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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
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**NEW SUB-SECTOR FOR THE ASSEMBLY, INSTALLATION AND SERVICING OF
REFRIGERATION EQUIPMENT:
STATUS REPORT**

Background

1. At its 27th Meeting the EC considered a paper on possible consideration of a new sub-sector for transportation refrigeration. In that paper it was explained that the issues concerning projects for transportation refrigeration were the same as those which arose in projects for the assembly, installation and charging of refrigeration equipment. This included projects for conversion of cold stores, assembly or installation of refrigeration systems and foam insulation in trucks or railcars and the assembly installation and charging of air-conditioning systems in trucks and buses. The Executive Committee accepted the conclusions of the paper in Decision 27/74 as follows:

- (a) Activities characterized by the assembly, installation and charging of refrigeration systems may be treated as a new sub-sector distinct from the already established domestic and commercial refrigeration sectors, which primarily deal with manufacture;
- (b) This new sub-sector has yet to be fully defined and the activities of enterprises within it can overlap with the commercial refrigeration sub-sector;
- (c) Where the activities are consistent with those found in typical commercial refrigeration projects approved by the Executive Committee, the projects may continue to be considered as part of the commercial refrigeration sub-sector;
- (d) Incremental costs for capital equipment should continue to be eligible for funding on the same basis as the commercial refrigeration sub-sector, provided that the ODS-based equipment is destroyed.

2. Noting that the quantification of consumption and subsequent definition of incremental operating costs had not been resolved, at the same meeting the Executive Committee requested the Fund Secretariat and the implementing agencies to provide more information on the impact of this new sub-sector for the Multilateral Fund (Decision 27/75).

3. At the 30th Meeting, the Sub-Committee on Project Review discussed a proposal from UNIDO for funding to prepare a project or projects in China for refrigerated transport. The Executive Committee decided that the draft guidelines for the transportation refrigeration sector should be prepared as soon as possible (Decision 30/45).

4. On the basis of Decision 22/75, projects associated with transportation refrigeration should be considered either under arrangements currently existing for the commercial refrigeration sub-sector or under the guidelines for projects for the assembly, installation and charging of refrigeration equipment, when fully resolved. This paper therefore addresses those guidelines.

Progress since the 27th Meeting

5. Projects that were consistent with typical commercial refrigeration projects have continued to be prepared and submitted by implementing agencies and approved by the Executive Committee.

6. For enterprises which install cold rooms or refrigeration systems in trucks, implementing agencies have been submitting for approval the foam part as separate projects, for approval under foam sector guidelines. This is appropriate because (a) the foam part of enterprises installing cold rooms or refrigerated trucks is basically the same as the production of foam insulation panels or the application of spray foam – both of which are established foam sub-sectors, (b) the ODS consumption in the foam part is typically much larger than consumption in the refrigeration part of such enterprises and is the major part of the project in terms of cost of equipment, and (c) the consumption in the foam part of these projects can be established in the same manner as for other foam projects. Where the foam part of the manufacturing activity is consistent with commercial refrigeration, i.e. it is not the production of insulation panels or the spraying of foam, the manufacturing activity would be considered under the rules for commercial refrigeration.

7. A number of projects which were not consistent with activities found in typical commercial refrigeration projects have been able to move forward on this basis, through provision of capital and operating costs for the foam part. The refrigeration part will be able to move forward when consumption and IOCs issues are resolved and guidelines are completed.

Impact on the Fund

8. In response to Decision 27/75 Implementing Agencies have provided consumption data for the following three countries; Turkey, Uruguay, and Brazil. The purpose of this data, if available Fund-wide, would be to indicate the level of consumption for activities associated with the installation assembly and charging of refrigeration equipment in each country and therefore globally. The availability of global figures would provide an indication of the potential overall liability of the Fund dependent on the extent to which IOCs were determined to exist and to be eligible in this sub-sector. The absence of data for most countries is indicative of the difficulty of quantifying consumption for these activities in particular the division of consumption between manufacturing and servicing, which frequently occur in the same enterprise.

Considerations relating to IOCs for these activities

9. As indicated above, accurate consumption may not be able to be quantified globally since (a) many enterprises in this sector may undertake a combination of manufacturing, installation and servicing activities, (b) use of CFC-12 for servicing has been shown to include a substantial proportion of waste (e.g. for cleaning components) which may not be eligible for compensation as it can be eliminated by good practice with no investment cost, and (c) individual customers can order either CFC or non-CFC refrigeration systems to be installed, therefore ODS use may not cease.

10. Additionally, where enterprises are assembling and installing pre-manufactured refrigeration or air-conditioning systems, there is no manufacturing and thus no consumption of ODS as an intermediate good (as set out in the indicative list of incremental costs). Rather, the enterprise assembles and installs a pre-manufactured product for which the refrigerant has been specified by the manufacturer of the refrigeration system, whether R-12, R134a or R404. The enterprises install the required refrigerant and charges the customer for the appropriate refrigerant costs. There is no manufacturing activity on the part of the enterprise. Thus phase-out cannot be established, IOCs are not incurred by the enterprise and no IOCs are eligible on the basis of use in manufacturing as an intermediate good.

11. It is relevant that uncertainty of (a) consumption, (b) whether there were any IOCs, and (c) who would bear the cost if they did exist, led the OORG MAC sector working group to recommend in its first report (1995) that IOCs not be considered for that sector. The Working Group confirmed this finding when it revised its report in 1998. The issues are similar in the two sectors.

Options for Outstanding Issues

12. In regard to paragraph (b) of Decision 27/74 regarding full definition of the sub-sector, the following could be used to clarify current ambiguities. Where the conditions below are in place, IOCs can potentially be quantified and the activities of the enterprise can be considered under the rules pertaining to commercial refrigeration – including the eligibility of incremental operating costs or savings for up to two years as applicable to commercial refrigeration:

- The activities of the enterprise involve the design and manufacture of completed refrigerated systems (including the foam part) in its own central facility and under its own trade name; this could include refrigerated trucks, reach-in refrigerators or freezers or small prefabricated cold rooms; a compressor size of 5kw or less may be used to delineate the upper size limit of “small” cold rooms;
- Production capacity prior to July 1995 can be established;
- Consumption can be established through stable production and ODS consumption records for a three year period (either the year prior to project formulation or the average of the last three years would continue be used to calculate consumption in projects);
- Satisfactory guarantees can be provided that CFC-based production will cease after conversion.

13. In accordance with practice now established between the Secretariat and the implementing agencies, where the enterprises produces foam panels, subject to the usual verification of CFC consumption and production levels, panel production should continue to be treated according to rules and policies for the rigid foam sub-sector.

14. Enterprises involved in activities other than those outlined above can be characterised as follows:

- The activities of the enterprise involve the assembly or installation of prefabricated refrigeration systems in cold rooms or trucks, or the installation of air conditioning systems obtained from specialised suppliers in trucks or buses;
- The installation is outside the premises of the refrigeration equipment manufacturer or may be undertaken by a branch, agency or independent contractor;
- The individual installation may be CFC or non-CFC based on the refrigerant specified by the manufacturer of the refrigeration unit or based on the choice of the customer;
- It may be impractical to establish production capacity prior to July 1995 or to identify likely levels of production (and thus consumption) in future years (as there is no production line);
- There is no consumption for manufacturing as an intermediate good.

15. For enterprises which fall within the new sub-sector for the assembly or installation of refrigeration equipment, as described in paragraph 14 above, it cannot be established whether there is an incremental operating cost associated with refrigeration part of such projects, whether there is a transitional period during which IOC should be paid or to which entity any incremental costs might arise. For these reasons, the refrigeration part of such projects should be based on capital costs only. This approach would be consistent with Decision 25/50 (directed towards terminal phase-out for remaining small enterprises) in which capital costs are eligible but IOC/savings are not included in project costs.

16. Consistent with current Executive Committee practice for projects with multiple sub-sectors in the foam and solvent sectors, enterprises which engage in a combination of the activities described in paragraphs 12 to 15 should indicate their consumption for each type of activity and the policies for each relevant sub-sector should be applied.

Comments from Implementing Agencies

17. UNEP suggested that the training of managers and technicians on phase-out options and the active dissemination of case studies on retrofitting which had been successfully carried out without support from the Multilateral Fund could be beneficial for the Fund.

18. UNDP noted that the Executive Committee had not yet funded any detailed survey that could respond to Decision 27/75. UNDP also indicated that the separation of consumption at enterprises with various different activities including servicing, is relatively easily undertaken and considered that there could be advantages from including servicing in certain transport

refrigeration projects. UNDP considered that the production of refrigerated trucks should remain under the cost effectiveness threshold for commercial refrigeration, that the paper should be restricted to the installation and servicing of air-conditioning in trucks and buses and that cold storage should be deleted from the scope.

19. UNIDO suggested that the paper could move forward several projects stranded due to this outstanding policy issue. UNIDO supported the grouping of some activities involving transport refrigeration under the commercial refrigeration sector as it allowed these projects to move forward. The agency suggested that cold rooms should not be included in considerations in the paper.

20. The World Bank agreed that projects for enterprises involved only in contractual work for the assembly and installation of prefabricated cold rooms and the installation of prefabricated refrigeration systems for trucks and buses should only be covered for incremental capital costs, but considered that all other activities should be considered as commercial refrigeration. The Bank suggested that the treatment of foam panel production as rigid foam in enterprises which undertook commercial refrigeration activities was only a temporary solution and that foam panel production for insulation purposes should revert to being considered as an integral part of the commercial refrigeration sub-sector when it was a part of the activities of the enterprise. The Bank also suggested that cold rooms installed at the customer's location by a commercial refrigeration company should not be considered in the new sub-sector but be considered as commercial refrigeration. The World Bank pointed out that no funding had been provided for surveys and data collection.

21. In regard to comments from implementing agencies, the Secretariat notes:

- (a) This would appear to be the first occasion on which the issue of funding for the data collection activity required by Decision 27/75 has been raised. Some agencies have been provided with funds in the relevant timeframe for activities in countries which could have elicited data about this sub-sector, but the necessary work was not incorporated in project activities. Funding for preparation of RMPs either already approved or currently being sought for larger countries could also be available to cater for any necessary additional data collection work. Decisions 28/25 and 29/10 on the summary status report on ODS phase-out already require similar information, including a breakdown between the manufacturing and servicing sectors.
- (b) The production and installation of cold rooms can involve activities which fall within both the commercial refrigeration sub-sector and the new sub-sector for assembly installation and charging of refrigeration equipment, as indicated in paragraphs 12 and 14 above. It is not possible to provide a comprehensive indication of the range of activities encountered in the two sub-sectors without including consideration of cold rooms. If they were not included in this document, it would be necessary to bring forward a separate policy paper to deal with cold rooms.

Conclusion

22. Transport refrigeration is not a separate sub-sector, but consists of the activities indicated in paragraphs 12 to 16 above which are either in the commercial refrigeration sub-sector, and/or the rigid foam sub-sector and/or the new sub-sector for the assembly installation and charging of refrigeration equipment.

23. If the Executive Committee wishes to adopt the proposals in paragraphs 12 to 16, all elements of projects for commercial refrigeration and for the assembly and installation of refrigeration equipment (including transport refrigeration) could proceed. Guidelines for projects involving servicing may need to be developed in the light of the Executive Committee's conclusions on Refrigerant Management Plans, however servicing activities could be included in projects for the new sub-sector for assembly installation and charging of refrigeration equipment where no incremental operating costs are involved.