FUNDING AND FLEXIBILITY IN IMPLEMENTATION: Issues raised during informal consultations among parties

1. Scope of the briefing note

At the 37th meeting of the Open-ended Working Group (OEWG), parties focused on "resolving challenges by generating solutions on the feasibility of managing HFCs" as described in the "Dubai pathway on hydrofluorocarbons".[1] The contact group charged with undertaking these discussions conducted a first review of issues under its remit and reported out at the end of the meeting that "significant progress had been made in generating solutions" specifically related to an exemption for high-ambient temperature countries and for some aspects of challenges related to funding and flexibility. The co-chairs reported that more time was needed to further consider aspects of solutions related to funding issues and that agreement on these issues should be possible at the next meeting. The informal discussions resulted in a table that has been issued as a background document, for information purposes only, for the resumed thirty-seventh meeting of the Open-ended Working Group.[2]

This briefing note focuses on the key issues related to funding and flexibility in implementation that were discussed by the contact group at the 37th OEWG in Geneva.[3] It presents background information related to a number of outstanding issues to be discussed further when the 37th Meeting of the Open-Ended Working Group resumes its work. The issues discussed in this note have been identified in informal discussions during the 37th Meeting of the Open-ended Working Group (OEWG) and were presented by the co-chairs of the contact group. This section is divided into those issues relevant to incremental costs in the consumption, production, and servicing sectors, and also addresses a number of cross-cutting issues.

The information contained in this note does not in any way represent policy recommendations, but seeks only to help inform the discussions being conducted among parties. The present note has been prepared in consultation with the secretariat of the Multilateral Fund (MLF) which provided background information.

2. Incremental costs in the consumption and production sectors

The parties created the Multilateral Fund to serve as the mechanism to provide financial and technical support to Article 5 parties to enable their compliance with control measures and adopted "an indicative list of the categories of incremental costs" (see Annex for the full indicative list of incremental costs) as well as general approaches to be taken into account in the evaluation of requests for financing these costs. An overview of the indicative list of the categories of incremental costs is shown in box 1.

[1] Decision XXVII/1. Twenty-Seventh Meeting of the Parties to the Montreal Protocol.

[2] The background document can be found under background documents at http://conf.montreal-protocol.org/meeting/oewg/oewg-37-resumed/presession.

[3] This note builds on prior notes prepared by the Ozone Secretariat that were available prior to the 37th OEWG in Geneva. See, *Briefing Note on Funding-Related Issues Identified in the Dubai Pathway* (April 2016) and *Briefing Note on Intellectual Property Rights and the Montreal Protocol: past practices and current challenges* (April 2016).

Box 1: Indicative list of incremental costs

The decision reached at the 4th Meeting of the Parties includes the following general principles:

- The most cost-effective and efficient option should be chosen, taking into account the national industrial strategy of the recipient party;
- Careful scrutiny of cost items shall seek to avoid double-counting in project proposals;
- Savings or benefits gained during the transition process should be taken into account on a case-by-case basis;
- Funding of incremental costs is intended as an incentive for early adoption of ozone-protecting technologies with the Executive Committee agreeing on the appropriate timescales for payment for each sector.

The decision establishing criteria for eligible costs then sets out a list of specific eligible costs under the subcategories of supply of substitutes, use in manufacturing as an intermediate good, and end uses. It states that incremental recurring costs would apply only for a transition period to be defined.

The decision sets forth that incremental costs other than those specified in the list would be reviewed by the Executive Committee for consistency with criteria established by the parties. Consequently, the Executive Committee has funded activities not in the indicative list including inter alia institutional strengthening, country programme development, regional networks, project preparation, and ODS and non-ODS alternatives survey. The Executive Committee has also provided special funding windows for, inter alia, demonstration projects on methyl bromide alternatives, chiller energy efficiency demonstrations, ozone-depleting substances (ODS) disposal projects, small and medium enterprise (SME) projects, and activities for low volume consuming (LVCs) parties. Special considerations were given to allow higher costs in LVCs, SMEs, and for the introduction of low-GWP technologies as alternatives to HCFCs.

2.1 Incremental cost in the consumption sector

For the consumption sector, issues related to incremental costs in the context of an HFC amendment include the following: the time scale for payment of incremental operating costs; whether research and development costs for alternatives would be eligible; and whether technology transfer costs, including patents or incremental cost of royalties, also would be eligible.

Time-scale for payment of incremental operating costs

Incremental costs for investment projects are broken out into incremental capital costs and incremental operating costs. Capital costs typically cover changes in equipment required to transition from a controlled substance to a substitute. Depending on the specifics of the investment project, capital costs may also cover any related technology transfer or technical assistance costs, trials and testing to demonstrate the alternatives are producing acceptable products, training, and commissioning costs. If safety concerns are associated with the substitute (for example, due to flammability or toxicity of the alternative used to replace the ODS), costs related to addressing those concerns would also be incremental capital costs eligible for funding.

Incremental operating costs typically cover: the added costs if the substitutes are more expensive; costs related to changes in the quantity of substitutes used in the product; and changes in other raw materials or energy consumption at the manufacturing facility.[4] One factor in determining the costs paid by the Fund relates to the time period covered by changes in incremental operating costs.

[4] Incremental operating costs include the costs associated with changes in the energy consumption of the manufacturing facility in making products using substitutes. It does not include costs associated with enhancing the energy efficiency of the manufactured products themselves. See section 4.

Depending on the sector and the cost of the substitute selected, incremental operating costs can range from a small percent of overall project costs to a significant factor. In cases where flammable refrigerants or foam-blowing substitutes were selected by parties, the incremental cost of the substitute itself in some cases was less than the controlled substance it replaced, but higher capital costs were incurred in modifying manufacturing facilities to address safety or flammability concerns. In contrast, where near drop-in alternatives (e.g., only minor changes required in the manufacturing process) were chosen to replace CFCs or HCFCs, incremental capital costs were typically small relative to the higher costs of the substitute chemicals.

In keeping with the initial decision of the parties creating the Fund, the Executive Committee has developed guidelines for the time period covered by incremental operating costs on a sector-by-sector basis. At its 10th Meeting (1993), the Executive Committee began addressing issues related to determining eligible operating costs.[5] The duration of incremental operating costs in Multilateral Fund projects has varied among industrial sectors from zero for enterprises manufacturing compressors or MAC systems to four years for aerosol and flexible slabstock manufacturing enterprises. Over the years, as the Executive Committee gained a better understanding of the operating costs incurred by projects in specific sectors, it further refined these guidelines at its 55th meeting (2008) to cover the following time periods and subsectors[6] as shown in box 2.

Box 2: Incremental operating costs – time periods and subsectors

- Up to one year for domestic refrigeration (or ten percent of incremental capital costs paid upfront or six months of incremental operating costs paid upfront at current prices, whichever is greatest);
- Two years for commercial refrigeration, and rigid and integral foam manufacturing facilities;
- No operating costs for compressors; and
- Four years for aerosol and flexible slabstock manufacturing plants.

The issue of how much to pay for incremental operating costs for phasing out HCFCs, was addressed in the guidelines for Stage I HPMPs at the 60th Meeting of the Executive Committee (2010)[7] and for Stage II HPMPs at the 74th meeting (2015).[8] The HCFC guidelines establish a specific maximum level of incremental operating cost for each subsector, regardless of the alternative. For example, for the stationary air conditioning subsector, incremental operating costs are set up to $6.30 per metric kilogram of HCFC phased out. For the polyurethane foam sector, incremental operating costs are set up to $1.60 per metric kilogram of HCFC for phasing out HCFC-141b, but up to $5.00/ metric kilogram if a substitute with low global warming potential is employed.[9] For the foam sector, higher levels of incremental operating costs could be considered when it is clearly demonstrated that they were needed to introduce low-GWP alternatives by SMEs. One year duration for incremental operating costs has generally been applied for Stages I and II HCFC projects approved for the manufacturing sectors.

In addition to the time period covered by incremental operating costs, a separate issue that also significantly affects what the Fund covers relates to the cut-off dates used for determining the eligibility of manufacturing capacity. In the case of ozone-depleting substances before the 2007 accelerated phase-out of HCFCs, the cut-off date was set at 25 July 1995. For HCFCs, the cut-off date was set at September 21st, 2007 (the date of the agreement of the accelerated phase-out). In both cases, manufacturing capacity established after the cut-off date, whether in new or existing facilities, is not eligible for Multilateral Fund assistance. Increased production after the cut-off date within existing capacity is eligible for funding, subject to other Fund guidelines.

[5] UNEP/OzI.Pro/ExCom/10/39.
[6] UNEP/OzL.Pro/ExCom/55/47.
[7] UNEP/OzL.Pro/ExCom/60/54, decision 60/44.
[8] UNEP/OzL.Pro/ExCom/74/56, decision 74/50.
[9] UNEP/OzL.Pro/ExCom/74/56, decision 74/50.

To provide flexibility in using resources from the Multilateral Fund, the Executive Committee has adopted guidelines that allow countries the flexibility to allocate approved funding for incremental operating costs for use as incremental capital costs and to allocate up to 20 percent of incremental capital costs to be used to defray incremental operating costs.[10]

Countries were also allowed flexibility to allocate approved funds for enterprises established before the cut-off date, as long as the agreed national consumption target was met. Given the focus of the Fund on meeting the near-term compliance targets as well as guidance by decision XIX/6 to phase out first HCFCs with higher ODP, phase-out activities in some sectors were prioritized over others in some countries. For some countries, these sectors may have been left to grow but still within the Montreal Protocol maximum allowed consumption for the country. In some cases, this growth may not be eligible for MLF funding depending on individual country – Executive Committee agreements or on how the markets for alternatives have developed.

Research and Development Costs

The "cost of research and development" is specifically included as a category of incremental costs for use in the manufacturing sector in the indicative list adopted by the Parties.[11] At the Eighth Meeting of the Executive Committee (1992), the issue of funding for research and development was specifically addressed in the following decision:

> The Executive Committee, as mandated by the Parties, could consider proposals regarding research and development on substitutes, and equipment production facilities for recycling and destruction on a case-by-case basis provided that the costs incurred were of an incremental nature.[12]

The Multilateral Fund has generally supported the use of proven, cost-effective technologies, but has also supported more innovative technologies in a number of ways. Demonstration projects described below are one example of this approach, and a number of MLF investment projects have also helped with deployment of newer technologies in Article 5 parties. In past transitions from ODS, substantial product development and testing of substitutes in manufacturing products has primarily occurred in developed countries faced with early national regulations limiting their use of ODS. Nonetheless, research and development has sometimes been necessary for products developed by enterprises in Article 5 parties and to adapt and test technologies to the local conditions specific to these countries. There are examples of specific circumstances for which countries have received such funding under the MLF.

As mentioned above, the Executive Committee has supported a number of demonstration projects aimed at specific technologies that have not yet been widely employed or require adaptations to meet local conditions in Article 5 Parties. As of the 76th Meeting of the Executive Committee (2016), funding for demonstration projects across a wide range of ODS and sectors has totaled $67 million. Of this amount, approximately $30 million has been approved for demonstration projects involving low-GWP alternatives. For example, recent projects supported by the Fund have included the use of low GWP/zero GWP alternatives across a range of sectors (e.g., a range of low-or zero-GWP foam alternatives, conversion of HCFC-22 to propane in room air conditioning) and the demonstration of low-GWP alternatives in air conditioning under high ambient temperatures.[13]

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[10] UNEP/OzL.Pro/ExCom/28/57, Decision 28/45. This flexibility was also incorporated in guidelines for Stage I HPMPs (UNEP/OzL.Pro/ExCom/60/54, decision 44) and Stage II HPMPs (UNEP/OzL.Pro/ExCom/74/56, decision 50).

[11] Research and development costs were also included in guidelines for implementing the categories of eligible incremental costs developed by the Executive Committee at its 10th Meeting. UNEP/Ozl.Pro/ExCom/10/39.

[12] UNEP/OzL.Pro/ExCom/8/29, paragraph 108.

[13] For a description of demonstration projects supported by the Multilateral Fund, see Ozone Secretariat, *Briefing Note on Funding-Related Issues identified in the Dubai Pathway,* April 2016. An additional 15 demonstration projects at a total value of approximately $9.5 million were approved at the 76th meeting of the Executive Committee.

Technology transfer and costs of patents or incremental costs of royalties

The indicative list of categories of incremental costs specifies under the section covering use in manufacturing that the "cost of patents and designs and incremental costs of royalties" are eligible for support under the Multilateral Fund.

Consistent with this provision, the costs associated with patents were explicitly included in several of the sector-specific technology guidelines adopted by the Executive Committee. Patent costs were also included in a small number of investment projects as a component of the overall incremental costs. In other cases, the costs associated with patents were indirectly paid for as part of the price of the technology being transferred.[14]

There appear to be several reasons why only a limited number of investment projects under the Fund have included the explicit payment for patents or licensing fees. For example, many of the substitute technologies used to replace ozone-depleting substances were never restricted by patents or were in the public domain following the expiration of applicable patents. Since patents are controlled only in the relatively small number of countries in which they are filed, they do not affect the vast number of Article 5 parties. Finally, the Fund's guidelines calling for the use of the most cost-effective option may have limited the use of technologies still under patents because they may not yet have benefitted from economies of scale and price competition.[15]

In past cases where the Multilateral Fund has paid for patents, different licensing arrangements have been utilized. The costs associated with patents have been paid for by the Fund either as a one-time incremental capital cost or as an output-based incremental operating cost. For example, for some metered-dose inhalers (MDIs), the non-CFC drugs were developed by valve manufacturers for the canisters in exchange of purchasing of the valves by the MDI manufacturer. In one case, a technology developer was sub-contracted to develop the non-CFC formulations.

In some cases, patents are only one aspect of transfer of technology. Technical know-how, testing, training, and related requirements are also important elements. These cost elements are considered as eligible incremental capital costs and have been paid by the Fund in investment projects. The use of proven technologies and adapting those to national circumstances has also been an important aspect of successful technology transfer under the Fund. In one case, where the Fund deviated from the practice of approving proven technologies and conditionally approved with license fees an unproven technology (liquid carbon dioxide foam projects), a subsequent evaluation of these projects concluded that the technology had not worked as intended and the Executive Committee decided to suspend approving any future projects proposed with that technology.[16]

2.2 Incremental cost in the production sector

The provisions in the indicative list of incremental costs on the supply of substitutes set out a range of options for determining costs that would be eligible for funding in the production sector. These options include: costs arising from premature retirement or enforced idleness; the costs of converting existing production facilities to produce alternatives where such capacity is not replaced by converted or new capacity; the costs of establishing new production capacity equivalent to that converted or scrapped; and the costs of importing substitutes.

To date, the Multilateral Fund has agreed to compensate for the production sector based on the premature retirement of existing production capacity (lost profits). That approach has been used as the basis for negotiating the amount paid by the Fund for production sector phase-out projects. The Fund requires that a technical audit be undertaken of the production facilities being phased out to help estimate the amount that

[14] Ozone Secretariat, *Briefing Note on Intellectual Property Rights and the Montreal Protocol*, (April 2016).
[15] Ibid
[16] UNEP/OzL.Pro/ExCom/39/43, decision 39/52.

would be considered agreed incremental costs. This information helps the Executive Committee to reach a final agreement on approved project funding.

Compensation to displaced workers

While the indicative list of incremental costs includes the cost of training (or retraining) personnel when production facilities are converted or new ones established, it doesn't explicitly refer to compensation for displaced workers. Nonetheless, the guidelines for technical audits for determining eligible costs for production facilities include an assessment of labor displacement costs and such costs have been included in production sector phase-out projects. For example, in the project approved for the phase out of CFC production in China, the calculation of incremental costs specifies in the agreement that "labor compensation is calculated on a 2 year basis".[17]

Dismantling of production facilities

Investment projects under the Multilateral Fund generally require that production facilities be dismantled to guarantee that phase-out goals are achieved and maintained over time.[18] For example, the CFC production phase-out agreements with India[19] and China[20] both contain language specifying that the dismantling of the plants would occur within 18 months of the cessation of production unless such facilities were used to produce non-ozone-depleting substances. The project proposal for China's CFC production sector specifies that incremental costs are defined to include dismantling costs of closing CFC facilities, and "net dismantling costs" are specified as a line item in the project budget at $20,000 per enterprise.[21] The HCFC production sector agreement for China also specified that 552,901 MT production line capacity would be closed and dismantled, or retired.[22]

Research and development for HFC alternatives

The "cost of research to adapt technology to local circumstances" is included among the categories of incremental costs as a subcategory under the costs of converting existing production facilities. Although most of the funding for production sector phase-out projects has been provided on the basis of lost profit from plant closure, some of these allocated funds have been used by the recipient party for technical assistance such as research and development on alternatives. In the case of the CFC phase-out project in China, the government decided that it would use $17 million of $150 million approved to support the development of the first HFC-134a demonstration pilot plant in the country[23] and $4.2 million was used for a range of research and development projects on alternatives to ODS.[24]

Technology transfer, including IPR

The indicative list of categories of incremental costs for the supply of substitutes (the production sector) contains similar language related to patents and licensing fees to that included for the manufacturing sector. The "costs of patents and designs and the incremental cost of royalties" is specified both for converting existing production facilities and for establishing new ones. In the one project where China used some of the

[17] UNEP/OzL.Pro/ExCom/27/45.
[18] The one exception to this policy is where such facilities are being converted to produce non-controlled substances.
[19] UNEP/OzL.Pro/ExCom/29/57.
[20] UNEP/OzL.Pro/ExCom/27/45.
[21] Ibid. Where applicable, the value of scrap materials would be deducted from the costs of dismantling a facility.
[22] UNEP/OzL.Pro/ExCom/69/40, decision 69/28.
[23] UNEP/OzL.Pro/ExCom/42/12.
[24] UNEP/OzL.Pro/ExCom/73/17/Add.1. The CFC production phase-out agreements provided Article 5 parties with the flexibility to use the agreed upon amount of allocated funds in a flexible manner as long as the production phase-out targets were met. Subsequently, the HCFC production phase-out agreement with China was structured in a way that provides for less flexibility in shifting around the use of agreed allocated resources without Executive Committee approval.

funds approved for the phase-out plan to support an HFC-134a pilot plant, the facility relied on its own proprietary patents.[25]

Conversion of HCFC production to HFC/HFO

Under the production sector provisions of the indicative list, one of the options for calculating incremental costs provides for the "cost of conversion of existing production facilities." This provision could apply to the potential to convert existing HCFC production facilities to produce HFCs or hydrofluoroolefins (HFOs).

The Multilateral Fund first addressed the option of converting existing production in its consideration of the production sector phase-out projects involving CFC plants, some of which were designed as "swing plants" that could also produce HCFC-22. As a result, some CFC plants shifted to manufacture HCFCs as part of their CFC phase-out projects.

More recently, in consideration of the HCFC production phase-out, the Executive Committee requested the MLF Secretariat to undertake an analysis of the technical feasibility of redirecting HCFC-22 production facilities to producing feedstocks.[26] In subsequent meetings, the Secretariat was also asked to assess the feasibility of possible redirection beyond feedstock use, to analyze conversion options. Options considered included converting an HCFC-22 plant to produce HFC-32, the feasibility of conversion of HCFC-141b or HCFC-142b to HFC-152a, and the feasibility of conversion of HCFC-22 to production of HFO-1234yf.[27]

While the economic and technical feasibility of modifying an existing HCFC (or HFC) production plant to produce low or zero global warming potential substitutes will be site and facility specific, there are early indications of the potential for such shifts. For example, in India chemical companies have announced that they are exploring, modifying existing facilities in one case from producing HCFC-22 to producing HFC-32, and in another case, from producing HFC-134a plant to also using the plant for producing HFC-32.[28]

3. Servicing (end use) sector

The indicative list of incremental costs includes the following categories associated with the end use sector:

- the cost of premature modification or retirement of user equipment;
- the cost of collection, management, recycling and destruction (if cost effective); and
- the cost of providing technical assistance to reduce consumption and unintended emissions.

For many Article 5 parties, the servicing sector is their only use of ozone-depleting substances. For example, for 95 Article 5 parties their only HCFC consumption is HCFC 22 used in servicing air conditioning and refrigeration equipment.[29] As a result, funding for these countries focuses on achieving compliance through reduced consumption associated with servicing.

Beginning in 1991, the Multilateral Fund began an extensive effort aimed at training refrigeration service technicians to introduce good service practices to reduce emissions of ODS refrigerants into the atmosphere (e.g., through using leak detection and control and avoiding venting of refrigerants during servicing), and to reduce consumption (e.g., through recovery/recycling and sometimes reclaim of refrigerants), so that the ODS-based equipment could continue to be used throughout its remaining useful life time.

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[25] Sinochem Modern Environmental Protection Chemicals (Xi'an) Co., LTD. Accessed on May 20, 2016, http://english.sinochem.com/1477.html.
[26] UNEP/OzL.Pro/ExCom/57/69, decision 57/35.
[27] UNEP/OzL.Pro/ExCom/67/38.
[28] Hindustan Fluorocarbons has solicited expert support to evaluate shifting an HCFC-22 plant to produce HFC-32 www.hfl.co.in/.../appointemnt%20of%20consultant%20for%20new%20projects.doc. SRF Ltd has announced plans to convert an HFC-134a plant to a swing plant that can make both HFC-134a and HFC-32. Analyst Report on SRF, Motilal Oswal, (2015).http://www.motilaloswal.com/site/rreports/635775577749011685.pdf
[29] UNEP/OzL.Pro/ExCom/75/53, Rev 1.

This effort evolved over time, moving from stand-alone projects to more comprehensive refrigeration management plans. More recently, Article 5 parties have included servicing sector programs in their national/terminal phase out management plans and in their HPMPs.

Through extensive monitoring and evaluation of past projects, the Multilateral Fund has developed guidance aimed at improving the effectiveness of programs targeting the recycling and recovery of refrigerants. The most recent guidance developed as part of the Fund's guidelines for preparing HPMPs supports core program elements including: public awareness activities; policy development aimed at legislation and regulatory requirements; training materials and certification programs mandated for service technicians; development of codes of practices and standards; import licensing systems and associated training programs; equipment and tools required for finding leaks and testing for refrigerant contamination; and recovery and recycling equipment.

To facilitate funding of servicing programs for Article 5 parties with total consumption of up to 360 metric tonnes, the Executive Committee has developed funding levels based on the costs of past projects for specified amounts of consumption. These funds are targeted for use in refrigerant management programs with flexibility left to the party to achieve the smoothest possible HCFC phase out.[30] For Parties with consumption that exceeds low-volume consumption thresholds, the Executive Committee initially approved support for refrigerant management at US $4.50/kg as part of stage I HPMPs[31] with that amount increased to US $4.80/kg for stage II HPMPs.[32] For CFC, it may be noted that the funding was approved at $5.00/kg.

It has been argued that a phase-down of HFCs would result in additional requirements on the end use service sector due to the resulting increase in the number of refrigerants and the potential introduction of ones with greater flammability and toxicity. It will be useful to build on past experience including refrigerant management activities focused on training service technicians and developing codes of practice and standards to ensure safe handling and use of all refrigerants. For stage II of HPMPs, the Executive Committee decided to provide additional support to the servicing sector by increasing the funding from $4.50/kg to $4.80/kg.

4. Cross-cutting issues

Costs associated with energy efficiency

The indicative list of categories of incremental costs did not include any direct reference to energy efficiency. As per the guidelines developed by the Executive Committee, technology upgrades are not an eligible incremental cost. Energy efficiency could be considered as a technology upgrade. However, interest in enhancing the energy efficiency of investment projects was spurred by Decision XIX/6 adopted in 2007 as part of the amendment accelerating the phase-out of HCFCs. It calls for the Multilateral Fund to give priority in its project evaluation and decisions "to cost effective projects and programmes which focus on, inter alia, substitutes and alternatives that minimize other impacts on the environment, including on the climate, taking into account global-warming potential, energy use and other relevant factors."

The Executive Committee in light of decision XIX/6 examined a number of options for the air conditioning and refrigeration sectors, but decided to maintain the existing policy of not funding technological upgrades unless necessary to allow the conversion to take place. It found that improvements aimed specifically at enhancing energy efficiency could require significant changes to refrigeration and air conditioning equipment components (e.g., compressors, heat exchangers, controls) that were not otherwise required in shifting to a substitute refrigerant.[33]

[30] UNEP/OzL.Pro/ExCom/60/54, decision 60/44, as modified by decision 75/40 which increased the level of funding for the lowest consumption categories.
[31] UNEP/OzL.Pro/ExCom/60/54, decision 60/44.
[32] UNEP/OzL.Pro/ExCom/74/56, decision 74/50.
[33] UNEP/OzL.Pro/ExCom/61/58, decision 61/44.

While not directly funding energy efficiency enhancements, the Multilateral Fund has taken steps to better inform their decisions about the climate impacts of proposed investment projects in the refrigeration, air conditioning, foam and other sectors. All HCFC phase-out management plans approved so far has included information of the overall climate impacts of the conversion of manufacturing enterprises to a a specific technology change.[34] The Executive Committee decided at its 75th Meeting to continue to use the Multilateral Fund Climate Impact Indicator (MCII) as a tool to inform parties about the climate impacts (both global warming potential and energy impacts) of proposed investment projects in the refrigeration and air conditioning sector and the methodology being used for calculating the climate impact of investment projects in the foam and other sectors.[35]

While the Executive Committee has adopted policies aimed at encouraging the adoption of low global warming potential substitutes (e.g., allowing for a 25 percent premium above cost-effectiveness thresholds and funding demonstration projects),[36] no such incentives have yet been considered for maintaining or enhancing the energy efficiency of investment projects supported by the fund.

Disposal of unwanted HFCs

The indicative list of categories of incremental costs includes the "cost of collection, management, recycling and if cost effective destruction of ozone-depleting substances." In evaluating activities related to destruction, the Executive Committee has considered that such activities are not directly linked to meeting a control measure and do not impact the ability of a party to comply with the Protocol.

At its 58th Meeting, the Executive Committee approved interim guidelines for pilot demonstration projects for the disposal and destruction of unwanted ozone-depleting substances.[37] Under that initiative, disposal and destruction projects have been funded for 12 countries, two regions, and one global project. These projects cover the costs of technology assistance for setting up regulatory and legal frameworks, monitoring systems, and the costs of utilizing existing destruction facilities or transporting wastes to other countries for destruction. They do not support costs associated with collecting unwanted ozone depleting substance. A recent desk review of the program concluded that implementation has generally been successful, but that the amount collected has been less than anticipated in some cases. The review also raised concerns about the need to find sustainable funding sources once pilot funding has expired.[38]

[34] UNEP/OzL.Pro/ExCom/75/78.
[35] UNEP/OzL.Pro/ExCom/75/85, decision 75/68.
[36] For a discussion of these incentives, see Ozone Secretariat, *Briefing Note on Funding-Related Issues Identified in the Dubai Pathway*, April 2016.
[37] UNEP/OzL.Pro/ExCom/58/53, decision 58/19.
[38] UNEP/OzL.Pro/ExCom/75/10.

Annex: Indicative list of categories of incremental costs adopted at MOP 4 (1992)

1. The evaluation of requests for financing incremental costs of a given project shall take into account the following general principles:

a) The most cost-effective and efficient option should be chosen, taking into account the national industrial strategy of the recipient Party. It should be considered carefully to what extent the infrastructure at present used for production of the controlled substances could be put to alternative uses, thus resulting in decreased capital abandonment, and how to avoid deindustrialization and loss of export revenues;

b) Consideration of project proposals for funding should involve the careful scrutiny of cost items listed in an effort to ensure that there is no double-counting;

c) Savings or benefits that will be gained at both the strategic and project levels during the transition process should be taken into account on a case-by-case basis, according to criteria decided by the Parties and as elaborated in the guidelines of the Executive Committee;

d) The funding of incremental costs is intended as an incentive for early adoption of ozone protecting technologies. In this respect the Executive Committee shall agree which time scales for payment of incremental costs are appropriate in each sector.

2. Incremental costs that once agreed are to be met by the financial mechanism include those listed below. If incremental costs other than those mentioned below are identified and quantified, a decision as to whether they are to be met by the financial mechanism shall be taken by the Executive Committee consistent with any criteria decided by the Parties and elaborated in the guidelines of the Executive Committee. The incremental recurring costs apply only for a transition period to be defined. The following list is indicated:

(a) Supply of substitutes

(i) Cost of conversion of existing production facilities:
- cost of patents and designs and incremental cost of royalties;
- capital cost of conversion;
- cost of retraining of personnel, as well as the cost of research to adapt technology to local circumstances;

(ii) Costs arising from premature retirement or enforced idleness, taking into account any guidance of the Executive Committee on appropriate cut-off dates:
- of productive capacity previously used to produce substances controlled by existing and/or amended or adjusted Protocol provisions; and
- where such capacity is not replaced by converted or new capacity to produce alternatives;

(iii) Cost of establishing new production facilities for substitutes of capacity equivalent to capacity lost when plants are converted or scrapped, including:
- cost of patents and designs and incremental cost of royalties;
- capital cost;
- cost of training, as well as the cost of research to adapt technology to local circumstances;

(iv) Net operational cost, including the cost of raw materials;

(v) Cost of import of substitutes;

(b) Use in manufacturing as an intermediate good

(i) Cost of conversion of existing equipment and product manufacturing facilities;
(ii) Cost of patents and designs and incremental cost of royalties;
(iii) Capital cost;
(iv) Cost of retraining;
(v) Cost of research and development;
(vi) Operational cost, including the cost of raw materials except where otherwise provided for;

(c) End use

(i) Cost of premature modification or replacement of user equipment;
(ii) Cost of collection, management, recycling, and, if cost effective, destruction of ozone-depleting substances;
(iii) Cost of providing technical assistance to reduce consumption and unintended emission of ozone-depleting substances.

Source: Annex VIII of the report of the Fourth Meeting of the Parties (UNEP/OzL.Pro.4/15).