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COMITE EXECUTIF  
DU FONDS MULTILATERAL AUX FINS  
D'APPLICATION DU PROTOCOLE DE MONTREAL  
Soixante-dix-huitième réunion  
Montréal, 4 – 7 avril 2017

**ORDRE DU JOUR PROVISOIRE ANNOTÉ**

1. Étant donné que la 78<sup>e</sup> réunion du Comité exécutif est une réunion extraordinaire, convoquée par le Comité exécutif pour traiter des questions relatives à l'Amendement de Kigali émanant de la décision XXVIII/2, et des contributions supplémentaires potentielles au Fonds multilatéral, l'ordre du jour de cette réunion diffère complètement de l'ordre du jour d'une réunion régulière du Comité exécutif.
2. Pour le bénéfice des membres du Comité exécutif, l'ordre du jour provisoire annoté explique brièvement le contexte qui a mené à l'élaboration de l'ordre du jour et fournit un résumé indicatif des documents préparés par le Secrétariat pour chaque point de l'ordre du jour.

**Contexte**

3. Dans le cadre du point 10 de l'ordre du jour de la 77<sup>e</sup> réunion, le Comité exécutif a discuté d'une note du Secrétariat sur des questions liées au Comité exécutif découlant de la vingt-huitième Réunion des Parties au Protocole de Montréal<sup>1</sup> qui cherchait à obtenir l'orientation du Comité exécutif sur la façon d'aller de l'avant pour aborder la décision XXVIII/2 sur l'amendement relatif à la réduction progressive des HFC. Par la décision XXVIII/2 les Parties ont demandé au Comité exécutif, *entre autres*, d'élaborer, dans un délai de deux ans à compter de l'adoption de l'Amendement de Kigali, des lignes directrices sur le financement de la réduction progressive de la consommation et de la production de HFC dans les Parties visées à l'article 5, et de présenter ces lignes directrices à la Réunion des Parties avant que le Comité exécutif en mette au point la version définitive afin que les Parties puissent apporter leurs vues et leurs suggestions. Un extrait du rapport de la 77<sup>e</sup> réunion concernant le point 10 de l'ordre du jour<sup>2</sup>, qui résume les délibérations des membres du Comité exécutif lors de la 77<sup>e</sup> réunion, figure à l'Annexe I au présent document.

<sup>1</sup> UNEP/OzL.Pro/ExCom/77/70/Rev.1.

<sup>2</sup> Paragraphes 205 -213 du document UNEP/OzL.Pro/ExCom/77/76.

4. Durant la discussion, les membres ont généralement reconnu l'importance historique de l'adoption de l'Amendement de Kigali et les défis auxquels est confronté le Comité exécutif pour formuler une réponse rapide et appropriée à la décision XXVIII/2. Plusieurs membres ont déclaré qu'il était nécessaire de trouver un équilibre entre la nécessité d'une action rapide et décisive, et le besoin d'aller de l'avant de manière réfléchie, judicieuse et éclairée. En effet, le processus devrait être itératif, et le Comité exécutif devrait être consulté à chaque étape. Un membre a indiqué que le processus devait être juste, transparent et efficace. Il a été convenu que le Comité avait besoin d'adopter une approche structurée, stratégique en appliquant des lignes directrices et des paramètres appropriés, avant de définir des actions et des activités spécifiques.

5. Il y a eu consensus sur la tenue d'une réunion extraordinaire du Comité exécutif au début de l'année 2017 afin de discuter des questions liées à l'Amendement de Kigali et de la façon de traiter des contributions supplémentaires potentielles provenant d'un groupe de pays donateurs<sup>3</sup>. Certains membres ont déclaré qu'il serait utile pour le Comité exécutif de demander au Secrétariat de préparer des documents stratégiques pertinents afin d'orienter les discussions lors de cette réunion.

6. Plusieurs membres ont indiqué que la priorité immédiate pour le Comité exécutif était de décider s'il les acceptait et la façon de traiter les contributions volontaires supplémentaires provenant d'un groupe de pays donateurs et visant à financer les activités de mise en œuvre de la réduction progressive des HFC. Initialement, l'accent devrait être mis sur le soutien du démarrage rapide de la mise en œuvre, notamment par le biais d'activités de facilitation menées dans les pays visés à l'article 5, dans le but de générer un élan dès le début. Parmi les domaines prioritaires identifiés figuraient l'efficacité énergétique et le secteur de la réfrigération et de la climatisation.

7. Le Comité exécutif a accepté de créer un groupe de contact afin de discuter de la manière dont le Comité devrait aller de l'avant pour traiter des questions liées à l'Amendement de Kigali et de la décision XXVIII/2, ainsi que des éventuelles contributions supplémentaires de pays donateurs.

8. Après avoir entendu le rapport du responsable du groupe de contact, le Comité exécutif a décidé (décision 77/59) :

- a) De tenir une réunion extraordinaire de quatre jours au début de 2017 afin d'aborder les questions relatives à l'Amendement de Kigali au Protocole de Montréal émanant de la décision XXVIII/2 de la Réunion des Parties et aux contributions supplémentaires potentielles au Fonds multilatéral ;
- b) De charger le Secrétariat de préparer un document contenant de l'information préliminaire sur les éléments de la décision XXVIII/2 de la vingt-huitième Réunion des Parties, qui demande au Comité exécutif de prendre action et aborde les questions suivantes :
  - i) Les informations disponibles sur la consommation et la production de HFC, ainsi que sur le sous-produit HFC-23, provenant notamment des enquêtes sur les

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<sup>3</sup> Avant la vingt-huitième Réunion des Parties, un communiqué de presse émis par la Maison Blanche des Etats-Unis d'Amérique, le 22 septembre 2016 (<http://obamawhitehouse.archives.gov/the-press-office/2016/09/22/leaders-100-countries-call-ambitious-amendment-montreal-protocol-phase>) annonçait l'intention de 16 pays donateurs (c.à.d. des pays non visés à l'article 5) de verser 27 millions \$US en 2017 pour aider des pays visés à l'article 5, par le soutien du démarrage rapide de la mise en œuvre si un amendement ambitieux sur les HFC, avec une date de gel suffisamment précoce, était adopté en 2016. Il s'agirait d'une contribution unique qui ne remplacerait pas les contributions des donateurs par la suite.

- solutions de remplacement des SAO financées par le Fonds multilatéral et autres sources;
- ii) Les activités habilitantes nécessaires afin d'aider les pays visés à l'article 5 à entreprendre l'établissement de rapports et des activités de réglementation en lien avec les mesures de réglementation des HFC;
  - iii) Les principaux aspects liés aux technologies de contrôle du sous-produit HFC-23;
  - iv) Le recensement des questions que le Comité exécutif pourrait souhaiter examiner en lien avec les activités existantes d'élimination des HCFC;
  - v) L'information pertinente au développement des directives sur les coûts demandée au Comité exécutif;
- c) D'inviter les membres de la 77<sup>e</sup> réunion du Comité exécutif à communiquer toute information pertinente au Secrétariat, concernant notamment, mais non uniquement, les éléments figurant dans les sous-paragraphes b) i) à v) ci-dessus, avant le 31 janvier 2017, à titre exceptionnel, en raison du peu de temps qu'il reste avant la fin de 2016;
- d) En ce qui concerne les contributions pour démarrage rapide de 27 millions \$US en 2017 versées par certaines Parties non visées à l'article 5 :
- i) D'accepter avec reconnaissance les contributions supplémentaires annoncées par plusieurs Parties non visées à l'article 5 visant à assurer le démarrage rapide de la mise en œuvre de l'Amendement de Kigali, en sachant que ces contributions ne se répèteront pas et ne remplaceront pas les contributions des donateurs;
  - ii) Les contributions supplémentaires mentionnées au sous-paragraphes d) i) ci-dessus devraient être mises à la disposition des pays visés à l'article 5 dont l'année de référence de la consommation de HFC se situe entre 2020 et 2022 et qui ont manifesté formellement leur intention de ratifier l'Amendement de Kigali et de s'acquitter des obligations d'élimination hâtive des HFC afin de soutenir leurs activités habilitantes, telles que le renforcement des capacités et la formation en manipulation de substances de remplacement des HFC, l'émission de permis en vertu de l'article 4B, l'établissement de rapports et la préparation de projets en tenant compte entre autres des lignes directrices pertinentes et des décisions du Comité exécutif;
  - iii) De charger le Secrétariat d'élaborer un document décrivant les procédures que pourraient suivre les pays dont il est question au sous-paragraphes d) ii) ci-dessus pour avoir accès aux contributions supplémentaires pour le démarrage rapide des activités habilitantes;
  - iv) Le Trésorier pourrait communiquer avec les pays non visés à l'article 5 contributeurs au sujet des procédures pour rendre les contributions supplémentaires disponibles au Fonds multilatéral afin de favoriser les actions hâtives en lien avec l'Amendement de Kigali;

- v) le Secrétariat ferait rapport au Comité exécutif sur les contributions de démarrage rapide supplémentaires reçues séparément des contributions promises au Fonds multilatéral; et
- e) Charger le Secrétariat de préparer un ordre du jour pour la réunion extraordinaire dont il est question au sous-paragraphe a) ci-dessus à partir des questions recensées dans les sous-paragraphe b) à d) ci-dessus.

#### Préparation de l'ordre du jour et des documents de soutien

9. Le Secrétariat a examiné individuellement tous les paragraphes de la décision XXVIII/2<sup>4</sup> en fonction de la décision 77/59 et préparé un ordre du jour provisoire. Conformément à la règle 8 des Règles de procédure pour les réunions du Comité exécutif du Fonds multilatéral, l'ordre du jour provisoire a été envoyé au président et au vice-président et suite à leur approbation, l'ordre du jour provisoire a été publié comme document UNEP/OzL.Pro/ExCom/78/1.

10. L'ordre du jour provisoire de la 78<sup>e</sup> réunion comprend les principaux points suivants avec les documents correspondants :

- a) Le point 3 de l'ordre du jour sur les activités du Secrétariat présente le rapport sur les activités entreprises par le Secrétariat, depuis la 77<sup>e</sup> réunion, pour traiter de la décision 77/59, à savoir les questions liées à l'Amendement de Kigali découlant de la décision XXVIII/2 et les contributions supplémentaires potentielles au Fonds multilatéral ;
- b) Le point 4 de l'ordre du jour sur l'état des contributions supplémentaires au Fonds multilatéral a été inclus pour donner suite à la décision 77/59d)v) qui demandait au Secrétariat de faire rapport sur les contributions de démarrage rapide supplémentaires, reçues séparément des contributions promises au Fonds multilatéral. Ce rapport sera présenté par le Trésorier du Fonds multilatéral;
- c) Le point 5 de l'ordre du jour sur l'information disponible sur la consommation et la production de HFC dans les pays visés à l'article 5 a été inclus suite à la décision 77/59b)i) afin de présenter un rapport sur l'information disponible sur les HFC à partir de sources incluant, *entre autres*, les rapports préparés par les groupes de travail du Groupe de l'évaluation technique et économique selon les décisions XXV/5 et XXVI/9, et les enquêtes sur les solutions de remplacement des SAO financées par le Fonds multilatéral et autres sources;
- d) Le point 6a) de l'ordre du jour sur l'information concernant le développement de directives sur les coûts de la réduction progressive des HFC dans les pays visés à l'article 5 a été inclus pour donner suite à la décision 77/59b) et à la décision XXVIII/2. Le document présente des informations préliminaires, les politiques, lignes directrices et décisions du Comité exécutif et des Parties ainsi que les informations transmises par les membres du Comité exécutif de la 77<sup>e</sup> réunion en réponse à la décision 77/59c). Après avoir dûment examiné le volume d'informations à présenter, il a été décidé de diviser ce point de l'ordre du jour en trois sous-points, à savoir : i) Projet de critères de

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<sup>4</sup> UNEP/OzL.Pro.28/12.

financement; ii) Activités de facilitation; et iii) Renforcement institutionnel, et de préparer un document distinct pour chaque sous-point;

- e) Le point 6b) de l'ordre du jour sur la détermination des points à examiner en lien avec les activités existantes d'élimination des HCFC a été inclus pour donner suite à la décision 77/59b)iv) et il fournit un aperçu des enjeux clés recensés durant l'élimination des HCFC à travers l'approbation et la mise en oeuvre des plans de gestion de l'élimination des HCFC, notamment en lien avec l'introduction des technologies à faible potentiel de réchauffement (PRG);
- f) Le point 6c) de l'ordre du jour sur les principaux aspects liés aux technologies de contrôle du sous-produit HFC-23 a été préparé suite à la décision 77/59b)iii) pour examiner l'état actuel des émissions de HFC-23 et les moyens potentiels de réduire de telles émissions par l'optimisation des procédés, la destruction, la collecte pour utilisation ou reconversion en d'autres produits chimiques inoffensifs pour l'environnement; et
- g) Le point 7 de l'ordre du jour sur les procédures destinées aux pays visés à l'article 5 dont l'année de référence pour la consommation de HFC se situe entre les années 2020 et 2022 concernant l'accès à des contributions supplémentaires pour des activités de facilitation, a été préparé pour donner suite à la décision 77/59d) et il présente des procédures possibles pour les pays visés à l'article 5 qui ont manifesté formellement leur intention de ratifier l'Amendement de Kigali et de s'acquitter des obligations d'élimination hâtive des HFC, pour avoir accès aux contributions supplémentaires pour le démarrage rapide des activités habitantes.

11. En réponse à la décision 77/59c), les gouvernements de l'Argentine, de l'Allemagne, du Japon et des Etats-Unis d'Amérique ont partagé des informations pertinentes avec le Secrétariat. Le texte intégral des informations fournies par ces gouvernements est inclus à l'Annexe II au présent document.

12. Les documents pour la 78<sup>e</sup> réunion ont été préparé à la suite d'un examen détaillé des politiques, lignes directrices et décisions du Fonds multilatéral, en tenant compte de l'information fournie par les membres du Comité exécutif conformément à la décision 77/59c) et après un échange de vues au sujet de la mise en oeuvre de l'Amendement de Kigali entre le Secrétariat, les agences bilatérales et d'exécution lors d'une réunion de coordination inter-agences, tenue en février 2017<sup>5</sup>. Durant cette réunion, le Secrétariat de l'ozone, à l'invitation du Chef du Secrétariat, a présenté un exposé sur l'Amendement de Kigali et les décisions pertinentes de la vingt-huitième Réunion des Parties<sup>6</sup>.

13. Conformément à la décision 77/59 b), le document préparé par le Secrétariat pour chaque point et sous-point de l'ordre du jour contient uniquement de l'information préliminaire et aucune analyse. Toute l'information relative à la réduction progressive des HFC est incluse et donc, dans certains cas, les documents individuels sont longs. Les sources d'information sont référencées dans chaque document.

<sup>5</sup> Les membres du Comité exécutif trouveront le rapport de la réunion de coordination inter-agences (MLF/IACM.2017/1/19) sur le site de la session de la 78<sup>e</sup> réunion.

<sup>6</sup> Décisions XXVIII/2 relative à l'Amendement sur la réduction progressive des hydrofluorocarbones, XXVIII/3 sur l'efficacité énergétique, XXVIII/4 relative à la tenue de consultations périodiques sur les normes de sécurité et XXVI/8 relative aux mesures destinées à faciliter la surveillance du commerce des hydrofluorocarbones et des substances de substitution.

## **Ordre du jour provisoire annoté**

### **1. Ouverture de la réunion**

Remarques d'ouverture du président du Comité exécutif.

### **2. Questions d'organisation**

#### **a) Adoption de l'ordre du jour**

Le document UNEP/OzL.Pro/ExCom/78/1 contient l'ordre du jour provisoire de la 78<sup>e</sup> réunion du Comité exécutif.

Le Comité exécutif pourrait souhaiter adopter l'ordre du jour de la réunion sur la base de l'ordre du jour provisoire, contenu dans le document UNEP/OzL.Pro/ExCom/78/1 et, le cas échéant, avec les amendements apportés oralement durant la plénière.

#### **b) Organisation des travaux**

Le président proposera l'organisation des travaux à la plénière

### **3. Activités du Secrétariat**

Le document UNEP/OzL.Pro/ExCom/78/2 contient un rapport sur les activités entreprises par le Secrétariat, depuis la 77<sup>e</sup> réunion, pour traiter de la décision 77/59 sur les questions liées à l'Amendement de Kigali découlant de la décision XXVIII/2 et des contributions supplémentaires potentielles au Fonds multilatéral.

Le Comité exécutif pourrait souhaiter prendre note des activités du Secrétariat, présentées dans le document UNEP/OzL.Pro/ExCom/78/2.

### **4. État des contributions supplémentaires au Fonds multilatéral**

Le document UNEP/OzL.Pro/ExCom/78/3 contient un rapport préparé conformément à la décision 77/59d)v) sur les contributions de démarrage rapide supplémentaires.

Le Comité exécutif pourrait souhaiter prendre note du document UNEP/OzL.Pro/ExCom/78/3 sur l'état des contributions supplémentaires au Fonds multilatéral.

### **5. Information disponible sur la consommation et la production de HFC dans les pays visés à l'article 5**

Le document UNEP/OzL.Pro/ExCom/78/4 a été préparé conformément à la décision 77/59b)i) et présente une analyse de la consommation et de la production de HFC dans les pays visés à l'article 5, à partir des rapports du groupe de travail du Groupe de l'évaluation technique et économique (section I) et d'informations préliminaires sur la consommation de HFC provenant des rapports des enquêtes sur les solutions de remplacement des SAO remis par les agences d'exécution en date du 27 février 2017 (section II). Le document contient aussi quelques informations sur le sous-produit HFC-23.

Le Comité exécutif pourrait souhaiter prendre note du document UNEP/OzL.Pro/ExCom/78/4 sur l'information disponible sur la consommation et la production de HFC dans les pays visés à l'article 5.

**6. Éléments soumis à l'examen du Comité exécutif en lien avec l'Amendement de Kigali au Protocole de Montréal émanant de la décision XXVIII/2 de la Réunion des Parties**

**a) Information concernant le développement de directives sur les coûts de la réduction progressive des HFC dans les pays visés à l'article 5**

**i) Projet de critères de financement**

Le document UNEP/OzL.Pro/ExCom/78/5 contient de l'information concernant l'élaboration de critères de financement pour la réduction progressive des HFC. Les éléments proposés pour les directives sur les coûts qui seront développées pour la réduction progressive des HFC sont présentés en suivant les éléments des critères de financement des HCFC. Chaque élément proposé est présenté avec les paragraphes ou sous-paragraphes correspondants de la décision XXVIII/2, l'information pertinente des membres du Comité exécutif conformément à la décision 77/59c) et les décisions et pratiques antérieures du Comité exécutif.

Le Comité exécutif pourrait souhaiter prendre note du document UNEP/OzL.Pro/ExCom/78/5 sur le projet de critères de financement.

**ii) Activités de facilitation**

Le document UNEP/OzL.Pro/ExCom/78/6 présente un résumé des décisions et lignes directrices concernant les activités de facilitation, adoptées par les Parties au Protocole de Montréal et le Comité exécutif qui pourraient encadrer une réduction progressive durable, efficace et réussie de la consommation et de la production de HFC dans les pays visés à l'article 5. Ces informations pourraient aussi aider le Comité exécutif à déterminer quelles activités de facilitation pourront être financées par les contributions volontaires supplémentaires de 27 millions \$US d'un groupe de pays donateurs, en vue du démarrage rapide de la mise en oeuvre de l'Amendement de Kigali dans des pays visés à l'article 5 dont l'année de référence pour la consommation se situe entre 2020 et 2022.

Le Comité exécutif pourrait souhaiter :

- a) Prendre note du document UNEP/OzL.Pro/ExCom/78/6 sur l'information concernant le développement de directives sur les coûts de la réduction progressive des HFC dans les pays visés à l'article 5 : activités de facilitation;
- b) Fournir une orientation au Secrétariat sur la manière d'envisager ces activités dans le cadre des directives sur les coûts de la réduction des HFC; et
- c) Fournir une orientation sur les activités de facilitation à inclure dans le financement provenant de la contribution supplémentaire de 27 millions \$US d'un groupe de pays donateurs, tel qu'indiqué dans le document sur les procédures destinées aux pays visés à l'article 5 dont l'année de référence pour la consommation de HFC se situe entre 2020 et 2022 concernant l'accès à des contributions supplémentaires pour des activités de facilitation (UNEP/OzL.Pro/ExCom/78/10).

**iii) Renforcement institutionnel**

Le document UNEP/OzL.Pro/ExCom/78/7 examine et met à jour l'information contenue dans le document UNEP/OzL.Pro/ExCom/74/51, notamment en ce qui concerne les activités de renforcement institutionnel et les défis anticipés suite à l'Amendement de Kigali. L'Annexe I du document contient un résumé de l'élaboration des règles et politiques pour le financement des projets de renforcement des institutions et l'Annexe II fournit une liste des principaux documents sur la politique de renforcement institutionnel.

Le Comité exécutif pourrait souhaiter prendre note du document UNEP/OzL.Pro/ExCom/78/7 sur l'information concernant le développement de directives sur les coûts de la réduction progressive des HFC dans les pays visés à l'article 5 : renforcement institutionnel.

**b) Détermination des points à examiner en lien avec les activités existantes d'élimination des HCFC**

Le document UNEP/OzL.Pro/ExCom/78/8 présente un aperçu de plusieurs enjeux majeurs identifiés durant l'élimination des HCFC dans les pays visés à l'article 5, à travers l'expérience acquise lors de l'approbation et la mise en oeuvre des phases I et II des plans de gestion de l'élimination des HCFC. Il résume les mesures prises dans la majorité des pays visés à l'article 5 pour mettre en place des technologies à faible potentiel de réchauffement (PRG), surtout dans les secteurs des mousses et de la réfrigération et de la fabrication de climatiseurs et, dans une moindre mesure, dans les secteurs des aérosols et des solvants. Il décrit brièvement les défis rencontrés durant l'introduction des technologies à faible PRG, incluant les aspects essentiels concernant l'entretien dans le secteur de la réfrigération. Le document contient aussi des informations pertinentes, fournies par des membres du Comité exécutif en réponse à la décision 77/59c).

Le Comité exécutif pourrait souhaiter prendre note du document UNEP/OzL.Pro/ExCom/78/8 sur la détermination des points à examiner en lien avec les activités existantes d'élimination des HCFC.

**c) Principaux aspects liés aux technologies de contrôle du sous-produit HFC-23**

Le document UNEP/OzL.Pro/ExCom/78/9 présente de l'information préliminaire, provenant de diverses sources, sur les principaux aspects liés aux technologies de contrôle du sous-produit HFC-23, incluant un aperçu des émissions de HFC-23 dans les pays visés à l'article 5; une description des occasions potentielles de réduire les émissions de HFC-23; incluant des informations préliminaires limitées sur les coûts connexes. Le document décrit aussi brièvement des activités de facilitation qui pourraient amorcer le processus de communication sur les émissions de HFC-23 et leur réduction.

Le Comité exécutif pourrait souhaiter prendre note du document UNEP/OzL.Pro/ExCom/78/9 sur les principaux aspects liés aux technologies de contrôle du sous-produit HFC-23.



**7. Procédures destinées aux pays visés à l'article 5 dont l'année de référence pour la consommation de HFC se situe entre les années 2020 et 2022 concernant l'accès à des contributions supplémentaires pour des activités de facilitation**

Le document [UNEP/OzL.Pro/ExCom/78/10](#) a été préparé conformément à la décision 77/59d) et présente des procédures possibles destinées aux pays visés à l'article 5 dont l'année de référence pour la consommation de HFC se situe entre les années 2020 et 2022 et qui ont manifesté formellement leur intention de ratifier l'Amendement de Kigali et de s'acquitter des obligations d'élimination rapide, concernant l'accès à des contributions supplémentaires pour des activités de facilitation.

Le Comité exécutif pourrait souhaiter :

- a) Prendre note du document [UNEP/OzL.Pro/ExCom/78/10](#) sur le projet de procédures destinées aux pays visés à l'article 5 dont l'année de référence pour la consommation de HFC se situe entre les années 2020 et 2022, concernant l'accès à des contributions supplémentaires pour des activités de facilitation;
- b) Envisager si :
  - i) les activités de facilitation contenues dans le document sont celles requises pour les mesures de démarrage rapide de la mise en œuvre de l'Amendement de Kigali;
  - ii) les modalités de financement possibles décrites dans le document pourraient servir à la répartition des fonds supplémentaires entre les pays visés à l'article 5 (groupe I); et
  - iii) demander aux agences bilatérales et d'exécution de préparer un plan d'activités spécial qui respecte strictement les mêmes exigences applicables à la présentation des plans d'activités, et contient les demandes de financement pour des activités de facilitation dans les pays visés à l'article 5 (Groupe I) à partir des contributions supplémentaires au Fonds multilatéral versées par un groupe de pays donateurs.

**8. Questions diverses**

Les enjeux substantiels qu'il a été convenu d'inclure au point 2a) de l'ordre du jour seront abordés à ce point de l'ordre du jour.

**9. Adoption du rapport**

Le projet de rapport de la 78<sup>e</sup> réunion sera soumis au Comité exécutif pour examen et adoption.

**10. Clôture de la réunion**

L'ajournement de la réunion est prévu le vendredi 7 avril 2017.

## Annexe I

### EXTRAIT DU RAPPORT DE LA SOIXANTE-DIX-SEPTIÈME RÉUNION DU COMITÉ EXÉCUTIF (UNEP/OzL.Pro/ExCom/77/76)

#### POINT 10 DE L'ORDRE DU JOUR : DES QUESTIONS LIÉES AU COMITÉ EXÉCUTIF DÉCOULANT DE LA VINGT-HUITIÈME RÉUNION DES PARTIES AU PROTOCOLE DE MONTRÉAL

205. La représentante du Secrétariat a présenté une note du Secrétariat (UNEP/OzL.Pro/ExCom/77/70/Rev.1) cherchant à obtenir l'orientation du Comité exécutif sur la façon d'aller de l'avant pour aborder la décision XXVIII/2 de la vingt-huitième réunion des Parties sur l'amendement relatif à l'élimination graduelle des HFC demandée par le Comité exécutif, *entre autres*, dans le but d'élaborer, dans les deux ans suivant l'adoption de l'Amendement de Kigali, des lignes directrices sur le financement de l'élimination graduelle des HFC consommés et produits dans les pays visés à l'article 5.

206. Tous les membres du Comité ont abordé divers aspects de la question. Ils ont généralement reconnu l'importance historique de l'adoption de l'Amendement de Kigali et des défis auxquels est confronté le Comité exécutif pour formuler une réponse rapide et appropriée à la décision XXVIII/2. Concernant l'approche globale à adopter, plusieurs membres ont déclaré qu'il était nécessaire de trouver un équilibre entre la nécessité d'une action rapide et décisive, et le besoin d'aller de l'avant de manière réfléchie, judicieuse et éclairée. En effet, le processus devrait être itératif, et le Comité exécutif devrait être consulté à chaque étape. Un membre a indiqué que le processus devait être juste, transparent et efficace. Il a été convenu que le Comité avait besoin d'adopter une approche structurée, stratégique en appliquant des lignes directrices et des paramètres appropriés, avant de définir des actions et des activités spécifiques.

207. Plusieurs membres ont indiqué que la note du Secrétariat apportait des informations générales utiles sur les questions relatives à l'Amendement de Kigali et des suggestions intéressantes sur les actions possibles que le Comité exécutif pourrait souhaiter examiner. Certains membres ont déclaré que la note aurait dû être élaborée en consultation avec le Comité exécutif, et qu'elle était en tout cas prématurée dans la mesure où le Comité n'avait pas demandé sa préparation. Un membre a déclaré que la décision XXVIII/2 devait permettre au Comité d'élaborer un programme de travail sur l'Amendement de Kigali et d'identifier les principaux thèmes et principales priorités à inclure dans ce programme.

208. Concernant la marche à suivre, il a été convenu qu'une réunion spéciale du Comité exécutif devrait se tenir au début de l'année 2017. Plusieurs membres se sont prononcés pour la première semaine d'avril afin de discuter des questions liées à l'Amendement de Kigali et de la façon de traiter d'éventuelles contributions supplémentaires de donateurs. Certains membres ont déclaré qu'il serait utile pour le Comité exécutif de demander au Secrétariat de préparer les documents stratégiques pertinents afin d'orienter les discussions de cette réunion.

209. Plusieurs membres ont indiqué que la priorité immédiate pour le Comité exécutif était de décider s'il acceptait et la façon de traiter les contributions volontaires supplémentaires provenant d'un groupe de pays donateurs et visant à financer les activités de mise en œuvre de l'élimination graduelle des HFC. Les modalités concernant les contributions pourraient être décidées par le biais de discussions bilatérales entre les pays donateurs et le Trésorier, compte tenu des écarts de mécanismes de financement appliqués par différents pays et qui nécessitent une approche personnalisée. Un membre a déclaré que le Comité exécutif devrait d'abord définir de façon générale l'objet de ces contributions avant d'envisager des demandes et des propositions plus spécifiques de la part des agences d'exécution. Plusieurs membres ont indiqué que l'accent devrait être d'abord mis sur un soutien d'amorce rapide pour la mise en œuvre,

notamment par le biais d'activités d'incitation menées dans les pays visés à l'article 5, dans le but de générer un élan le plus tôt possible. Parmi les domaines prioritaires identifiés figuraient l'efficacité énergétique et le secteur de la réfrigération et de la climatisation. Par ailleurs, un membre a souligné certaines questions méritant de faire l'objet d'une attention particulière, à savoir la sécurité et la collecte des données. Un autre membre a déclaré que l'accent devrait être placé sur les pays qui étaient engagés et prêts à aller de l'avant pour prendre rapidement des mesures de réduction des HFC.

210. Eu égard aux nouveaux défis posés par le traitement des HFC, un membre a déclaré qu'il serait utile de prendre comme point de départ les modalités élaborées pour le traitement des HCFC et de les adapter aux besoins particuliers des activités liées aux HFC, compte tenu du fait que l'Amendement de Kigali demandera davantage de souplesse. Un autre membre a souligné les incertitudes liées aux sources et au mode de mise en œuvre du financement, y compris le fait que les fonds provenant des fondations ne seraient pas acheminés par l'intermédiaire du Fonds multilatéral. Il a également déclaré que les questions d'équité devaient se voir accorder une grande priorité s'agissant de prendre les décisions sur l'allocation des fonds.

211. Suite à la discussion, le Chef du Secrétariat a précisé la procédure via laquelle la note avait été produite. Conformément à la pratique habituelle dans de tels cas, le Chef du Secrétariat avait consulté le président et le vice-président pour savoir si un point de l'Amendement de Kigali devait être inclus à l'ordre du jour de la présente réunion. Une fois cet élément confirmé, le Secrétariat avait préparé la note d'information pour renseigner le Comité exécutif, en tenant compte des discussions complexes et larges ayant mené à la vingt-huitième réunion des Parties, des différentes décisions prises en la matière, de l'engagement fort pris par les pays donateurs et du besoin d'élaborer des modalités de financement, ainsi que de la nécessité globale d'une action urgente pour mettre en œuvre l'Amendement de Kigali. Il a également stipulé que, sauf indication contraire de l'organe politique, le Secrétariat ne consultait pas les membres dans le cadre de la préparation des documents ni dans le cas présent, même s'il avait eu le temps de le faire. Deux principaux domaines nécessitant une action particulièrement urgente ont été mis en évidence dans le document : le secteur de l'entretien de l'équipement de réfrigération et l'efficacité énergétique. Le document ne contenait pas de recommandations mais avait pour but de fournir des informations visant à aider le Comité dans ses processus de prise de décisions.

212. Le Comité exécutif a accepté de créer un groupe de contact, convoqué par le représentant du Canada, afin de discuter de la manière dont le Comité devrait aller de l'avant pour traiter des questions liées à l'Amendement de Kigali et de la décision XXVIII/2 de la vingt-huitième réunion des Parties, ainsi que des éventuelles contributions supplémentaires de pays donateurs.

213. Après avoir entendu le rapport du responsable du groupe de contact, le Comité exécutif a décidé :

- (a) De tenir une réunion extraordinaire de quatre jours au début de 2017 afin d'aborder les questions relatives à l'Amendement de Kigali au Protocole de Montréal émanant de la décision XXVIII/2 de la Réunion des Parties et aux contributions supplémentaires potentielles au Fonds multilatéral ;
- (b) De charger le Secrétariat de préparer un document contenant de l'information préliminaire sur les éléments de la décision XXVIII/2 de la vingt-huitième Réunion des Parties, qui demande au Comité exécutif de prendre action et aborde les questions suivantes :
  - (i) Les informations disponibles sur la consommation et la production de HFC, ainsi que sur les sous-produits du HFC-23, provenant notamment des enquêtes sur les solutions de remplacement des SAO financées par le Fonds multilatéral et autres sources ;

- (ii) Les activités habilitantes nécessaires afin d'aider les pays visés à l'article 5 à entreprendre l'établissement de rapports et des activités de réglementation en lien avec les mesures de réglementation des HFC ;
  - (iii) Les principaux aspects liés aux technologies de contrôle des sous-produits du HFC-23 ;
  - (iv) Le recensement des questions que le Comité exécutif pourrait souhaiter examiner en lien avec les activités existantes d'élimination des HCFC ;
  - (v) L'information pertinente au développement des directives sur les coûts demandée par le Comité exécutif ;
- (c) D'inviter les membres de la 77<sup>e</sup> réunion du Comité exécutif à communiquer toute information pertinente au Secrétariat, concernant notamment, mais non uniquement, les éléments figurant dans les sous-paragraphes b) i) à v) ci-dessus, avant le 31 janvier 2017, à titre exceptionnel, en raison du peu de temps qu'il reste avant la fin de 2016 ;
- (d) En ce qui concerne les contributions pour démarrage rapide de 27 millions \$US en 2017 versées par certaines Parties non visées à l'article 5 :
- (i) D'accepter avec reconnaissance les contributions supplémentaires annoncées par plusieurs Parties non visées à l'article 5 visant à assurer le démarrage rapide de la mise en œuvre de l'Amendement de Kigali, en sachant que ces contributions ne se répéteront pas et ne remplaceront pas les contributions des donateurs ;
  - (ii) Les contributions supplémentaires mentionnées au sous-paragraphe d) i) ci-dessus devraient être mises à la disposition des pays visés à l'article 5 dont l'année de référence de la consommation de HFC se situe entre 2020 et 2022 et qui ont manifesté formellement leur intention de ratifier l'Amendement de Kigali et de s'acquitter des obligations d'élimination hâtive des HFC afin de soutenir leurs activités habilitantes, telles que le renforcement des capacités et la formation en manipulation de substances de remplacement des HFC, l'émission de permis en vertu de l'article 4B, l'établissement de rapports et la préparation de projets en tenant compte entre autres des lignes directrices pertinentes et les décisions du Comité exécutif ;
  - (iii) De charger le Secrétariat d'élaborer un document décrivant les procédures que pourraient suivre les pays dont il est question au sous-paragraphe d) ii) ci-dessus pour avoir accès aux contributions supplémentaires pour démarrage rapide des activités habilitantes ;
  - (iv) Le Trésorier pourrait communiquer avec les pays non visés à l'article 5 contributeurs au sujet des procédures pour rendre les contributions supplémentaires disponibles aux Fonds multilatéral afin de favoriser les actions hâtives en lien avec l'Amendement de Kigali ;
  - (v) Le Secrétariat ferait rapport au Comité exécutif sur les contributions de démarrage rapide supplémentaires reçues séparément des contributions promises au Fonds multilatéral ; et

- (e) Charger le Secrétariat de préparer un ordre du jour pour la réunion extraordinaire dont il est question au sous-paragraphe a) ci-dessus à partir des questions recensées dans les sous-paragraphe b) à d) ci-dessus.

**(Décision 77/59)**

**Annex II****ARGENTINA  
COMMENTS SUBMITTED RELATED TO DECISION 77/59**

In response to Decision 77/59 where ExCom members were invited to share relevant information on certain specific elements, but not limited to, of Decision XXVIII/2 of the Twenty-Eighth Meeting of the Parties, Argentina is submitting for consideration at the 78<sup>th</sup> Meeting of the ExCom the following comments/proposals.

- (i) Available information on HFC consumption and production, as well as on HFC-23 by-product, including from surveys of ODS alternatives funded by the Multilateral Fund and other sources;

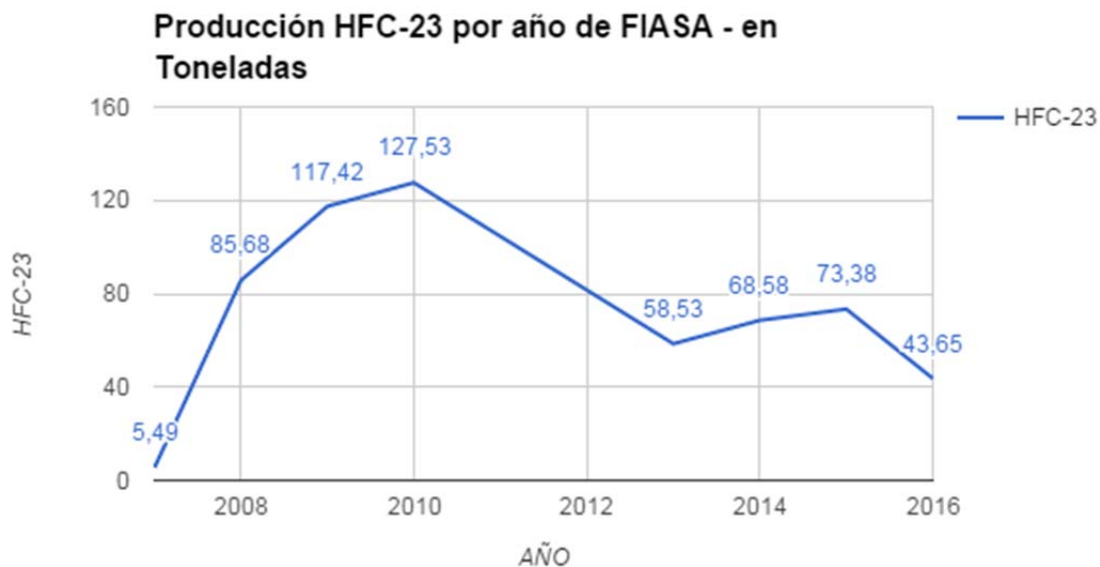
**BRAZIL – HFC IMPORTS 2014-2015**

Substances	2014	2015
HFC-23	1.82	0.46
HFC-32	1,219.17	1,541.05
HFC-125	2,065.59	2,688.24
HFC-134A	10,832.33	9,418.71
HFC-143A	828.25	794.41
HFC-152A	32.20	52.16
HFC-43ME	0.0	0.00
HFC-365	0.00	17.86
HFC-227	0.0	1.82
HFO 1234yf	0.00	0.52
HFC-236fa		0.32
<b>Total</b>	<b>14,979.37</b>	<b>14,515.55</b>

- (ii) The enabling activities required to assist Article 5 countries in commencing their reporting and regulatory activities in relation to the HFC-control measures;

Are included in paragraph 20 of Decision XVIII/2.

- (iii) Key aspects related to HFC-23 by-product-control technologies;
- (iv) The following information refers to Argentina's report production of HFC-23 from FIASA. Since 2013, the Ministry of Production of Argentina carries out the audit of the company FIASA on a quarterly basis, under the coordination of UEPRO - PRESAO of the National Directorate of Sustainable Industry Development.
- (v) Based on the audits and considering the relationship between the production of HCFC-22 and its by-product, HFC-23 gas, the present generation is of approximately 6TN of HFC-23 per month. In the following table, the production of HFC-23 in the last 10 years can be observed:



The company FIASA SA does not perform any treatment of destruction of the HFC-23, but that the gas is vented.

At the time that FIASA worked under the CDM, a project was implemented from which the production of HFC-23 was destroyed in a tower they had for this purpose. This tower is currently in disuse and the company believes that to start up the HFC-23 destruction plant again, investments should be made to:

- Replace damaged absorption tower.
- Repair valves.
- Buy zeolite for the oxygen generator PSA, among other issues.

According to the company, the estimated operating cost for the destruction of HFC-23 is 90 Argentinian pesos per kilogram of HFC-23 for a monthly production of 200TN of HCFC-22 and 6TN of HFC-23.

Please find below our comments on different items of Decision XXVIII/2:

Decision XXVIII/2	Element	Comments/Proposals
<b><i>Financial Issues</i></b>		
<b><i>Overarching principles and timelines</i></b>	9. To recognize that the Amendment maintains the Multilateral Fund for the Implementation of the Montreal Protocol as the financial mechanism and that sufficient additional financial resources will be provided by parties not operating under paragraph 1 of Article 5 to offset costs arising out of HFC obligations for parties operating under paragraph 1 of Article 5 under the Amendment;	
	10. To request the ExCom to develop, within two years of the adoption of the Amendment, guidelines for financing the phase-down of HFC consumption and production, including cost-effectiveness thresholds, and to present those guidelines to the Meeting of the Parties for the parties' views and inputs before their finalization by the ExCom;	Since the ExCom only has 2 years to develop the financing guidelines for HFC phase down, including the c.e. thresholds and submitting them for consideration of the Parties, this delegation thinks it should be ranked as a first priority in the ExCom work.
	11. To request the Chair of the ExCom to report back to the Meeting of the Parties on the progress made in accordance with this decision, including on cases where ExCom deliberations have resulted in a change in a national strategy or a national technology choice submitted to the ExCom;	To ensure transparency and equity across ExCom approvals, the Secretariat should prepare an overview table for the project review agenda item, summarizing for each and all country proposals (regardless if recommended for blanket approval or not), proposed and agreed strategy, technology choice and recommended level of funding, as well as: information on sectors and selected technologies covered by each project, the total eligible cost and C.E. based on eligible consumption for each sector as well as overall coverage (percentage of the baseline level) and the reason why the Secretariat is suggesting the changing of the proposed strategy chosen by the Country, if this is the case.
	12. To request the ExCom to revise the rules of procedure of the ExCom with a view to building in more flexibility for parties operating under paragraph 1 of Article 5;	Decisions that are clearly directed at individual investment projects approved prior to the performance-based project modality should be retired to prevent misuse (i.e. to limit country flexibility or funding levels). The ExCom should commission a report, to be updated periodically, containing a rolling list of decisions that no longer can be applied to sector/national plans.
<b><i>Flexibility in implementation that enables parties to select their own strategies and priorities in sectors and technologies</i></b>		
	13. That parties operating under paragraph 1 of Article 5 will have flexibility to prioritize HFCs, define sectors, select technologies and alternatives and elaborate and implement their strategies to meet agreed HFC obligations, based on their specific needs and national circumstances, following a country-driven approach;	Needs to be included in a Decision



<i>Decision XXVIII/2</i>	Element	Comments/Proposals
	14. To request the ExCom of the Multilateral Fund to incorporate the principle referred to in paragraph 13 above into relevant funding guidelines for the phase-down of HFCs and in its decision-making process;	

**Guidance to the Ex Com with respect to the consumption, production and servicing sectors**

	<p>15. To request the ExCom, in developing new guidelines on methodologies and costs calculations, to make the following categories of costs eligible and to include them in the cost calculation:</p>	
<p><i>Elegible costs in the HFC manufacturing sector</i></p>	<p>(a) Incremental capital costs;</p>	<p>The decision made at the MOP should be the main guiding document as well as the lessons learnt during HPMP implementation, which proved that for some sectors the ICC provided was not sufficient and the IOC should be extended for a much longer period in order to provide sufficient incentive for the conversion to new alternatives. The A2 countries may wish to demonstrate to A5 countries successful conversions to low-GWP alternatives in their countries and share their experience, especially with those countries, which are facing difficulties in introducing new alternatives. • Cost-effectiveness thresholds should be developed using actual incremental costs of HFC phase-out . Those actual incremental cost items should become the basis for a list of standard, eligible equipment for the particular sector. • The ExCom should then approve new C.E. thresholds and the associated standard list of equipment for each subsector. The Secretariat would be required to apply the thresholds and the standard list of equipment in its project review to ensure transparency and equity. • To implement this approach, a cost template should be developed by the Secretariat and Implementing Agencies (as was done for CFCs) for reviewing project costs. • With the above standard costs and set of equipment, there would be no need to maintain artificial levels of IOC. • Where required information for establishing the above thresholds is not available, the ExCom would commission an external technical review by experts selected by the ExCom to determine actual costs as experienced in developed countries and/or approve demonstration projects with an aim to obtain this information.</p>
	<p>(b) Incremental operating costs for a duration to be determined by the ExCom;</p>	
	<p>(c) Technical assistance activities;</p>	
	<p>(d) Research and development, when required to adapt and optimize low-GWP or zero-GWP alternatives to HFCs;</p>	
	<p>e) Costs of patents and designs, and incremental costs of</p>	

<i>Guidance to the Ex Com with respect to the consumption, production and servicing sectors</i>		
	royalties, when necessary and cost-effective;	
	(f) Costs of safe introduction of flammable and toxic alternatives.	
<i>Elegible costs in the HFC production sector</i>	(a) Lost profit due to shutdown/closure of the production facilities as well as production reduction;	<ul style="list-style-type: none"> <li>• Approval of HFC funding guidelines should not preclude the approval of HFC phase-down activities, particularly for HFC-23 emissions that must be eliminated by 2020.</li> <li>• Most important action would be to agree on the HCFC and HFC production guidelines and ensure that funding is swiftly provided to swing plants for production closure/conversion. The most effective way to reduce HFC-23 by-product is to close HCFC-22 production and provide guidance and sufficient funding for that.</li> <li>• Reduction of emission of HFC-23, a byproduct from the production process of HCFC-22, by reducing its emission rate in the process, destroying it from the off-gas, or by collecting and converting to other environmentally safe chemicals, should be funded by the MLF, to meet the obligations of A5 countries specified under the HFCs Amendment.</li> </ul>
	(b) Compensation to displaced workers;	
	(c) Dismantling of production facilities;	
	(d) technical assistance activities;	
	(e) Research and development related to the production of low/zero-GWP alternatives to HFCs with a view to lowering the cost of alternatives;	
	(f) Costs of patents and designs or incremental costs of royalties;	
	(g) Costs of converting facilities to produce low/zero-GWP alternatives to HFCs when technically feasible and cost-effective;	
(h) Costs of reducing the rate of emissions of HFC-23, destroying HFC-23 from off-gas, or collecting HFC-23 and converting it to other environmentally safe chemicals.		
	16. To request the ExCom to increase in relation to the servicing sector the funding available under ExCom Decision 74/50 above the amounts listed in that decision for parties with total HFC baseline consumption up to 360 metric tonnes when needed for the introduction of alternatives to HFCs with low-GWP and zero-GWP alternatives to hydrofluorocarbons and <b>maintaining energy efficiency also in the servicing/end-user sector;</b>	Need a clarification to what is intended with this request. How is servicing sector related to energy efficiency??
<i>Energy efficiency eligible costs</i>	22. to request the ExCom to develop cost guidance associated with maintaining and/or enhancing the energy efficiency of low/zero-GWP replacement technologies and equipment, while taking note of the role of other institutions addressing energy efficiency, when appropriate.	<ul style="list-style-type: none"> <li>• Energy efficiency is not included in agreed incremental costs. Are we going to finance energy efficiency?. This is the first decision that should be taken into account and be taken to the Parties consideration, and then decide whether we should invest time in developing this cost guidance.</li> <li>• There is a need to establish a definition for low-GWP alternatives.</li> </ul>

*Guidance to the Ex Com with respect to the consumption, production and servicing sectors*

		<ul style="list-style-type: none"><li>• In terms of energy efficiency, the Executive Committee has not approved funding for improved energy efficiency of refrigeration and air-conditioning equipment, as this is not considered as an eligible incremental cost under the MLF and because the focus was on phasing-out of ODS. Past Executive Committee decisions determined that technological upgrades go beyond what is covered as eligible incremental costs and would not be funded unless they were unavoidable as part of the project</li></ul>
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**Requests to consider by the secretariat in the preparation of a document containing preliminary information in response to the elements in decision XXVIII/2 of the Twenty-Eighth Meeting of the Parties.**

30.01.2017 prepared by the German Constituency

**Background**

In the Conference Room Paper *UNEP/OzL.Pro/ExCom/77/CRP.3/Rev.1* "DRAFT DECISION ON AGENDA ITEM10: ISSUES RELEVANT TO THE EXECUTIVE COMMITTEE ARISING FROM THE TWENTY EIGHTH MEETING OF THE PARTIES TO THE MONTREAL PROTOCOL: KIGALI AMENDMENT – NEXT STEPS FOR THE EXECUTIVE COMMITTEE"

"The Executive Committee decided:

- a) *To invite members of the 77<sup>th</sup> Executive Committee, to share relevant information with the Secretariat on the elements listed but not limited to the sub-paragraphs (b) (i) to (v) above, no later than 31 January 2017 on an exceptional basis noting the limited time between now and the end of the year"*

The following document entails requests/relevant information of the German Constituency for consideration of the secretariat. The document has been structured according to the decision 77/59 and includes additional issues raised in excom doc. 7770 and decision XXVIII/2 of the MOP. However, in keeping the contextual structure of dec 77/59, there are necessarily a number of overlapping issues that need to be mentioned at multiple places.

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## I. General remarks on funding issues when implementing the Kigali amendment

In the following we describe the challenges we see in developing the HFC guidelines. As a principle we would like to maintain the existing ODS guidelines as much as possible as they are well understood by members and implementing agencies and are operating well. This paper is therefore, mainly associated with the development of guidelines for new issues to the MLF such as energy efficiency, HFC-23 and the integration with the UNFCCC.

In general we believe that the evaluation of requests for financing incremental costs of a given HFC-project shall take into account the following principles:

- the most cost-effective and efficient option should be chosen, taking into account the national industrial strategy of the recipient A5,
- operational policies, guidelines and administrative arrangements, including the disbursement of resources, for the purpose of achieving the objectives of the MLF (Article 10(5)) should:
  - strictly relate to compliance with the provisions of the Protocol, and
  - meet agreed incremental costs (Article 10(6));
  - consequently, all activities which require MLF funding, including energy efficiency, should be strictly related to the phase down of HFCs, and kept within agreed cost thresholds.
- to seek, to the extent possible, co-funding from other multilateral and bilateral funding efforts, for activities not related to compliance and agree operational modalities for effective cooperation that will ensure there is no delay in disbursing funds or double-counting in view of other multilateral and bilateral funding efforts in the targeted sectors, in specific with view on energy efficiency
- when establishing the incremental costs in the various subsectors, to take into account *any savings or benefits that will be gained at both, the strategic and project levels, during the transition process* (dec/4/15)- continue to fund greenhouse gas reductions on the basis of sustained aggregate reductions. Therefore, any request (HFC, energy use) shall be presented with a baseline and the respective reduction targets that are measurable, (independently) verifiable and reportable, matching the requirements of *both, the MP and the UNFCCC*.
- develop together with reknown institutions in the field of energy use reduction on methodologies and procedures for conservatively projecting and measuring greenhouse gas reductions in the RAC sector, for example with view on complex monitoring needs for appliances
- in the evaluation of greenhouse gas reductions, measure and illustrate the impact in tCO<sub>2</sub> eq. on the basis of annual consumption, lifetime emissions and aggregated savings until 2050 vs. a business as usual scenario.
- give priority to funding (incentivize) requests that implement zero/low GWP, HFC-free solutions and eliminate the need for additional conversions and costs (leapfrogging)
- ensure that an overall national (sub)sector management plan will initiate and enforce normative measures, necessary for establishing a qualitative infrastructure that will facilitate a safe supply of alternative services and products.
- when applying a holistic approach in the servicing sector, take into account experiences, components and synergies of ODS management plans and activities (CFC, HCFC, etc.) previously funded under the MLF, such as tools, equipment, infrastructure, vocational sector actors, training

and certification agents

- to design a credible range of enforcement measures in order to raise the perception of risk among recipients of funding.

- when designing guidelines on capital and operational incremental costs, take into account negative experiences of the fund with cash payments for IOCs and consequently the need for seamless monitoring and control on the sustainability of such transitions.

**II. Available information on HFC consumption and production, as well as on HFC-23 by-product, including from surveys of ODS alternatives funded by the Multilateral Fund and other sources;**

Invite the remaining 17 Article 5 countries, that had not yet received assistance to conduct surveys on ODS alternatives from the Multilateral Fund, to provide, consumption and production data for alternatives to ODS in particular HFCs and provide an overall analysis of the results of the surveys for the consideration of the Executive Committee by its first meeting in 2017.

The secretariat should include in its evaluation of the HFC- Inventories

- an overview on the implemented measures of ODS Alternatives inventories (compilation of reports per country) in order to allow the ExCom a differentiated analysis of HFC use patterns in A5 countries
- clearly identify missing information from the ODS Alternatives Surveys
- describe needs to integrate and include emission reporting under the MP
- ways forward to harmonize with tier 2 or 3 (bottom-up) approach used under UNFCCC
- get a full picture on whether the information from ODS Alternatives Surveys are sufficient to build preliminary baselines for HFCs and to include baselines for energy use emissions in the RAC subsectors

Furthermore we support the secretariat to provide information on the studies and investigation of HFC-23 disposal technologies and HFC-23 reductions using best practices that had been funded through the HCFC production phase-out management plan. In addition, we invite other Governments to provide, on a voluntary basis, information on their experience in controlling HFC-23 by-product emissions.

In the evaluation of information on potential HFC-23 funding, we would like include:

- how independent verification of the information on HFC-23 emission will be warranted?
- what the lifetime of existing productions are and timeline for regulations avoid emissions for new productions?
- if and what incentives for early action are needed, incremental costs of establishing HFC-23 destruction capacity

**III. The enabling activities required to assist Article 5 countries in commencing their reporting and regulatory activities in relation to the HFC-control measures;**

According to the XXVIII/2 the following activities would be eligible for funding: implementing HFC phase down strategies and public awareness; data reporting; enforcement and customs training; service sector training and capacity building; measures for safe introduction of hazardous alternatives.

We recommend to integrate service sector funding under the HCFC and HFC phase down as soon as possible in order to support/facilitate early ratification and rapid phase-down of HFCs. Particularly A5 need a systems for import/export licensing, quota, reporting, data collection, customs, amended regulation and new training for f  
UNEP/OzL.Pro/ExCom/78/1/Add.1 alternatives to reduce transition to high-GWP in the me  
Annex II

In the HFC Management Strategy/Plan we would like to see the following issues being addressed:

- activities that will speed up phase-down and limit HFC growth most rapidly and effectively, taking into account the lifetime effects of alternatives at realistic leakage rates as established in the HPMPs (72/42)

#### ***HFC- Inventories*** (see chapter i. above)

- methodologies for establishing baselines for both, HFC and energy consumption in the RAC subsectors

Seek for **synergies** when enabling

- the servicing sector activities for capacity-building and training for HFC alternatives in the manufacturing and production sectors;
- the development of national strategies for a combined institutional HCFC and HFC management and support structure;
- Article 4b on licensing and reporting

#### ***Demonstration projects***

- How to identify key subsectors and select demonstration projects enabling HFC and HCFC management, controls and enforcement, funding could be linked to HPMPs

#### ***Implementation***

- Ask countries to advise on which activities that are particularly important for “fast start” phase-down action

### **IV. Key aspects related to HFC-23 by-product control technologies**

With regard to the potential HFC-23 by-product control technologies, we would like to know:

- what is the state of art, what is the incremental cost of destruction?
- what is the mechanism influencing avoidance of new cases of HFC-23 by-production?
- how will HFC-23 mitigation become mandatory for everybody in the long-term?
- what will be the market demand for HCFC-22 feedstock on view of future products (PTFE, Refrigerants?)



**V. Identification of the issues that the Executive Committee might want to consider in relation to existing HCFC phase-out activities;**

In discussing challenge 6 during the OEWG 38, Parties generally acknowledged the linkage between the HFC and HCFC reduction schedules relevant to subsectors and the preference to avoid transitions from HCFC to high-GWP HFC. They are willing to provide flexibility if no other technically proven and economically viable alternatives are available.

In order to avoid double conversions we recommend that parties acknowledge these linkages with respect to certain subsectors, in particular industrial process refrigeration. *Parties are willing to provide flexibility if no other alternatives are available in cases where HCFC supply may be unavailable from existing allowable consumption, stocks as well as recovered/recycled material, and if it would allow for a direct transition at a later date from HCFCs to low-GWP or zero-GWP alternatives.*

In this proposal parties have signalled their alignment with the principle of using resources most cost-effective manner when seeking synergies between the HCFC and HFC phase-down regimes.

With regard to the integration of the consumption sector we would like to include:

- how could leapfrogging of HFC transitions be further maximised?
- could this also apply to HPMP projects where high-GWP alternatives have been approved already, but have not yet been implemented?
- how to account additional funding resources in view of the starting point for HFC, when avoiding the phase-in of high-GWP HFCs?
- how to rationalise costs following the synergizing effects of implementing servicing simultaneously under the HCFC and HFC phase down

With regard to the integration of production sector we would like to know:

- how will the transition to high-GWP production be avoided/minimized?

**VI. Information relevant to the development of the cost guidelines requested from the Executive Committee;**

**a Sustained aggregate reductions**

*Background Principles*

*“Remaining consumption tonnage eligible for funding will be determined on the basis of the starting point of the national aggregate consumption less the amount funded by previously approved projects in future multi-year agreement templates for HFC phase-down plans (consistent with decision 35/57).”*

We agree that for those Article 5 countries that submit projects in advance of their assessed baseline, the starting point for aggregate reduction in HFC consumption would be established at the time of submission of either the HFC investment project or the HFC-Management plan, whichever was submitted first to the Executive Committee. In cases where calculated HCFC baselines, based on reported Article 7 data, were different from the calculated starting point before the baseline, the starting points could be adjusted.

We want to maintain the practice of fixing a starting point on eligible funding, clearly divided in subsectors and respective eligible HFC consumption in kg substance. This will provide predictable clarity about financial needs for the parties in each of the subsectors.

Generally the Multilateral Fund's strategy is based on a compliance-driven business planning approach. Accordingly, the required reduction level for each country is calculated prior to allocating the resources that are needed to achieve it. This calculation is made in case of HFCs on the basis of an agreed baseline of eligible consumption figures in terms of environmental impact (tCO<sub>2</sub>eq). Energy consumption of HFC technologies shall be as well measured in tCO<sub>2</sub>. When energy consumption of alternatives is funded, a subsector baseline on energy consumption is necessary in order to ensure that the funding provided will result in sustained reductions.

#### *Methodological Issues of Impact Assessment*

We need a paradigmatic change for assessing and reporting climate impact in comparison to the approach we have taken so far under ODS controls, when the impact of GHG reduction was a secondary benefit. With regard to projecting and reporting climate impact we need to dramatically improve transparency and reliability of reporting and clearly distinguish between verified (hard) emission reductions (e.g. HFC) and not verifiable (soft) reductions that depend on unpredictable conditions (as for energy use, unless an agreed conservatively proven methodology is applied).

#### **The evaluation of the environmental impact should include in case of HFCs:**

- lifetime emission of conversion of annual productions
- the aggregated impact (tCO<sub>2</sub>) until 2050
- the separated indication of the impact (tCO<sub>2</sub>) of hard and soft reductions

Each data set should include underlying assumption and a description of means of verification.

Any funding should be used in light of the principle of sustained aggregate reductions, however would like to know also:

- on which principles/decisions could we justify incremental costs of energy efficiency, and
- in case we do so, is it confirmed that EE will fall as well under the agreed subsector cost thresholds
- how to maintain the principle of sustained aggregate GHG reductions of energy use in a RAC subsector and avoid diluting/offsetting GHG reductions and cost effectiveness of the HFC phase down
- how would a possible starting point be assessed in such case (bottom up?)
- will in such case the ExCom agreement complement for individual compliance to targets of the a recipient country with regard to GHG reductions in the energy use subsector

#### **b Multiple staged conversions of HFC -based manufacturing enterprises**

We fully support the principles agreed by the Parties, no additional clarification needed.

#### **c Eligible incremental costs of HFC phase-out projects**

##### **i Guidelines for enabling activities**

The Secretariat recommends using \$27m for enabling activities (→ *see comments chapter I. & II. in this report.*)

The secretariat expects funding for HFC enabling activities to be similar to the HPMP development costs. If though, then very little money (if support costs are included) will be left to do any other than enabling activities . Priority should be given to overcome regulatory and other barriers.

ExCom would request bilateral and implementing agencies to submit funding proposals and prepare capacity assistance.

## **ii Institutional strengthening**

Institutional needs to maintain relationship with regard to the replenishment level. Since there are many similarities between the HFC and HCFC management, costs could be rationalized. Relating costs to the total consumption under implementation could be an important aspect.

## **iii Eligible production costs:**

Eligible production sector costs: lost profit from shutdown or reduction, displaced worker compensation, dismantling facilities, technical assistance, R&D to lower cost of alternatives, patents and royalties, conversion costs to low-GWP, reducing HFC-23 from HCFC-22 production.

Note: similar issues are currently being considered for HCFCs by the production sub-group.

- how should we handle the read-across between HCFC and HFC guidelines
- asking China and other producers to provide info to inform HFC-23 destruction options may need independent verification

## **iv Eligible manufacturing costs:**

ICCs and IOCs for a duration to be determined by ExCom

General market considerations

- Technology deployment will definitely develop faster after the ratification of the Kigali Amendment;
- ICC/IOCs need to be seen in light of the early phase down in many A2 countries, the market will be very different in 5 yrs from now;
- Start with cost effective alternatives, conversions where there are no cost-effective alternatives yet should be backloaded;
- Preference, incentive systems need to be developed for low-/zero-GWP versus technologies based on HFC.

ICCs

- Need to take into account on-going review of prices for components, parts and refrigerants;
- Starting point of cost-effectiveness considerations should be the existing HPMP guidelines, considering that with increasing market introduction, prices will go further down

## IOCs

- approval of IOCs need to take into account negative experiences and possible cases of misuse, consequently there is a need for seamless monitoring and control of the sustainability of such transitions.
- IOCs should not be extended over a longer period of time, because IOCs are only meant to compensate for a loss during the initial market introduction that is caused by a lack of established procedures. New products are generally thought to be overall more competitive than predecessor product/service they replace. Therefore, there is no longer-term need for IOC.
- keep the limit to transfer of funds from eligible ICCs to IOCs at 20%
- considering we have an average implementation of 36 month for approved projects, the application of present market prices for some alternatives, e.g. such as HFOs, with presently only marginal production, is highly volatile and speculative. In these cases IOCs need to be based on real production price, rather than on speculative prices stimulated by initially limited supplies. Ask secretariat to describe marginal production costs of HFOs and HFC-32.

**Prioritisation of funding for manufacturing**

- Ask to prioritize subsectors with highest impact, along both the GWP of the alternative and the lifetime consumption (taking into account initial charge and refill).

**Overview:** Average Lifetimes and leakage-rate per year for equipment assumed in the various RAC subsectors for Article 5 Parties by TEAP and the MLF Secretariat.

Subsector	LIFETIME	ANNUAL LEAK TEAP	ANNUAL LEAK MLF (72/42)	LIFETIME REFILL TEAP	LIFETIME REFILL MLF
Domestic refrigeration	20	2%		40%	
Industrial refrigeration	15-30	15-30%	44%	506%	990%
Transport refrigeration	9-30	15-30%	23%	450%	460%
Commercial refrigeration	20	15-40%	38%	550%	760%
Stationary AC	10-25	2-10%	29%	105%	508%
Mobile AC	15-20	10% - 20%		350%	

This table illustrates that early action would have the largest impact in the industrial, commercial and stationary AC sector. The impact in the domestic sector would be exceptional low (less than 10% compared to the other sectors). This has important implications when giving priority in the selection of subsectors.

Based on above the table below table illustrates an example how the impact of lifetime emissions influences the impact of mitigation scenarios when choosing a subsector:

- If 10% of the HFC-410A is replaced with R32 in stationary A/C, the remaining lifetime emissions (33 Mio tCO<sub>2</sub>) would be still be higher than the total emissions of HFC-134a in the domestic refrigeration sector (29 Mio. tCO<sub>2</sub>) and cause a need for additional conversion in the A/C sector.
- If, alternatively, 10 % of the HFC-410A in stationary A/C sector are replaced with an HFC-free alternative (e.g. Propan) the remaining lifetime emissions would fully offset the existing emissions of HFC-134a in the domestic refrigeration sector (in tCO<sub>2</sub>).

This clearly indicates that in evaluating strategic priorities, both consideration of the GWP of the alternative and the lifetime consumption (charge and refill) are decisive/essential for a cost effective reduction. A/C conversion to zero/low GWP has the highest reduction potential and cost-effectiveness compared to measures in the domestic refrigeration sector or conversion of A/C to HFCs (e.g. R-32) and should be taken into account.

SUBSECTOR BAU	Refrigerant	GWP	LT TCO2/ Unit (C&R)*	CONSUMPTION 2020 (KT)	LT Consumption in MTCO2
Domestic refrigeration	134a	1400	1,4	14610	29
Stationary AC	410A	1920	8,0	134702	938
MITIGATION SCENARIO	Refrigerant	GWP	LT TCO2/ Unit (C&R)*	CONSUMPTION 2020 (KT)	LT Consumption in MTCO2
Domestic refrigeration	600a	6	0,0	14610	1
Stationary AC	290	3	0,0	134702	1
Stationary AC	32	675	3,0	134702	330

\* Emissions from charge plus refill over lifetime (20yrs, no EOL recycling)

This shows that priority setting could help to quickly and sustainably remove emissions, it needs to take into account the actual leakage rates of equipment and how the best environmental outcome is achieved by prioritising HFC-free alternatives.

Therefore, enabling activities need to build framework conditions and capacities to manage flammability and toxicity issues for a safe introduction of HFC-free alternatives and initiate the local adaptation of rules and standards in support of demonstration projects.

#### **d Aspects related to the refrigeration and air conditioning servicing sector**

Include aspects related to the refrigeration servicing sector, taking into account previous policy documents, case studies, and monitoring and evaluation reviews, while developing new guidelines on methodologies and cost calculations.

It is important to review the servicing sector activities. In the past servicing sector activities have not been necessarily designed as a package of policies, regulations, enforcement, skill training and conformity monitoring to build a functioning, qualitative service infrastructure in developing countries. Especially with regard to the formulation and enforcement of regulations countries need more support.

Cost categories considered to be eligible and included in the cost calculation:

- training of customs officers;
- preventing illegal trade of HFCs;
- policy development and implementation;
- public awareness activities;
- training of technicians in good practices and the safety of alternatives, including training equipment and servicing tools;
- certification programmes, monitoring conformity of products, equipment and services in the RAC sectors;
- recycling and recovery of HFCs;
- [best practice on energy efficiency]

It is important to integrate servicing activities for HCFC and HFCs and rationalise the implementation of activities. Thus, a strategy needs to be in place that illustrates the necessary actions with regard to the introduction of low-GWP alternatives under both plans.

This requires a larger degree of differentiation between the various subsectors, alternatives and applications in a country. It will require a stricter formalization of servicing sectors in the countries, specifying requirements in terms of education, quality assurance, tools and conditions at which new technologies with low-GWP alternatives need to be serviced and maintained.

This necessarily includes a review of local standards. Countries need to make sure that there is no concession on safety for users, independent from the fact whether new or refurbished equipment is in use. Furthermore, this should include a review of vocational training systems, the qualification and certification that can be provided through them. In addition, for local quality assurance, certifiers may be needed to confirm the scope of local supplies, compliance of services with standards, product checks, final inspection, as required for certification of equipment, and regular inspection.

The secretariat speaks for a holistic approach. A holistic approach would result in robust local qualitative infrastructure that builds capacity throughout the sectors and institutions: national vocational training system, national certification bodies, policy makers in government and associations, code of practice and skill developers, enforcement authorities, local providers of certification, testing and quality assurances.

Therefore, the delivery of a holistic approach will require longer-term formalised structural changes of processes and institutions. It needs to be assisted by agents, which are sufficiently experienced in delivering institution building in A5 countries in the field of national vocational training and certification.

Altogether developing countries need to provide a qualitative infrastructure to install, operate and disassemble products and equipment operating on low-GWP alternatives, with new operational and safety requirements.

In this regard, it needs to be recognised that the ExCom has already anticipated the need and adapted guidelines to significantly increased servicing sector funding for A5s in view of managing the more difficult introduction of low-GWP alternatives, with a priority on those A5 with consumption below 360mt HCFC.

In summary, addressing the servicing sector can have a big impact on emissions and energy use, it should be addressed holistically. Given flammables and toxicity of alternatives, local needs for certification need to be seen in context of regulations and standards and should be reviewed for all MLF funded activities in this sector.

On the mandate and role of UNEP/CAP in this respect please refer to chapter iv Role of UNEP CAP

**e Key aspects for improving the energy efficiency of refrigeration and air-conditioning equipment**

The MOP has requested the Executive Committee “to develop cost guidance associated with maintaining and/or enhancing the energy efficiency of low-GWP or zero-GWP replacement technologies and equipment, when phasing down HFCs, while taking note of the role of other institutions addressing energy efficiency, when appropriate”.

**i Donor coordination and integration with other funding initiatives in the energy sector**

Before hovering into this new aspect we need answer the following questions:

- We need an action plan for parties on how MP and MLF/ExCom can maximise energy efficiency opportunities as part of the HCFC and HFC phase down:
- What are the opportunities?
- What funding is available with us and with others?
- What should we do to release that funding and use it most effectively and in synergy with the HCFC and HFC phase downs? and,
- Do we have a national framework and strategy that is supportive enough that action can start.

There are several sources of environmental and development funding available for energy efficiency, such as the Global Environment Facility (GEF), the \$5.8bn Clean Technology Fund (CTF) administered by the Multilateral Development Banks or the Green Climate Fund which includes as one of its priorities 'reduced emissions from buildings, cities, industries and appliances'. At the moment, these funds are not well integrated with the Multilateral Fund, which means that opportunities to improve energy efficiency as part of MLF funded projects may be missed. Better integration and co-ordination between the funding streams could lead to more rapid and effective improvements in cooling sector energy efficiency, with less disruption for businesses, and achieve greater improvements from the same overall level of funding. The additional funding for the energy efficiency aspects of the plans could come from the existing sources such as the GEF, GCF and CTF. Consequently, mechanisms could be established to ensure funding approval from those sources was co-ordinated with the ExCom to avoid delays in adopting the Management Plans.

A co-ordinated approach of this type could bring energy efficiency benefits more rapidly and maximise the potential benefits for both energy efficiency and HCFC/HFC reduction from the available funding.

- The World Bank announced \$1bn for energy efficiency in urban areas by 2020, which could include high efficiency cooling technologies, other development banks and initiatives have similar targets.
- 53 Mio. will be added by Philanthropic Organisations (Kigali Cooling Efficiency Fund)
- There are many bilateral initiatives on energy efficiency worldwide. At present the German Ministry of Economic Cooperation and Development implements 120 Mio. of energy efficiency projects in developing countries. Altogether in the EU several billions are pledged for energy efficiency programs, including RAC technologies, in the EU but also in developing countries
- The Green Climate Fund is still growing, but it has already started disbursing money and includes in its priorities reduced emissions from buildings, cities, industries and appliances.
- Overall funding for energy efficiency programs supersedes the budget of the MLF for HFCs by far. These other funds may also be able to provide funding for energy efficiency activities which the MLF does not have the resources or expertise to address, such as cooling demand reduction.

- Therefore, to maximise funding for energy efficiency in the RAC sector it will be important to link up with these existing funding mechanisms

## **ii Proofing readiness of A5 to facilitate energy efficiency measures**

The other funds above will already have their own criteria and guidelines for approving energy efficiency funding. For any energy efficiency funding provided by the MLF, cost guidance needs to be conservative in light of the possible climate impact. Therefore, it is first of all important to analyse and describe necessary governing structure for energy efficiency funding that includes baselines, mitigation targets and instruments for measuring, reporting and verification of funded activities.

There are a number of policy, technical and costs barriers for the introduction of high energy efficient refrigeration and air-conditioning equipment in A5 that needs to be identified. These barriers need to be sufficiently addressed.

The readiness of countries should be assessed through the following information:

- List of relevant needs and methodologies to assess national baselines and performance metrics, such as energy productivity, intensity, fossil power efficiency, potential emission of residential, commercial, industrial sector consumption, mandatory energy savings policies & goals, tax credits, loan programs, incentives, relevant R&D efforts.
- Measures to implement EE certification processes and testing,
- Options for attaching EE strictly to HFC phase-down activities (not being a stand-alone activity)
- Options for verifying funded energy efficient products' compliance or non-compliance when in operation.
- Existing institutional and organizational readiness to enable necessary policies, legal and regulatory frameworks and their enforcement
- Necessary support from recipient countries in terms of institutional arrangements, stakeholder coordination
- Options for evaluating the financial and economic readiness including review of energy prices and tariffs, market structures, financial support and incentives
- Options for evaluating readiness of existing awareness, stakeholder information, education, training, prevalent skills, technologies, infrastructure
- Options for ensuring compatibility with the other mitigation initiatives under the UNFCCC such as CDM or NAMAs
- Institutional requirements to build synergies between other EE initiatives
- Options to make sure that the climate impact of verified emission reductions (HFC) is not sacrificed by diluting these with not-verifiable emission reductions, which are unpredictable in nature and often depended on behavioural patterns and change of energy use.

## **iii Strategic planning under the Kigali Amendment**

Secretariat proposes to a project-by-project approach. The analysis of the priority sectors illustrates that almost all strategic subsector are also subject to the HCFC phase-down. Therefore, the HCFC



phase-down provides sufficient level playing field to generate best practice examples based on regular implementation modalities.

#### **iv Role of UNEP CAP**

UNEP CAP, the compliance assistance programme, was entrusted by the Parties in 1991 to the political promotion of the objectives of the Protocol, research and data-gathering and Clearinghouse function. It delivers regional assistance to governments in choosing and enforcing policies required to implement the Protocol, when making informed decisions about alternative technologies and sustain compliance obligations.

UNEP has been chosen to host umbrella bodies under the Montreal Protocol, including convention/protocol and fund secretariat, as well as the CAP programme. The actual implementation of country activities is through the multilateral bilateral and implementing agencies. The parties have always been cognizant of this work division in order to avoid a conflict of interest and double counting of country based activities.

We support the idea that CAP should continue its efforts to ensure compliance of countries with the HFC phase down policies and targets, e.g. through regional efforts on regulations and ensuring measures for controlling imports and exports are harmonized and enforced. In addition, CAP should continue to support the investment and capacity building programmes of bilateral and implementing agencies through facilitation of the regional and global exchange of experiences between agency experts and country representatives. Such exchange is not part of the approved HFC- phase down projects and should be financially supported through CAP.

We would be interested to discuss the extent to which the CAP is currently able to deliver the holistic, structural changes needed in A5 institutions to meet the requirements of the Kigali amendment. Therefore, we support the proposal that CAP should include on the agendas of regional network meetings of ozone officers, beginning in 2017, issues related to the ratification of the Kigali Amendment to the Montreal Protocol and the phase-out of HCFCs and the phase-down of HFCs, with the participation of experts that could address issues of relevance to Article 5 countries, and encourage the Secretariat and the bilateral and implementing agencies to attend those meetings and engage in the discussions.

Before discussing any longer term mandates of CAP, we suggest to wait for the outcome of the evaluation of the CAP programme.

#### **v Plus up Administration**

Governments need to have flexibility from which budgets to take the plus up, which may influence their choice of contribution. Regarding the mechanism for providing the plus up, it is our understanding that it would be treated as an earmarked, voluntary contribution, either in the form of bilateral or cash contributions under the fund. Since the contributions are voluntary, limitations to the share of bilateral contributions shall not apply and those contributions could exceed 20% of the total contribution.

## ANNEX

### Leak rates per subsector :

On average between 22 to 44% /annum (EXCOM document 72/42)

Subsector	Estimated annual emission rates in HPMPs		
	Average (%)	Lowest value (%)	Highest value (%)
Residential air-conditioning	29	4	79
Commercial air-conditioning	40	3	70
Industrial air-conditioning	40	8	54
Transport	23	8	40
Chillers	22	14	30
Commercial refrigeration	38	2	82
Industrial refrigeration	44	7	100

*Source: A sample of 38 approved HPMPs in which this data is available. The data corresponds to estimations made by each country and the methods may differ between countries.*

## Government of Japan

**(i) Available information on HFC consumption and production, as well as on HFC-23 by-product, including from surveys of ODS alternatives funded by the Multilateral Fund and other sources;**

According to the data for FY 2015 reported by operators of more than 10,000 t-CO<sub>2</sub> equivalent HFCs production in the previous FY, the total amount of HFCs production from April 2015 to March 2016 in Japan is 47.73 million t-CO<sub>2</sub>. The total amount of HFCs production is estimated to be 48.52 million t-CO<sub>2</sub>, also taking into account the estimated amount of the operators of less than 10,000 t-CO<sub>2</sub> equivalent HFCs production.

**(ii) The enabling activities required to assist Article 5 countries in commencing their reporting and regulatory activities in relation to the HFC-control measures;**

Regarding the enabling activities (a) to (f) below, which are listed in paragraph 30 of the document ExCom77/70/Rev.1, we believe that priority should be given in particular to the activities of (a), (b) and (f).

- (a) Capacity-building and training for handling HFC alternatives in the servicing, manufacturing and production sectors;
- (b) Institutional strengthening;
- (c) Article 4B licensing (e.g., training of customs officers and other enforcement officers on inter alia policies, regulations, import/export licensing and quota systems, preventing illegal trade of HFCs in support of the phase-down of HFCs);
- (d) Reporting (e.g., data reporting under Article 7 of the Montreal Protocol and under the progress report);
- (e) Development of national strategies; and
- (f) Demonstration projects.

**(iii) Key aspects related to HFC-23 by-product-control technologies;**

The emission of HFC-23 has been decreasing in Japan since 2004, when all production facilities were equipped with recovery and destructive device. The

substance is destroyed by the Liquid Injection Incineration technology.  
(2014)

Production of HCFC-22: 51,753 ton

Ratio of HFC-23 as by-product: 1.46%

Emission ratio from HCFC-22 production: 0.003%

Emission amount: 2 metric ton (0.02 Million t-CO<sub>2</sub>)

Source: National Greenhouse Gas Inventory Report of Japan 2016

**(iv) Identification of the issues that the Executive Committee might want to consider in relation to existing HCFC phase-out activities;**

We believe that the activities aimed at securing compliance of Article 5 countries with the HCFC phase-out schedule should not be delayed as they commence HFC phase-down activities.

**(v) Information relevant to the development of the cost guidelines requested from the Executive Committee;**

As evaluation criteria and standard for energy efficiency vary among countries, incorporating energy efficiency into the cost guidelines would be a complicated work. Therefore, it should be given very careful consideration.



United States Department of State

*Bureau of Oceans and International  
Environmental and Scientific Affairs*

*Washington, D.C. 20520*

January 31, 2017

Eduardo Ganem  
Chief Officer  
Montreal Protocol Multilateral Fund  
Suite 4100  
1000, De La Gauchetière Street West  
Montreal, Quebec H3B 4W5  
Canada

Dear Mr. Ganem,

Please accept the U.S. response to Decision 77/59 of the Executive Committee of the Multilateral Fund requesting Executive Committee members to share relevant information to help the Fund Secretariat prepare a document containing preliminary information in response to the elements in decision XXVIII/2. I hope this information is helpful to the Secretariat in preparing for the 78th meeting of the Executive Committee in April 2017. Please let me know if you have any questions.

*Global Mitigation of Non-CO<sub>2</sub> Greenhouse Gases: 2010-2030* (U.S. EPA, 2013).<sup>i</sup> This report lays out several strategies for reducing HFC emissions, among other non-CO<sub>2</sub> greenhouse gases, and then assesses the costs of those strategies. Specifically, the report assesses the cost of (1) transition to low-global warming potential (low-GWP) alternatives in several sectors, (2) servicing practices, and (3) HFC-23 capture and destruction. The following sections of the report are relevant:

- Section IV.2 – HFC Emissions from Refrigeration and Air Conditioning
- Section IV.3 – HFC Emissions from Solvent Use
- Section IV.4 – HFC Emissions from Foams Manufacturing
- Section IV.5 – HFC Emissions from Aerosol Product Use
- Section IV.6 – HFC and PFC Emissions from Fire Protection
- Section IV.8 – HFC-23 Emissions from HCFC-22 Production
- Corresponding Appendices D-II, and J.

In addition to the above report, a prior U.S. EPA document published in 2004 also covers abatement costs of substitutes for ozone-depleting substances. While the figures are outdated, the methodology used may be informative: *Analysis of Costs to Abate International Ozone-Depleting Substance Substitute Emissions* (U.S. EPA, 2004).<sup>ii</sup>

*Analysis of Equipment and Practices in the Reclamation Industry, Draft Report* (U.S. EPA, 2010).<sup>iii</sup> This draft report provides an overview of the reclamation industry in the United States.

*Greenhouse Gas Performance Analysis for Commercial Buildings with Large Refrigeration and Air Conditioning Systems* (ICF International, 2012).<sup>iv</sup> This report proposes twelve refrigerant leak reduction measures (outlined pages 3-8) and a handful of energy conservation measures (outlined pages 13-14) for commercial refrigeration and cold storage systems. The report provides relative



costs of implementing the various leak reduction measures and energy conservation measures and provides the net cost savings and environmental impacts avoided through these practices (provided in charts and tables).

*Technical Support Document: Analysis of the Economic Impact and Benefits of Final Revisions to the National Recycling and Emission Reduction Program* (U.S. EPA, 2016).<sup>v</sup> This report analyzes the costs and benefits of refrigerant servicing practices being proposed in a U.S. regulation. In Section 3.1.1.3 (page 45) of the report there is a description of unit costs and savings for leak inspections and repair activities based on U.S. median earnings for HVAC mechanics and installers. In addition, the document estimates costs and savings for the implementation of the proposed servicing practices by "do-it-yourself" technicians (found in Appendix E, page 117).

With respect to the HFC-23 byproduct control obligations, the United States would draw the attention of the Secretariat to the Parties approval in 2011 of the technology for Conversion by Chemical Reaction with Hydrogen and Carbon Dioxide. To date, we are aware of HFC-23 being handled at HCFC production facilities at the commercial scale using conventional destruction technology, but we believe the Secretariat should consider the full range of available technologies in helping inform the Executive Committee at its 78<sup>th</sup> meeting, and we want to draw attention to the conversion technology noted above that has been developed by Midwest Refrigerants. In contrast to destruction technology, this conversion technology allows for production of anhydrous hydrogen fluoride, with small amounts of anhydrous hydrogen chloride. These outputs can either be put back into the production cycle or sold as high purity chemicals. There are other possible products with commercial value that can also be produce in this process with commercial value that can help offset capital and operating costs of the technology. Operating costs of the technology are similar to a thermal oxidizer, and while capital costs may be somewhat higher, they will be offset by the sales of the products noted above. We request the Secretariat include information on this technology in documents being prepared for the 78<sup>th</sup> meeting as it relates both to byproduct control provisions of the amendment as well as demonstration projects, and further information can be found at <http://www.midwestrefrigerants.com/>.

The United States has identified several best practices and standards documents related to servicing that may be useful to the Fund Secretariat. These provide information on the proper installation and maintenance of refrigeration and air-conditioning equipment. As documented in the first article listed below, proper installation and maintenance practices can reduce refrigerant leakage and maintain a system's energy efficiency. The below list is just a sample of the many resources that are available.

The National Institute of Standards and Technology (2014) authored a report on the *Sensitivity Analysis of Installation Faults on Heat Pump Performance*. Of particular interest, sections 5.2.2 and 5.2.3 articulate and quantify the effects of heat pump sizing and duct leakage on HVAC equipment.<sup>vi</sup>

"Smart Maintenance for Rooftop Units," *ASHRAE Journal* (Breuker et al. 2000).<sup>vii</sup> This article provides the decrease in rooftop unit capacity and coefficient of performance resulting from various problems with a system that can be addressed by servicing (e.g., refrigerant leakage).

*ENERGY STAR*<sup>®</sup> *Program Requirements for Room Air Conditioners, Version 4.0* (U.S. EPA).<sup>viii</sup> Section D of the Certification Criteria on page 7 of 11 of this document provides specific installation requirements for window air conditioners to minimize air leakage and thermal losses. We are also providing the Fund Secretariat with an Excel spreadsheet titled "ENERGY STAR Draft 1 Version 4.0 Room Air Conditioners Data Package.xlsx,". Tab 5 shows the additional cost of more energy efficient equipment that meets the criteria and the payback time for the consumer in annual energy



savings. Currently for room air conditioners, the initial purchase price of the more energy efficient appliance is higher than less efficient products in most cases. However, the payback period is only three to four years. For many ENERGY STAR products, there is little to no price increase. ENERGY STAR specifications are set so that if there is a cost differential at time of purchase, that cost is recovered through utility bill savings within the life of the product—generally between two and five years.

*GreenChill Best Practices Guideline: Commercial Refrigeration Leak Prevention and Repairs* and *GreenChill Best Practices Guideline: Ensuring Leak-Tight Installations of Commercial Refrigeration Equipment* (U.S. EPA).<sup>ix</sup> These guides provide food retailers with information on best practices for reducing refrigerant leaks from commercial refrigeration systems. Reducing leaks saves equipment owners money on refrigerant and energy costs, and in the case of commercial refrigeration prevents food spoilage.

Installation and Maintenance Standards from numerous organizations are also available.

- ANSI/ASHRAE/ACCA Standard 180-2012: Standard Practice for Inspection and Maintenance of Commercial Building HVAC Systems<sup>x</sup>
- ACCA Standard 4: Maintenance of Residential HVAC Systems<sup>xi</sup>
- ACCA Standard 5: HVAC Quality Installation Specification<sup>xii</sup>
- ACCA Standard 14: Quality Maintenance of Commercial Refrigeration Systems<sup>xiii</sup>

Additionally, we would like to note that minimum energy conservation standards by the United States Department of Energy, combined with our highly-successful ENERGY STAR labeling program have resulted in significant benefits in the United States, both for consumers in lower energy bills and for the environment in fewer greenhouse gas emissions. Without a minimum energy efficiency standard for equipment, the manufacturers of refrigeration and air-conditioning manufacturers are likely to continue to produce least-cost, low-energy efficient equipment because there will continue to be a consumer market for it, even while they convert production lines to manufacture energy efficient units. We request that the Secretariat include consideration of the role that adequate and enforceable minimum energy efficiency standards can play in meeting the Parties' goals outlined in Decision XXVIII/2 in documents being prepared for the 78<sup>th</sup> meeting. Several resources are listed below that may be useful in preparing for the 78<sup>th</sup> meeting of the ExCom:

*Energy Conservation Standard Technical Support Documents:* The U.S. Department of Energy's Building Technology Office is responsible for establishing energy conservation standards for numerous appliances. When updating the minimum standard, the program develops detailed technical support documents evaluating the costs and benefits of the department's actions. These documents contain useful information on the various options for improving energy efficiency in a product, the incremental manufacturing production cost of meeting the new standard, and the payback period for consumers, among other topics. One example is listed below. If the Fund Secretariat finds this type of document useful, the United States will provide a more complete list of relevant Technical Support Documents.

*Technical Support Document: Energy Efficiency Program for Consumer Products and Commercial and Industrial Equipment: Small, Large, and Very Large Commercial Package Air Conditioning and Heating Equipment* (U.S. Department of Energy, 2015).<sup>xiv</sup> Chapter 8 of this report provides cost and consumer payback estimates associated with increasing the efficiency standard. This includes the incremental manufacturer production costs, among other elements. Chapter 12, which measures the impacts on manufacturers may also be relevant.



*Lessons Learned from Incenting Programs for Efficient Air Conditioners* (U.S. Department of Energy, 2015).<sup>xv</sup> As shown through this report there are a number of different ways to incentivize more energy efficient appliances. Of particular note, there are a variety of case studies described which cover many countries across the world.

*Achievements of appliance energy efficiency standards and labelling programs* (International Energy Agency, 2016).<sup>xvi</sup> Based on evidence from a wide cross-section of countries with energy efficiency standards and labelling programs, this report finds that energy efficiency standards and labeling programs deliver energy and CO<sub>2</sub> reductions while also reducing total appliance costs as articulated in chapters 3 and 4.

*Cost-Benefit of Improving the Efficiency of Room Air Conditioners in India* (Lawrence Berkeley National Laboratory, 2016).<sup>xvii</sup> In an evaluation of improving the efficiency of room-AC in India, this report found that, despite a small cost increase for manufacturing more energy efficient units requiring a modest increase in retail price, consumers are able to easily recoup the modest retail price increase through significant energy savings leading to short payback periods of 1.2 to 2.4 years.

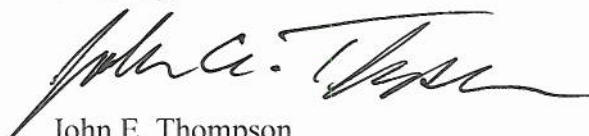
*The Future of Air Conditioning for Buildings* (U.S. Department of Energy, 2016).<sup>xviii</sup> This report provides several useful data points. Section 4.2 shows that many of the low-GWP refrigerant alternatives under consideration can increase energy efficiency with only soft optimization, even in high ambient temperature conditions. Section 6 provides historical equipment cost information for the United States—showing decreasing inflation-adjusted costs even as minimum energy efficiency standards increased and the ODS phaseout took hold—and ways that equipment manufacturers are reducing transition costs.

“A Retrospective investigation of energy efficiency standards: policies may have accelerated long term declines in appliance costs,” *Environmental Research Letters* (Buskirk et al., 2014).<sup>xix</sup> This article also finds decreasing long-term costs for certain refrigeration and air-conditioning equipment while energy efficiency standards became more stringent.

*The Greenhouse Gas Performance Analysis for Commercial Buildings with Large Refrigeration and Air Conditioning Systems* report (ICF 2012) that is referenced above also provides useful information on nine specific energy conservation measures for commercial refrigeration and cold storage, including estimates of costs of installation or implementation of practices, and the environmental and cost savings from these energy efficiency actions over the life of the equipment.

*EPA Energy and Environment Guide to Action* (U.S. EPA, 2015).<sup>xx</sup> Starting on page 4-72, section 4.4 provides an overview of the benefits and best practices when implementing an appliance energy efficiency standard.

Sincerely,



John E. Thompson  
Deputy Director  
Office of Environmental Quality and  
Transboundary Issues



- <sup>i</sup> Available at [https://www3.epa.gov/climatechange/Downloads/EPAactivities/MAC\\_Report\\_2013.pdf](https://www3.epa.gov/climatechange/Downloads/EPAactivities/MAC_Report_2013.pdf) and [https://www3.epa.gov/climatechange/Downloads/EPAactivities/MAC\\_Report\\_2013-Appendixes.pdf](https://www3.epa.gov/climatechange/Downloads/EPAactivities/MAC_Report_2013-Appendixes.pdf)
- <sup>ii</sup> Available at <https://www.epa.gov/sites/production/files/2015-08/documents/odssubstituteemissions.pdf>
- <sup>iii</sup> Available at [https://www.epa.gov/sites/production/files/2015-08/documents/analysis\\_of\\_equipment\\_and\\_practices\\_in\\_the\\_reclamation\\_industry.pdf](https://www.epa.gov/sites/production/files/2015-08/documents/analysis_of_equipment_and_practices_in_the_reclamation_industry.pdf)
- <sup>iv</sup> Available at <https://www.arb.ca.gov/research/apr/past/09-306.pdf>
- <sup>v</sup> Available at <https://www.regulations.gov/document?D=EPA-HQ-OAR-2015-0453-0225>
- <sup>vi</sup> Available at <http://nvlpubs.nist.gov/nistpubs/TechnicalNotes/NIST.TN.1848.pdf>
- <sup>vii</sup> Available at <http://alpinems.com/pdfs/Smarter-Maintenance.pdf>
- <sup>viii</sup> Available at <https://www.energystar.gov/sites/default/files/ENERGY%20STAR%20Version%204.0%20Room%20Air%20Conditioners%20Program%20Requirements.pdf>
- <sup>ix</sup> Available at <https://www.epa.gov/sites/production/files/documents/leakpreventionrepairguidelines.pdf>
- <sup>x</sup> Available at [http://resilientenergymanagement.com/ASHRAE\\_180\\_0010.pdf](http://resilientenergymanagement.com/ASHRAE_180_0010.pdf)
- <sup>xi</sup> Available at [http://www.transductiontechnologies.com/uploads/2/7/5/4/27547719/acca\\_standard\\_4\\_quality-maintenance.pdf](http://www.transductiontechnologies.com/uploads/2/7/5/4/27547719/acca_standard_4_quality-maintenance.pdf)
- <sup>xii</sup> Available at <http://www.acca.org/communities/community-home/librarydocuments/viewdocument?DocumentKey=b1d2a39d-fda8-4af9-b8de-0ae579bfe24a>
- <sup>xiii</sup> Available at <http://www.acca.org/communities/community-home/librarydocuments/viewdocument?DocumentKey=12319f89-e8d1-401c-ba48-e7e5607c9511>
- <sup>xiv</sup> Available at <https://www.regulations.gov/document?D=EERE-2013-BT-STD-0007-0105>
- <sup>xv</sup> Available at <http://www.superefficient.org/Research/PublicationLibrary/2015/Lessons%20Learned%20From%20Incentive%20Programs%20for%20Efficient%20Air%20Conditioners>
- <sup>xvi</sup> Available at <http://www.superefficient.org/Research/PublicationLibrary/2016/IEA-4E-Achievements-of-national-EESL-programs-report-2016>
- <sup>xvii</sup> Available at <http://www.superefficient.org/Research/PublicationLibrary/2016/India%20AC%20Cost%20Benefit%20report%202016>
- <sup>xviii</sup> Available at <https://energy.gov/eere/buildings/downloads/future-air-conditioning-buildings-report>
- <sup>xix</sup> Available at <http://iopscience.iop.org/article/10.1088/1748-9326/9/11/114010/pdf>
- <sup>xx</sup> Available at [https://www.epa.gov/sites/production/files/2015-09/documents/guide\\_action\\_chapter4.pdf](https://www.epa.gov/sites/production/files/2015-09/documents/guide_action_chapter4.pdf)