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EXECUTIVE COMMITTEE OF  
THE MULTILATERAL FUND FOR THE  
IMPLEMENTATION OF THE MONTREAL PROTOCOL  
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**PROJECT PROPOSAL: BURKINA FASO**

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

Refrigeration:

- Implementation of the RMP: incentive programme for the commercial and industrial refrigeration end-user sector UNDP

**PROJECT EVALUATION SHEET  
BURKINA FASO**

SECTOR: Refrigeration ODS use in sector (1999): 37.1 ODP tonnes

Sub-sector cost-effectiveness thresholds: n/a

***Project Titles:***

- (a) Implementation of the RMP: incentive programme for the commercial and industrial refrigeration end-user sector

<b>Project Data</b>	<b>RMP</b>
Enterprise consumption (ODP tonnes)	
Project impact (ODP tonnes)	3.00
Project duration (months)	72
Initial amount requested (US \$)	132,250
Final project cost (US \$):	
Incremental capital cost (a)	132,250
Contingency cost (b)	
Incremental operating cost (c)	
Total project cost (a+b+c)	132,250
Local ownership (%)	100%
Export component (%)	0%
<b>Amount requested (US \$)</b>	<b>132,250</b>
Cost effectiveness (US \$/kg.)	44.08
Counterpart funding confirmed?	
National coordinating agency	Ministere de l'Environnement et de l'Eau
Implementing agency	UNDP

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

## PROJECT DESCRIPTION

(a) Implementation of the RMP: incentive programme for the commercial and industrial refrigeration end-user sector

1. The Burkina Faso RMP project was approved by the Executive Committee at the 29<sup>th</sup> Meeting as bilateral co-operation by the Government of Canada (UNEP/OzL/Pro/29/19).

2. The RMP reported that the annual consumption of CFCs in the domestic refrigeration subsector is estimated at 22 tonnes. About 99 per cent of the imports is made by over 200 small traders who travel overland to Nigeria and smuggle refrigerant into the country.

3. Legislation has been enacted whereby the imports of ODS and products using and containing ODS is now strictly controlled. A customs coding method based on the Brussels system has been adopted which allows this range of products to be separately identified and recorded. A decree was issued in March 1997 whereby prior approval from the Ozone Office is required for the import of CFC and CFC-based equipment. It is intended to use this to prevent the imports of second-hand refrigerators and MACs from 1999 onwards. The import of these will be affected by further legislation.

4. Insufficient training in good practices for the majority of the refrigeration technicians is the major cause for inadequate and inappropriate maintenance of refrigeration equipment and thus the high consumption of CFCs. To address this issue, the RMP included a training programme for refrigeration service technicians.

5. A recent survey of cold stores was conducted in Burkina Faso with assistance from the Institut de Génie Thermique of Switzerland. In total, 24 cold stores were surveyed. According to the survey, it was found that:

- (a) while some installations are well maintained, and conversion to zero-/low-ODP refrigerants would require minor changes, other installations would need to be completely re-built or replaced;
- (b) retrofit of newer facilities (installed after 1995) to zero/low-ODP refrigerants will be relatively easy to perform, since they were designed for either CFC or HFC refrigerants;
- (c) in general, the design and electrical installations of the facilities preclude simple retrofit to a flammable hydrocarbon refrigerant (which would involve major equipment re-design, and upgrading of the electrical installation).

6. Based on the results of the survey, the Government of Burkina Faso has submitted a project to be implemented over a period of 5 years for establishing an incentive programme to encourage refrigeration end-users to replace, or permanently retrofit their existing ODS based equipment (fisheries, meat-processing plants, breweries, hospitals, hotels, restaurants,

supermarkets), to zero/low-ODP refrigerants (the total ODS consumption in this sub-sector is 14 ODP tonnes). During the period 2001-2006, any end-user (established prior to 25 July 1995) can apply to receive an incentive payment towards the cost of replacement/retrofit of their CFC-based equipment. Incentive payments (between US \$500 and US \$15,000) will be based on CFC consumption when equipment is replaced, or the cost for a permanent retrofit.

7. The project also includes a component for information dissemination and monitoring (advertisements in newspapers, information brochures for end-users and relevant industry associations, and workshops and annual meetings to report on progress of the programme).

8. The project cost is US \$132,250, equivalent to the total additional funding that could be made available to Burkina Faso for implementation of its RMP (decision 31/48).

9. Following completion of the conversion, the end-user enterprise must provide invoices to confirm the total costs incurred during the conversion.. The level of payment will be reviewed by the Ozone Office and UNDP (40 per cent of the incentive amount will be paid upon receipt of an application and the balance after conversion has been completed and a certification that the replaced equipment has been destroyed/rendered unusable has been issued).

## **SECRETARIAT'S COMMENTS AND RECOMMENDATIONS**

### **COMMENTS**

1. The Government of Burkina Faso submitted the project proposal with an official letter of transmittal stating its commitment and financial implications associated with decision 31/48. The Government considers that the proposed incentive programme is an important step to assist the country in the refrigeration sector.

2. The Secretariat pointed out to UNDP that it has not been clearly demonstrated how the proposed incentive programme will assist Burkina Faso to reduce its CFC consumption from 37.1 tonnes in 1999 to 18.1 tonnes by 2005. If the project is successfully implemented, only 3 tonnes of CFCs will be phased out (as reported in the project cover sheet). UNDP informed the Secretariat that the project aims, through the innovative mechanism, to apply the limited funding available (less than US \$150,000) as widely as possible amongst end-users in the commercial and industrial refrigeration sector. UNDP also felt that most requests for an incentive would come from end-users who must change their refrigeration system (i.e., age, innovation of business), and would be willing to select a non-CFC technology. Even if the number of end-users coming forward for an incentive is low at the beginning (i.e., during the first one or two years), it will increase as CFC prices continue to evolve. The incentive programme must start now so that the direct impact of at least 3 tonnes/year can be achieved in 2003-2004.

3. The Secretariat also raised issues related to the high leakage rate of installed commercial refrigeration equipment surveyed (from 10 per cent to over 400 per cent); and the low price of CFC-12 (US \$6.50/kg) as compared to the price of HFC-134a (US \$12.10/kg). UNDP informed the Secretariat that the annual CFC used by the surveyed enterprises is a realistic figure; not all

of the consumption is for topping-up the systems due to leaks. Whilst there may be potential to reduce this by improvements in servicing techniques this is no more certain than the potential to reduce overall consumption by the proposed incentive programme. In Burkina Faso, the price of CFC-12 is already US \$6.7/kg, which can be considered as relatively high for the region (the current HFC-134a/CFC-12 price ratio is 1.86:1). The price of R-502 is also very high (US \$40.40).

4. UNDP considered that all requirements under decisions 28/44 and 31/48 have been met. Regarding the issue of utilizing all the funds available without meeting the phase-out objectives of the RMP, UNDP is convinced that neither service technician training nor recovery and recycling projects will give any better guarantee. The incentive programme has the potential to start the process of elimination by conversion. Remaining consumption will be decreased through legislative measures, quota systems and market forces.

## **RECOMMENDATIONS**

1. The Executive Committee may wish to consider the project proposal in light of the above comments and observations, and specifically in the context of paragraph (a) of Section A of decision 31/48.