EIA Briefing to the 95th Meeting of the Executive Committee of the Multilateral Fund (ExCom95)

4 – 8 December 2024

Introduction

For more than three decades, the Multilateral Fund (MLF) has played a crucial role in protecting the ozone layer and mitigating climate change. Now – against the backdrop of an historic US $985 million replenishment – members of the Executive Committee (ExCom) have an opportunity to super-charge the fund's climate benefit, by incentivising the acceleration of the HFC phase-down, promoting energy efficiency, addressing ODS and HFC banks and exploring innovative ways to support the just and sustainable transition to climate and environmentally friendly cooling solutions.

Seeing this climate benefit played out though, requires more than just available funding. It requires all countries to seek genuinely ambitious solutions that respond to the scale of the climate emergency, and to prioritise in good faith the technologies and pathways that will have the greatest climate and environmental impact.

As we approach the end of another year of record-breaking heat and intensifying climate breakdown, a year that is "virtually certain" to be the first above 1.5°C, EIA looks at the Kigali Implementation plans (KIPs) submitted to this meeting and sees that greater ambition is sorely needed.[1] Of the 14 KIPs submitted, just two propose HFC consumption targets that represent real reductions in HFCs by 2029.[i] Meanwhile, the majority allow for consumption to increase throughout the decade, in the most extreme case by more than 200 per cent compared to the country's average consumption in the baseline years.

Although disappointing, the proposed KIPs remind us that it is critically important for sufficient support to be made available to A5 countries, to assist them in overcoming the ongoing challenges which may be hindering greater ambition; challenges around data reporting, capacity building, availability of alternatives and securing adequate financing for the transition to low-GWP technologies. The present KIPs also remind us that the cost guidelines must be finalised, and that they should explicitly incentivise one-time transitions to non-controlled substances to ensure a cost-effective and sustainable phase-down that prioritises long-term environmental benefits.

When considering the projects submitted to this meeting, EIA calls on all ExCom members to embrace the qualities that have made the Montreal Protocol the most successful environmental treaty, to place environmental impact front and centre in their minds, and to work collaboratively in pursuit of our shared climate and ozone goals.

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[i] As compared to average consumption during the baseline years of 2020-2022 (see Table 1).

Agenda Item 5: Country programme data

Doc 95/8: Country programme data and prospects for compliance

In the context of the dual HCFC phase-out and HFC phase-down now underway, it is vital that the remaining HCFC Phase-Out Management Plans (HPMPs) do not imperil Kigali Amendment implementation by allowing the phase-in of high-GWP HFCs. A review of the country programme (CP) data reported to this meeting shows that there is significant scope to increase the ambition of these remaining HPMPs and draws attention to the ongoing and concerning use of very-high-GWP HFCs and HFC blends in a number of Article 5 (A5) countries.

HCFC phase-out progress

As of the 94th meeting, ExCom has approved HPMPs at Stage I for 145 countries, Stage II for 115 countries and Stage III for 17 countries, at a total value of US $1.31 billion. The implementation of these approved stages is projected to result in the phase-out of 83 per cent of the starting point for aggregate reduction of HCFC consumption, including 90.7 per cent of the consumption of HCFC-141b from imported pre-blended polyols.

This leaves 5,525.21 ODP tonnes of HCFC consumption still to be phased out, 91.16 per cent of which is HCFC-22 – a high-GWP substance with production associated with significant by-product emissions of HFC-23. EIA notes with concern that HCFC-22 production for use as a feedstock has increased by 66 per cent over the last ten years. This large-scale supply of cheap HCFC-22 risks being laundered onto the emissive market and therefore warrants enhanced monitoring and enforcement as the HCFC phase-out progresses.

HFC consumption data

Of the 113 countries with established HFC baselines that have reported data for 2023 (either under Article 7 (A7) or as CP data), 26 reported consumption that would exceed their baseline levels if repeated in 2024. With the baseline freeze now in force for Group 1 A5 countries, this is a clear reminder of the urgent need to undertake activities to reduce HFC consumption.

According to the CP data, total consumption of HFCs across both Low-Volume Consuming (LVC) and non-LVC countries was 1,192,161 CO_2-eq tonnes in 2023. Across the countries with reported data, R-410A, HFC-134a, R-507A, R-404A, HFC-227ea, HFC-32 and HFC-23 (use) accounted for 93.5 per cent of the total CO_2-eq consumption. The significant increase in the use of HFC blends can be attributed to their use as retrofits, especially in commercial refrigeration, largely driven by the decreasing availability and higher costs of HCFC-22 for servicing. With this in mind, as the final stages of the remaining HPMPs are drafted, EIA reminds all ExCom members that it is crucial for countries not to pursue transition pathways that rely on the consumption of high-GWP HFCs or HFC blends.

Furthermore, EIA flags with serious concern that a number of countries continue to report use of HFC-23 in their CP data. In 2023, 23 countries reported the use of HFC-23 in refrigeration servicing, firefighting, refrigeration manufacturing, solvent and other sectors, with that consumption totalling 28,697 CO_2-eq tonnes.[ii] HFC-23 is a super pollutant greenhouse gas with a GWP of 14,700. With a

[ii] These countries are Argentina, Bangladesh, Brazil, China, Egypt, El Salvador, Fiji, Indonesia, Malaysia, Maldives, Mauritius, Mexico, Namibia, Panama, Peru, the Philippines, Serbia, Seychelles, South Africa, Sri Lanka, Türkiye, Uruguay and Viet Nam.

specific provision agreed under the Kigali Amendment to control its emission during production processes, and significant SAP and TEAP attention being paid to understanding its ongoing, unaccounted for and large-scale global emissions, HFC-23 should be targeted for phase-out at the earliest possible opportunity.

Refrigerant prices

Table 10 reports the average price of HCFCs, high-GWP HFCs and alternatives. Although the range is large, the average price of hydrocarbon refrigerants is relatively high compared to high-GWP HFCs, yet it is unclear how the average is calculated. For completeness, EIA notes that it would be helpful for the Secretariat to share additional details on the data used for these calculations, and to include prices of the lower-GWP HFC blends that are being used to substitute HCFCs and high-GWP HFCs.

Agenda Item 6: Evaluations

Document 95/10: Final report on the external assessment of the evaluation function of the Multilateral Fund

The MLF's evaluation function has been successful in setting up a system that tracks compliance with specific ODS reduction goals. However, with the adoption of the Kigali Amendment in 2016, the mandate of the MLF was extended, with new goals and horizons stretching out into the 2040s. Recognising this, the Multilateral Organization Performance Assessment Network (MOPAN) was tasked with conducting an assessment of the evaluation function, finding it to be "insufficiently challenging, formative and analytical," and noting that its evaluations "tend to present findings rather than [provide] analysis and explanations." The MOPAN also noted that the evaluation function's lesson learning has been "tacit rather than explicit and systematic."

In this context, EIA welcomes the final report of the external assessment of the MLF's evaluation function and now encourages ExCom members and the Secretariat to move ahead with implementing its recommendations. The external assessment concluded that the evaluation function needs a fresh vision to meet its longer-term objectives, encompass the broader impact of its programmes and incorporate United Nations priorities including the sustainable development goals, gender and human rights. EIA recognises these concerns and agrees that the MLF's evaluation function and its strategies should be adapted to meet 2040 HFC phase-down goals.

Key Findings

From amongst the findings of the external assessment, EIA highlights three as particularly key:

- The impact of eliminating recommendations from evaluation reports;
- The absence of a clear evaluation policy resulting in the commingling of monitoring and evaluation functions; and
- The limited exposure that stakeholders, particularly those at the country level and in implementing agencies, have to the evaluation process.

The external assessment is clear that the elimination of evaluation-specific recommendations from reports has significantly weakened their utility and effectiveness. EIA seconds this finding, noting that the replacement of recommendations with standardised text has diminished the overall usefulness of evaluation reports. The external assessment also found that the current

evaluation framework primarily focuses on assessing compliance with ODS phase-out targets, ignoring the social and economic impacts of MLF programming. This "compliance-based" approach has limited the scope of evaluations, meaning that they often fail to adequately capture the broader impacts of projects, for example on gender and employment, or on small and medium enterprises (SMEs). The external assessment found that, because of this, the MLF has not been able to develop a comprehensive evaluation framework that can adequately assess 'softer' kinds of activities such as training, capacity building, institutional strengthening, private sector involvement and public awareness-raising.

Commingling of monitoring and evaluation activities has also weakened the relevance of the evaluation function according to the findings of the external assessment. EIA supports the assessment's conclusion that a clear distinction between these functions is necessary to promote a culture in which project evaluations are actively consulted as tools to promote accountability and lesson-learning. This, EIA believes, should be addressed concurrently with efforts to ensure that all stakeholders have sufficient access to project evaluations, as the accountability and lesson-learning aspects that should be central to any effective evaluation process do not just have relevance to the ExCom members.

EIA is alarmed by the external assessment's finding that some stakeholders, at both the country level and in implementing agencies, were not aware that project evaluations are carried out. We believe that the blurred distinction between monitoring and evaluation has likely contributed to this lack of awareness and, as part of the evaluation strengthening processes, we encourage greater efforts to disseminate findings to all stakeholders. Ultimately, it is stakeholders at the country level and in implementing agencies that are tasked with developing the projects that ExCom members consider and approve, if these stakeholders are not brought in on the evaluation, they cannot take full advantage of the learnings going forwards.

External Assessment Recommendations

EIA supports the recommendations of the external assessment and encourages the Secretariat to implement the time-bound roadmap that it sets out. Within this roadmap, there is one particular recommendation that EIA wishes to draw attention to; that any strengthening of the MLF's evaluation function must introduce a system to track the implementation of recommendations. This measure alone would go a long way to addressing the issues highlighted by each of the key findings discussed above.

Document 95/12: Terms of reference for the desk study for the evaluation of the recovery, recycling and reclamation projects

Recovery, recycling and reclamation (RRR) plays a critical role within life-cycle refrigerant management (LRM) and has the potential to deliver significant climate and ozone benefits. Indeed, full, universal implementation of leak prevention measures and best practice end-of-life disposal for RACHP equipment, which includes effective RRR, could reduce cumulative HCFC and HFC emissions by approximately 39 billion tonnes of CO_2-eq by 2050.[2]

As such, EIA welcomes the proposed terms of reference (TOR) for a desk study evaluating RRR projects. Intended to launch in 2025, and focussed on assessing how existing RRR infrastructure supports A5 countries in their efforts to reduce consumption of controlled substances, this study

would "pave the way" towards a future second-phase evaluation in the field. EIA supports the approach outlined in the TOR and appreciates the evaluation questions set out in Annex II of document 95/12. As one specific improvement to these questions, EIA recommends that, when considering geographical distribution, the desk study should also consider where reclamation capacity could be increased based on regional needs, and that it should be tasked with proposing a timeline for when reclamation would transition to destruction as the HFC phase-down progresses.

Finally, EIA notes that the proposed study must analyse issues related to data collection and reporting, particularly around HFC blends, the proliferation of which complicates enforcement for A5 parties. Among others, the proposed study could be informed by a review of Australia's successful Extended Producer Responsibility (EPR) program which has prevented over 18.5 million tonnes of CO_2-eq from being emitted since 1993, with over 500 collection locations across the country.[3]

Agenda Item 7: Programme implementation

Document 95/22: 2024 consolidated project completion report (part II)

The consolidated project completion report (PCR) for ExCom95 covers eight PCRs for multi-year agreement projects submitted by the bilateral and implementing agencies, comprising seven Stage I HPMPs and one Stage II HPMP. Across these eight PCRs, EIA notes with concern that a gap of 17.1 ODP tonnes exists between the approved consumption phase-outs and the actual reductions in consumption that have been achieved.

Within the consolidated report, security, in-country stability, the Covid-19 pandemic and market issues affecting technology availability have all been cited as reasons for project implementation delays. Recognising the discrepancy between approved consumption phase outs and achieved consumption reductions, EIA recommends further analysis and work to proactively plan for and avoid similar implementation delays in the future. To this end, we have outlined several of the "lessons learned" that were identified in the consolidated report and provided our feedback and recommendations in response to them:

- Project implementation: Across the PCRs consolidated in this report the role of National Ozone Units (NOUs) was highlighted as essential in supervising and monitoring planned activities. EIA is a firm advocate of the NOU approach and encourages all A5 countries to engage actively in their Regional Ozone Networks. Outside of NOUs, one agency noted that conversion activities should be carried out in parallel with other activities to avoid delays, and that flexibility in implementing conversion sub-projects was essential to achieve sustainable outcomes. EIA seconds this sentiment, noting the paramount importance of successful conversion projects to the overall phase-out/phase-down of controlled substances.

- Capacity building: Agencies reported on the necessity of capacity-building programmes involving customs departments and other enforcement agencies to achieve Montreal Protocol targets and fight illegal trade. EIA strongly encourages coordination across agencies and Parties to prevent illegal trade of controlled substances under the ODS phase-out and the HFC phase-down. We call on all Parties that identify cases of illegal trade to voluntarily report them to the Ozone Secretariat, as per decision XXXV/12 to strengthen Montreal Protocol institutions.

Since May 2023, EIA is disappointed to note that only eight Parties have submitted information concerning cases of illegal trade.[4]

- National and sectoral approach: The consolidated PCR included lessons learned which are relevant to the ongoing discussions at the Meetings of the Parties on LRM. Specifically, the importance of improved training and the need for accessible equipment for refrigerant servicing and recovery were identified, with agencies reporting that effective servicing and maintenance in the refrigeration and air-conditioning (RAC) sector are critical to reducing refrigerant leakage and creating employment opportunities. EIA supports the suggestion that a minimum threshold for training and certification of servicing technicians should be pursued. We also encourage re-certification and continuous training to ensure technicians are well-trained to safely use ultra-low GWP non-F-gas alternatives, the importance of which was also highlighted in agency reports on capacity-building.

  Furthermore, EIA encourages greater support for countries in bolstering their training programmes and equipment to facilitate the safe, sustainable management of refrigerants. In particular, we encourage ExCom members to consider establishing financing pathways to support such activities under the MLF, as well as through initiatives such as EPR Corporate Social Responsibility activities.[5] With this in mind, EIA looks forward to the report being prepared for the 97th ExCom meeting, which will present members with an opportunity to establish a funding window in line with decision XXV/11 on LRM.

- Policy and regulatory framework: Agencies reported that many countries were able to adopt regulatory and institutional frameworks to ensure management and monitoring of controlled substances to achieve phase-out targets. EIA remains a steadfast supporter of regulatory approaches, which are central to any successful phase-out/phase-down plans.

  Strong regulations that limit the import, use or production of controlled substances can act as both a clear indicator to business about a country's direction of travel, and an effective backstop that safeguards reductions and phase-outs when they are achieved. We encourage all countries developing their KIPs to bear this lesson in mind and to consider how to appropriately build their regulatory frameworks to support and safeguard their phase-down of HFCs, noting that strong regulation will be even more crucial in this instance, as a tail of legitimate consumption will still be allowed following full KIP implementation.

Agenda Item 9: Project Proposals

Kigali Implementation Plans

A total of 14 Stage I KIPs are being considered at ExCom95, including one that addresses proposed activities for 12 separate Pacific Island Countries.[iii] EIA appreciates these submissions but is again disappointed by the lack of ambition that most display in their proposed consumption targets. As

[iii] The Pacific Island Countries KIP covers national and regional activities in the Cook Islands, Kiribati, the Marshall Islands, Federated States of Micronesia, Nauru, Niue, Palau, Samoa, Solomon Islands, Tonga, Tuvalu and Vanuatu.

noted in previous briefings, the current phase-down schedules under the Kigali Amendment are not aligned with the Paris Agreement's goal of limiting global warming to 1.5°C.[6]

In the context of the ever-worsening climate emergency, EIA urges all A5 countries to use their KIPs to pursue reductions in actual HFC consumption, before the mandatory limits take effect.

Proposed consumption under Stage I KIPs

Although the ExCom has agreed to release additional funding for countries targeting reductions ahead of the Kigali Amendment schedule, just two KIPs submitted to this meeting – those of Guatemala and Zimbabwe – set 2029 consumption targets that are below their proponent's average consumption during the baseline years (see Table 1). EIA appreciates the KIP proposed by Zimbabwe, which seeks to reduce the country's consumption to ten per cent below its 2020-2022 average by 2029 (representing a 37 per cent reduction from the baseline).

Two further KIPs – those of Rwanda and Chad – seek to bring consumption back down to roughly 2020-2022 average levels by the end of Stage I. The remaining ten set consumption targets for 2029 that are between 8-215 per cent higher than average reported consumption during the baseline years.

EIA acknowledges that some increase in HFC consumption in specific sectors may be inevitable during the final stages of HCFC phase-out. However, alternatives to HFCs are readily available in most sectors, including in domestic and commercial RACHP, where established hydrocarbon and natural refrigerant-based technologies are already widely used. Recognising this, EIA calls on all A5 countries to pair the final stages of their HCFC phase-out with a strong commitment to minimise HFC use wherever possible.

Table 1: Comparison between average consumption 2020-2022 and proposed HFC consumption in 2029 (CO_2-eq tonnes)

Country	Kigali baseline	Average HFC consumption 2020-2022	Proposed HFC consumption in 2029	% difference between proposed HFC consumption in 2029 and…	
				… Kigali baseline (%)	… average consumption 2020-2022 (%)
Lesotho	103,221	29,478	92,899	-10	+215
Uruguay	1,012,431	538,749	911,188	-10	+69
Togo	1,124,896	698,315	1,012,406	-10	+45
Pacific Island Countries	171,271	99,894	140,239	-18	+40
Benin	1,875,057	1,366,209	1,687,551	-10	+24
Senegal	2,786,915	2,013,625	2,439,234	-12	+21
Mauritius	665,957	496,774	599,361	-10	+21

Country	Kigali baseline	Average HFC consumption 2020-2022	Proposed HFC consumption in 2029	% difference between proposed HFC consumption in 2029 and…	
				… Kigali baseline (%)	… average consumption 2020-2022 (%)
Türkiye	37,117,410	28,463,127	32,080,222	-14	+13
Colombia	8,652,982	6,464,688	7,068,258	-18	+9
Costa Rica	1,450,799	1,210,618	1,305,719	-10	+8
Rwanda	338,197	254,008	254,008	-25	0
Chad	3,573,612	3,229,250	3,216,251	-10	0
Guatemala	1,215,970	1,057,344	1,022,667	-16	-3
Zimbabwe	1,210,624	846,122	761,510	-37	-10

Notes:

Countries highlighted blue have proposed plans that reduce or limit consumption ahead of the minimum required for Montreal Protocol compliance.

Data and baseline concerns

Due to the inclusion of the HCFC component in HFC baselines, the extent to which a country can increase its HFC consumption without risking non-compliance varies significantly. Among the 14 countries that have KIPs to this meeting, the share of the baseline attributed to HCFCs ranges from just 10 per cent in Chad, to as high as 71 per cent in Lesotho. Countries with larger HCFC components have more leeway within their total baselines to accommodate HFC consumption growth, which delays the need for immediate action on phasing down HFCs. The impact of this can be demonstrated by looking at the "business as usual" (BAU) projections that are included in almost every KIP submitted to this meeting.

BAU projections set out the level of HFC consumption that a country would expect to see between 2024-2029 in a scenario of unconstrained growth. In seven of the KIPs submitted to this meeting, the proponent countries have projected unconstrained growth scenarios that would not breach their proposed consumption limits until the first mandatory phase-down step in 2029 – i.e., their proposed consumption targets allow for unconstrained growth until 2029.[iv] In a further two KIPs, unconstrained growth would not breach proposed consumption limits at all, even after the first

[iv] As per projected consumption in the KIPs submitted by Mauritius, Rwanda, Senegal, Togo, Türkiye and Uruguay, levels of HFC consumption in an unconstrained BAU scenario would not breach the respective countries' proposed consumption limits until 2029. Colombia did not provide a projected BAU scenario within its KIP, however EIA applied an annual growth rate of six per cent to the country's 2020-2022 average consumption and found that such growth would not breach the country's proposed consumption limits until 2029.

mandated phase-down step comes into effect.[v] These BAU scenarios, projected by the countries themselves, demonstrate the significant scope for faster and more ambitious action that has been overlooked in the submissions to this meeting. Looking at the baselines of these nine countries, EIA notes that all have HFC baselines in which the HCFC component accounts for more than one fifth of the total figure.

EIA reminds all ExCom members of our previous call for KIP consumption limits to reflect actual HFC use and demand. Establishing consumption limits based on average HFC consumption during the baseline years (2020-2022), with allowances for reasonable and justified growth, would ensure that all countries submitting KIPs are equally committed to curbing HFC growth. This approach would also incentivise earlier efforts to prevent and reduce HFC consumption.

EIA also wishes to draw ExCom members' attention to the ongoing issue of inconsistency in data reporting. Although we recognise that the collection of accurate consumption data is challenging in many A5 countries, particularly given market volatility due to the Covid-19 pandemic, we remain concerned by the fluctuations and unexplained anomalies that are frequently encountered in data reported for the baseline years of 2020-2022.

Examples submitted to this meeting include the very high baseline consumption data reported by Chad – which the Secretariat notes is "difficult to explain or justify after a comparison […] with other countries in the region – and the widely fluctuating baseline consumption data reported by Türkiye – which increased by 64 per cent between 2019-2020, then hit an anomalous peak of 46,309,766 tCO_2-eq in 2022 (due primarily to a 152 per cent increase in the consumption of R-404A between 2021-2022). EIA notes that Türkiye is in a prime stop-off point for non-quota refrigerant gas making its way from China to the EU, which could account for some of the consumption. EIA's investigations have found that HFCs are moved illegally from Türkiye into the EU, either by ship to end-user destinations such as Spain or are smuggled in smaller batches by road across the EU's land border with Türkiye.[7]

EIA supports the ExCom's handling of previous KIPs where it is unclear if reported baseline consumption accurately reflects a country's ongoing needs. We therefore encourage ExCom members to continue requesting that proponent countries facing such situations monitor their ongoing consumption and report back when their second tranche requests are submitted.

Stage I KIP activities: Strengthening regulatory frameworks

Activities intended to strengthen regulatory and legislative frameworks include a range of measures proposed to variously improve licensing and quota systems, establish import bans and restrictions, and ensure effective market monitoring and standards. EIA highly commends those countries proposing to introduce bans or restrictions on HFCs or HFC-based equipment. Bans are an effective safeguard in the transition away from HFCs, especially in key sectors where technologies based on low-GWP alternatives such as hydrocarbons are readily available – this is

[v] As per projected consumption in the KIPs submitted by Benin and Lesotho, levels of HFC consumption in an unconstrained BAU scenario would not breach the respective countries' proposed consumption limits even after the required ten per cent reduction in 2029.

the model being pursued, for example, in the European Union and several of its neighbouring countries.[8]

Several of the KIPs submitted to this meeting include commitments to introduce bans, and EIA has outlined those linked to specified timelines in Table 2 below. Although not included in the table, EIA is also reminded of Türkiye's series of bans on refrigerants above designated GWP thresholds that will come into force between 2025 and 2029 under its 2022 F-gas Regulation. These will support the country's KIP implementation and greatly benefit its HFC phase-down over the next five years.

Table 2: Proposed bans links to specified timelines

Country	Proposal under KIP
Colombia	A ban on the import and manufacture of HFC-based stand-alone commercial refrigeration equipment, to be issued by 1 July 2028 and entering into force by 1 July 2029.
Costa Rica	A ban on the manufacturing of HFC-based self-contained commercial refrigerators with refrigerant charge below 150 grams, following the successful conversion of the country's one enterprise manufacturing equipment in this sector from HFCs to R-290 under Stage I of the KIP.
Mauritius	A ban on the import and use of HFC-based domestic refrigerators and small commercial refrigeration equipment by 1 January 2027.
Rwanda	A ban on the import and sale of HFC-134a-based domestic refrigerators and R-410A based air conditioners by 1 January 2027.
Uruguay	A ban on the import and manufacture of HFC-based domestic refrigerators by 1 July 2027 and of HFC-based standalone commercial refrigeration equipment by 1 January 2029.
Zimbabwe	A ban on the import of HFC-134a-based domestic refrigerators by January 2026.

EIA also appreciates Benin and Togo's plans to ban the import of HFC-based RAC units in coordination with other countries in their region, and the Pacific Island Countries' plans to ban the import of R-410A-based air-conditioners and HFC-134a-based domestic refrigerators, although we encourage the Pacific Islands to consider bans that are instead based on low-GWP thresholds to avoid medium-GWP HFC blends becoming unnecessarily prevalent in the market. We recommend that timelines be set for these efforts to ensure that domestic markets are given a clear and early signal of each country's commitment to phasing out HFCs from these sectors.

Stage I KIP activities: Training and capacity building

Training and capacity-building activities form another core component featured across the KIPs submitted to this meeting, with emphasis commonly placed on preparing technicians in the RAC servicing sector for the transition to natural refrigerants. These activities often align with the final stages of countries' HPMPs, enabling a coordinated effort to leapfrog directly to HFC-free alternatives. This coordination is vital to ensuring that safety information and best practices are effectively disseminated to all refrigerant handlers, including those in both formal and informal sectors.

EIA is supportive of the emphasis placed on capacity building, especially where it helps accelerate the transition to natural refrigerants and wishes to highlight some notable examples from the KIPs submitted to this meeting.

Firstly, building on work started under the country's HPMP, Lesotho's KIP proposes to promote the use of CO_2 and ammonia in the commercial sector by 'training the trainers' on these technologies, and integrating them into the existing refrigeration curriculum. This will allow for a specific new training programme to be established, with the necessary equipment provided to support its development. This is a significant focus for Lesotho, which is a very low consumer of HFCs and could rapidly leapfrog to natural refrigerant alternatives. Unfortunately, however, this potential is not reflected in the country's proposed HFC consumption limits, which are proportionately very high compared to actual consumption during the baseline years.

A second example of positive efforts to use training and capacity building to support the transition to natural refrigerants can be found in Uruguay's KIP. Uruguay's proposed RAC technician training project is two-pronged, addressing both training on low-charge domestic and commercial standalone refrigerators, and training on large-charge domestic AC, commercial installations and commercial CO_2-based equipment. The training on low-charge refrigerators supports a push towards R-600a and R-290 based equipment by procuring training units and running workshops to train RAC technicians on them. Similarly, the large-charge training supports a push towards R-290 and CO_2 technologies through the procurement of training equipment and subsequent workshops. On the large-charge track, Uruguay also proposes developing an electronic registry for domestic technicians trained on this equipment.

Similar capacity building approaches that explicitly emphasise training in the safe-handling of natural refrigerants (such as R-290, R-600a and CO_2) can also be found in the KIPs put forward by Benin, Colombia, Chad, Guatemala, Mauritius, Rwanda, Senegal, Türkiye and Zimbabwe.

Stage I KIP activities: Demonstration and pilot projects

Among the KIPs submitted to this meeting, there are a number of demonstration and pilot projects that EIA wishes to draw attention to, noting that such projects play an important role in raising awareness and encouraging the wider uptake of HFC-free technologies.

Commercial refrigeration projects

The KIP proposed by Benin includes a demonstration project to replace HFC-based refrigeration systems in food preservation and storage with R-290-based monoblock units. The project will retrofit two existing R-404A systems with closed R-290 units of under 20 kW capacity. With over 1,000 similar HFC-based systems currently in operation in the food preservation sub-sector in Benin this project has significant replication potential, and EIA appreciates that Benin has included the proper collection and disposal of the replaced units as an explicit element within the proposed plan.

Another R-290-based demonstration project which EIA wishes to highlight is included in Senegal's KIP. This project focuses on the fisheries sector, where it aims to transition cold storage facilities from HFC-134a and R-404A to R-290-based monoblocks. The project will replace three systems, each designed to operate between 0°C and -20°C, with refrigeration capacities ranging from 15 to 26.8 kW. The project evaluates technical viability, cost implications, environmental benefits and

energy consumption, with the beneficiary funding part of the infrastructure and civil works. Senegal's project includes a year-long comparative analysis of baseline and new systems, alongside awareness-raising campaigns targeted at fisheries enterprises, industrial refrigeration users and technicians.

In addition, Colombia, Costa Rica, Togo and Uruguay have also proposed projects showcasing R-290-based technologies in their KIPs, in these cases for use in supermarkets and small stores. EIA commends these projects and again welcomes the choice of refrigerant, noting that R-290-based technologies are widely available in this sector, and that lower refrigerant charges and improved energy efficiency will mean reduced operating costs for businesses, reinforcing the replicability of the proposed projects.

Finally, the Pacific Island Countries' KIP outlines a plan for future demonstration projects showcasing "six types of equipment" for use in cold storage, refrigeration in the fisheries sector and commercial refrigeration. The specifics of these projects, if considered feasible at the time, will be confirmed when the second tranche of this KIP is submitted. At present, the KIP simply states that the main criteria for choice of equipment would be the energy efficiency performance and the use of low-GWP refrigerants. EIA urges the Pacific Island Countries, if they do go ahead with this demonstration project, to consider R-290-based technologies in the first instance, noting again the energy efficiency and widespread availability of such equipment.

Air-conditioning projects

Lesotho and Zimbabwe have both proposed demonstration projects for the use of R-290 in air-conditioning (AC) applications, addressing both technical feasibility and awareness-raising. Lesotho's project will install approximately 25 R-290-based AC units in selected health sector facilities and ministries and will be followed-up with an awareness programme targeting various end-users to share the outcomes and promote the adoption of this technology.

Similarly, Zimbabwe's initiative will see 50 R-290 AC units installed in Government buildings around the country. This project, which will be used to train technicians on safe installation practices, will also involve energy efficiency monitoring and includes a plan to ensure the proper recovery and disposal of refrigerants from the replaced units. The Government of Zimbabwe will co-finance the installation costs, contributing $320 per unit, and the project will be followed up by awareness-raising activities to disseminate its findings and promote broader adoption.

In addition to these two projects, EIA welcomes Türkiye's proposed pilot project addressing HFC reliance in the residential AC sector. Türkiye is proposing to provide an incentive to owners of R-410A-based AC units to replace their equipment with R-290-based heat pumps, offering to reach 2,000 units by providing end-users with 50 per cent of the cost. EIA commends this forward-looking initiative and notes that it would help to facilitate expected changes to the country's F-gas regulation that could see the GWP limit on AC split units reduced below the current 750 by 2027.

Stage I KIP activities: Manufacturing conversion projects

Colombia

EIA welcomes and supports Colombia's proposed plan to phase-out the consumption of HFC-134a, R-404A and R-507A in the manufacture of self-contained commercial refrigeration equipment in

the country. The proposed conversion of 27 enterprises to R-290 (with a portion of one enterprise converting to CO_2) would cover all large and medium-sized enterprises manufacturing equipment in the sector, as well as many of the small and micro-sized enterprises, and would represent the elimination of a significant quantity of the country's annual consumption (RAC manufacturing accounted for 14 per cent of Colombia's CO_2-eq consumption in 2023). EIA commends Colombia's commitment to this phase-out and is pleased to note that, following the conversions, Colombia will issue a ban on the import and manufacture of HFC-based stand-alone commercial refrigeration equipment, entering into force by 1 July 2029.

Costa Rica

Commercial refrigeration manufacturing in Costa Rica is carried out by just one enterprise, Omega. Converting Omega's final HFC-based commercial refrigeration lines to R-290 would therefore secure the total domestic phase-out of HFCs from this sector. Noting that this should be the goal for any sector in which it is possible, EIA welcomes Costa Rica's proposal and commends their intention to transition away from HFC-134a. Omega should be recognised for having already partially converted its commercial refrigeration manufacturing to R-290 using its own funds. EIA now encourages ExCom members to support Costa Rica by approving the funds to complete this work, recognising that the country would implement a ban on the manufacture of HFC-based self-contained commercial refrigerators with refrigerant charge below 150g upon completion of the project. We do, however, encourage Costa Rica to consider increasing the scope of this ban by increasing the charge threshold, noting that R-290 commercial refrigerators with a 150g charge are equivalent in size to HFC refrigerators operating with higher charges.

Türkiye

Around 50 per cent of Türkiye's annual HFC consumption is in its manufacturing sectors, however no proposal to address manufacturing is included in the present KIP. Providing some explanation for this, the Government of Türkiye and UNIDO (the lead implementing agency) both note that they faced significant challenges to gathering the data and information needed, in time to formulate sectoral plans that could be presented at this meeting. Taking this into account, the Government has requested flexibility to submit to the 97th meeting stand-alone HFC conversion projects in conjunction with energy efficiency components under decision 94/60.

Noting the significant proportion of Türkiye's total consumption that manufacturing represents, EIA encourages ExCom members to allow Türkiye the flexibility to submit its stand-alone conversion projects at a later date. However, we also ask the Government of Türkiye to ensure that submission of these projects is not delayed beyond the 97th ExCom meeting.

In addition, EIA urges Türkiye to commit to the total phase-out of HFCs from the country's commercial refrigeration and AC manufacturing sectors through the projects it proposes. Türkiye's unique circumstances would support such a move, both because of its role as a significant exporter of RAC equipment to Europe (which is now moving towards the phase-out of HFCs in many applications under the EU's revised F-Gas Regulation) and because of its own series of GWP-based restrictions coming into force of the next five years. This is a significant opportunity for Türkiye to leap-frog directly to ultra-low-GWP natural refrigerant-based manufacturing.

HCFC Phase-out Management Plans

Amongst the projects submitted to ExCom95 for individual consideration, there are eight Stage II and Stage III HPMP proposals. EIA welcomes each of these submissions, which would see HCFC consumption phased out completely by 2030 in Algeria, Burundi, Congo, Guinea-Bissau, Jordan, Mexico, Peru and Somalia.

Document 95/39: Algeria, Stage II HPMP

The Government of Algeria has proposed a Stage II HPMP to eliminate its remaining HCFC consumption by 2030. Key elements include the establishment of an electronic licensing system, strengthened customs monitoring and a comprehensive ban on HCFC-based equipment imports and manufacturing by 31 December 2029. The plan emphasises capacity-building in the RAC servicing sector through technician training, certification programs and tools distribution. Notable initiatives include creating a centre of excellence for flammable refrigerants and implementing a pilot certification scheme for technicians.

Despite supporting these proposed activities, EIA has significant concerns about Algeria's transition to high-GWP HFCs in the manufacturing sector. Algeria's largest AC manufacturer, Condor, partly converted to HFC-32 under Stage I of the country's HPMP. Undermining even this partial progress, however, is the fact that HFC-32-based equipment makes up only six per cent of Condor's AC manufacturing. The vast majority of Condor's output, as well as the output of other manufacturers in the country, relies on R-410A, an HFC blend with a GWP in excess of 2,000. Algeria has not yet ratified the Kigali Amendment, and EIA urges the country to do so with haste.

Document 95/44: Burundi, Stage II HPMP

The Government of Burundi has submitted a Stage II HPMP to phase-out its remaining consumption of HCFCs by 2030. Notably, Burundi is proposing to adopt an import ban on all new and used HCFC-based equipment by 1 January 2027, supporting this with capacity building for customs and enforcement officers. Burundi's Stage II plan also proposes to establish regulatory measures to control emissions occurring during installation, servicing and decommissioning of refrigeration and AC equipment.

EIA welcomes Burundi's plans to develop national technical standards and protocols on the safe handling and use of flammable and toxic refrigerants, as well as its plans to strengthen technician capacity through improvements to training and certification, and its proposed establishment of several centres of excellence. We further encourage the Government of Burundi however, to avoid phasing-in HFCs with high-GWPs and to prioritise the adoption of widely available hydrocarbon and natural refrigerant-based technologies.

Document 95/49: Congo, Stage II HPMP

The Government of the Congo has also submitted a Stage II HPMP which proposes to phase out the country's remaining HCFC consumption by 2030. Among the proposed activities, the Government of the Congo has included the adoption of an import ban on new and used HCFC-based equipment from 1 January 2027, the establishment of a regulatory measure to control refrigerant emissions during installation, servicing and decommissioning of RAC equipment, the development of an electronic licensing system and online tool for issuing import quotas and the development of

regulatory standards and protocols on the use of flammable and toxic refrigerants in RAC equipment.

EIA commends the Congo for advancing its technician training under Stage I of its HPMP, particularly with regards to the safe handling of hydrocarbon refrigerants, which it supported through the installation of 30 R-290 AC units for training purposes. EIA backs the country's present proposal to strengthen its two existing centres of excellence, and establish two more, to provide further "intensive training" on hydrocarbon refrigerants. We do suggest, however, that training in these centres also focus on preventing equipment leaks, which the Secretariat notes are still high in the country.

Document 95/56: Guinea-Bissau, Stage II HPMP

Whilst phasing out its remaining HCFC consumption by 2030, the Government of Guinea-Bissau will focus its Stage II HPMP on strengthening the capacity of its RAC servicing sector, its technicians and its customs and enforcement officers. EIA supports these planned strengthening activities, which seek to increase technical capacity through specialised training centres and programmes that emphasise hydrocarbon refrigerants as ultra-low-GWP alternatives.

EIA also appreciates that the introduction of regulations, codes and standards to ensure safe introduction of flammable and/or toxic refrigerants will be concurrently addressed in Stage I of the country's KIP. In light of Guinea-Bissau's plans to advance natural refrigerants in the country, EIA urges the country's Government to ensure that a hydrocarbon or natural refrigerant-based technology is used in its proposed demonstration project to replace an HCFC-based RAC system in one of its sub-sectors with the highest installed banks of HCFC-22. This would help to cement the country's efforts to transition directly to ultra-low natural refrigerant technologies and would demonstrate clear replicability in a high-HCFC-consuming sector.

Finally, EIA commends Guinea-Bissau for working with the Secretariat to address concerns about potential imports of obsolete equipment and welcomes its plans to issue a regional ban (alongside other member states of the West African Economic and Monetary Union) on the import of new and used HCFC-based equipment by 1 January 2029. EIA further welcomes the efforts to set up an electronic platform to resolve deficiencies with the import quota system that will be finalised in 2025 and supports Guinea-Bissau's work at the regional level to introduce a ban on the import of HCFC-22-based equipment imports before 2029.

Document 95/61: Jordan, Stage II HPMP

Jordan has introduced a comprehensive Stage III HPMP targeting the complete elimination of HCFCs by 2030. Key proposals include strengthening the country's regulatory framework, expanding capacity-building initiatives for RAC technicians and enhancing refrigerant recovery and recycling efforts. Specific measures involve the translation of training manuals, the provision of advanced tools and equipment to service workshops and vocational centres, as well as the establishment of a robust reclamation system.

Also noteworthy is an initiative to convert cold storage facilities to low-GWP refrigerants. EIA calls on the Government of Jordan to ensure that one of the ultra-low-GWP hydrocarbons identified by UNIDO (R-600a, R-290 or R-1270) is selected for this project. Ensuring that non-HFC technologies are

chosen for these cold storage facilities will help Jordan to maintain compliance with the ambitious HFC consumption targets which we commend it for setting under its Stage I KIP.

Document 95/66: Mexico, Stage III HPMP

The Government of Mexico has also submitted its Stage III HPMP proposal, aiming to completely phase out HCFC consumption by 2030. According to 2023 CP data, Mexico ranks among the top 14 countries for HCFC consumption (excluding China). It is also a significant producer of HCFCs, with production totalling 147.22 ODP tonnes in 2023.

Stage III of Mexico's HPMP focuses on phasing out HCFC-22 consumption, which accounted for over 99% of national HCFC consumption in 2023. Many HCFC-22 users, particularly in domestic and small commercial sectors, are located in low-income areas where limited financial resources often hinder the replacement of outdated equipment or access to well-trained technicians. To address these challenges, Stage III prioritizes several activities, including strengthening the legal and regulatory framework, training technicians in customs operations, capacity building and technical assistance in the RAC servicing sector and providing support to replace inefficient HCFC-22 equipment. The proposal also emphasises public awareness and gender programmes to address systemic challenges.

Although commercial refrigeration systems using HCFC-22 are no longer being manufactured, most enterprises have transitioned to R-404A and HFC-134a, with the adoption of ultra-low alternatives such as R-290 confined to self-contained commercial refrigeration units for the most part. Mid-GWP HFCs, such as HFC-32, are also being used in medium-sized AC systems. EIA seconds the point made by the Secretariat, that Mexico must avoid reliance on HFCs and develop a comprehensive plan to effectively align the final stage of the HPMP with the KIP. This plan should also extend beyond the larger enterprises already identified and targeted by the KIP to ensure broader coverage.

EIA also commends the development and inclusion of gender programmes and applauds the Government of Mexico for addressing these "deeply rooted" issues. Additionally, the proposed technical assistance for HCFC-22 end-users in the commercial refrigeration sector appears well-designed to facilitate the adoption of low-GWP technologies and improve access to plug-in R-290 technology kits for local businesses.

Document 95/73: Peru, Stage III HPMP

To phase out its remaining consumption of HCFCs by 2030, the Government of Peru has proposed a Stage III HPMP focussed on strengthening its legal framework to control HCFCs, strengthening its refrigerant recovery, recycling and reclamation network (including through the establishment of a reclamation centre) and promoting the transition to low-GWP technologies in the RAC sector.

Under Stage III, activities are also proposed to provide training on good refrigeration practices for low-GWP refrigerants and to establish a technician certification scheme. EIA was pleased that Stage II of the HPMP placed some emphasis on low-GWP natural refrigerants in training, and that a review was conducted on switching RAC systems in key sectors with transcritical CO_2, with technical assistance provided to three companies to promote this. Although HCFC-22 and high-GWP HFC refrigerants still comprised the majority of refrigerants used in the servicing sector in

2023, EIA recognises the positive sign that 16 per cent of the sector has now transitioned to low-GWP refrigerants, including R-717, R-600a and R-290.

As a final point, EIA wishes to highlight the Secretariat's consultation with UNDP concerning the low volume of refrigerant recovered in Peru, which is due to the widespread practice of venting. While activities addressing RRR training and awareness are included in Peru's HPMP and KIP, EIA remains concerned about the issue of venting, especially considering the use of high-GWP HFCs and HCFC-22 in the country. EIA therefore urges Peru to consider further strengthening its existing regulatory framework, supporting the Secretariat's suggestions to establish a mandatory registry of large end users and a ban on the intentional release of refrigerants.

Document 95/77: Somalia, Stage II HPMP

The Government of Somalia will phase out its remaining consumption of HCFCs by 2030 through implementation of the Stage II HPMP submitted to this meeting. Stage II of the HPMP includes activities to strengthen the country's HCFC licensing and quota system, to improve its technical capacity for controlling imports and to develop a national RRR scheme. EIA supports the regulatory activities proposed by Somalia, notably including a ban on the import of HCFC-141b in imported pre-blended polyols, and on the import of HCFC-based equipment by 1 January 2025. We also support the proposed introduction of labelling requirements for HCFC containers and equipment, and the proposed ban on the re-use of disposable containers by 1 January 2027.

Manufacturing sector conversion projects

Two standalone manufacturing conversion projects have been submitted to the present meeting in line with decision 87/50(e) on assistance to A5 countries that choose to implement individual HFC investment projects in advance of submitting Stage I of their KIP. Before addressing each of these projects, EIA wishes to reiterate our firm belief that any conversion projects pre-empting a country's KIP must embrace genuinely low- or zero-GWP alternatives. Aside from the climate harm that will result from continued reliance on HFCs, EIA also points out that any transition which does not phase-out HFCs inevitably risks a further transition being required to meet future, more stringent obligations under the Kigali Amendment.

Document 95/40: Argentina – Phasing out R-410A in the residential air-conditioning manufacturing sector

Argentina has submitted a project proposal to phase-out R-410A in its residential AC manufacturing sector in line with Decision 87/50(e), proposing HFC-32 as the alternative technology. Although the proposal notes that local safety standards currently limit the use of R-290 and other hydrocarbons, EIA urges Argentina to reconsider its choice of refrigerant, noting that the revision of such prohibitive standards can and should be a priority for the country's forthcoming KIP. EIA reminds Argentina that many regions have already adopted standards that allow for the safe and effective use of hydrocarbon-based technologies, notably the European Union, and that these systems can be looked to as sources of guidance and best practice by any country pursuing its own standards revisions.

Turning back to Argentina's present proposal, in the case of the residential AC sector, EIA notes that R-290 is a proven, effective and energy efficient technology. Transitioning to R-290 now would avoid this significant manufacturing sector locking in an ongoing reliance on HFCs in the country.

Furthermore, amending Argentina's project to adopt R-290 would not require any drastic technological changes. In fact, the Secretariat noted in its review of the proposal that, even though the project had been designed to adopt HFC-32, the equipment and safety measures proposed would also be suitable to manufacture AC units with R-290 refrigerant.

ExCom members should encourage Argentina to re-think its present proposal. By updating its domestic standards during the first stage of its KIP, Argentina can facilitate an alternative conversion to R-290 that would allow it to pursue the total phase out of HFCs from its AC manufacturing sector. This, EIA suggests, would be a far more impactful and desirable outcome.

Document 95/68: Morocco – Conversion of two production lines in one enterprise manufacturing domestic refrigeration equipment from HFC-134a to R-600a

Morocco has proposed a project seeking to convert two domestic refrigeration manufacturing lines at the enterprise MANAR from HFC-134a to R-600a, estimating that this will eliminate 36,684 tCO_2-eq of HFC-134a consumption (based on 2023 reported data). EIA strongly supports this proposed project and urges the ExCom to approve the conversion as MANAR is the only domestic refrigeration manufacturer in Morocco and so this project represents the conversion of the entire sector to an ultra-low-GWP hydrocarbon alternative that is already well-established in domestic refrigeration globally. EIA seconds the Secretariat in its assessment that this project will provide enhanced environmental benefits, and, in light of the proposed project, we particularly look forward to the submission of Morocco's full Stage I KIP at the 96th ExCom meeting.

Energy Efficiency Projects

EIA recognises the significant value in supporting projects for maintaining and/or enhancing energy efficiency in alignment with the HFC phase-down, particularly where these projects facilitate the wide-spread adoption of low-GWP, energy efficient natural refrigerant and hydrocarbon-based technologies. EIA therefore welcomes the nine projects submitted for individual consideration at this meeting by China, Colombia, Costa Rica, Honduras, Malaysia, Montenegro, Peru, Uganda and Uruguay, and the one project recommended for blanket approval that was submitted by Saint Vincent and the Grenadines. Below, EIA discusses key elements from several of these projects.

One project that EIA wishes to highlight is that of Costa Rica. EIA appreciates Costa Rica's proposal for a demonstration project to install a transcritical CO_2 refrigeration system in a supermarket as a low-GWP and high energy efficiency technology as part of their HFC phase-down. Given that 50 per cent of HFC refrigerant consumption in the Costa Rican supermarket sector is high-GWP R-404A and R-507A, strengthening the national capacity to adopt transcritical CO_2 technology is crucial the country's phase-down of HFCs. Likewise, EIA welcomes Honduras' proposed installation of a low-GWP energy-efficient R-290/Glycol/CO_2 commercial refrigeration system in a processed food distribution centre, especially given the concerning report that Honduras' consumption of HFCs in 2023 was almost 27 per cent higher than the established baseline.

EIA supports Uganda's proposal to improve the deployment of energy-efficient commercial refrigeration equipment in the supermarket sector, through the introduction of R-290 coolers and freezers and R-600a freezers. We appreciate that these activities will be supported by technician training addressing best service practice for the safe use of flammable refrigerants and

hydrocarbon-based equipment and believe the project could have significant replicability across the region. We also want to commend Malaysia's proposal, which aims to improve energy efficiency in stand-alone commercial refrigeration by 20 to 40 percent, in alignment with the country's Stage I KIP. The enterprises involved are the two largest manufacturers and assemblers of commercial refrigerators and industrial refrigeration systems in the country, and EIA congratulates both on their commitments to cease using HFCs (HFC-134a and R-404A) for manufacturing.

Finally, EIA welcomes the Government of China's proposed project addressing energy efficiency in a data centre, demonstrating a single-phase immersion cooling system using an "environmentally friendly proprietary" synthetic oil coolant.[vi] Recognising that the rapid growth of data centres globally is a significant environmental concern due to their very high energy demands and very significant cooling needs, EIA is greatly supportive of efforts to develop innovative cooling solutions that can reduce energy consumption and avoid the further uptake of HFCs. The novel nature of the technology proposed means that close monitoring will be necessary, and EIA hopes that the Government of China will report regularly to the ExCom on the development and outcomes of this piece of work, including reporting on its implications for energy efficiency, the associated emissions it produces and the potential replicability of the project. With the global expansion of data centres showing no sign of slowing any time soon, demonstration projects for environmentally friendly, non-HFC-based technologies will be crucial for reducing emissions in line with the global 1.5°C target.

Agenda Item 11: Kigali Amendment Matters

Documents 95/86 and 93/97: Draft guidelines for funding the phase-down of HFCs in A5 countries & Paper on the starting point for sustained aggregate reductions

Despite ongoing discussions since the adoption of the Kigali Amendment, the ExCom has yet to finalise the cost guidelines. While EIA welcomes the progress made at the 94th meeting regarding cost-effectiveness thresholds and incremental operating costs, significant issues remain unresolved. Chief among these is the methodology for determining the starting point for sustained aggregate reductions. EIA urges ExCom members to address this issue promptly and encourages them to prioritise the discussion of Australia's proposal, originally introduced at the 93rd meeting, as a productive basis for further discussion.

EIA previously welcomed Australia's proposal, reissued in Annex V of document 95/86, noting its alignment with recommendations from the MLF Secretariat. The proposal suggests using CO_2-eq as the unit of measurement and suggests introducing mechanisms to ensure sustained reductions are tailored to the servicing and manufacturing sectors in both LVC and non-LVC countries.

Nonetheless, EIA does question whether the proposal's allowance for funding subsequent conversions, irrespective of remaining eligible consumption, is consistent with subparagraph 18(e) of decision XXVIII/2. This subparagraph stipulates that enterprises transitioning from HFCs to lower-GWP HFCs with MLF support may receive future funding to convert to low- or zero-GWP alternatives, but only when necessary to meet final phase-down steps. EIA notes that limiting

[vi] As per document 95/47/Add.1, 'Bing Yi 797' is a synthetic oil coolant registered by Tianjin Tier, composed mainly of 90-99.8% hydrogenated polidocanol and 0.2%-0.9% compound antioxidants, with no aromatic hydrocarbons.

funding for repeated conversions is a core principle of the MLF, and questions why subsequent conversions should be funded in cases where insufficient eligible consumption remains. HFC-free alternatives are now widely available and arguments to the contrary are no longer justifiable in most cases. EIA therefore recommends that the cost guidelines explicitly incentivise one-time transitions to non-controlled substances, ensuring an efficient, cost-effective and sustainable phase-down pathway that prioritises long-term environmental benefits.

Document 95/87: Further elaboration on the operational framework on energy efficiency while phasing down HFCs in relation to the elements listed under decision 94/60(h)

At its 94th meeting, the ExCom adopted decision 94/60(h), establishing a funding window of US $100 million for projects intended to maintain or enhance the energy efficiency of replacement technologies and equipment in the manufacturing and servicing sectors when phasing down HFCs. Recognising that additional funding to accelerate the adoption of energy efficient, ultra-low-GWP equipment is essential during the transition to sustainable cooling, EIA welcomes the Secretariat's further elaboration on the operational framework for this decision, set out in Parts A and B of document 95/87.

EIA notes that, alongside direct emissions reductions achieved through measures such as an accelerated phase-down, the indirect reductions achieved through measures including increasing energy efficiency, could reduce the cooling-related GHG emissions of A5 countries from 8.15 billion CO_2-eq tonnes in 2050, to 2.11 billion CO_2-eq tonnes (not including energy grid decarbonisation).[9]

Operational framework for MLF grant funding: Manufacturing of components and heat pumps

With respect to the operational framework for the manufacturing of components and heat pumps, EIA supports the Secretariat's general proposal to follow a case-by-case approach to cost assessments, noting that this will allow for tailored funding that can be aligned with manufacturers' varying technical capabilities and production capacities. We also support the Secretariat's suggested approach of establishing minimum energy improvements that would be required for a project to be considered eligible for funding, supporting the idea of tying these improvements to MEPS as a means for further encouraging those countries that have not yet established them to do so.

Where EIA believes the operational framework could be improved though, is through the integration of explicit incentives favouring equipment designed to work with ultra-low-GWP, non-HFC refrigerants. Equipment based on natural refrigerant technologies, including ammonia and hydrocarbons, has been shown to consistently perform with greater energy efficiency than HFC-based equipment. Moreover, favouring equipment that is not based on HFCs will assist countries in avoiding a 'double transition' during their HFC phase down (i.e., a transition to lower-GWP HFCs in the short term, followed by an eventual second transition away from these replacement HFCs in the future).

Operational framework for MLF grant funding: Non-manufacturing activities

EIA recognises the critical role that non-manufacturing activities play in facilitating the sustainable transition to energy-efficient, low-GWP technologies. By addressing technical assistance, servicing sector support, capacity building and preparatory funding, the Secretariat has

outlined a comprehensive approach that addresses numerous barriers across different sectors and national circumstances. EIA is broadly supportive of the activities outlined by the Secretariat in Part B of document 95/87, but again urges members of the ExCom to take greater advantage of the opportunity to incentivise the transition to energy-efficient technologies that are based on low-GWP, non-HFC alternatives.

Centres of excellence for sustainable cooling offer perhaps the most potential as a platform for enhancing energy efficiency whilst simultaneously transitioning away from HFCs. Such centres can provide important technical and capacity-building support, particularly for small and informal enterprises that often lack access to specialised expertise and resources. By focusing on region-specific needs, centres of excellence can deliver tailored training, promote innovative product designs, and facilitate technology transfer in a cost-effective manner.

EIA believes that any centres of excellence established under decision 94/60(h) should be tasked by the ExCom with facilitating the transition to low-GWP HFC-free alternatives as part of the energy efficiency support they provide. These centres of excellence will be able to advise on the most suitable alternative technologies within their local context, accounting for factors such as refrigerant availability and affordability, and drawing lessons from successful transitions in other geographically or circumstantially similar regions. EIA again notes the clear rationale for prioritising the transition to ultra-low-GWP natural refrigerant-based equipment in this context, given both its widespread availability and proven energy efficiency across different geographic regions.

Energy efficiency revolving fund for end users

In Part C of document 95/87 the Secretariat discusses a potential Energy Efficiency Revolving Fund (EERF), which it bills as an innovative mechanism to provide sustainable, low-cost financing for end-users transitioning to energy-efficient and low-GWP technologies. EIA recognises the significant effort that has gone into developing the EERF idea and is supportive of the Secretariat seeking new ways to address the often-faced barrier of high upfront costs. However, EIA does wish to highlight that a US $100 million window for energy efficiency projects has just been opened and is only just being operationalised. We note that ExCom approving the proposed minimum amount of US $20 million for this EERF would therefore result in a very significant amount of MLF money being directed solely towards energy efficiency projects.

At present, EIA does not support the proposed criteria for considering projects for funding through the EERF as currently outlined in Annex I of document 95/87. The current criteria suggest that in the case of the commercial refrigeration and industrial refrigeration sectors, refrigerants used in replacement equipment should have a GWP of less than 150. In the case of residential and commercial AC, the present criteria suggest equipment should be based on refrigerants with a GWP of less than 750. These GWP thresholds are not fit for purpose and would permit funding being directed towards HFC-based technologies with significant climate and environmental impacts, perpetuating a reliance on HFCs in Article 5 countries and undermining the global HFC phase down.

Equipment based on non-HFC refrigerants with ultra-low-GWPs (GWP <5), notably natural refrigerants including CO_2, ammonia and hydrocarbons, are widely available in most applications

and across all geographic regions. The energy efficiency of equipment using these refrigerants has been demonstrated and proven in numerous settings.[10]

If the EERF is to be established – and at significant cost – then it is vital that it does not become a vehicle for MLF funds to continue supporting the uptake of high-GWP HFCs. Aside from the obvious climate implications of this, MLF funding should always prioritise activities that avoid the need for a double transition as this is the most cost-effective and efficient option (as per the indicative list of agreed incremental costs).[11] Funding an ongoing reliance on HFCs with GWPs up to 750 can only invite the risk that any country adopting such technologies will need to transition again at a future, more stringent phase of Kigali Amendment implementation.

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