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执行蒙特利尔议定书
多边基金执行委员会
第九十六次会议
2025 年 5 月 26 日至 30 日，蒙特利尔
临时议程¹项目 9(d)

增编

工发组织 2025 年工作方案

发行本文件是为了增列一项在 UNEP/OzL.Pro/ExCom/96/22 号文件发行后收到的阿根廷在氢氟碳化物逐步减少背景下提高空调制造行业能效的项目编制申请。有关段落和表格修订如下：

- 第 1 段和表 1 替换如下：

1. 工发组织请求执行委员会核准 946,451 美元，外加 67,452 美元的机构支助费用，用于表 1 所列 2025 年工作方案。提交的材料附于本文件之后。

表 1: 工发组织 2025 年工作方案

国家	活动/项目	申请金额 (美元)	建议金额 (美元)
A 部分：建议一揽子批准的活动			
A1: 体制强化项目续期			
墨西哥	体制强化项目续期 (第十七阶段)	654,451	654,451
	A1 小计	654,451	654,451
	机构支助费用	45,812	45,812
	A1 合计	700,263	700,263
A2: 氟氯烃淘汰管理计划项目编制			
土库曼斯坦	编制氟氯烃淘汰管理计划 (第三阶段)	30,000	30,000
	A2 小计	30,000	30,000
	机构支助费用	2,100	2,100
	A2 合计	32,100	32,100

¹ UNEP/OzL.Pro/ExCom/96/1

国家	活动/项目	申请金额 (美元)	建议金额 (美元)
A3: 编制国家用过或不需要的受控物质库存清单, 以及此类物质的收集、运输和处置计划²			
南非	编制国家用过或不需要的受控物质库存清单和计划	100,000	100,000
	A3 小计	100,000	100,000
	机构支助费用	7,000	7,000
	A3 合计	107,000	107,000
A4: 根据第 91/65 号决定编制能效试点项目			
埃及	在氢氟碳化合物逐步减少的背景下, 制定一个提高数据中心能效的项目	30,000	30,000
北马其顿	在氢氟碳化合物逐步减少的背景下, 制定一个提高数据中心能效的项目	30,000	30,000
	A4 小计	60,000	60,000
	机构支助费用	4,200	4,200
	A4 小计	64,200	64,200
A5: 为编制氟氯烃消费核查报告提供技术援助			
阿尔巴尼亚	氟氯烃淘汰管理计划第二阶段核查报告	30,000	30,000
亚美尼亚	氟氯烃淘汰管理计划第三阶段核查报告	30,000	30,000
	A5 小计	60,000	60,000
	机构支助费用	5,400	5,400
	A5 合计	65,400	65,400
B 部分: 建议单独审议的活动			
B1: 在空调制造行业逐步减少氢氟碳化合物背景下提高能效的项目编制 (第 94/60 号决定)			
阿根廷	在逐步减少氢氟碳化合物背景下提高空调制造行业能效的项目编制	42,000	*
	B1 小计	42,000	*
	机构支助费用	2,940	*
	B1 合计	44,940	*
	A1、A2、A3、A4、A5、B1 合计	946,451	904,451
	A1、A2、A3、A4、A5、B1 的机构支助费用	67,452	64,512
	总计	1,013,903	968,963

* 建议单独审议

- 增加 B 部分如下:

B 部分: 建议单独审议的活动

B1: 制冷制造行业在逐步减少氢氟碳化合物背景下提高能效的项目编制 (第 94/60 号决定)

项目说明

28. 如表 1B1 部分所示, 工发组织提交了阿根廷在逐步减少氢氟碳化合物背景下提高住宅空调设备制造能效项目的编制供资申请。该申请是根据第 94/60 号³和第 95/87(j)号决定提

² 本文中称为编制国家用过或不需要的受控物质库存清单和计划

³ 执行委员会请阿根廷政府 (如果愿意) 可根据第 94/60 号决定提交一个项目, 以提高得到上文(a)分段所述项目援助的企业制造的使用 HFC-32 的分体式空调设备的能效, 但有一项谅解, 即该项目最迟应在第九十七次会议上提交 (第 95/58(c)号决定)。

交的。

29. 项目编制申请的重点是提高住宅空调制造企业的能效，将与第九十五次会议核准的六条住宅空调生产线从 R-410A 转换为 HFC-32 的转换项目(第 95/58 号决定)一起实施。项目编制活动包括数据收集和分析、利益相关方协商以及项目提案的设计和制定。

30. 阿根廷已经实施了住宅空调最低能效标准。编制申请指出，该项目还将支持制定改进能效标签计划的路线图，并提高阿根廷住宅空调的最低能效标准。

秘书处的评论

31. 秘书处审查了住宅空调设备制造行业在逐步减少氢氟碳化物背景下提高能效的项目编制供资申请，并注意到该项目符合第 94/60 号和第 95/87(j)号决定规定的标准。

32. 据指出，阿根廷的住宅空调行业共有 7 家制造商，所有制造商都包括在拟议的编制项目中。尽管第九十五次会议上核准的转换项目提到了七家制造商，但为 6 家制造商提供了资金。这是因为其中一家企业(Carrier Faguina)已经开始在其一条生产线上使用 HFC-32 进行生产，并将在不向多边基金申请供资的情况下完成整个工厂的技术转换。

33. 秘书处注意到，工发组织为阿根廷的项目编制申请了 42,000 美元，这符合第 95/87(j)号决定。秘书处还注意到，编制供资申请中包括的上述活动与根据第 95/87 号决定制定能效部分所需的活动是一致的。

秘书处的建议

34. 谨建议执行委员会考虑核准阿根廷提高空调设备制造能效的项目编制申请，金额为 42,000 美元，外加给工发组织的 2,940 美元机构支助费用。

- 将以下项目编制申请**添加**到工发组织提交的工作方案呈件的附件中。

Annex I

**MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Energy Efficiency ExCom decision 94/60 (EE) project preparation (PRP)
KIP (INV - A/C)**

Part I: Project information

Part 1: Project information		
Project title:	Preparatory assistance for the Energy Efficiency Project in the Air-Conditioning Sector	
Country:	Argentina	
Lead implementing agency:	UNIDO	
Implementation period for stage RPR EE:	18 months	
Duration of PRP implementation (i.e., time (in months) from the approval of PRP to submission of the project proposal (please specify): 4 months		
Funding requested:		
Agency	Sector	Funding requested (US \$)*
UNIDO	INV-AC	42.000.00 USD

*Details should be consistent with information provided in the relevant sections below.

Part II: Prerequisites for submission

Item	Yes	No
Official endorsement letter from Government, indicating the specifying roles of respective agencies (where more than one IA is involved)	☒	☐

A. Information required for PRP funding request for investment projects/sector plans as part of Energy Efficiency Funding Window

Agency:	UNIDO
Sector:	Air-Conditioning
HFC consumption in item #2 reported under country programme data?	☒ Yes, please specify reported amount and year: 2023 ☐ No
Does the enterprise commit to phase out the HFC consumption associated with the proposed investment project, if approved by the Executive Committee?	☐ Yes, please provide support letter _____ ☐ No ☒ N/A
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?	☐ Yes ☐ No ☒ N/A
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))	The project will significantly contribute to the energy efficiency improvement in the air-conditioning manufacturing sector in Argentina while facing out HFCs.
Background information	
Argentina's Residential Air Conditioning (RAC) manufacturing sector plays a key role in the country's implementation of the Kigali Amendment. Under the recently approved HFC phase-down project, Argentina is transitioning from HFC-410A to lower global warming potential (GWP) refrigerants, with a focus on the adoption of HFC-32. As this technological conversion progresses, the government seeks to develop a complementary project focused on improving the energy performance of air conditioners manufactured in the	

country. This effort aligns with national and international commitments on climate mitigation and sustainable development.

The domestic RAC industry in Argentina includes a total of seven manufacturers. All of them are located in the special industrial area of Tierra del Fuego.

Aires de Sur S.A.: A medium-sized enterprise (SME) with an annual production capacity of approximately 300,000 units, though its operating permit limits output to 180,000 units. The company assembles domestic RAC units using kits sourced from China, primarily from TCL. As an independent producer, it does not undertake toll manufacturing for other Argentine companies. Aires de Sur produces both split and a small proportion of window-type air conditioners (4% of total production). Over the past three years, energy-efficient inverter-type split air conditioners averaged 43,134 units annually, representing 40% of the company's total production. The company is transitioning from HFC-410A to HFC-32 with equipment and technical support from the Multilateral Fund (MLF).

BGH group: With over 110 years of experience in innovation and technology, BGH Group has evolved from a family-owned hardware wholesaler founded in 1913 into a leader in developing, manufacturing, and marketing advanced home appliances. BGH Consumer, the division responsible for RAC production, assembles domestic RACs using kits from Chinese suppliers, including Midea, Hisense, and TCL. As an independent producer, BGH does not perform toll manufacturing. The company manufactures split air conditioners and a small, declining share of window-type units (5-6% of total production). Production of energy-efficient inverter-type air conditioners has grown significantly, reaching 130,000 units in 2023, with their share increasing from 10% in 2019 to 31% in 2023. BGH is converting to HFC-32 with MLF support.

Electrofueguina: This manufacturer produces and sells air conditioners in the Argentine retail market, assembling domestic RACs with kits from Chinese suppliers, primarily Midea. As an independent producer, it does not engage in toll manufacturing. Electrofueguina exclusively manufactures split air conditioners. Over the past six years, production of energy-efficient inverter-type split units has risen steadily, with their share of total production growing from 11% in 2018 to 71% in 2022 and 65% in 2023. The company is transitioning to HFC-32 with MLF support.

Carrier Fueguina S.A.: Specializing in manufacturing and marketing air conditioning units for residential, commercial, and non-industrial applications, Carrier Fueguina assembles domestic RACs using kits from Midea. As an independent producer, it does not perform toll manufacturing. With a production capacity of 100,000 units annually, the company manufactures split air conditioners and a small, declining share of window-type units (5-6% of total production). Production of portable air conditioners ceased in 2020. Energy-efficient inverter-type units reached 130,000 units in 2023, with their share growing from 10% in 2019 to 31% in 2023. Carrier Fueguina is independently transitioning to HFC-32 without MLF financial or technical assistance.

Newsan: It's the largest and well recognized domestic RAC manufacturer in Argentina. It sells its products on the Argentine air conditioners market exclusively. The production of domestic RACs is performed through assembly of kits purchased from China, currently from Hisense, Midea and/or other Chinese suppliers. It is an independent producer, and does not perform toll jobs for any other Argentine company. Newsan manufactures split window type, portable and big split DRAC. In the last six years, the production of the energy-efficient inverter-type split a/c-s increased steadily. Their share of the total production of the company grew from 2% in the year 2018 to 21% in 2023. In actual numbers the production of inverter a/c in 2018 was 11,000, whereas in 2023 it amounted to 113,000 units. The company is converting from HFC-410A to HFC-32 technology with equipment and technical support from the Multilateral Fund (MLF).

Radio Victoria: It's one of the oldest and renowned domestic RAC manufacturing plants in Argentina. The production of domestic RACs is performed through assembly of kits purchased from China, currently from Chinese suppliers: TCL and Hisense. It is an independent producer, and does not perform toll jobs for any

other Argentine company. The company produces only split DRAC appliances. The production of the energy-efficient inverter-type split a/c-s increased steadily. The share of the total production of the company grew from the year 2018 - 12% to 21% in 2022, and 29% in 2023. The company is converting from HFC-410A to HFC-32 technology with equipment and technical support from the Multilateral Fund (MLF).

Solnik S.A.: Established in 2012, Solnik is a relatively new player in Argentina's domestic RAC manufacturing sector and has not previously benefited from Montreal Protocol (MP) assistance. It serves the domestic market exclusively, assembling domestic RACs with kits from TCL. As an independent producer, it does not undertake toll manufacturing. Between 2018 and 2023, production of energy-efficient inverter-type split units grew significantly. In 2018, total production was 11,044 units, all inverter-type. By 2023, production reached 90,000–100,000 units annually, with inverter-type units comprising 60% of output. Solnik is transitioning to HFC-32 with MLF support.

These companies have demonstrated the technical and institutional capacity to implement refrigerant conversions and are well-positioned to pursue energy efficiency upgrades. Past experience with ozone-depleting substance (ODS) phase-out projects and ongoing collaboration with national authorities underscore their readiness for this next step.

Capacity building is critical to the success of this project. Technicians, engineers, and product development teams will require targeted training to design, test, and validate high-efficiency units. Coordination with national institutions, such as the Secretary of Energy and standardization bodies, will be essential to harmonize energy efficiency standards and labeling policies.

Through this preparatory funding request, Argentina aims to identify cost-effective pathways for improving energy efficiency alongside refrigerant transitions. The initiative will analyze opportunities to introduce advanced components, such as high-performance compressors, heat exchangers, and controls. Preparatory activities will assess technical feasibility, economic impacts, and policy alignment to support a comprehensive project proposal under the Multilateral Fund.

Project Objectives

This preparatory project aims to lay the groundwork for improving energy efficiency while phasing down HFCs in the RAC sector by:

Data Collection and Verification: Gather and validate data on the current market, enterprise landscape, and technical opportunities for improving equipment energy efficiency. Calculate additional component costs, considering commercial factors and the characteristics of domestic companies.

Selection of Opportunities: Identify and prioritize the most cost-effective options for component upgrades in each company based on the identified opportunities.

Project Document Development: Prepare a comprehensive project document to enhance energy efficiency in the RAC sector while phasing down HFCs.

Roadmap for raising the existing MEPS: Establish a roadmap for improving energy efficiency labeling schemes and raising the minimum energy performance standards (MEPS) for domestic air conditioners in Argentina

Expected Outcome

The primary outcome of this preparatory project is to deliver a comprehensive, evidence-based project document to improve energy efficiency levels while phasing down HFCs in Argentina's RAC and domestic manufacturing sector. The document will detail specific opportunities for enhancing energy performance for each of the seven manufacturers (Aires de Sur S.A., BGH Group, Electrofueguina, Carrier Fueguina S.A., Newsan, Radio Victoria, and Solnik S.A.), including baseline data on current energy efficiency levels and a proposal with costs for cost-effective technological upgrades.

Key Deliverables

In addition to the project document, the following deliverables will support the achievement of the project's objectives:

- **Comprehensive Survey Data:** Detailed data on the energy efficiency performance of RAC units produced by each manufacturer, establishing a baseline for future improvements and estimating required investments for component upgrades.
- **Technical Analysis and Gap Assessment:** Expert evaluation of survey data to identify gaps in technology and financing, guiding the development of targeted interventions for each manufacturer.
- **Technical Assistance to improve existing MEPS:** Develop a comprehensive understanding of Energy Efficiency Labeling improvement and for raising MEPS.

Project Activities

- **Data Collection and Analysis:** Collection and analysis of data on the current RAC market, manufacturer profiles, energy consumption patterns, and appliance stock to identify challenges and opportunities for energy efficiency improvements.
- **Stakeholder Consultations:** Engage with industry representatives from the seven manufacturers and government officials to gather input, align objectives, and ensure broad support for the project document.
- **Project Document Development:** Prepare the project document.

Budget and Timeline

A detailed budget is outlined in the table below. The project duration is estimated to be 18 months.

Conclusion

This preparatory project is a critical step towards achieving energy efficiency improvements while phasing down HFC in Argentina's RAC manufacturing sector.

Activities to be undertaken for preparation of the investment project and funding requested

Activity	Indicative funding (US \$)	Bilateral/ implementing agency
Survey, Data Collection: Collect data on production capacities, production lines, energy efficiency levels for participating companies to lay the foundation for opportunities identification.	\$12,000	UNIDO
Technical Feasibility Study: Assess current systems and evaluate potential for integrating energy-efficient technologies for participating companies.	\$14,000	UNIDO
Drafting of Energy Efficiency Project Document: Prepare a comprehensive investment project document for energy efficiency improvements.	\$16,000	UNIDO
TOTAL	\$42,000	