



**United Nations
Environment
Programme**



Distr.
Limited

UNEP/OzL.Pro/ExCom/33/25
27 February 2001

ORIGINAL: ENGLISH

EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Thirty-third Meeting
Montreal, 28-30 March 2001

**PRE-REQUISITES FOR TERMINAL PHASE-OUT IN THE
REFRIGERATION SECTOR**

Introduction

1. At its 29th Meeting the Executive Committee requested the Secretariat, in conjunction with the implementing agencies and consulting relevant bilateral donors, to prepare a paper on prerequisites and guidelines for terminal phase-out projects in the refrigeration sector including complete CFC phase-out proposals for submission to a future meeting (Decision 29/26).
2. This request was made in the context of the Executive Committee's discussion of an issue raised by the Fund Secretariat in its Overview paper submitted to the 29th meeting.
3. Thus far the Executive Committee has not considered the timing and conditions under which it wishes to see projects of this nature prepared nor the guidelines to be followed. For clarification, terminal phase-out in the refrigeration sector is defined as the cessation of consumption by a country of CFC-12 in the manufacture, charging, installation and servicing of refrigeration equipment and of new CFC-11 in foam blowing activities associated with manufacture of refrigeration equipment in the domestic refrigeration sub-sector. In this regard it should be noted that the manufacture of insulating panels used in commercial and mobile refrigeration equipment is included in the foam sector.
4. Low-volume-consuming countries (LVCs) have most if not all of their consumption in the refrigeration sector. Additionally, many of these countries have few if any investment projects. Their needs are catered for by means of refrigerant management plans, which were devised to meet the needs of LVCs, before being widened in scope to include larger consumers. Therefor this paper is addressed mainly to the needs of non-LVC countries.
5. Decision 31/48C, concerning RMPs for larger consuming countries, provides the basis for countries to seek the assistance of the Fund to prepare and implement long term strategies for the refrigeration sector. However the decision does not provide any guidance on the boundary conditions for such strategies, their relationship to strategic planning in the Multilateral Fund and to existing policies applied by the Executive Committee in its management of the Fund, or on the essential information which the Committee might wish to see contained in a strategy. These additional factors are presented in this paper.
6. The paper will:
 - (a) present information which forms the background to consideration of this issue, including the revised guidelines for RMPs, the situation of countries needing to move forward with terminal phase-out and the priorities of the Multilateral Fund;
 - (b) indicate information and actions which might be considered as a prerequisite to commencement of project preparation for terminal phase-out in the refrigeration sector;
 - (c) indicate the additional information and activities which might need to be undertaken as part of project preparation and which would therefore form guidelines for preparation of a terminal phase-out project;

- (d) invite the Executive Committee to consider adopting these prerequisites and guidelines.

Background

7. The Executive Committee's deliberations on various aspects of phase-out in the refrigeration sector and terminal phase-out generally, and the principles contained in its decisions resulting from that work, provide a comprehensive basis for consideration of terminal phase-out in the refrigeration sector.

8. Relevant decisions include:

- (a) Decision 23/15: Guidelines for the preparation of refrigerant management plans
- (b) Decision 24/24: Quality and content of RMPs
- (c) Decision 31/48C: RMPs for higher-volume-consuming countries
- (d) Decision 25/50(d): terminal umbrella projects – new approach to address remaining small enterprises
- (e) Decision 28/44: guidelines for the commercial refrigeration end-use sector
- (f) Decision 31/45: guidelines for the new sub-sector for the assembly, installation and charging of refrigeration equipment.

Discussion

9. A number of non-LVC Article-5 countries have reached or will shortly reach the position where:

- (a) the majority of the eligible enterprises in their countries have been the beneficiaries of projects to convert their manufacturing capacity to non CFC technologies. However, there could be many small-sized enterprises spanning manufacturing, installation and servicing that are still using CFCs;
- (b) the majority of their remaining consumption in the refrigeration sector is mostly for refrigeration servicing, with some being used for installation;
- (c) either: the country needs additional assistance to meet the 1999 freeze or the 2005, 50 percent reduction step and the 2007, 85 percent reduction step;
- (d) or the country has well defined plans to phase-out its consumption of Annex A ODS substantially in advance of 2010.

10. Countries where these conditions prevail may be likely to consider terminal phase-out in the refrigeration sector as one option to meet their Montreal Protocol obligations or national plans for significantly earlier phase-out.

11. The Executive Committee has instituted policies and practices for effective use of Fund resources which include the following:

- (a) a proposal must have priority for funding vis a vis other calls on the Fund in the same business plan period:
 - (i) at the present time, provision of funds to assist countries to come into compliance with the 50 percent reduction and other control steps in the period up to 2005 command a high priority, taking into consideration the time lag between initiation and completion of projects;
 - (ii) an increasing proportion of Fund resources is being allocated in advance of business planning periods, through agreements in principle to fund sector strategies and other long term projects (for 2001, 27 percent of the investment project budget), thus reducing the level of funding available for new allocations, even when they have a high priority;
- (b) a proposal must be implementable and sustainable, so that the assistance provided through Fund resources is effective over time, does not leave the country with residual consumption in the sector and does not lead to supplementary requests for funding to complete that phase-out;
- (c) a proposal must be cost-effective (as determined by the Executive Committee);
- (d) the costs requested must be soundly based, having regard to:
 - (i) Multilateral Fund rules and the policies of the Executive Committee;
 - (ii) whether the knowledge of the refrigeration sector available to the implementing agency is good enough to enable the country and the implementing agency to accurately and reliably identify the key parameters which determine cost of the project and the evaluation of its implementation, which include, *inter-alia*:
 - : number of enterprises
 - : nature of activities (to verify eligibility for compensation)
 - : date of commencement of operation (in relation to the cut-off date of 25 July 1995)
 - : accurate and reliable determination of ODS consumption and enterprises production levels in manufacturing industry and in the servicing sub-sector

Prerequisites for preparation of terminal phase out projects

12. The prerequisites will be determined from consideration of the circumstances of Article-5 countries in relation to achievement of Montreal Protocol control measures, the policies and practices for effective use of Fund resources and the necessary requirements to ensure that a proposal is soundly based, implementable and sustainable. These issues have been well summarised in the principles contained in recent decisions concerning this sector and could be expressed in the form of prerequisites for project preparation as follows, with the reasons indicated immediately below:

- (a) the country has received enough assistance from the Fund to convert all appliance manufacturers, other than SMEs;
 - (i) or there may not be priority for funding since simpler and potentially more cost-effective interventions are available to meet reduction targets. This also suggests that a terminal phase-out strategy in the refrigeration sector would normally be embarked upon after most or all industrial conversion projects other than the informal sector had been funded and/or implemented;
 - (ii) additionally, when consumption for manufacturing approaches zero, it becomes more straightforward to obtain reliable indications of the consumption used in the service sector since the activities of small or informal manufacturers are oriented primarily towards installation and servicing;
- (b) that either no other possible alternatives would allow the country to meet its CFC control obligations, or more stringent national targets, or the comparative consumer price of CFCs, relative to substitute refrigerants, had been high for at least 9 months and is predicted to continue to increase;
 - (i) where significant CFC-based manufacturing activity remains, there may not be priority for funding a terminal phase-out strategy since consumption can be reduced by continuing to implement industrial conversion projects;
 - (ii) by the time CFC prices have become higher than prices of substitutes, on current indications it is likely that conversion of most CFC-based manufacturing capacity, other than very small enterprises and the informal sector, will have been completed in most higher consuming countries;
- (c) there should be indications that the legislative and industrial support measures necessary for successful implementation of terminal phase-out will be operational and effective in the timeframe envisaged for project preparation and implementation.

- (i) extended periods are sometimes needed to develop and operationalise institutional support measures. The timing of terminal phase-out projects and their preparation should be consistent with the availability of these measures;
- (d) that the modality for a preparation of a terminal phase-out project will be the development of a long term strategy for the refrigeration sector undertaken in the context of a country programme update (RMP guidelines, Decision 31/48C);
 - (i) this means that the country should ensure that it has accurate, current and sufficiently detailed knowledge about the structure and consumption of its refrigeration sector.

Issues to be addressed during project preparation

Legislative support

13. Many larger consuming countries already have, or are developing, legislation controlling ODS imports and exports and the major producing countries are already controlling production. However few non-LVC Article-5 countries have ratified the Montreal Amendment. The existence of functioning legislation is a key indicator that the country is both committed and able to move forward to terminal phase-out in the sector as required by relevant Executive Committee decisions. Therefore:

- (a) prior to implementation of a project the country should have production, import and distribution controls on CFCs and CFC-based equipment in place and effectively enforced, and should be restricting the deployment of new CFC-based equipment as a fundamental requirement for achievability and sustainability.
- (b) during project preparation the extent of regulatory mechanisms including the status of enactment by all relevant departments should be determined and evidence obtained of successful phasing-in of regulatory enforcement.

Establishing reliable consumption data

14. The reliability and accuracy of data, especially relating to consumption, has been generally acknowledged as a challenge, at both the project and country level. Its importance is indicated by the emphasis placed on data in the original RMP guidelines approved in Decision 23/15. There are numerous and continuing examples of revision of data, especially sectoral consumption data. Experience with preparation and review of projects in the refrigeration sector has shown that there can be scope for substantial inaccuracies in data emanating from surveys of suppliers unless data is gathered from a number of independent sources, correlated and the resulting discrepancies resolved. Inaccuracies can have significant implications for project funding and approval and for project implementation.

15. It is necessary to gain an understanding of the structure and consumption of the refrigeration sector sufficiently accurate to form a basis for an approvable project (firstly, so that the country will not find later that the project as approved will not meet the objective of complete phase-out, and secondly so that the basis for funding is sound). To achieve this it may be necessary for measures such as the following to have been undertaken either before or during project preparation:

- (a) obtaining consistent importer surveys and monitoring (including manufacturers, where appropriate) to establish levels of imports, and follow-up along the distribution chain (import modalities and container sizes, repackaging, existence or otherwise of illegal activities and their impact);
- (b) use of production statistics from converted refrigerator manufacturing enterprises to establish numbers of CFC-12 refrigerators requiring servicing, also price differentials between CFC and non-CFC products;
- (c) use of compressor import/manufacturing information (both R-12 and R134a/R600a) to inform knowledge of the manufacturing and servicing sectors; price differentials, the existence or otherwise of illegal imports;
- (d) assessment of the extent of stockpiling (difference between CFCs imported and CFCs used; storage capacity; impact of price differentials if any);
- (e) estimation of total remaining consumption from the above information and based on numbers of units being serviced;
- (f) determination of the structure of industry associations: chambers of commerce; appliance manufacturer's and importer's associations, extent of membership; qualifications; numbers and distribution of chapters; mandates; extent of linkages to government programmes (e.g. training courses and accreditation);
- (g) establishment of a country-wide profile for the servicing sector including domestic and commercial refrigeration, MAC, and chillers.

16. Not all these pre-requisites will be in place prior to preparation of a long term strategy and terminal phase out plan. For instance more detailed information on the structure of the sector and on legislative measures or taxation and fiscal incentives, will emerge as a result of project preparation activities and should be in place at the time a terminal phase-out project is submitted to the Executive Committee.

Guidelines for terminal phase-out projects

17. When the information obtained by a country and the implementing agency as discussed above indicates that the country is in a position to request assistance from the Fund for

implementation of a terminal refrigeration phase-out project, proposals should be consistent with a set of guidelines which might be along the lines of those indicated below.

- (a) Proposals should be presented in the form of a long-term strategy for the refrigeration sector under Decision 31/48C (guidelines for RMPs for higher consuming countries), incorporating the principles outlined in the initial guidelines for RMPs (Decision 23/15);
 - (i) in other words, a terminal phase-out proposal for the refrigeration sector is the same as a long term strategy for the refrigeration sector in a larger consuming country, in the same way that an RMP for a low-volume-consuming country is a terminal phase-out project for that country
- (b) Proposals should be consistent with all relevant rules and policies of the Multilateral Fund as decided by the Executive Committee;
- (c) Proposals should contain *inter-alia* the following elements:
 - (i) comprehensive data on the profile of all remaining ODS consumption in the sector with breakdown into sub-sectors, supported by results of analysis undertaken either before or during project preparation, as a prerequisite to the proposal;
 - (ii) comprehensive data on the profile of the remaining enterprises in the sector, with breakdown into sub-sectors, supported by results of analysis undertaken either before or during project preparation, indicating, *inter-alia*, enterprises whose production capacity was installed after 25 July 1995;
 - (iii) institutional support through government policy directives or legislation and taxation or other fiscal measures; a timed action plan and expected results in terms of ODS phase out; co-ordination and management by ozone offices and financial intermediaries; technology transfer by local industry associations and/or component suppliers and systems houses;
 - (iv) the appropriate choice of technology, innovative methodologies for achieving technology transfer; achievement of economies of scale through geographical grouping or industrial rationalisation; financial arrangements which could provide flexibility in the allocation of approved resources;
 - (v) the commitment of the Government to phase out ODS according to the proposed action plan;
 - (vi) a financing plan related to the major milestones with provisions to release funds against the performance achieved.
- (d) The development of elements of the proposal and the determination of

incremental costs related to each activity or sub-sector should be guided by pertinent policies of the Executive Committee, as expressed in decisions previously taken, for instance:

- (i) the elements related to the commercial refrigeration end-user sector will be developed in accordance with policies previously contained in Decision 28/44;
- (ii) the elements related to the new sub-sector for the assembly, installation and servicing of refrigeration equipment will be developed in accordance with Decision 31/45;
- (iii) the elements related to recovery and recycling will be developed in accordance with Decisions 22/22,-Recycling projects in CFC-producing countries and Decision 22/23-General recovery and recycling projects;

Co-ordination with interested Bilateral Partners and Implementing Agencies

18. A discussion draft was provided to regular bilateral donors including Australia, Canada, France, Germany, Japan and USA. Responses were taken into consideration to the extent possible and appropriate in further development of the paper. The main points are summarised below.

19. Canada suggested that countries might choose the most cost-effective option between a terminal phase-out project, or an RMP and additional conversion projects for SMEs. The conditions in Decision 31/48 might only be relevant if the terminal phase-out project included proposals for retrofitting. Canada pointed out that the original guidelines for RMPs provided guidance on eligibility and the guidelines for terminal phase-out should include these. Finally Canada considered that the decision on chillers taken at the 12th Meeting might have been superseded by later decisions in chiller projects.

20. France noted that large companies such as OEMs need to be treated differently from informal servicing companies and that countries need to indicate priorities for each sub-sector. France was keen to see more focus on removing barriers including through taxation and fiscal measures, and on involving all stakeholders in strategy development. France considered it would be helpful to see a summary of the structure of this sector for each non-LVC country and the assistance received by each country. (Note: country programme summary sheets which provide much of this information are available from the Secretariat).

21. Germany considered that preparation of the sector plan should take place much earlier than suggested in the paper but that commencement of implementation should be dependent on conditions which were more detailed and stringent and which should be monitored by the

Secretariat. Germany considered that guidelines based on existing decisions should not be used as requirements but to provide guidance. Germany pointed out that since small service companies often installed equipment as well as performing maintenance, consumption used in the service sector was different from consumption used for servicing.

22. Japan appreciated that the draft kept scrupulously to the relevant principles that the Executive Committee had adopted to date. Japan suggested that the document be streamlined in a logical way to explain the elements of prerequisites and guidelines starting from basic agreed principles. Japan considered that the suggestion that a terminal phase-out strategy would normally be embarked upon after all industrial conversion projects other than the informal sector had been implemented to be a somewhat sweeping statement that may not be perfectly consistent with the strategic approach to accord a high priority to compliance with the 50 percent reduction step. Japan also considered that lack of information mentioned under prerequisites should not give rise to deferral of a project. Finally Japan wished to see an elaboration of the World Bank's views that the principles for end-user conversion in Decision 28/44 were not practical and could not be implemented.

23. The discussion draft was also circulated to the implementing agencies. UNEP was concerned about the difficulties in collecting accurate data, what data would be needed as a prerequisite to approval for project preparation and what would be collected as part of project preparation. UNEP was concerned that lack of all the information mentioned under prerequisites should not give rise to grounds to defer or reject a project. UNEP also suggested that performance based targets might not be appropriate for all countries. UNEP considered that it would be useful if the paper discussed the level of funding needed to prepare terminal phase-out strategies.

24. The World Bank was concerned that the paper did not include the option of using a sector strategy approach incorporating sufficient indicative information on the level of consumption, commitments to annual reductions in consumption, and proposed annual funding levels. The World Bank noted that a number of sector strategies has already been approved by the Executive Committee. The Bank stressed the need for countries to have flexibility in implementing their strategy. The Bank suggested that the principles relating to end-user conversions adopted in Decision 28/44 and proposed for inclusion in these guidelines were not practical and could not be implemented, since no countries had come forward with projects in this sector. It was noted that the suggested requirements for establishing and corroborating the nature of the sector and its consumption were very detailed and would require an extensive undertaking.

25. UNDP supported the comments of UNEP and the World Bank and suggested that neither NOUs or implementing agencies have the resources to gather such detailed and complete information. UNDP suggested that consumption data might be arrived at by a best estimate using data from overall import statistics, individual importer's data and information from major manufacturers and major service industries.

Conclusions

26. The Executive Committee might wish to consider adopting the pre-requisites and guidelines outlined in paragraphs 13 and 18 respectively, for a trial period, for use both in the refrigeration sector on its own, or as a component of a national CFC phase-out strategy.