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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Ninety-fourth Meeting
Montreal, 27-31 May 2024
Item 9(d) of the provisional agenda¹

PROJECT PROPOSAL: EL SALVADOR

This document consists of the comments and recommendation of the Secretariat on the following project proposal:

Phase-down

- Kigali HFC implementation plan (stage I, first tranche) UNDP

Energy efficiency

- Pilot project to maintain and/or enhance the energy efficiency of replacement technologies and equipment in the context of HFC phase-down (non-investment activities) UNDP

¹ UNEP/OzL.Pro/ExCom/94/1

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

El Salvador

PROJECT TITLE	AGENCY
Kigali HFC implementation plan (stage I)	UNDP (lead)

LATEST ARTICLE 7 DATA (Annex F)	Year: 2023	557.53 mt	1,122,854 CO ₂ -eq tonnes
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SECTORAL HFC CONSUMPTION DATA (CO₂-eq tonnes) AND PLANNED ACTIVITIES									
	Aerosol	Foam*	Fire-fighting	AC and refrigeration				Solvent	Other
				Manufacturing			Servicing**		
				Refrigeration	AC	Other			
As submitted (2022)	0	1,990	0	0	0	0	634,877	0	0
Latest CP report (2023)	0	1,485	0	0	0	0	1,122,854	0	0
KIP stage I activities as agreed (Y/N)	N	N	N	N	N	N	Y	N	N

* HFC contained in pre-blended polyols

** Sectoral survey focused on four main HFC and HFC-blends (HFC-134a, R-404A, R410A and R507A) only

AVERAGE 2020-2022 HFC CONSUMPTION IN SERVICING	351.39 mt	772,767 CO ₂ -eq tonnes
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BASELINE CONSUMPTION DATA (CO₂-eq tonnes)*	2020	2021	2022	Average 2020-2022
HFC annual consumption	620,802	985,085	712,414	772,767
HCFC baseline (65%)				191,353
HFC baseline				964,120

*The data for 2020, 2021 and 2022 is consistent with the data published on the Ozone Secretariat website; however, the calculation of the HFC baseline data is different from that published on the Ozone Secretariat website (923,806 CO₂-eq tonnes).

HFC CONSUMPTION ELIGIBLE FOR FUNDING	
Starting point for sustained aggregate reductions	n/a
Previously approved HFC phase-down investment projects	No
Aggregate reductions from previously approved projects (CO ₂ -eq tonnes)	n/a

PROJECT DATA AS AGREED		2024*	2025	2026	2027	2028	2029	Total	
Consumption (CO ₂ -eq tonnes)	Montreal Protocol limits**	923,806	923,806	923,806	923,806	923,806	831,425	n/a	
	Maximum allowable**	923,806	923,806	923,806	923,806	923,806	831,425	n/a	
	Maximum allowable (%)**	100	100	100	100	100	90	n/a	
Amounts recommended in principle (US \$)	UNDP	Project costs	180,000	0	0	144,000	0	36,000	360,000
		Support costs	23,400	0	0	18,720	0	4,680	46,800
	Total project costs	180,000	0	0	144,000	0	36,000	360,000	
	Total support costs	23,400	0	0	18,720	0	4,680	46,800	
	Total funds	203,400	0	0	162,720	0	40,680	406,800	

* Recommended for approval at the present meeting

** Based on the HFC baseline data published on the Ozone Secretariat

Reduction from stage I in CO ₂ -eq tonnes*	92,381
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* Calculated based on the HFC baseline data published on the Ozone Secretariat

Secretariat's recommendation:	Individual consideration
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PROJECT DESCRIPTION

1. The present document contains the following sections:
 - I. Summary of the proposal as submitted
 - II. Background: Implementation status of the country's HCFC phase-out management plan
 - III. HFC consumption: Overview of the country's HFC consumption levels, trends, and sectoral uses
 - IV. Stage I of the Kigali HFC implementation plan, as submitted: Overarching strategy and plan of implementation for the first tranche
 - V. Secretariat's comments, including the agreed cost of activities
 - VI. Recommendation

I. Summary of the proposal as submitted

2. On behalf of the Government of El Salvador, UNDP as the designated implementing agency has submitted a request for stage I of the Kigali HFC implementation plan (KIP), in the amount of US \$360,000, plus agency support costs of US \$46,800, as originally submitted.²
3. The implementation of stage I of the KIP will assist the Government of El Salvador in meeting the target of 10 per cent reduction from its HFC baseline consumption by 1 January 2029.
4. The first tranche of stage I of the KIP being requested at this meeting amounts to US \$180,000, plus agency support costs of US \$23,400 for UNDP, as originally submitted.

II. Background

Status of implementation of the HCFC phase-out management plan

5. Table 1 presents information on the HPMP in El Salvador as of May 2024.

Table 1. HPMP implementation status for El Salvador

	Stage I	Stage II
Meeting when HPMP was approved/updated	65 th /74 th	87 th
Reductions from baseline	35% by 2020	100% by 2030
Total project cost (US \$)	1,074,277	698,320
Date of completion (actual/planned)	31 December 2021	31 December 2031

Status of implementation of previous HFC-related activities

6. Table 2 presents an overview of activities implemented in El Salvador in the context of the Kigali Amendment that have been funded by the Multilateral Fund.

² As per the letter of 5 February 2024 from the Ministry of Environment and Natural Resources of El Salvador to UNDP.

Table 2. Previously approved HFC-related activities in El Salvador

Approval meeting	Project title	Implementing agency	Cost (US \$)	Date of completion
74 th	Survey of ODS alternatives	UNDP	70,000	September 2017
81 st	Enabling activities for HFC phase-down	UNDP/Canada	150,000	December 2021

III. HFC consumption overview

HFC consumption levels

7. El Salvador imports HFCs for use in multiple refrigeration and air-conditioning (RAC) servicing subsectors and small amounts contained in pre-blended polyols for use in the polyurethane (PU) foam manufacturing sector and also the country re-exports HFCs in the Central American region. The most consumed substances in 2023 were HFC-134a (41.1 per cent of total HFC consumption in CO₂-equivalent (CO₂-eq) tonnes), R-404A (25.0 per cent), R-410A (24.0 per cent), R-507A (7.5 per cent), HFC-23 (0.3 per cent), and other HFCs and HFC-blends (2.2 per cent in total), and pre-blended polyols used in the foam manufacturing. Table 3 presents the country's HFC consumption for 2020 to 2022 as originally submitted to the Ozone Secretariat under Article 7 of the Montreal Protocol.

Table 3. HFC consumption in El Salvador (2020–2023 Article 7 data)

HFC	GWP	2020	2021	2022	2023
Metric Tonnes					
HFC-134a	1,430	162.74	203.64	199.28	322.76
HFC-23	14,800	0.00	0.00	2.19	0.19
R-404A	39,21.6	36.00	120.1	30.63	71.46
R-410A	2,087.5	70.15	60.00	74.24	129.25
R-507A	3,985	21.59	18.54	24.15	21.11
Others*		6.74	11.92	12.26	12.76
Total (mt)		297.22	414.2	342.75	557.53
HFCs in imported pre-blended polyols **		1.18	1.74	2.41	1.69
CO₂-eq tonnes					
HFC-134a	1,430	232,718	291,205	284,970	461,547
HFC-23	14,800	0	0	32,412	2,812
R-404A	3,921.6	232,718	470,984	120,119	280,238
R-410A	2,087.5	146,438	125,250	154,976	269,809
R-507A	3,985	86,036	73,882	96,238	84,123
Others*		14,432	23,764	23,699	24,325
Total (CO₂-eq tonnes)		620,802	985,085	712,414	1,122,854
HFCs in imported pre-blended polyols **		937	1,405	1,990	1,485

* Including: R-407A, R-407C, R-407F, R-422D, R-437A, R-438A, R-448A, R-449A, R-449C, and R-513A

** Based on Country Programme data including HFC-365mfc, CustMix-265, and CustMix-134 contained in pre-blended polyols

Established HFC baseline

8. The Government of El Salvador reported the Article 7 data for 2020 to 2022. The country's HFC consumption baseline was established at 923,806 CO₂-eq tonnes as published on the website of the Ozone Secretariate; however, the calculated baseline amounts to 964,120 CO₂-eq tonnes as shown in table 4 below.

Table 4. Annual consumption and established HFC baseline for El Salvador (CO₂-eq tonnes)

Baseline calculation components	2020	2021	2022
HFC annual consumption	620,802	985,085	712,414
HFC average consumption in 2020-2022	772,767		
HCFC baseline (65%)	191,353		
HFC baseline	964,120		

Country programme implementation report

9. The sectoral HFC consumption data provided by the Government of El Salvador in its country programme (CP) implementation report for 2023 is consistent with the data reported under Article 7 of the Montreal Protocol.

HFC consumption trends

10. The total HFC consumption shows an increasing trend from 2020 to 2023. The consumption in 2021 increased with the economic growth of the country in the same year and the rebound effect after the COVID-19 pandemic which caused an over purchase of refrigerants in that year, thus leaving a surplus for the year 2022, which caused HFC imports to decrease in 2022 below the market's needs. The import data for the year 2023 has increased sharply most likely due to previsions taking by importers in advance of the quota system and the freezing of the HFC consumption level established for the year 2024.

HFC consumption by sector

11. The primary HFCs and HFC-blends consumed in El Salvador are HFC-134a, R-404A, R410A and R507A, which accounted for 90 per cent of the consumption in 2022. These four HFCs are mainly consumed for servicing in mobile air-conditioning (MAC) (38.6 per cent in mt and 26.7 per cent in CO₂-eq tonnes), followed by stationary air-conditioning (AC) (24.7 per cent in mt and 25.0 per cent in CO₂-eq tonnes), commercial refrigeration (17.9 per cent in mt and 31.2 per cent in CO₂-eq tonnes) and domestic refrigeration (14.6 per cent in mt and 10.1 per cent in CO₂-eq tonnes). In addition, the sectoral survey revealed a minor use of HFCs contained in pre-blended polyols in the PU foam manufacturing sector, as shown in tables 5 and 6.

Table 5. HFC consumption in El Salvador by sector in mt (2022)

Sector	HFC-134a	R-404A	R-410A	R-507A	HFCs contained in pre-blended polyols *	Total**	Share of total (%)
Refrigeration and air-conditioning sectors							
Domestic refrigeration	45.04	0.00	0.0	0.00	0.00	45.04	14.6
Commercial refrigeration	7.61	21.19	0.00	26.14	0.00	54.94	17.9
Industrial refrigeration	0.35	1.98	0.29	3.56	0.00	6.18	2.0
Refrigerated Transport	2.02	4.58	0.00	0.00	0.00	6.60	2.1
Stationary AC	0.00	0.00	75.97	0.00	0.00	75.97	24.7
MAC	118.76	0.00	0.00	0.00	0.00	118.76	38.6
Total	173.78	27.75	76.26	29.70	0.00	307.49	100
Other Sectors							
Foam	0	0	0	0	2.41	2.41	n/a

* HFC-365mfc, CustMix-265, and CustMix-134

** The sectoral survey focused on four main HFC/HFC blends (HFC-134a, R-404A, R410A and R507A) for which the quantities align with the CP data reported; however, the CP implementation report included nine other substances in the servicing sector for 2022 at a total amount of 23.26 mt.

Table 6. HFC consumption in El Salvador by sector in CO₂-eq tonnes (2022)

Sector	HFC-134a	R-404A	R-410A		R-507A	HFCs contained in pre-blended polyols *	Total**	Share of total (%)
Refrigeration and air-conditioning sectors								
Domestic refrigeration	64,407	0	0		0	0	64,407	10.1
Commercial refrigeration	10,882	83,099	0		104,168	0	198,149	31.2
Industrial refrigeration	501	7,765	605		14,187	0	23,057	3.6
Refrigerated Transport	2,889	17,961	0		0	0	20,850	3.3
Stationary AC	0	0	158,587		0	0	158,587	25.0
MAC	169,827	0	0		0	0	169,827	26.7
Total	248,505	108,824	159,193		118,355	0	634,877	100
Other Sectors								
Foam	0	0	0		0	1,990	1,990	n/a

* HFC-365mfc, CustMix-265, and CustMix-134

** The sectoral survey focused on four main HFC/HFC-blends (HFC-134a, R-404A, R410A and R507A) for which the quantities align with the CP data reported, however the CP included nine other substances in the servicing sector for 2022 at a total amount of 68,472 CO₂-eq tonnes.

Polyurethane foam manufacturing sector

12. The PU foam sector consumes small amounts of HFCs contained in imported pre-blended polyols for sandwich panels and spray foam application. As there are no systems houses in the country, the industry is supplied by importers of formulated polyols and isocyanates (PU systems), with the main blowing agents being HFC-365mfc, and custom blends of HFC-365mfc and HFC-227ea. Cyclopentane, methyl formate, and water-based materials are also locally available. The imports of HFCs contained in pre-blended polyols in 2020 to 2023 period are presented in table 7.

Table 7. Imports of controlled substances contained in pre-blended polyols in El Salvador (mt)

Substance	2020	2021	2022	2023
HCFC-365mfc	1.18	1.55	1.78	0.79
CustMix-134*	0	0	0	0.70
CustMix-265**	0	0.19	0.63	0.20
Total	1.18	1.74	2.41	1.69

* HFC-365mfc=93% and HFC-227ea=7%

** HFC-365mfc=95% and HFC-227ea=7%

13. There are four importers of pre-blended PU polyols based on HFCs in El Salvador using the spray method in the formulations supplied by the enterprise Synthesia. Alternatives such as HFOs and methyl formate for spray applications are already available, and technical assistance for the conversion of the sector is not required. Thus, the foam manufacturing sector will be regulated through the HFC import permits since they are included in the country's quota system.

Firefighting, solvent and aerosol sectors

14. There was no record of HFC imports for firefighting, solvent, and aerosol uses from 2020 to 2022. Therefore, any company that needs to import HFCs for any of those uses will be limited to the quota assigned to potential HFC importers, which consists of up to 5 per cent of the national quota established for the corresponding year.

Refrigeration and air-conditioning servicing sector

15. There are approximately 4,000 servicing technicians and 400 to 500 workshops consuming HFCs in El Salvador. Among the technicians identified, 12 women are engaged in refrigeration servicing or as administrative support. Furthermore, 18 women were identified as are students at universities and vocational training institutes offering at least one refrigeration and air-conditioning subject. Around 50 per cent of technicians work independently, servicing mostly domestic refrigerators, residential AC and mobile air-conditioning, while the remaining ones are part of formal servicing mainly in the commercial and industrial RAC sectors.

16. From 2004 to the present, RAC technicians with formal training in RAC servicing have been trained through three vocational institutes working under the Salvadoran Institute of Vocational Training. However, training in the recovery and recycling of refrigerants in the MAC sector has not been provided by any of the training centres, despite the fact that the consumption of HFC-134a in the MAC sector in El Salvador is quite significant.

17. The main problems identified during equipment maintenance are spare-part replacement and leak control. Sometimes, less suitable spare parts are purchased at a lower price, and in other cases the original parts of the refrigeration system are adapted, resulting in poor operation of the equipment and forcing the technician to waste refrigerant. In the case of refrigerant leaks, if they are small, some technicians prefer to recharge rather than find the leak. Good practices included in the HPMP and KIP target the reduction of such refrigerant leaks.

Domestic, commercial, industrial and transport refrigeration servicing

18. More than 1.5 million domestic refrigerators are used by households and by some commercial establishments in El Salvador. An estimated 70 per cent of the domestic refrigerators in the country are based on HFC-134a, while the remaining 30 per cent are based on R-600a .

19. Commercial refrigeration equipment in El Salvador includes self-contained plug-in freezers, display cabinets and beverage coolers, condensing units at convenience stores and centralized units in supermarkets. While most self-contained refrigerators are currently HFC-134a-based, R-290 is as an

emergent alternative (from 3 to 5 per cent of the installed units). R-404A is used mostly in supermarkets. In the health sector, there are 66 units of cold chambers for blood/breast milk banks and 500 units of vaccine refrigerators based on HFC-134a.

20. Most industrial refrigerants are consumed in food processing and distribution, and in agro-industrial cold rooms and chambers, industrial icemakers, ice-cream production, deep-freezing tunnels and other processes. Ammonia, R-404A, HFC-134a, and R-507A are widely used for servicing and maintaining the industrial refrigeration equipment. Particularly, HFC-23 is used by one enterprise in a cascade refrigeration system for test benches in the manufacture of capacitors for satellites which are subjected to temperatures down to -70° Celsius.

21. Regarding refrigerated ground transportation, the equipment is mainly R-404A-based and to a lesser degree HFC-134a-based, while in fishing boats, the HCFC-22 and HFC-134a equipment installation rates are almost equivalent.

Residential and commercial air-conditioning servicing

22. In 2022, the stationary AC equipment servicing subsector was the second largest consumer of HFCs in the country in terms of metric tonnage, and the main consumer in terms of CO₂-eq tonnes. Depending on the type of equipment, from 70 to 90 per cent of residential AC units are installed with R-410A while the rest still use HCFC-22. All commercial AC units (whether rooftop, packaged or split) currently in use are based on R-410A. Chillers are found in building air-conditioning, the health sector, vineyards, milk tanks, and plastic injection machines among others. Between 60 and 70 per cent of those chillers are based on HFC-134a and the rest are R-410A-based.

Mobile air-conditioning servicing

23. In 2022, the servicing of MAC units accounted for the highest metric tonnage of HFC consumption in the country, and the second highest consumption in CO₂-eq tonnes of all servicing subsectors. The vehicle fleet of the country comprises 1,174,637 units and 1 million of them are equipped with air-conditioning. Ninety-five per cent of those air-conditioning units require HFC-134a, and the remaining five per cent require HFO-1234yf.

IV. Stage I of the Kigali HFC implementation plan as submitted

Institutional, policy and regulatory framework

24. El Salvador ratified the Kigali Amendment on 13 September 2021. An executive decree was approved 27 February 2024 and subsequently entered into force for implementation in 2024 which defines the mechanisms and procedures for the implementation of a licensing and quota system for HFCs. For the allocation of HFC quotas, importers who had import activities during the period from 2020 to 2022 have been registered. The allocation of HFC quotas in CO₂-eq tonnes is distributed according to the percentage that was imported by each registered importer during the period from 2020 to 2022.

Phase-down strategy for stage I of the Kigali HFC implementation plan

Overarching strategy

25. The purpose of stage I of the KIP is to phase down 10 per cent of HFC consumption by 2029. The strategy is built on the activities being developed in the second stage of the HPMP, complementing efforts in related activities to expand the coverage of activities or reach sectors that have not previously been worked on, such as the MAC sector. It prioritizes the strengthening of national capacity to reduce HFC supply and demand through the control and monitoring of HFC trade; broad dissemination and awareness

of the use of low-GWP refrigerants; the adoption of technical standards, training and certification on the handling of available low-GWP technologies; and good servicing practices to reduce HFC-134a consumption in the MAC sector. The KIP will be reinforced by a pilot project on energy efficiency for the health sector.

Proposed activities

26. Stage I of the KIP aims to lay the groundwork for the RAC servicing sector to facilitate the required reduction steps in the country's HFC consumption. The following activities have been proposed for implementation under stage I, as submitted:

- (a) *Supporting the development of an institutional and public policy framework and strengthening HFC controls:* Conducting four training courses on the revised requirements for the import of HFCs and HFC-based equipment, and on the detection and prevention of potential cases of illegal trade for at least 80 customs and enforcement officers, and holding four informative meetings on the HFC regulations for customs brokers and importers; adjusting the HFC licensing system and HFC import register according to the future revision of HS customs codes in 2026; organizing three coordination meetings with the main HFC stakeholders from the private sector (HFC importers, end users, industry representatives) and control institutions (Customs and legal department of the Ministry of the Environment, among others) to coordinate joint actions for the effective reduction of HFC consumption; and developing and implementing a multimedia campaign to raise awareness among main stakeholders and the public on low-GWP alternatives (US \$44,786);
- (b) *Creation of technical standards for the safe use of natural refrigerants:* Evaluation of the current standards and guidelines on the safe handling of flammable, toxic or high-pressure refrigerants and drafting standards and guidelines on the safe use of hydrocarbon, ammonia, CO₂ and other low-GWP refrigerants for the local market, and printing 500 copies of the guidelines (US \$35,227);
- (c) *Enhancing national capacity in the safe use of low/zero-GWP technologies:* Developing the CO₂ refrigeration specialty at one specialized engineering school; providing the necessary technological equipment³ (including start-up and training of ten trainers) for the installation of a cold chamber based on trans-critical CO₂ for the practical training of RAC students and technicians (US \$90,000); and
- (d) *Technical assistance to the MAC Sector:* Promoting good practices in the handling of refrigerants in MAC servicing, including the selection of 12 workshops offering diverse maintenance services in different regions of the country; procuring and providing recovery and recycling (RR) equipment and tools⁴ to four vocational training institutions and the 12 identified workshops to implement good practices in MAC servicing, including installation and training of at least six trainers in the use of the equipment; and providing complementary technical assistance and follow up to ensure refrigerant containment and the recording of the amount of refrigerants recovered/reused in each of the 12 workshops (US \$157,260).

³ One evaporator, one condensing unit, and control and telemetry elements.

⁴ Sixteen portable RR units and pocket coolant identifiers for MAC, 76 units of 30 lb recovery cylinders, 16 units of 123 lb cylinders for non-reusable refrigerant, leak detectors, pressure gauges, set of fittings and valves, and personal protection equipment.

27. The project implementation, coordination and monitoring activities will build upon the HPMP, which will run concurrently with stage I of the KIP. Under the HPMP, there is a provision to have a project coordinator, supervised by the Montreal Protocol Focal Point of El Salvador. In order to maximize the benefits of available funds, the same project coordinator will be responsible for the implementation of both projects. The KIP budget will cover the salary of an assistant to provide support in day-to-day logistics, oversight of project activities, and keeping project documentation updated. Project monitoring activities are proposed at a cost of US \$32,727 to be allotted for hiring a project assistant (US \$25,000), monitoring-related travel (US \$2,773), conducting coordination meetings (US \$4,500), and miscellaneous expenses (US \$454).

Gender policy implementation

28. The Government of El Salvador plans to promote the development of activities for the inclusion of women in the framework of the Kigali Amendment to the Montreal Protocol to support social groups that are vulnerable due to gender and include them in a special program aimed at the RAC sector. Throughout the implementation of stage I of the KIP an analysis will be carried out on the potential for increasing the participation of women as technicians, system designers, installers, teachers, and technical managers in RAC sector enterprises. Promotional activities will be held to increase interest and build capacity for women in the RAC sector and in HFC phase-out activities. Furthermore, in line with the Multilateral Fund Indicators, gender disaggregated data will be collected for each activity and reported during the submission of the second tranche and in the final reports.

Coordination of activities in the servicing sector under the HCFC phase-out and HFC phase-down plans

29. Stage II of the HPMP and stage I of the KIP will be implemented simultaneously. The Government of El Salvador is committed to harmonizing the implementation of HPMP and KIP activities to the extent possible, on the understanding that separate agreements between the country and the Executive Committee will govern both multi-year projects. The schedule of HFC phase-down and HCFC phase-out commitments, and of the KIP and HPMP tranches, is presented in annex I to the present document, while activities to be implemented under the HPMP and the KIP are listed in annex II.

30. The KIP seeks the further strengthening of controls on HFC and HFC-based equipment; the implementation of the quota system for HFCs; and the development of technical standards that promote the proper and safe use of natural refrigerants and avoid the release of HFCs into the environment throughout their life cycle. The training of customs officers and brokers on the updated regulations will be coordinated to optimize the use of HPMP and KIP resources, and the outputs will be duly registered to avoid double counting. Stage I of the KIP addresses refrigerant recovery, recycling and reclaim activities only for the MAC sector, which is not addressed by the HPMP. Certification of RAC technicians will be kept under the HPMP. Furthermore, the KIP will strengthen vocational training institutes to develop training on CO₂ and to provide training to the MAC technicians. Dissemination and awareness at the national level on the use of low-GWP refrigerants planned under the KIP will complement the awareness campaign for the general public developed as part of the HPMP.

Total cost of stage I of the Kigali HFC implementation plan

31. The budget for stage I has been proposed at US \$360,000. The costs of activities in the refrigeration servicing sector have been proposed in line with decision 92/37.

Implementation of the first tranche of stage I of the Kigali HFC implementation plan

32. The first funding tranche of stage I of the KIP, in the total amount of US \$180,000, will be implemented between July 2024 and June 2027 and will include the following activities:

- (a) *Supporting the development of an institutional and public policy framework and strengthening HFC controls:* Conducting three training courses on the revised requirements for the imports of HFCs and HFC-based equipment, and on the detection and prevention of potential cases of illegal trade for at least 60 customs and enforcement officers, and holding three informative meetings on the HFC regulations adapted to customs brokers and importers; adjusting the HFC licensing system and HFC import register according to the future revision of HS customs codes in 2026; organizing two coordination meetings with the main HFC stakeholders from the private sector and from control institutions to coordinate joint actions for the effective reduction of HFC consumption; developing a communication campaign that addresses all topics related to refrigerants, technologies and efficiency, among others, considering different target audiences; and design informative materials aimed at different target audiences (US \$27,386);
- (b) *Creation of technical standards for the safe use of natural refrigerants:* Evaluating the standards and guidelines on the safe handling of flammable, toxic or high-pressure refrigerants on the safe use of hydrocarbon, ammonia, CO₂ and other low-GWP refrigerants for the local market (US \$10,000);
- (c) *Enhancing national capacity in the safe use of low/zero-GWP technologies:* Providing the necessary technological equipment for the installation of a cold chamber based on trans-critical CO₂ (including start-up and training to ten trainers) (US \$85,000);
- (d) *Technical assistance to the MAC Sector:* Promoting good practices in the handling of refrigerants in MAC servicing, including the selection of four workshops offering diverse maintenance services in different regions of the country; procuring and providing RR equipment and tools⁵ to four workshops to implement good practices in MAC servicing, including installation and training of at least two trainers in the use of the equipment; and providing complementary technical assistance to ensure refrigerant containment and follow-up and the recording of the amount of refrigerants recovered/reused in each of the four workshops; (US \$41,250) and
- (e) *Project coordination and monitoring:* Hiring a programme assistant to support KIP implementation, drafting annual implementation reports (US \$12,000), organizing annual meetings (US \$2,500), monitoring-related travel (US \$1,500) and miscellaneous expenses (US \$364) (for a total of US \$16,364).

SECRETARIAT'S COMMENTS AND RECOMMENDATION

V. Comments

Overarching strategy

33. The Secretariat enquired whether the Government had considered accelerating HFC reductions under the special funding provision established by Executive Committee decisions 92/37(b)(ii) or 92/44. After discussing this with the Government, UNDP explained that the upward trend in HFC consumption⁶

⁵ 16 portable RR units and pocket coolant identifiers for MAC, 76 units of 30 lb recovery cylinders, 16 units of 123 lb cylinders for non-reusable refrigerant, leak detectors, pressure gauges, set of fittings and valves, and personal protection equipment.

⁶ The current HCFC consumption might be replaced by R-404A and R-410A or HFC blends, such as R-438A and R-422D thus and a higher demand for HFCs would be expected in coming years.

would make it difficult to comply with additional HFC reductions, even though they are associated with additional funding.

HFC consumption survey and adjustments to Article 7 data

34. The national HFC consumption levels quoted in the submission were based on the survey carried out in preparation for the KIP and on data reports. However, after discussions with the Secretariat on the survey results, UNDP and the NOU conducted a careful review of customs import and export data for the baseline years, concluding that there were HFCs and HFC-blends that had been under-reported, as well as HFC refrigerant re-exports to other countries in Central America (Honduras, Guatemala and Nicaragua) in all three baseline years, which has not been accounted for in the initial data submissions. Furthermore, the Government had inadvertently reported the HFC contained in pre-blended polyols as pure substances. After all the corrections were made, the current average HFC consumption in the servicing sector during the baseline years (354.03 mt) remains in the same funding bracket (from 300 to 360 mt) as the average of consumption (351.39 mt).

35. On 6 May 2024 the country submitted a request to the Ozone Secretariat to revise its reported Article 7 data for 2020, 2021, and 2022, to 705,669 CO₂-eq tonnes, 784,010 CO₂-eq tonnes, and 703,349 CO₂-eq tonnes, respectively, which would result in a revised HFC baseline level of 922,379 CO₂-eq tonnes. This request will be considered by the Implementation Committee at its 72nd meeting to be held on 7 July 2024, in line with decisions XIII/15, XIV/27 and XV/19 of the Meeting of the Parties on the consideration of requests for the revision of baseline data. Accordingly, stage I of the KIP is recommended under the established baseline (923,806 CO₂-eq tonnes) and on the understanding that what the Meeting of the Parties decides on the revised data will be incorporated into the Agreement between the Government of El Salvador and the Executive Committee.

HFC consumption trends

36. The Secretariat noted a significant rise in HFC consumption in 2023, representing more than 50 per cent of 2020 levels, and asked about potential stockpiling. UNDP reported that the COVID-19 pandemic interfered with the HFC consumption trends during the baseline years and attributed the increased imports to the country's economic recovery. UNDP added that in 2020 there was a shortage of R-404A, widely used in supermarkets, and by 2021 the importers most likely stocked up on more refrigerant than usual, estimating that the pandemic would continue. However, the imports of R-404A were slightly below the expected amount due to inventories carried out from the previous year. Thus, considering the overall situation, the hypothesis that stockpiling had significantly altered the country's baseline was dismissed.

Institutional, policy and regulatory framework

HFC licensing and quota system

37. In line with decision 87/50(g), UNDP has confirmed that El Salvador approved an enforceable licensing and quota system for monitoring HFC imports/exports on 27 February 2024. For 2024, the Ministry of Environment distributed 877,616 CO₂-eq tonnes of HFC quotas to the registered importers, keeping an additional 5 per cent in reserve to respond to the requests from non-traditional importers.

38. UNDP has also confirmed that the General Directorate of Taxes and Customs of El Salvador has adopted the 7th revision of the international Harmonized System, which enables the Government to identify all imported and exported HFC-blends, as well as other blends that may contain HFCs and HFOs.

Technical and cost-related issues

39. UNDP has assessed that the HFC phase-down will involve the conversion of several sectors of the cold chain in El Salvador, including the application of refrigeration in supermarkets, where the global trend is the adoption of CO₂-transcritical systems. None of the technical training centres in El Salvador has a specific facility for training in this alternative. However, an officially established training plan aimed at preparing technicians in refrigeration to work with this technology is a prerequisite to adopting low-GWP technology in the commercial refrigeration sector, which is the country's largest HFC-consuming sector (in CO₂-eq tonnes).

40. In response to an enquiry about support and contributions from the vocational training institutes that will receive equipment, UNDP responded that civil works, public utilities and the maintenance of equipment will be a responsibility of the beneficiary vocational training institutes. UNDP added that 100 students per year are expected to train in CO₂-based equipment and the use of recovery and recycling in the MAC sector as part of their regular courses in those training institutes. Further discussion on specific courses on CO₂ and MAC will be conducted during the implementation of the KIP.

41. Regarding the MAC sector, the KIP proposal includes technical support for the country's servicing and maintenance centres, and the provision of RR equipment and accessories to the vocational training institutes and 12 MAC workshops. UNDP has stressed that containment of the HFC-134a in servicing operations is the primary option to reduce HFC uses in this sector, which is the second largest HFC-consuming sector (in CO₂-eq tonnes), and where the alternative technology is only 5 per cent of the MAC market in the country. The Secretariat asked for the average level of HFC used and the number of MAC servicing activities provided by the potentially selected workshops. UNDP responded that the NOU would collect accurate data during the implementation of the activity. Although the current estimate of 500 kilograms per year and per MAC workshop would add up to a total of 6 mt per year, representing 8,640 mobile units served and 5 per cent of the annual HFC sectorial consumption, this initiative will provide valuable insights and pave the way for more MAC workshops to see the benefits of investing in RR units and adopting good practices. Furthermore, UNDP informed the Secretariat that the currently operational ban on the import of second-hand cars older than 8 years from the manufacture date has indirectly contributed to reducing the leakages of HFC-134a. Therefore, strengthening the capacities of the MAC technicians, along with good servicing practices and RR training, is expected to further limit HFC demand in this sector.

Total project cost

42. At the agreed total cost of US \$360,000 stage I of the KIP for El Salvador will result in a reduction of 92,381 CO₂-eq tonnes from the country's HFC consumption eligible for funding, as summarized in paragraph 26 above.

43. Stage I of the KIP will be implemented in three tranches, with the first tranche agreed as submitted. The schedule of HFC phase-down and HCFC phase-out commitments and of the KIP and HPMP tranches is presented in annex I to the present document.

2024–2026 business plan of the Multilateral Fund

44. UNDP is requesting US \$360,000, plus agency support costs, for the implementation of stage I of the KIP for El Salvador. The total value of US \$203,400, including agency support costs, requested for the period 2024–2026, is US \$93,568 above the amount in the business plan.

Sustainability of the HFC phase-down and assessment of risks

45. Stage I of the KIP in El Salvador is especially challenging because of an expected gradual growth of the country's economy, along with a corresponding increase in refrigerant consumption, generating pressure against the freeze in consumption in coming years. During the preparation of the KIP, UNDP analyzed the external risks for the implementation of the project and compliance with the control targets and assessed them as controllable. Mitigation actions are as follows: the NOU will closely monitor HFC consumption and coordinate with stakeholders so as not to introduce high-GWP alternatives in substitution of the HCFCs phased out while UNDP will be providing support to the country in the identification of low-GWP technology suppliers and through the exchange of information with different countries implementing KIPs within the region; UNDP will conduct meetings with decision makers to maintain political will on the HFC phase-down and to encourage timely decisions on project implementation matters; UNDP will use the long-term regional agreement to facilitate and accelerate the equipment acquisition process; and the training of technicians, the adoption of safety standards, and awareness raising are expected to ensure the long-term sustainability of skills and expertise in the workforce and promote the involvement of the country's importers and supply-chain stakeholders in the HFC phase-down.

Impact on the climate

46. The activities proposed, including efforts to strength the control of the HFC imports, promote low-GWP alternatives, promote refrigerant recovery and reuse, and strengthen vocational training institutions during the implementation of stage I of the KIP will reduce refrigerant emissions into the atmosphere, resulting in climate benefits. While the Secretariat is not able to provide an estimate of the overall climate benefits of the KIP at the present meeting,⁷ by 2029, El Salvador will have reduced its emissions by approximately 92,381 CO₂-eq tonnes of HFCs, calculated as the difference between the HFC baseline for compliance and the 2029 target, assuming that all consumed HFCs would eventually have been emitted.

Draft Agreement

47. A draft Agreement between the Government of El Salvador and the Executive Committee for stage I of the KIP has not been prepared as the Agreement template is still under consideration by the Executive Committee.

48. If the Executive Committee so wishes, the funds for stage I of the KIP for El Salvador could be approved in principle, and funds for the first tranche could be approved on the understanding that the Agreement would be prepared and presented at a future meeting, before the submission of the second tranche, and once the Agreement template has been approved.

VI. Recommendation

49. The Executive Committee may wish to consider:

- (a) Approving, in principle, stage I of the Kigali HFC implementation plan (KIP) for El Salvador for the period 2024-2029 to reduce HFC consumption by 10 per cent of the country's baseline by 2029, in the amount of US \$360,000, plus agency support costs of US \$46,800, for UNDP, as reflected in the schedule contained in annex I to the present document, on the understanding that the schedule, in particular rows 1.1 and 1.2, will be

⁷ As noted in document 94/14, Overview of issues identified during project review, the Secretariat was in the process of developing a methodology to estimate the avoided emissions from the implementation of HFC phase-down projects supported by the Multilateral Fund.

revised accordingly based on the recommendation of the Implementation Committee on the revision of the consumption data in the baseline years;

- (b) Approving the first tranche of stage I of the KIP for El Salvador and the corresponding tranche implementation plan, in the amount of US \$180,000, plus agency support costs of US \$23,400, for UNDP; and
- (c) Requesting the Government of El Salvador, UNDP, and the Secretariat to finalize the draft Agreement between the Government of El Salvador and the Executive Committee for the reduction in consumption of HFCs, including the information contained in the annex referred to in subparagraph (a) above, and to submit it to a future meeting once the KIP Agreement template has been approved by the Executive Committee

PROJECT EVALUATION SHEET – NON-MULTI-YEAR PROJECT**El Salvador****PROJECT TITLE****BILATERAL/IMPLEMENTING AGENCY**

Pilot project for the adoption of energy-efficient equipment in the health sector under the context of HFC phase-down	UNDP
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PROJECT OBJECTIVE

The pilot project proposal seeks to strengthen and increase collaboration among various stakeholders involved in the implementation of minimum energy efficiency standards, establish energy efficiency criteria for public procurement and promote the adoption low-GWP and energy-efficient technology in the health sector.
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NATIONAL CO-ORDINATING AGENCY	Ozone Protection Office (NOU), Ministry of Environment and Natural Resources of El Salvador
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LATEST ARTICLE 7 DATA (Annex F)	Year: 2023	557.53 mt	1,122,854 CO ₂ -eq tonnes
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Particular	Non-investment activities
Project duration (months):	36
Initial amount requested (US \$):	125,000
Final project costs (US \$):	125,000
Requested grant (US \$):	125,000
Implementing agency support cost (US \$):	11,250
Total cost of project to Multilateral Fund (US \$):	136,250
Status of counterpart funding (Y/N):	N
Project monitoring milestones included (Y/N):	Y
Minimum energy performance standards available for the relevant sector (Y/N):	N

SECRETARIAT'S RECOMMENDATION	Individual consideration – all technical and cost issues resolved
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PROJECT DESCRIPTION

Background

50. On behalf of the Government of El Salvador, UNDP has submitted, in line with decision 91/65, a request for a pilot project to enhance the energy efficiency of replacement technologies and equipment in the context of HFC phase-down (non-investment activities), in the amount of US \$125,000, plus agency support cost of US \$11,250, as originally submitted.⁸

Energy efficiency pilot project

51. Information on the country's status of ratification to the Kigali Amendment, the policy, regulatory and institutional frameworks for the implementation of the Montreal Protocol, HFC consumption and its distribution by sector, the established HFC baseline, and relevant activities from the request for stage I of the Kigali HFC implementation plan (KIP) and the first tranche submitted to the current meeting, is available in paragraphs 7 to 32 of the present document. The country has not yet requested funding for energy efficiency related activities under decision 89/6.

Policy, regulatory and institutional framework

52. The legislative Decree No. 404 of 2007 created a National Energy Council (NEC) in operation since 2009, with the purpose of establishing the policy and strategy to promote the efficient development of the energy sector. El Salvador has five energy efficiency standards linked to the refrigeration and air-conditioning (RAC) sector, these were promoted by the National Energy Council in conjunction with the Salvadoran Standardization Agency and the Salvadoran Technical Regulation Agency.⁹ The implementation of these regulations, however, does not currently consider a restriction on the use of HFCs in RAC equipment.

Project objectives

53. The pilot project proposal seeks to strengthen and increase collaboration among various stakeholders involved in the implementation of minimum energy efficiency standards (MEPS), establish energy efficiency criteria for public procurement and promote the adoption low-GWP energy-efficient technology in the health sector.

Proposed activities

54. Activities with their cost breakdown (as initially submitted) are described below:

- (a) Providing technical assistance to ten public hospitals on the selection of energy-efficient technologies based on R-290 in cold rooms; applying procedures for the comparative analysis of energy consumption; monitoring of thermal and energy performance and preparing an evaluation report that includes a comparative analysis of energy consumption for the adoption of the selected technology; and training of 10 technicians in charge of the

⁸ As per the letter of 5 February 2024 from the Ministry of Environment and Natural Resources of El Salvador to UNDP.

⁹ RTS 23.01.02:15 Energy efficiency. room type air conditioners. limits, test methods and labeling; RTS 23.01.01:15 Energy efficiency. central, package or split type air conditioners. limits, test methods and labeling.; RTS 23.01.03:15 Energy efficiency. split type air conditioners, free discharge, and air ductless. limits, test methods and labeling; RTS 97.02.01:15 Energy efficiency. self-contained commercial refrigeration equipment. limits, test methods and labeling; RTS 97.01.01:15 Energy efficiency. household electric refrigerators and freezers. limits, test methods and labeling.

installation and maintenance of the systems for safe operations and maintenance of equipment (US \$25,000);

- (b) Acquisition of 12 cold rooms¹⁰ based on R-290 and devices for measuring electrical energy consumption (US \$32,000);
- (c) Coordination with other institutions for development of standard operating procedure for installation of commercial equipment and cold rooms; and establishing criteria on public procurement for the health sector based on energy efficiency parameters and awareness raising (US \$17,000); and
- (d) Development and implementation of a training program for 90 decision makers designers, implementers, and purchasers, among other key stakeholders on energy efficiency and reduction of refrigerant consumption during servicing for equipment using with R-290 in health facilities; and training of trainers, technicians, and end users in the sector on energy efficiency in the servicing of RAC equipment (US \$51,000).

Total cost of the pilot project

55. The project is expected to be completed in 36 months after approval, between July 2024 and June 2027, for a total cost of US \$125,000, as initially submitted.

SECRETARIAT'S COMMENTS AND RECOMMENDATIONS

COMMENTS

56. The Secretariat has reviewed the project proposal in light of the activities and criteria under decisions 89/6 and 91/65.

57. In line with decision 91/65, confirmation from the Government of El Salvador has been received: that the national ozone unit (NOU) will coordinate with relevant energy efficiency authorities and national standards bodies to facilitate the consideration of refrigerant transition when developing energy efficiency standards in the relevant sectors/applications; that, if El Salvador has mobilized or were to mobilize funding from sources other than the Multilateral Fund for energy-efficiency components when phasing down HFCs, the project will not result in the duplication of activities among those funded by the Multilateral Fund and those funded from other sources; that the information on project progress, results and key learning will be made available, as appropriate; and that the date of completion of the project will be set as no more than 36 months after the date of approval by the Executive Committee and that a detailed project report will be submitted to the Executive Committee within six months of the date of completion of the project.

Policy, regulatory and institutional framework

58. The Government of El Salvador is implementing a MEPS and labelling system that is supported by regulations and enforcement by the Ministry of Energy. The MEPS are reassessed periodically and enforced through resolutions that request any importer and manufacturer to reassess their equipment energy performance. The current MEPS cover domestic and self-contained commercial refrigeration and air conditioners only and there is an interest in establishing MEPS for different RAC systems. The basic information collected through the pilot project will be used for the development of MEPS for cold rooms. The NOU will collaborate with the National Energy Council, the Salvadoran Standardization Agency and the Salvadoran Technical Regulation Agency to this effect.

¹⁰ Temperature (0°C to +4°C), compressor 1/3 HP, voltage 115 V, and energy consumption no more than 370 watts.

Technical and cost-related issues

59. The Secretariat inquired about how the energy efficiency pilot project activities would incentivize opportunities to avoid the continued growth in the use of HFC in the country. UNDP confirmed that the proposal's aim was to promote energy-efficient alternatives and low-GWP refrigerants in the health sector to counterbalance the continued HFC growth in commercial refrigeration. The proposal intended to demonstrate the viability of R-290-based systems to meet performance, safety and efficiency needs, if designed, installed and serviced correctly, building confidence in this technology for commercial refrigeration in the health sector. This could also have “spill-over” effect on adoption of low-GWP technologies in other commercial refrigeration applications.

60. UNDP emphasized that promoting alternatives that maintain or enhance the energy efficiency of RAC systems in the country is a crucial pillar for the HFC phase-down. The main driver for the spread of low-GWP technology would be the significant economic benefits. Thus, this comprehensive pilot project will cover different aspects of adopting energy-efficient technology. It will facilitate stakeholder interaction, providing first-hand knowledge and experience with the new technology. It also aims to foster information sharing and raise awareness on its safe and energy-efficient performance. The project further seeks to strengthen and increase collaboration among various stakeholders involved in the implementation of MEPS, establish energy efficiency criteria for public procurement, and promote the adoption of ODS-free, low-GWP refrigerants in the health sector. A complementary aspect of the project is encouraging energy consideration when maintaining RAC equipment and monitoring energy consumption. Collecting and managing energy consumption and thermal performance data will enable the identification of savings opportunities, and initiating and tracking progress in energy efficiency improvements. Further, predictive maintenance of equipment can also be promoted through monitoring energy efficiency. In this respect, UNDP explained that the standard operating procedures for operations and maintenance of the cold rooms that would be developed would initially apply only to the health sector. Still, they are also helpful for other refrigeration equipment within the country.

Agreed cost of the pilot project

61. After discussion among the Secretariat and UNDP some activities were added or reorganized. The revised activities and agreed funding for the pilot project to enhance the energy efficiency of replacement technologies and equipment in the health sector of El Salvador are as follows:

- (a) Providing technical assistance to 10 public hospitals on selection of energy efficiency technologies with R-290; applying procedures for the comparative analysis of energy consumption; monitoring of thermal and energy performance and preparing an evaluation report that includes a comparative analysis of energy consumption for the adoption of the selected technology; and training of 10 hospital technicians staff on operation and maintenance of the new efficiency cold rooms (US \$25,000);
- (b) Acquisition of 12 cold rooms with R-290 and devices for measuring electrical energy consumption to be installed in the blood banks of ten hospitals and two vocational schools (US \$32,000);
- (c) Development and implementation of a training program on energy efficiency and reduction of refrigerant consumption and safe operations with R-290-based equipment in health facilities for 160 relevant stakeholders from the health sectors; training at least 70 RAC servicing technicians in the health sector on R-290-based technology; training courses on energy efficiency for RAC systems to ten trainers from the two vocational schools (US \$35,000);

- (d) Coordination with other institutions to discuss criteria of energy efficiency rate for adopting MEPS for cold rooms; development of standard operating procedure for installation of commercial equipment and cold rooms; establishing criteria on public procurement for the health sector based on energy efficiency parameters (US \$17,000); and
- (e) Awareness raising to decision makers and partners of national institutions related to the public procurement process; organizing technical visits and seminars to disseminate the results of the pilot project; designing and distributing printed technical materials on energy efficiency rates to raise awareness and knowledge of technicians and decision-makers (US \$16,000).

Sustainability of the pilot project and assessment of risks

62. The success of this project depends on the collaboration of all stakeholders. It will replace the old cold rooms that currently use HFC-134a in blood banks in ten public hospitals with new cold rooms using R-290, an ODS-free and a zero-GWP refrigerant. This project will result in greater adoption of low-GWP refrigerant technologies and reduce demand for HFC-based equipment in these applications and other similar applications in the commercial refrigeration sector. The project will demonstrate the significant decrease in energy consumption using this technology and also result in development of standard operating procedures for safe and efficient maintenance of low-GWP refrigerant based commercial refrigeration equipment. It will also have a profound social impact by ensuring the optimal temperature to preserve blood quality. RAC technicians and students will gain practical knowledge on monitoring the performance of energy-efficient equipment and maintaining R-290-based cold rooms. Furthermore, by implementing this pilot project, government officers will gain experience in identifying challenges and opportunities related to institutional coordination for developing MEPS, safety standard operational procedures, and public procurement.

63. The project, which will identify 10 public hospitals out of 66 for installing the R-290 cold rooms and places significant importance on the participation of representatives from all public hospitals. Their involvement in awareness-raising and training activities is not only a means to expand the pilot scope applicability but also a crucial step towards the HFC phase-down, faster adoption of low-GWP alternatives and enhancing energy efficiency in commercial refrigeration. UNDP has identified specific operational risks, such as potential concerns of hospital managers on the thermal performance of equipment and safety issues. These concerns will be effectively addressed by first installing the equipment in the laboratories of two vocational schools to check their performance, applying standard operational procedures, and providing comprehensive training to the maintenance technicians of the hospitals, all of which will be part of the awareness-raising efforts.

RECOMMENDATION

64. The Executive Committee may wish to consider:

- (a) Approving the pilot project to maintain and/or enhance the energy efficiency of replacement technologies and equipment in the context of HFC phase-down (non-investment activities) for El Salvador, in the amount of US \$125,000, plus agency support costs of US \$11,250 for UNDP, noting:
 - (i) That the Government of El Salvador has committed to the conditions referred to in decision 91/65(b)(iv)b. to b(iv)d.; and
 - (ii) That the project would be operationally completed no later than 30 June 2027 and a detailed project report would be submitted to the Executive Committee within six months of the date of completion of the project.

Annex I

**SCHEDULE OF HFC PHASE-DOWN AND HCFC PHASE-OUT COMMITMENTS AND FUNDING TRANCHES
UNDER THE KIGALI HFC IMPLEMENTATION PLAN AND THE HCFC PHASE-OUT MANAGEMENT PLAN FOR EL SALVADOR**

Kigali HFC implementation plan (stage I)

Row	Particulars	2024	2025	2026	2027	2028	2029	Total
1.1	Montreal Protocol reduction schedule of Annex F substances (CO ₂ -eq tonnes)	923,806	923,806	923,806	923,806	923,806	831,425	n/a
1.2	Maximum allowable total consumption of Annex F substances (CO ₂ -eq tonnes)	923,806	923,806	923,806	923,806	923,806	831,425	n/a
2.1	Lead IA (UNDP) agreed funding (US \$)	180,000	0	0	144,000	0	36,000	360,000
2.2	Support costs for Lead IA (US \$)	23,400	0	0	18,720	0	4,680	46,800
3.1	Total agreed funding (US \$)	180,000	0	0	144,000	0	36,000	360,000
3.2	Total support costs (US \$)	23,400	0	0	18,720	0	4,680	46,800
3.3	Total agreed costs (US \$)	203,400	0	0	162,720	0	40,680	406,800

HCFC phase-out management plan (stage II)

Row	Particulars	2021	2022-2023	2024	2025	2026	2027	2028	2029	2030	Total
1.1	Montreal Protocol reduction schedule of Annex C, Group I substances (ODP tonnes)	7.59	7.59	7.59	3.80	3.80	3.80	3.80	3.80	0	n/a
1.2	Maximum allowable total consumption of Annex C, Group I substances (ODP tonnes)	5.42	3.44	3.44	2.88	2.32	2.32	0.29	0.29	0	n/a
2.1	Lead IA (UNDP) agreed funding (US \$)	169,000	0	244,255	0	124,745	0	0	65,000	0	603,000
2.2	Support costs for Lead IA (US \$)	11,830	0	17,098	0	8,732	0	0	4,550	0	42,210
2.3	Cooperating IA (UNEP) agreed funding (US \$)	26,000	0	17,000	0	4,000	0	0	0	0	47,000
2.4	Support costs for Cooperating IA (US \$)	3,380	0	2,210	0	520	0	0	0	0	6,110
3.1	Total agreed funding (US \$)	195,000	0	261,255	0	128,745	0	0	65,000	0	650,000
3.2	Total support costs (US \$)	15,210	0	19,308	0	9,252	0	0	4,550	0	48,320
3.3	Total agreed costs (US \$)	210,210	0	280,563	0	137,997	0	0	69,550	0	698,320

Annex II

**SIMULTANEOUS IMPLEMENTATION OF THE HCFC PHASE-OUT MANAGEMENT PLAN
AND THE KIGALI HFC IMPLEMENTATION PLAN IN EL SALVADOR**

Area of work	HPMP		KIP		Combined cost (US \$)
	Activity	Cost (US \$)	Activity	Cost (US \$)	
Strengthening policies and legal frameworks to control the consumption of HCFCs	Development of a new regulation to prohibit the importation of equipment using HCFCs.	11,000	Improving control of imports of HFCs and equipment containing HFCs.	2,500	13,500
	Penalties for venting HCFCs into the atmosphere, prohibiting the use of disposable cylinders for refrigerants, and the implementation of a mandatory certification scheme for service technicians.				
Strengthening compliance and enforcement capacity	Training of 200 Customs Officers and 150 customs agents on HS and import/export controls, use of identifiers and prevention of illegal trade, among other subjects	26,000	Training of 60 customs officers and 40 customs brokers on the 7 th Amendment targeting both pure HFCs and HFC blends including HFO and HFC blends.	20,000	46,000
	Provision of two portable ODS identifiers	10,000			10,000
Certification of technicians	Development and implementation of labor competence standards in good refrigeration service practices including the handling of HC refrigerants and development of a registry for certified technicians	48,500			48,500
	Implementation of a national certification programme with at least 150 RAC technicians certified under the new standards	30,000			30,000
Strengthening of technical vocational training institutes in the RAC sector	Provision of six training kits to two training centres (30 lb and 100 lb cylinders, recovery machine, refrigerant identifier, vacuum pump, RAC modules, welding kit and other tools)	186,358	Provision of technological equipment for 1 cold chamber for transcritical CO ₂ training.	90,000	276,358
			Provision of 4 modules for RR training in the MAC sector.	37,720	37,720
Tool kit for servicing technicians	Provision of 31 basic tool kits to technicians (including two cylinders, charging station, vacuum, welding kit hoses, vales, leak detectors, manometer, and precision balance for HC)	69,502			69,502
Training of servicing technicians	One training of trainer course and 39 training courses for RAC servicing technicians	73,500	Promoting Good Practices in the MAC equipment maintenance service through support to 12 service workshops of the sector	19,940	93,440

Area of work	HPMP		KIP		Combined cost (US \$)
	Activity	Cost (US \$)	Activity	Cost (US \$)	
	Design and printing of 1,000 technical manuals on best refrigeration practices in RAC maintenance	22,686			22,686
RRR	Installation of one Recovery, Storage and Recycling center	49,464	Provision a unit of RR equipment and tool kits for mobile air conditioning equipment to 12 service workshops.	99,600	149,064
	Technical assistance and training workshops	17,000			17,000
Safety Standards			Development of technical standards for safe use of natural refrigerants	35,227	35,227
Awareness Raising	- Awareness campaign targeting at general public and servicing technicians on RAC technician certification and refrigerant recovery. - Five seminars and distribution of brochures on alternative technologies targeting at end-users such as commercial facilities and supermarkets.	40,990	Dissemination and awareness at national level on the use of low GWP refrigerants.	22,286	63,276
Coordination and monitoring	Reinforcing the NOU monitors implementation of activities, reports on progress, collects data and works with stakeholders to phase out HCFCs.	65,000	Hiring an assistant for coordination and monitoring	32,727	97,727
Grand total		650,000		360,000	1,010,000