaat Co., Iran / dom ref. | CFC-11 & CFC-12 | 25.39 | 23.86 |
| Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration at the Havasaz Manufacturing & Industrial Co., Iran / comm ref-Rigid Foams. | CFC-11 & CFC-12 | 26.21 | 24.50 |
| Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of domestic refrigeration at the Garm Iran Co., Iran / dom ref. | CFC-11 & CFC-12 | 12.57 | 11.81 |
| Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of domestic and commercial | CFC-11 & CFC-12 | 15.54 | 14.56 |

| | | | |
|---|---|---|---|
| refrigeration at the Ghotb Jonoub Industrial Group, Iran / dom-comm ref. | | | |
| Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration at the Sanaye Boroudati Maleki , Iran / comm Rigid Foams. | CFC-11 & CFC-12 | 19.03 | 17.88 |
| Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration at the Mehran Sard Co., Iran / comm ref - Rigid Foams | CFC-11 & CFC-12 | 18.80 | 17.66 |
| Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of domestic and commercial refrigeration at the Tehran Sardsazi Industrial Co., Iran / comm ref. - Rigid Foams | CFC-11 & CFC-12 | 16.60 | 15.50 |
| **Total** | | **134.14** | **125.77** |

**Section II: Other Relevant Actions Arising from Decision 33/2**

4. It is understood that, in accordance with the relevant guidelines, the funding received for a project would be partly or fully returned to the Multilateral Fund in cases where technology was changed during implementation of the project without informing the Fund Secretariat and without approval by the Executive Committee;

5. The National Ozone Unit undertakes to monitor closely, in cooperation with customs authorities and the environmental protection authorities, the importation and use of CFCs and to combine this monitoring with occasional unscheduled visits to importers and recipient manufacturing companies to check invoices and storage areas for unauthorized use of CFCs.

6. The National Ozone Unit will cooperate with the relevant implementing agencies to conduct safety inspections where applicable and keep reports on incidences of fires resulting from conversion projects.

**Section III: Projects Requiring the Use of HCFCs for Conversion**

7. In line with Decision 27/13 of the Executive Committee and in recognition of Article 2F of the Montreal Protocol, the Government

(i) has reviewed the specific situations involved with the projects; *Parto Shiva Sanaat Co. ,Havasaz Manufacturing & Industrial Co. , Garm Iran Co. , Ghotb Jonoub Industrial Co. . Sanaye Boroudati Maleki Co. , Mehran Sard Co. , Tehran Sardsazi Industrial Co.* as well as its HCFC commitments under Article 2F; and

(ii) has nonetheless determined that, at the present time, the projects needed to use HCFCs for an interim period with the understanding that no funding would be available for the future conversion from HCFCs for the companies involved.

Name and signature of responsible Officer:

Fereidoun Rostami F. Rostami

Designation: Date: 12 october 2001

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## GOVERNMENT NOTE OF TRANSMITTAL OF INVESTMENT PROJECTS TO THE EXECUTIVE COMMITTEE OF THE MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL

## PROJECT(S) OF THE GOVERNMENT OF THE ISLAMIC REPUBLIC OF IRAN

The Government of the Islamic Republic of Iran requests UNDP to submit the project(s) listed in Table 1 below to the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol for consideration at its 35th Meeting.

**Section 1: ODS Consumption Data**

1. The ODS consumption figures of the projects has/have been validated by the National Ozone Unit (NOU).

2. The consumption data have been retained in the records of the NOU for reference and/or future verification.

3. The Government has been advised by the NOU that the agreement to the projects indicates a commitment to ensure that the validated phase out figures were realized and yielded a sustained reduction from the 2000 consumption of 64.08 ODP tonnes for the refrigeration sector.

**Table 1: Projects Submitted to the 35th Meeting of the Executive Committee by UNDP**

| Project Title/Sector | Type of ODS | Consumption (ODP Tonnes), (2000) | Amount to be Phased Out (ODP Tonnes), (2003) |
|---|---|---|---|
| **Refrigeration Sector** | | | |
| Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration at the Alireza Abdolrezazadeh Co., Iran / comm ref. | CFC-11 & CFC-12 | 8.12 | 7.67 |
| Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration at the Sarma Fan Co., Iran / comm ref. | CFC-11 & CFC-12 | 22.04 | 20.84 |
| Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of domestic and commercial refrigeration at the Sain Electric Co., Iran / dom - comm ref. | CFC-11 & CFC-12 | 11.88 | 11.18 |
| Conversion from CFC-11 to water blown technology in the manufacture of flexible molded polyurethane foam at the Sandalisazi Esfanje Ghalebi Iran , Iran / Flexible Molded and Integral | CFC-11 | 22.40 | 22.40 |

| | | | |
|---|---|---|---|
| Skin Foams | | | |
| **Total** | | **64.08** | **61.73** |

**Section II: Other Relevant Actions Arising from Decision 33/2**

4. It is understood that, in accordance with the relevant guidelines, the funding received for a project would be partly or fully returned to the Multilateral Fund in cases where technology was changed during implementation of the project without informing the Fund Secretariat and without approval by the Executive Committee;

5. The National Ozone Unit undertakes to monitor closely, in cooperation with customs authorities and the environmental protection authorities, the importation and use of CFCs and to combine this monitoring with occasional unscheduled visits to importers and recipient manufacturing companies to check invoices and storage areas for unauthorized use of CFCs.

6. The National Ozone Unit will cooperate with the relevant implementing agencies to conduct safety inspections where applicable and keep reports on incidences of fires resulting from conversion projects.

**Section III: Projects Requiring the Use of HCFCs for Conversion**

7. In line with Decision 27/13 of the Executive Committee and in recognition of Article 2F of the Montreal Protocol, the Government

(i) has reviewed the specific situations involved with the projects; *Alireza Abdolrezazadeh Co. , Sarma Fan Co. , Sain Electric Co. , Sandallsazi Esfanje Ghalebi Iran Co* as well as its HCFC commitments under Article 2F; and

(ii) has nonetheless determined that, at the present time, the projects needed to use HCFCs for an interim period with the understanding that no funding would be available for the future conversion from HCFCs for the companies involved.

Name and signature of responsible Officer:

**Fereidoun Rostami** F. Roshani

Designation: Date: 11 Oct 2 June 2001

**Manager Of Ozone Protection Office**
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# GOVERNMENT NOTE OF TRANSMITTAL OF INVESTMENT PROJECTS TO THE EXECUTIVE COMMITTEE OF THE MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL

## PROJECT(S) OF THE GOVERNMENT OF THE ISLAMIC REPUBLIC OF IRAN

The Government of the Islamic Republic of Iran requests UNDP to submit the project(s) listed in Table 1 below to the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol for consideration at its 35th Meeting.

**Section 1: ODS Consumption Data**

1. The ODS consumption figures of the projects has/have been validated by the National Ozone Unit (NOU).

2. The consumption data have been retained in the records of the NOU for reference and/or future verification.

3. The Government has been advised by the NOU that the agreement to the projects indicates a commitment to ensure that the validated phase out figures were realized and yielded a sustained reduction from the 2000 consumption of 64.08 ODP tonnes for the refrigeration sector.

**Table 1: Projects Submitted to the 35th Meeting of the Executive Committee by UNDP**

| Project Title/Sector | Type of ODS | Consumption (ODP Tonnes), (2000) | Amount to be Phased Out (ODP Tonnes), (2003) |
|---|---|---|---|
| **Refrigeration Sector** | | | |
| Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration at the Alireza Abdolrezazadeh Co., Iran / comm ref. | CFC-11 & CFC-12 | 8.12 | 7.67 |
| Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration at the Sarma Fan Co., Iran / comm ref. | CFC-11 & CFC-12 | 22.04 | 20.84 |
| Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of domestic and commercial refrigeration at the Sain Electric Co., Iran / dom - comm ref. | CFC-11 & CFC-12 | 11.88 | 11.18 |
| Conversion from CFC-11 to water blown technology in the manufacture of flexible molded polyurethane foam at the Sandalisazi Esfanje Ghalebi Iran , Iran / Flexible Molded and Integral | CFC-11 | 22.40 | 22.40 |

| | | | |
|---|---|---|---|
| Skin Foams | | | |
| Total | | 64.08 | 61.73 |

**Section II: Other Relevant Actions Arising from Decision 33/2**

4. It is understood that, in accordance with the relevant guidelines, the funding received for a project would be partly or fully returned to the Multilateral Fund in cases where technology was changed during implementation of the project without informing the Fund Secretariat and without approval by the Executive Committee;

5. The National Ozone Unit undertakes to monitor closely, in cooperation with customs authorities and the environmental protection authorities, the importation and use of CFCs and to combine this monitoring with occasional unscheduled visits to importers and recipient manufacturing companies to check invoices and storage areas for unauthorized use of CFCs.

6. The National Ozone Unit will cooperate with the relevant implementing agencies to conduct safety inspections where applicable and keep reports on incidences of fires resulting from conversion projects.

**Section III: Projects Requiring the Use of HCFCs for Conversion**

7. In line with Decision 27/13 of the Executive Committee and in recognition of Article 2F of the Montreal Protocol, the Government

(i) has reviewed the specific situations involved with the projects; *Alireza Abdolrezazadeh Co.*, *Sarma Fan Co.*, *Sain Electric Co.*, *Sandallsazi Esfanje Ghalebi Iran Co.* as well as its HCFC commitments under Article 2F; and

(ii) has nonetheless determined that, at the present time, the projects needed to use HCFCs for an interim period with the understanding that no funding would be available for the future conversion from HCFCs for the companies involved.

Name and signature of responsible Officer:

Fereidoun Rostami F. Rostami

Designation: Date: 2 June 2001

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Ref:.....

Date:.....

**Islamic Republic of Iran**
**Department of Environment**
**Ozone Layer Protection Unit**

*In the name of God*

*35th Meeting of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol*

# GOVERNMENT NOTE OF TRANSMITTAL OF INVESTMENT PROJECTS TO THE EXECUTIVE COMMITTEE OF THE MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL

## PROJECT(S) OF THE GOVERNMENT OF THE ISLAMIC REPUBLIC OF IRAN

The Government of the Islamic Republic of Iran requests UNIDO to submit the project(s) listed in Table 1 below to the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol for consideration at its 35th Meeting.

**Section I: ODS Consumption Data**

1. The ODS consumption figures of the projects has/have been validated by the National Ozone Unit (NOU).

2. The consumption data have been retained in the records of the NOU for reference and/or future verification.

3. The Government has been advised by the NOU that the agreement to the projects indicates a commitment to ensure that the validated phase out figures were realized and yielded a sustained reduction from the 2000 consumption of 28.86 ODP tonnes for the refrigeration sector.

**Table 1: Projects Submitted to the 35th Meeting of the Executive Committee by UNIDO**

| Project Title/Sector | Type of ODS | Consumption (ODP Tonnes), (2000) | Amount to be Phased Out (ODP Tonnes), (2003) |
|---|---|---|---|
| Refrigeration Sector | | | |
| Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at the "Abbaspour" company, Iran / Comm. Ref. | CFC-11 & CFC-12 | 10.14 | 9.73 |
| Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of domestic refrigeration equipment at the Ariz Pooyaye Sanat, Iran. (Ariz Co.) / Dom. Ref. | CFC-11 & CFC-12 | 7.87 | 7.57 |



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| Project Title/Sector | Type of ODS | Consumption (ODP Tonnes), (2000) | Amount to be Phased Out (ODP Tonnes), (2003) |
|---|---|---|---|
| Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of domestic refrigeration equipment at the Yaghoubali Bazdid Vahdati, Iran (Isun Co.) / Dom. Ref. | CFC-11 & CFC-12 | 10.85 | 10.47 |
| Total | | 28.86 | 27.77 |

**Section II: Other Relevant Actions Arising from Decision 33/2**

4. It is understood that, in accordance with the relevant guidelines, the funding received for a project would be partly or fully returned to the Multilateral Fund in cases where technology was changed during implementation of the project without informing the Fund Secretariat and without approval by the Executive Committee;

5. The National Ozone Unit undertakes to monitor closely, in cooperation with customs authorities and the environmental protection authorities, the importation and use of CFCs and to combine this monitoring with occasional unscheduled visits to importers and recipient manufacturing companies to check invoices and storage areas for unauthorized use of CFCs.

6. The National Ozone Unit will cooperate with the relevant implementing agencies to conduct safety inspections where applicable and keep reports on incidences of fires resulting from conversion projects.



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Ref:.....

Date:.....

**Islamic Republic of Iran**
**Department of Environment**
**Ozone Layer Protection Unit**

*In the name of God*



## Section III: Projects Requiring the Use of HCFCs for Conversion

7. In line with Decision 27/13 of the Executive Committee and in recognition of Article 2F of the Montreal Protocol, the Government

(i) has reviewed the specific situations involved with the projects; *Abbaspour Co., Ariz Co., and Isun Co.*, as well as its HCFC commitments under Article 2F; and

(ii) has nonetheless determined that, at the present time, the projects needed to use HCFCs for an interim period with the understanding that no funding would be available for the future conversion from HCFCs for the companies involved.

Name and signature of responsible Officer:

Fereidoun Rostami F Rostami

Designation: Manager Date: 25 Sep. 2001

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to the kind attention of MS. Ghoneim Ozone office Iran

Ref:.....

Date:.....

**Islamic Republic of Iran**
**Department of Environment**
**Ozone Layer Protection Unit**

*In the name of God*

*35th Meeting of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol*

# GOVERNMENT NOTE OF TRANSMITTAL OF INVESTMENT PROJECTS TO THE EXECUTIVE COMMITTEE OF THE MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL

## PROJECT(S) OF THE GOVERNMENT OF THE ISLAMIC REPUBLIC OF IRAN

The Government of the Islamic Republic of Iran requests UNIDO to submit the project(s) listed in Table 1 below to the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol for consideration at its 35th Meeting.

Section I: **ODS Consumption Data**

1. The ODS consumption figures of the projects has/have been validated by the National Ozone Unit (NOU).

2. The consumption data have been retained in the records of the NOU for reference and/or future verification.

3. The Government has been advised by the NOU that the agreement to the projects indicates a commitment to ensure that the validated phase out figures were realized and yielded a sustained reduction from the 2000 consumption of 43.61 ODP tonnes for the refrigeration sector.

**Table 1: Projects Submitted to the 35th Meeting of the Executive Committee by UNIDO**

| Project Title/Sector | Type of ODS | Consumption (ODP Tonnes), (2000) | Amount to be Phased Out (ODP Tonnes), (2003) |
|---|---|---|---|
| Refrigeration Sector | | | |
| Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of domestic refrigeration equipment at the Boma Sanat Arak, Iran / Dom. Ref. | CFC-11 & CFC-12 | 8.31 | 8.0 |
| Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of domestic and commercial refrigeration equipment at the Alborz Neishabour, Iran / Dom. – Comm. Ref. | CFC-11 & CFC-12 | 16.59 | 15.96 |
| Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of domestic and commercial refrigeration equipment at the Bouran Saz Karaj., Iran. / Dom. - Comm. Ref. | CFC-11 & CFC-12 | 10.03 | 9.69 |



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Date:.....

**Islamic Republic of Iran**
**Department of Environment**
**Ozone Layer Protection Unit**

*In the name of God*

*35th Meeting of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol*

| Project Title/Sector | Type of ODS | Consumption (ODP Tonnes), (2000) | Amount to be Phased Out (ODP Tonnes), (2003) |
|---|---|---|---|
| Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at Sard va Garm Iran, Iran. / Comm. Ref. | CFC-11 & CFC-12 | 8.68 | 8.39 |
| Total | | 43.61 | 42.04 |

**Section II: Other Relevant Actions Arising from Decision 33/2**

4. It is understood that, in accordance with the relevant guidelines, the funding received for a project would be partly or fully returned to the Multilateral Fund in cases where technology was changed during implementation of the project without informing the Fund Secretariat and without approval by the Executive Committee;

5. The National Ozone Unit undertakes to monitor closely, in cooperation with customs authorities and the environmental protection authorities, the importation and use of CFCs and to combine this monitoring with occasional unscheduled visits to importers and recipient manufacturing companies to check invoices and storage areas for unauthorized use of CFCs.

6. The National Ozone Unit will cooperate with the relevant implementing agencies to conduct safety inspections where applicable and keep reports on incidences of fires resulting from conversion projects.



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*In the name of God*

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## Section III: Projects Requiring the Use of HCFCs for Conversion

7. In line with Decision 27/13 of the Executive Committee and in recognition of Article 2F of the Montreal Protocol, the Government

(i) has reviewed the specific situations involved with the projects; *Borna Sanat Arak, Alborz Neishabour, Bouran Saz Karaj and Sard va Garm Iran*.. as well as its HCFC commitments under Article 2F; and

(ii) has nonetheless determined that, at the present time, the projects needed to use HCFCs for an interim period with the understanding that no funding would be available for the future conversion from HCFCs for the companies involved.

Name and signature of responsible Officer:
Fereidoun Rostami F. Rostami

Designation: Manager

Date: 25 Sep. 2001

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# GOVERNMENT NOTE OF TRANSMITTAL OF INVESTMENT PROJECTS TO THE EXECUTIVE COMMITTEE OF THE MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL

## PROJECT(S) OF THE GOVERNMENT OF THE ISLAMIC REPUBLIC OF IRAN

The Government of the Islamic Republic of Iran requests UNIDO to submit the project(s) listed in Table 1 below to the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol for consideration at its 35th Meeting.

**Section I: ODS Consumption Data**

1. The ODS consumption figures of the projects has/have been validated by the National Ozone Unit (NOU).

2. The consumption data have been retained in the records of the NOU for reference and/or future verification.

3. The Government has been advised by the NOU that the agreement to the projects indicates a commitment to ensure that the validated phase out figures were realized and yielded a sustained reduction from the 2000 consumption of 9.66 ODP tonnes for the refrigeration sector.

**Table 1: Projects Submitted to the 35th Meeting of the Executive Committee by UNIDO**

| Project Title/Sector | Type of ODS | Consumption (ODP Tonnes), (2000) | Amount to be Phased Out (ODP Tonnes), (2003) |
|---|---|---|---|
| Refrigeration Sector | | | |
| Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at the Darvish Mohamad Nazari, Iran (Jahan Nama) / Country Ref. | CFC-11 & CFC-12 | 9.66 | 9.28 |
| Total | | 9.66 | 9.28 |



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Ref: Oz/1042
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**Department of Environment**
**Ozone Layer Protection Unit**

*In the name of God*

*35th Meeting of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol*

**Section II: Other Relevant Actions Arising from Decision 33/2**

4. It is understood that, in accordance with the relevant guidelines, the funding received for a project would be partly or fully returned to the Multilateral Fund in cases where technology was changed during implementation of the project without informing the Fund Secretariat and without approval by the Executive Committee;

5. The National Ozone Unit undertakes to monitor closely, in cooperation with customs authorities and the environmental protection authorities, the importation and use of CFCs and to combine this monitoring with occasional unscheduled visits to importers and recipient manufacturing companies to check invoices and storage areas for unauthorized use of CFCs.

6. The National Ozone Unit will cooperate with the relevant implementing agencies to conduct safety inspections where applicable and keep reports on incidences of fires resulting from conversion projects.



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Date: 25 Sep 2001

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**Department of Environment**
**Ozone Layer Protection Unit**

*In the name of God*

*35th Meeting of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol*

## Section III: Projects Requiring the Use of HCFCs for Conversion

7. In line with Decision 27/13 of the Executive Committee and in recognition of Article 2F of the Montreal Protocol, the Government

(i) has reviewed the specific situations involved with the projects; as well as its HCFC commitments under Article 2F; and

(ii) has nonetheless determined that, at the present time, the projects needed to use HCFCs for an interim period with the understanding that no funding would be available for the future conversion from HCFCs for the companies involved.

Name and signature of responsible Officer:
Fereidoun Rostami F. Rostami

Designation: Manager

Date: 25 Sep. 2001

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*In the name of God*

*35th Meeting of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol*

# GOVERNMENT NOTE OF TRANSMITTAL OF INVESTMENT PROJECTS TO THE EXECUTIVE COMMITTEE OF THE MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL

## PROJECT(S) OF THE GOVERNMENT OF THE ISLAMIC REPUBLIC OF IRAN

The Government of the Islamic Republic of Iran requests UNIDO to submit the project(s) listed in Table 1 below to the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol for consideration at its 35th Meeting.

**Section I: ODS Consumption Data**

1. The ODS consumption figures of the projects has/have been validated by the National Ozone Unit (NOU).

2. The consumption data have been retained in the records of the NOU for reference and/or future verification.

3. The Government has been advised by the NOU that the agreement to the projects indicates a commitment to ensure that the validated phase out figures were realized and yielded a sustained reduction from the 2000 consumption of 33.50 ODP tonnes for the refrigeration sector.

**Table 1: Projects Submitted to the 35th Meeting of the Executive Committee by UNIDO**

| Project Title/Sector | Type of ODS | Consumption (ODP Tonnes), (2000) | Amount to be Phased Out (ODP Tonnes), (2003) |
|---|---|---|---|
| Refrigeration Sector | | | |
| Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at the Sherkate Taavoni 435, Iran (Khorsandi Co.) / Comm. Ref. | CFC-11 & CFC-12 | 5.64 | 5.4 |
| Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of domestic and commercial refrigeration equipment at the "Moradi" Company, Iran / Dom. – Comm. Ref. | CFC-11 & CFC-12 | 6.60 | 6.38 |
| Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at the Sardin Tous Co., Iran. / Comm. Ref. | CFC-11 & CFC-12 | 10.70 | 10.28 |



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| Project Title/Sector | Type of ODS | Consumption (ODP Tonnes), (2000) | Amount to be Phased Out (ODP Tonnes), (2003) |
|---|---|---|---|
| Conversion from CFC-11 to HCFC-141b and CFC-12 to HFC-134a technology in the manufacture of commercial refrigeration equipment at the Sarma Gostar Co., Iran. / Comm. Ref. | CFC-11 & CFC-12 | 10.56 | 10.06 |
| Total | | **33.50** | **32.12** |

**Section II: Other Relevant Actions Arising from Decision 33/2**

4. It is understood that, in accordance with the relevant guidelines, the funding received for a project would be partly or fully returned to the Multilateral Fund in cases where technology was changed during implementation of the project without informing the Fund Secretariat and without approval by the Executive Committee;

5. The National Ozone Unit undertakes to monitor closely, in cooperation with customs authorities and the environmental protection authorities, the importation and use of CFCs and to combine this monitoring with occasional unscheduled visits to importers and recipient manufacturing companies to check invoices and storage areas for unauthorized use of CFCs.

6. The National Ozone Unit will cooperate with the relevant implementing agencies to conduct safety inspections where applicable and keep reports on incidences of fires resulting from conversion projects.



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## Section III: Projects Requiring the Use of HCFCs for Conversion

7. In line with Decision 27/13 of the Executive Committee and in recognition of Article 2F of the Montreal Protocol, the Government

(i) has reviewed the specific situations involved with the projects; *Khorsandi Co., Moradi Co., Sardin Tous Co., and Sarma Gostar Co.*, as well as its HCFC commitments under Article 2F; and

(ii) has nonetheless determined that, at the present time, the projects needed to use HCFCs for an interim period with the understanding that no funding would be available for the future conversion from HCFCs for the companies involved.

Name and signature of responsible Officer:
Fereidoun Rostami F Rostami

Date: 25 Sep. 2001

Designation: Manager

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