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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Ninety-second Meeting
Montreal, 29 May to 2 June 2023
Item 9(c) of the provisional agenda¹

WORLD BANK'S WORK PROGRAMME FOR 2023

¹ UNEP/OzL.Pro/ExCom/92/1

Pre-session documents of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol are without prejudice to any decision that the Executive Committee might take following issuance of the document.

COMMENTS AND RECOMMENDATION OF THE FUND SECRETARIAT

1. The World Bank is requesting approval from the Executive Committee for US \$390,000, plus agency support costs of US \$27,300, for its 2023 work programme listed in table 1. The submission is attached to the present document.

Table 1: World Bank's work programme for 2023

Country	Activity/Project	Amount requested (US \$)	Amount recommended (US \$)
SECTION A: ACTIVITIES RECOMMENDED FOR BLANKET APPROVAL			
A1: Project preparation for Kigali HFC implementation plans (KIPs)			
Indonesia	Preparation of a KIP (stage I)	220,000	220,000
Viet Nam	Preparation of a KIP investment project in the domestic refrigeration sector for Aqua Electrical Appliances, Darling Electronics, and Hoa Phat Refrigeration Engineering	80,000	80,000
	Preparation of a KIP investment project in the commercial refrigeration sector for Sanaky	30,000	30,000
	Preparation of a KIP investment project in the industrial refrigeration sector for Quang Thang Refrigeration	30,000	30,000
	Preparation of a KIP investment project in the mobile air-conditioning sector for Thaco Auto	30,000	30,000
Subtotal		390,000	390,000
Agency support costs		27,300	27,300
Grand total		417,300	417,300

SECTION A: ACTIVITIES RECOMMENDED FOR BLANKET APPROVAL

A1: Project preparation for Kigali HFC implementation plans (KIP)

Project description

2. The World Bank submitted a request for the preparation of stage I of the KIP for Indonesia as the designated implementing agency and four requests for the preparation of stage I KIP investment projects in Viet Nam in the domestic refrigeration sector, the commercial refrigeration sector, the industrial refrigeration sector, and the mobile air-conditioning (MAC) sector, as shown in section A1 of table 1. Viet Nam received funding for the preparation of stage I of the overarching KIP at the 88th meeting.²

Secretariat's comments

3. In reviewing these requests, the Secretariat took into account the guidelines for the preparation of KIPs as contained in decision 87/50; the activities proposed for project preparation and their connection with enabling activities and other HFC-related projects in the country.

4. The Secretariat noted that for the preparation of stage I of the KIP the World Bank provided descriptions of the activities required for the preparation of the overarching strategy for stage I of the KIP for Indonesia. The submission included data on the consumption of HFCs and HFC blends for 2019 to 2021. Project preparation activities included the review of the licensing and quota system for control and monitoring of HFCs; capacity building for customs officials and importers; a nationwide survey and data collection on HFC consumption; analysis of the use of HFCs and alternatives; policy and legislative reviews related to HFC phase-down; a review of the national approach to management and disposal of ODS and

² Decision 88/40 Annex XIV of document UNEP/OzL.Pro/ExCom/88/79

HFCs; the development of an overarching HFC phase-down strategy; and stakeholder consultations and validation; and the development of a communication and outreach plan.

5. The Secretariat noted that the preparation of stage I of the KIP will cover both the manufacturing and servicing sectors and inquired as to when investment projects are expected to be submitted; clarified the length of the project preparation and noted the inclusion of gender considerations in the development of the overarching strategy. The World Bank confirmed that investment project preparation requests will be prepared after preliminary data collection and the identification of priority sectors and that they expect to submit these to the second meeting in 2023; and that the project preparation of stage I of the KIP is expected to take 12 to 18 months to complete.

6. Regarding the four requests for the preparation of the KIP investment projects, the Secretariat noted that the World Bank provided descriptions of the activities and that in each sector these included *inter alia* the development of the conversion plans for the manufacturing facilities, equipment, and production line(s) including environmental management plans to safely handle flammable and/or toxic materials; the collection of supporting documentation to confirm HFC consumption by enterprises; consultation with relevant government agencies on the use of flammable and/or toxic refrigerants and product standards; and a gender analysis of the hiring policies at each enterprise in light of the gender mainstreaming policy of the Multilateral Fund.

7. The Secretariat observed that:

- (a) The project preparation for the KIP investment project in the domestic refrigeration sector would include three enterprises (Aqua Electrical Appliances, Darling Electronics, and Hoa Phat Refrigeration Engineering) manufacturing stand-alone domestic refrigeration equipment and that HFC consumption data for 2019 to 2021 was provided for each enterprise. The investment project would involve conversion from HFC-134a refrigerant to hydrocarbons.
- (b) For the commercial refrigeration manufacturing sector, the project preparation of a KIP investment project would be for one enterprise (Sanaky) manufacturing stand-alone commercial refrigeration equipment for which HFC consumption data for 2019 to 2021 was provided. The investment project would involve conversion from HFC-134a refrigerant to hydrocarbons.
- (c) The project in the industrial refrigeration would include one enterprise (Quang Thang Refrigeration) which is part of the local installation and assembly sub-sector manufacturing industrial refrigeration components (such as evaporators and condensers) and installing industrial refrigeration systems. The investment project would aim to provide technical assistance to the enterprise to manufacture ammonia-based heat exchanger to replace HFCs and would include an awareness component to encourage end-users to select ammonia-based industrial refrigeration systems.
- (d) The project preparation of a KIP investment project in the MAC sector would address one car manufacturing enterprise (Thaco Auto), for which 2019-2021 consumption data had been provided. The project preparation activities include technical support and research and development to develop more efficient MACs based on an alternative refrigerant in cooperation with the suppliers and partners of the enterprise. The investment project would be for a demonstration project which would enhance one of its plants to manufacture one vehicle model equipped with R-1234yf MAC system.

8. Following this review, the Secretariat noted that both countries have ratified the Kigali Amendment;³ that the countries had provided an endorsement letter signifying their intention to take action on HFC phase-down; and that the funding requested is in accordance with decision 87/50(f)(v) on the preparation of investment projects/sector plans of KIPs. The Secretariat also noted that Viet Nam had not yet submitted their country programme implementation (CP) report for 2022. The World Bank indicated that the investment projects will be submitted as part of the overall KIP and not earlier, and that all resulting consumption reduced from these enterprises would be deducted from the starting point, when agreed by the Executive Committee; and that Viet Nam would submit their CP report by the deadline of 1 May 2023.

Secretariat's recommendation

9. The Secretariat recommends blanket approval of project preparation for the Kigali HFC implementation plan (KIP) for Indonesia and for the preparation of the KIP investment projects in the domestic refrigeration sector, the commercial refrigeration sector, the industrial refrigeration sector, and the mobile air-conditioning sector for Viet Nam at the level of funding shown in section A1 of table 1.

³ Date of ratification (or acceptance) of the Kigali Amendment: Indonesia (14 December 2022) and Viet Nam (27 September 2019).

2023 BUSINESS PLAN
WORK PROGRAM



WORLD BANK GROUP

WORLD BANK IMPLEMENTED
MONTREAL PROTOCOL OPERATIONS

Presented to the
92nd Meeting of the Executive Committee
of the Multilateral Fund

3 April 2023

WORK PROGRAM FOR WORLD-BANK IMPLEMENTED MONTREAL PROTOCOL OPERATIONS

1. This proposed work program for Bank-Implemented Montreal Protocol Operations is prepared on the basis of the 2023-2025 World Bank Business Plan which was approved by the Executive Committee at its 91st meeting.
2. The 2023-2025 World Bank Business Plan consists of investment and non-investment activities to assist Article 5 partner countries to comply with their HCFC reduction target during 2020-2024: 35% reduction from the baseline in both production and consumption sectors. The Business Plan includes, in addition to deliverables associated with previously approved and new investment activities, requests to extend support for implementation of existing institutional strengthening projects in 2 countries.
3. The 2023-2025 Business Plan also includes investment and non-investment activities for the World Bank client countries that either have ratified or in the process of ratifying the Kigali Amendment to phasedown HFCs. These activities will ensure their compliance with the 2024 freeze target and the 2029 10% reduction in the consumption sectors.

2023 Work Program – 92nd ExCom

4. The proposed 2023 Work Program being submitted for consideration at the 92nd Meeting of the Executive Committee, includes two (6) funding requests:
 - (i) one (1) for preparation of Kigali Implementation Plan overarching strategy for Indonesia
 - (ii) four (4) for preparation of HFC investment and demonstration projects for Vietnam
5. Brief description of the work program amendment activity requests are highlighted below.

**Table 1: Funding Requests Submitted for Consideration
by the 92nd Meeting of the Executive Committee**

Country	Request (US\$)	Support Costs (US\$)	Duration (months)	Description	Supporting document
Indonesia	220,000	15,400	12-18	Preparation of Kigali Implementation Plan Stage I	Annex 1
Vietnam	80,000	5,600	6-12	Preparation of individual HFC projects (domestic ref.)	Annex 2-A
Vietnam	30,000	2,100	6-12	Preparation of individual HFC project (commercial ref.)	Annex 2-B
Vietnam	30,000	2,100	6-12	Preparation of individual HFC project (industrial ref.)	Annex 2-C
Vietnam	30,000	2,100	6-12	Preparation of individual HFC project (MAC)	Annex 2-D
Total	390,000	27,300			

Annex 1: Request for project preparation of Kigali Implementation Plan for Indonesia

**MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
KIP PROJECT PREPARATION REQUEST FORM
KIGALI HFC IMPLEMENTATION PLAN (OVERARCHING)**

Part I: Project Information

Project title:	Kigali HFC Implementation Plan Preparation	
Country:	Indonesia	
Lead implementing agency:	World Bank	
Implementation period:	July 2023 – December 2024	
Funding requested:		
Agency	Sector	Funding requested (US \$)
World Bank	Overarching	220,000

Part II: Prerequisites for submission

Item	Yes	No
1. Official endorsement letter from Government specifying roles of respective agencies (where more than one IA is involved)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2. Ratification of the Kigali Amendment by Indonesia	<input checked="" type="checkbox"/>	<input type="checkbox"/>

A. Information required to support PRP funding (Overarching strategy)

1. Montreal Protocol compliance target to be met in stage I of the KIP			
Phase-down commitment	Freeze 10% reduction	Year of commitment	2024 2029
<input type="checkbox"/> Servicing only	<input type="checkbox"/> Manufacturing only	<input checked="" type="checkbox"/> Servicing and manufacturing	
2. Brief background on previous activities related to the Kigali amendment and the HFC phasedown			
Indonesia completed an 2010-2012 HFC inventory with the financial support of the Climate and Clean Air Coalition in 2014 through cooperation with UNDP. The HFC enabling activities with support of the Multilateral Fund (MLF) was completed in November 2021 with the overall survey work was undertaken between 2019-2021 by ASHRAE Indonesia Chapter, with technical guidance and oversight provided by the National Ozone Unit (NOU) of the Ministry of Environment and Forestry and the World Bank.			
3. Current progress in implementation of Enabling Activities for HFC phase-down (Completed) Budget: US\$ 250,000 (Fully disbursed)			
Activity	Description		Implementing agency

Activities to facilitate early ratification of the Kigali Amendment	The Government of Indonesia ratified the Kigali Amendment on 14 December 2022.	World Bank
Institutional arrangements	Review existing institutional arrangements for control of ODSs and HFCs, and conduct gap analysis for HFC control. Review and propose updating codes and standards for the efficient use of HFCs and ODS alternatives in the entire value chain	World Bank
Data collection and analysis of HFCs consumption	Identify and collect HFC consumption and equipment containing HFCs in key sectors. Project consumption trends in key sectors under a BAU scenario.	World Bank
Promoting energy efficiency improvement opportunities in the RAC sector	Review and assess policies and regulations related to energy efficiency in the RAC sector in Indonesia and other countries. Assessment of alternative technologies and identification of potential energy saving opportunities.	World Bank

4. Overview of current HFC consumption in metric tonnes by substance (last three years)

Substance	Sector	2019	2020	2021
HFC-23	Fire suppression	0.09	0.06	0.86
HFC-32	RAC manufacturing and servicing	779.05	782.42	1,477.36
HFC-125	Fire suppression	3.69	0	0
HFC-134a	RAC manufacturing and servicing	3,775.46	2,666.54	2,594.82
HFC-143a		0	0	0.23
HFC-152a	Others	3.57	12.12	14.40
HFC-227ea	Fire suppression	5.63	8.54	5.29
HFC-236fa	Fire suppression	2.50	1.54	16.00
HFC-245fa	Foam & Geothermal	56.11	505.01	202.00
R-404A	RAC manufacturing and servicing	721.44	522.88	293.32
R-407C	RAC manufacturing and servicing	356.09	250.95	191.26
R-407F	RAC manufacturing and servicing	0	0	0.07
R-410A	RAC manufacturing and servicing	1,121.77	1,075.97	1,050.30
R-417A	RAC manufacturing and servicing	37.63	19.25	3.66
R-422A	RAC manufacturing and servicing	0	69.50	51.98
R-422D	RAC manufacturing and servicing	0.15	0	0
R-427A	RAC manufacturing and servicing	0	0	0
R-438A	RAC manufacturing and servicing	0.91	3.52	0.92
R-449C	RAC manufacturing and servicing	0	0	0.06
R-507A	RAC manufacturing and servicing	120.24	72.80	26.07
R-508B	RAC manufacturing and servicing	0	0	0.14
R-513A	RAC manufacturing and servicing	0	0	0.95

5. Based on the consumption data given above, please provide a description of the sector/sub-sector that use HFCs in the country, including a short analysis and explanation of the consumption trends (i.e., increasing or decreasing)

HFCs are mainly used in the manufacturing and servicing of refrigeration and air-conditioning equipment. Other uses in Indonesia include fire suppression, aerosol, etc. The overall HFC

consumption trends are aligned with Indonesia's economic growth which averaged 4.86 percent from 2000 until 2022, reaching an all time high of 7.16 percent in the fourth quarter of 2004 and a record low of -5.32 percent in the second quarter of 2020.

HFCs used in the RAC sectors are on an increasing trend given increasing urbanization, expansion of the middle class and regional HCFC phaseout in these sectors, particularly in unitary air-conditioning. Both HFC-32 and R-410A in room AC are experiencing double growth in consumption from 2015 to 2019. The development of the livestock, fisheries, processed food, chemical and pharmaceutical and drug industry has a major influence on the development of the cold chain industry in Indonesia and have affected the increase in cold chain demand. The Government of Indonesia has also issued several policies to support the development of the cold chain industry by the user industry, such as the fisheries sector. Indonesia manufactures vehicles for primarily domestic sales and thus requires HFC-134a for the initial charge of mobile air conditioning and contributed the largest amount of HFC-134a consumed. Consumption of HFCs used in the other sectors are also on an increasing trend.

6. Description of information that needs to be gathered and updated. Explain why this has not been undertaken during HFC enabling activities.

Information needed	Description	Agency
Others, specify.	Update Indonesia HFC survey (inclusion of actual 2022 and 2023 HFC consumption and analyze the impact of COVID-19 pandemic that may depress the demand of HFCs and HFC-based equipment during the baseline years (2020 – 2022), resulting in a lower HFC baseline than the previous estimate. Update HFC consumption projections for the immediate period (2023 – 2029) to assess potential compliance risk once demand returns to normal post COVID-19 pandemic.	World Bank

7. Activities to be undertaken for project preparation and funding

Activity	Indicative funding (US \$)	Agency
1. Import and export control		
1.1 Review of the national licensing and quota system to monitor and control the consumption of HFCs and HFC blends. Development of options in alignment with the preparation of the HFC phasedown strategy.	20,000	World Bank
1.2 Capacity building activities related to import/export licensing system including Customs and importers/exporters. Assistance in the development of options as necessary.	10,000	World Bank
2. Data collection and analysis		
2.1 Data collection by sector/sub-sector/HFC substance (2020-22)	50,000	World Bank
2.2 Stakeholder consultation: conducting interviews, organizing workshops and stakeholders' consultations on ODS alternatives and for the integration of national regulations and procedures for	25,000	World Bank

KA implementation and coordination of technical capacities in the institutions involved in HFC control		
2.3 Data analysis and development of BAU and growth modeling scenarios, sensitivity analysis, review of feasible options along with preparation of a related technology roadmap reflecting current and future HFC alternatives	25,000	World Bank
3. Development of overarching strategy		
3.1 Review and development of implementing policies and approaches as relevant and in the context of Indonesia's forthcoming national plan on the management and disposal of controlled ODS and GHGs, including inter-ministerial/agency and institutional arrangements for HFC phasedown.	10,000	World Bank
3.2 Development of the overarching strategy for the phase-down of HFCs and plan of action for stage I of the KIP to address the freeze and 10 per cent reduction in HFC consumption. HFC phase-down strategy development: Technical and legal experts to prepare all legal and technical documents; and if necessary, recommendations for update of institutional arrangements; consult all key stakeholders and develop detailed strategy.	50,000	World Bank
3.3 Development of and integration of the strategy for the phase-down of HFCs focusing on refrigeration servicing sector into the overarching strategy.	20,000	World Bank
4. Outreach and communication		
4.1 Preparation of a comprehensive communication and outreach plan in consultation with key stakeholders.	5,000	World Bank
4.2 Consultation with relevant stakeholders to identify challenges and conduct need assessment for development of outreach and communication methodology for the servicing sector.	5,000	World Bank
TOTAL	220,000	
8. How will activities related to implementation of HPMP be considered during project preparation for Kigali Implementation Plan?		
It is expected that there will be opportunities for synergies between the HPMP and the KIP, particularly in refrigeration and air-conditioning sectors that use both HCFCs and HFCs. Previous measures from the HPMPs in these sectors such as capacity building for technicians, can be integrated to a certain extent. However, there are other sectors that only use HFCs such as in the mobile air-conditioning and domestic refrigeration that were not addressed in the HPMPs. Moreover, integration of best practices in installed equipment maintenance related to energy performance was also not covered. Thus, the Kigali Implementation Plan will be broader and more complex undertaking than HCFC phase-out.		
9. How will the Multilateral Fund gender policy be considered during project preparation?		
The Government of Indonesia is aware of the Multilateral Fund gender policy contained in ExCom document 84/73, and the related Executive Committee decision 84/92. The project preparation will aim to advocate the importance of gender-responsive actions and provisions in developing the Kigali Implementation Plan. Relevant stakeholders will be sensitized on the gender policy and efforts will be		

made to encourage female stakeholders to contribute to the project preparation. To the extent possible, a gender-disaggregated data will be collected.

Annex 2: Preparation funding requests for investment and demonstration projects for Vietnam

- A. Preparation funding request for investment projects in domestic refrigeration
- B. Preparation funding request for an investment project in commercial refrigeration
- C. Preparation funding request for an investment project in industrial refrigeration
- D. Preparation funding request for an investment project in mobile air-conditioning

A. PRP funding request for investment projects in domestic refrigeration

1. Agency:	World Bank				
2. Sector:	Refrigeration				
3. HFC consumption in item #2 reported under country programme data?	<input type="checkbox"/> Yes, please specify reported amount and year: <input checked="" type="checkbox"/> No				
4. Does the enterprise commit to phase out the HFC consumption associated with the proposed investment project, if approved by the Executive Committee?	<input type="checkbox"/> Yes, please provide support letter <input checked="" type="checkbox"/> No The enterprises' HFC consumption to be phased out will be determined during the preparation of the investment project.				
5. If the project preparation is requested in advance of the KIP, did the Government provide a written commitment that the consumption associated with these investment projects, once approved, will be deducted from the country's starting point, once established?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Investment projects will be submitted as part of the final KIP.				
6. Please explain briefly how the investment project would relate to the overarching strategy for the country, and when the final KIP will be submitted (decision 87/50(e))	Investment projects will contribute to Vietnam curbing the growth of HFCs and meet 10% reduction target in 2029. The KIP Overarching Plan and Stage I will be submitted to ExCom meeting in 2023.				
7. Information on sector consumption (specify previous year HFC consumption)					
Substance			Consumption (metric tonnes)		
HFC-134a			1,729.4 (2021)		
8. Information on enterprise(s) for which funding is being sought					
Enterprise	Year established	HFC consumption (metric tonnes) (last three years)			HFC phase-out to be achieved (metric tonnes and CO ₂ -eq. tonnes)
		2019	2020	2021	
AQUA Electrical Appliances Vietnam	1998	46.5	25.0	15.0	TBD
Darling Electronics – Refrigeration	1999	2.8	2.0	1.5	TBD
Hoa Phat Refrigeration Engineering	2001	7.2	8.0	8.0	TBD
9. Activities to be undertaken for preparation of the investment project and funding requested					
Activity		Indicative funding (US \$)		Bilateral/implementing agency	
Prepare investment project for 3 enterprises manufacturing stand-alone domestic refrigeration equipment to convert from HFC-134a refrigerant to hydrocarbons		80,000		World Bank	
TOTAL		80,000			

B. PRP funding request for investment projects in commercial refrigeration

1. Agency:	World Bank				
2. Sector:	Refrigeration				
3. HFC consumption in item #2 reported under country programme data?	<input type="checkbox"/> Yes, please specify reported amount and year: <input checked="" type="checkbox"/> No				
4. Does the enterprise commit to phase out the HFC consumption associated with the proposed investment project, if approved by the Executive Committee?	<input type="checkbox"/> Yes, please provide support letter <input checked="" type="checkbox"/> No The enterprises' HFC consumption to be phased out will be determined during the preparation of the investment project.				
5. If the project preparation is requested in advance of the KIP, did the Government provide a written commitment that the consumption associated with these investment projects, once approved, will be deducted from the country's starting point, once established?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Investment projects will be submitted as part of the final KIP.				
6. Please explain briefly how the investment project would relate to the overarching strategy for the country, and when the final KIP will be submitted (decision 87/50(e))	Investment projects will contribute to Vietnam curbing the growth of HFCs and meet 10% reduction target in 2029. The KIP Overarching Plan and Stage I will be submitted to ExCom meeting in 2023.				
7. Information on sector consumption (specify previous year HFC consumption)					
Substance			Consumption (metric tonnes)		
HFC-134a			1,729.4 (2021)		
8. Information on enterprise(s) for which funding is being sought					
Enterprise	Year established	HFC consumption (metric tonnes) (last three years)			HFC phase-out to be achieved (metric tonnes and CO ₂ -eq. tonnes)
		2019	2020	2021	
SANAKY	1995	5.3	7.0	7.5	TBD
9. Activities to be undertaken for preparation of the investment project and funding requested					
Activity		Indicative funding (US \$)		Bilateral/implementing agency	
Prepare investment project for one enterprise manufacturing stand-alone commercial refrigeration equipment to convert from HFC-134a refrigerant to hydrocarbons.		30,000		World Bank	
TOTAL		30,000			

C. PRP funding request for an investment project in industrial refrigeration

1. Agency:	World Bank				
2. Sector:	Refrigeration				
3. HFC consumption in item #2 reported under country programme data?	<input type="checkbox"/> Yes, please specify reported amount and year: <input checked="" type="checkbox"/> No				
4. Does the enterprise commit to phase out the HFC consumption associated with the proposed investment project, if approved by the Executive Committee?	<input type="checkbox"/> Yes, please provide support letter <input checked="" type="checkbox"/> No The enterprises' HFC consumption to be phased out will be determined during the preparation of the investment project.				
5. If the project preparation is requested in advance of the KIP, did the Government provide a written commitment that the consumption associated with these investment projects, once approved, will be deducted from the country's starting point, once established?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Investment projects will be submitted as part of the final KIP.				
6. Please explain briefly how the investment project would relate to the overarching strategy for the country, and when the final KIP will be submitted (decision 87/50(e))	Investment projects will contribute to Vietnam curbing the growth of HFCs and meet 10% reduction target in 2029. The KIP Overarching Plan and Stage I will be submitted to ExCom meeting in 2023.				
7. Information on sector consumption (specify previous year HFC consumption)					
Substance			Consumption (metric tonnes)		
HFC-134a			1,729.4 (2021)		
R-404A			495.1 (2021)		
8. Information on enterprise(s) for which funding is being sought					
Enterprise	Year established	HFC consumption ¹ (metric tonnes) (last three years)			HFC phase-out to be achieved (metric tonnes and CO ₂ -eq. tonnes)
		2019	2020	2021	
Quang Thang Refrigeration	2003	59.9	75.3	90.0	TBD
9. Activities to be undertaken for preparation of the investment project and funding requested					
Activity		Indicative funding (US \$)		Bilateral/implementing agency	
Prepare an investment project for the local installation and assembly subsector. Quang Thang manufactures industrial refrigeration components (evaporator & condenser) and also installs industrial refrigeration systems for their customers. The project would comprise investment activities to assist Quang Thang to manufacture heat exchangers for use with ammonia and include end-user component to adopt ammonia-based industrial refrigeration systems instead of choosing HFCs.		30,000		World Bank	
TOTAL		30,000			

¹ Based on installations at customers

D. PRP funding request for an investment project in mobile air-conditioning

1. Agency:	World Bank				
2. Sector:	Mobile Air-conditioning				
3. HFC consumption in item #2 reported under country programme data?	<input checked="" type="checkbox"/> Yes , please specify reported amount and year: ██████████ <input type="checkbox"/> No				
4. Does the enterprise commit to phase out the HFC consumption associated with the proposed investment project, if approved by the Executive Committee?	<input type="checkbox"/> Yes , please provide support letter ██████████ <input checked="" type="checkbox"/> No The enterprises' HFC consumption to be phased out will be determined during the preparation of the investment project.				
5. If the project preparation is requested in advance of the KIP, did the Government provide a written commitment that the consumption associated with these investment projects, once approved, will be deducted from the country's starting point, once established?	<input type="checkbox"/> Yes <input checked="" type="checkbox"/> No Investment projects will be submitted as part of the final KIP.				
6. Please explain briefly how the investment project would relate to the overarching strategy for the country, and when the final KIP will be submitted (decision 87/50(e))	Investment projects will contribute to Vietnam curbing the growth of HFCs and meet 10% reduction target in 2029. The KIP Overarching Plan and Stage I will be submitted to ExCom meeting in 2023.				
7. Information on sector consumption (specify previous year HFC consumption)					
Substance			Consumption (metric tonnes)		
HFC-134a			1,729.4 (2021)		
8. Information on enterprise(s) for which funding is being sought					
Enterprise	Year established	HFC consumption (metric tonnes) (last three years)			HFC phase-out to be achieved (metric tonnes and CO ₂ -eq. tonnes)
		2020	2021	2022	
THACO AUTO	1997	40.7	48.8	65.2	TBD
9. Activities to be undertaken for preparation of the investment project and funding requested					
Activity		Indicative funding (US \$)		Bilateral/implementing agency	
A demonstration activity is proposed at one local car company to enhance one of its plants to manufacture one vehicle model equipped with R-1234yf mobile air-conditioning system. Preparation of investment activities will be in cooperation with its partner and suppliers of MAC components (compressor, evaporator/condenser, hoses) and include investments, TA and R&D to develop more efficient MACs that use alternative refrigerant. Its pathway to this transition would be documented for the remaining vehicle manufacturers and accompanied by concrete evidence to inform transport policy under Vietnam's national policy, strategy and action plan.		30,000		World Bank	
TOTAL		30,000			