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EXECUTIVE COMMITTEE OF
THE MULTILATERAL FUND FOR THE
IMPLEMENTATION OF THE MONTREAL PROTOCOL
Ninety-eighth Meeting
Montreal, 22–26 June 2026
Items 8(c) and (d) of the provisional agenda¹

PROJECT PROPOSALS: PLURINATIONAL STATE OF BOLIVIA

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

Phase-out

- | | | | |
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| • | HCFC phase-out management plan (stage II, third tranche) | UNIDO and UNEP | Blanket approval |
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Phase-down

- | | | | |
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| • | Kigali HFC implementation plan (stage I, second tranche); including a plan for the complete elimination of HFCs contained in imported pre-blended polyols in the polyurethane foam sector | UNIDO and UNEP | Individual consideration |
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¹ UNEP/OzL.Pro/ExCom/98/1

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS**Plurinational State of Bolivia**

PROJECT TITLE	AGENCY	MEETING APPROVED	CONTROL MEASURE
HCFC phase-out plan (stage II)	UNIDO (lead), UNEP	87 th	100% phase-out by 2030

ARTICLE 7 DATA (Annex C, Group I)	Year: 2024	1.53 ODP tonnes
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COUNTRY PROGRAMME SECTORAL DATA (ODP tonnes)							Year: 2025
Substance	Aerosol	Foam	Firefighting	Refrigeration		Solvent	Total sector consumption
				Manufacturing	Servicing		
HCFC-22					1.04		1.04

CONSUMPTION DATA (ODP tonnes)			
2009–2010 baseline:	6.10	Starting point for sustained aggregate reductions:	6.70
CONSUMPTION ELIGIBLE FOR FUNDING			
Already approved:	6.70	Remaining:	0.00

ENDORSED BUSINESS PLAN		2026	2027	2028	Total
UNIDO	ODS phase-out (ODP tonnes)	0.00	0.98	0.00	0.98
	Funding (US \$)	0	157,857	0	157,857
UNEP	ODS phase-out (ODP tonnes)	0.00	0.06	0.00	0.06
	Funding (US \$)	0	10,170	0	10,170

PROJECT DATA			2021	*2022-2023	2024	2025	**2026	2027	2028-2029	2030	Total
Consumption (ODP tonnes)	Montreal Protocol limits		3.97	3.97	3.97	1.98	1.98	1.98	1.98	0	n/a
	Maximum allowable		3.97	3.36	3.36	1.98	1.98	1.98	0.92	0	n/a
Amounts approved in principle (US \$)	UNIDO	Project costs	141,009	0	232,660	0	0	147,530	0	45,530	566,729
		Support costs	9,871	0	16,286	0	0	10,327	0	3,187	39,671
	UNEP	Project costs	24,000	0	72,500	0	0	9,000	0	15,000	120,500
		Support costs	3,120	0	9,425	0	0	1,170	0	1,950	15,665
Funds approved by ExCom (US \$)		Project costs	165,009	305,160	0	0	0	0	0	0	470,169
		Support costs	12,991	25,711	0	0	0	0	0	0	38,702
Total funds recommended for approval at this meeting (US \$)		Project costs					156,530				156,530
		Support costs					11,497				11,497

* Funding scheduled for 2024 was approved at the 93rd meeting and includes US \$60,000, plus agency support costs of US \$4,200 for UNIDO, and US \$40,000, plus agency support costs of US \$5,200 for UNEP, for additional activities to maintain energy efficiency (decision 89/6).

** Funding requested at the present meeting was originally scheduled for 2027.

Secretariat's recommendation:	Blanket approval
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PROJECT DESCRIPTION

1. On behalf of the Government of the Plurinational State of Bolivia, UNIDO as the lead implementing agency has submitted a request for funding for the third tranche of stage II of the HCFC phase-out management plan (HPMP), at a total cost of US \$168,027, consisting of US \$147,530, plus agency support costs of US \$10,327, for UNIDO and US \$9,000, plus agency support costs of US \$1,170, for UNEP.² The submission includes a progress report on the implementation of the second tranche, and the tranche implementation plan for 2026 to December 2029.

Report on HCFC consumption

2. The Government of the Plurinational State of Bolivia reported a consumption of 1.04 ODP tonnes of HCFCs in 2025 under the country programme (CP) implementation report, which is 83 per cent below the country's HCFC baseline for compliance. The Article 7 data for 2025 has not been reported yet. The 2021–2025 HCFC consumption is shown in table 1.

Table 1. HCFC consumption in 2021–2025 in the Plurinational State of Bolivia (Article 7 data)

HCFC	2021	2022	2023	2024	*2025	Baseline
Metric tonnes (mt)						
HCFC-22	18.58	24.58	27.85	27.25	18.92	88.85
HCFC-141b	0.91	0.41	0.14	0.00	0.00	8.85
HCFC-142b	0.00	0.00	0.00	0.00	0.00	2.57
HCFC-123	0.00	0.00	0.00	1.63	0.00	0.22
HCFC-124	0.00	0.00	0.00	0.00	0.00	1.72
Total (mt)	19.49	24.99	27.99	28.88	18.92	102.21
HCFC-141b in imported pre-blended polyols*	0.31	0.00	0.00	0.00	0.00	**5.50
ODP tonnes						
HCFC-22	1.02	1.35	1.53	1.50	1.04	4.89
HCFC-141b	0.10	0.05	0.02	0.00	0.00	0.97
HCFC-142b	0.00	0.00	0.00	0.00	0.00	0.17
HCFC-123	0.00	0.00	0.00	0.03	0.00	***0.00
HCFC-124	0.00	0.00	0.00	0.00	0.00	0.07
Total (ODP tonnes)	1.12	1.40	1.55	1.53	1.04	6.10
HCFC-141b in imported pre-blended polyols*	0.03	0.00	0.00	0.00	0.00	**0.60

* CP data.

** Average consumption between 2007 and 2009.

*** Including negligible amounts of HCFC-123 (0.004 ODP tonnes)

3. Recently, the Plurinational State of Bolivia has faced evolving economic and social conditions relating to foreign currency, fuel supply, and security that have, at times, affected transportation and domestic trade. These factors have led to variations in imports and product availability, reflected in fluctuations in reported consumption data. HCFC consumption declined in 2020 and 2021 due to the economic impact of the COVID-19 pandemic, recovered in 2022 and 2024, and dropped sharply in 2025. Despite these variations, consumption of HCFCs has remained below the 2025 target of a 67.5 per cent reduction from the baseline since 2020.

4. Consumption of HCFC-141b has been phased out, with no imports reported since 2023. Likewise, consumption of HCFC-141b in imported pre-blended polyols has not been reported since 2021. The reappearance of HCFC-123 in 2024 is from one intermittent user (a thermoelectric plant) for the servicing of chillers. In parallel, the use of HFCs as substitutes increased in 2023 and rose sharply in 2024, with HFC-134a, R-410A, and R-404A being the most imported, and the largest growth observed for HFC-32.

² As per the letter of 13 March 2026 from the Ministry of Planning, Development and Environment of Plurinational State of Bolivia to UNIDO.

Country programme implementation report

5. The HCFC consumption data provided by the Government of the Plurinational State of Bolivia in its CP implementation report for 2024 is consistent with the data reported under Article 7 of the Montreal Protocol.

Progress report on the implementation of the second tranche of stage II of the HCFC phase-out management plan

Legal framework

6. At the institutional level, the Governmental Ozone Commission (CGO)/national ozone unit (NOU) was incorporated into the Ministry of Planning, Development and Environment.³ These institutional adjustments have not altered the mandate or operational continuity of the CGO, which continues to oversee the implementation of the Montreal Protocol within the new governmental structure.

7. On 17 October 2024, the Government issued an administrative resolution⁴ that prohibits the importation of HCFC-141b (pure and contained in imported pre-blended polyols) and refrigeration and air-conditioning (RAC) equipment using HCFCs. In December 2018, the legal framework prohibiting the intentional release of HCFCs during the installation, servicing, and decommissioning of RAC equipment was established,⁵ classifying such emissions as a serious offense. Since then, work has been initiated to incorporate RAC equipment within the national extended producer responsibility regime to support a life-cycle management approach. The Government implemented the labour-competency-based evaluation and certification process for the RAC servicing sector in January 2023, following the approval of the competency standard entitled: *Worker in Domestic Refrigeration Systems*. As part of the activities under stage I of the Kigali HFC implementation plan (KIP), an occupational standard entitled: *Refrigeration Technician (Hydrocarbons, Commercial and Industrial)* was approved through Ministerial Resolution No. 0821/2025, dated October 2025.⁶

8. The process of incorporating the electronic licensing system for substances regulated under the Montreal Protocol into the Single Window for Foreign Trade (VUCE) was initiated in October 2025, in coordination with National Customs of Bolivia (Plurinational State of). The process included the definition of functional requirements, module development, pilot testing, and functional controls, culminating in the system's entry into force.

9. Training sessions for a total of 65 customs officers (including 33 women) were held on the identification of substances, tariff classification, global warming potential (GWP) of substances, prevention of illegal trafficking, and risk management. Another training session was held for 45 customs officers working inland and in free trade zones on the use of refrigerant identifiers, the application of technical criteria for the identification and verification of regulated substances, and operational control and environmental certification mechanisms. One training session was held for 35 customs brokers and importers (including 15 women) on the regulations related to controlled substances, GWP of substances, Harmonized System (HS) codes, and proper tariff classification.

³ The former Ministry of Environment and Water was dissolved and its portfolios rearranged.

⁴ VMABCCGDF No. 97/2024

⁵ Administrative Resolution VMABCCGDF No. 043/2018

⁶ It establishes the following competencies: (i) safety measures and protocols; (ii) preventive and corrective maintenance of refrigeration systems (iii) repair refrigeration equipment by interpreting component readings and ensuring compliance with technical specifications; and (iv) assemble refrigeration equipment by applying manufacturer standards and technical data to guarantee proper operation.

Refrigeration servicing sector

10. The following activities were implemented during the second tranche:

- (a) *Technical assistance to strengthen and upgrade the training programme on good refrigeration practices and alternative refrigerants with non-ODP and low-GWP:* Two RAC training workshops were conducted for 153 technicians (5 women), covering theoretical and practical aspects of good refrigeration practices, refrigerant recovery and recycling, leak prevention, and low-GWP alternatives to HCFCs, with emphasis on hydrocarbons (HC);
- (b) *Development of the refrigerant recovery, recycling, and reclaiming (RRR) network:* A specialized workshop in June 2024 (56 participants, including five women) addressed substance identification, recovery practices, and sustainable refrigerant management, including environmentally sound destruction; training capacity was further strengthened through the delivery of 11 inverter refrigerators and 11 high-efficiency AC units to strategic technical training institutions, public universities, and INFOCAL⁷ training centers across the country; one reclamation center was established in Santa Cruz de la Sierra in coordination with the Federation of Refrigeration Technicians of Bolivia (FFB)⁸, which has reclaimed 900 kg of HCFC-22 and 350 kg of HFC-134a since September 2025; a mobile reclamation scheme was implemented using a transportable reclamation unit, which resulted in the reclamation of 247.23 kg of HFC-134a; between December 2025 and January 2026, equipment was provided to the FFB and technical associations, including recovery units, vacuum pumps, cylinders, identifiers, and a reclamation unit with a gas analyzer to strengthen the national recovery and reclamation schemes;
- (c) *Technical assistance to RAC end users:* Two virtual workshops for the National Chamber of Industries (NCI) were delivered, one for technical personnel on leak prevention, good refrigerant management practices, and energy efficiency, and another for decision-makers on the current regulatory framework, strategic refrigerant management, and planning the transition toward lower environmental impact alternatives; one enterprise, Pil Andina S.A., consuming about 489 kg of HCFC-22 annually, was selected for the Zero Leaks programme, under which both of its plants received system assessments, technical recommendations, and training for maintenance staff; monitoring devices were installed in a cold room and a chiller, collecting around 15 days of data per system, which enabled the detection and repair of a refrigerant leak; additionally, a guide for end users was developed, consolidating best practices for integrated RAC equipment and refrigerant management, drawing on real operational data and emission-reduction experience;
- (d) *Advancing sustainable accreditation, certification by labour competencies, and registration of RAC servicing technicians:* Eight awareness and outreach meetings in coordination with the Plurinational System for Competency Certification and the FFB were held to disseminate information on the requirements, procedures, and benefits of competency-based certification;
- (e) *Dissemination and awareness-raising for HCFC phase-out:* In 2024 and 2025, the CGO participated in trade fairs and workshops to disseminate technical and regulatory information on the Montreal Protocol, HCFC control, and low-GWP alternatives, supported by the distribution of targeted awareness materials.

⁷ Instituto de Formación y Capacitación Laboral, a network of training centers in the Plurinational State of Bolivia.

⁸ Federacion de Frigoristas Bolivia

Project on activities to maintain energy efficiency in the refrigeration servicing sector

11. UNEP has recruited an international consultant to identify opportunities for cooperation and dialogue between the NOU and policymakers to improve energy efficiency labelling and minimum energy performance standards in the RAC sector. A terms of reference has been finalized to recruit a national consultant to carry out awareness and outreach activities during the second half of 2026.

12. A capacity-building seminar on energy efficiency in the RAC sector was held with 26 participants (including four women), including end users, technicians, and academics, covering energy-saving strategies, automation, performance, digital tools, refrigerant charge optimization, and heat recovery. Additionally, two workshops were delivered to 67 technicians (including five women), combining theoretical and practical sessions on good practices and energy efficiency in RAC equipment.

13. Energy efficiency monitoring has been incorporated under the Zero Leaks programme, and specialized monitoring devices were procured, including two units for monitoring electrical and environmental variables and two for thermodynamic variables with pressure measurement. A cloud-based service was also contracted to enable continuous data recording, backup, and remote monitoring.

14. The procurement process for the required equipment to carry out training on the assessment of RAC system performance and energy efficiency, aimed at students and technicians in the sector, has been completed, and this equipment is expected to arrive in the country during the second half of 2026.⁹

Project implementation and monitoring

15. The CGO is responsible for programme coordination and execution in coordination with UNIDO and UNEP. The CGO activities included regular visits to refrigerant retailers, servicing workshops, customs facilities, and end users. The funding for project monitoring was adjusted during implementation to US \$24,951 allocated under the second tranche¹⁰. Of this US \$24,353 was disbursed for project staff (US \$9,498), and travel, meetings, and workshops (US \$14,855).

Level of fund disbursement

16. As of March 2026, of the US \$470,169 approved so far, US \$375,550 had been disbursed (US \$332,050 for UNIDO and US \$43,500 for UNEP), as shown in table 2. The balance of US \$94,619 will be disbursed during the implementation of the third tranche.

Table 2. Financial report of stage II of the HPMP for the Plurinational State of Bolivia (US \$)

Agency	First tranche		Second tranche		Total		
	Approved	Disbursed	Approved	Disbursed	Approved	Disbursed	Balance
UNIDO	141,009	138,847	232,660	193,203	373,669	332,050	41,619
UNEP	24,000	24,000	72,500	19,500	96,500	43,500	53,000
Total	165,009	162,847	305,160	212,703	470,169	375,550	94,619
Disbursement rate (%)	99		70		80		

⁹ For the specialized training centre, this includes three each of the following: Three-phase power quality analyzers, power meter clamps, infrared thermometers with lasers, refrigeration system analyzers with two clamps thermometers, anemometers for air velocity, temperature and humidity measurement, and thermal imaging cameras; and six each of pipe-clamp thermometers and intelligent wireless pipeline pressure measuring instruments. For the upgrades to existing training centers this includes the same items in the same quantities except without the thermal imaging cameras and the three-phase power quality analyzers.

¹⁰ From US \$20,660 originally planned for allocation to project monitoring in the second tranche.

Implementation plan for the third tranche of stage II of the HCFC phase-out management plan

17. The following activities will be implemented between July 2026 and December 2029:

- (a) *Technical assistance to strengthen capacity of customs and trade controls*: Train at least 60 customs and enforcement officers, as well as brokers and importers, on import controls for controlled substances under the Montreal Protocol and the equipment that contains them (UNEP) (US \$6,000 and funds from the previous tranche);
- (b) *Advancing sustainable accreditation, certification by labour competencies*: Conduct at least two awareness meetings on the certification process targeting technicians and end users, and evaluate and certify at least 200 RAC technicians in labour competency standards related to the RAC servicing sector (UNIDO) (US \$15,000);
- (c) *Technical assistance to strengthen and upgrade the training programme*: Hold six technical seminars for a total of 180 technicians on good refrigeration servicing practices and alternative refrigerants; procure three sets of tools and equipment¹¹ for three selected women technicians (UNIDO) (US \$40,000);
- (d) *Technical assistance to RAC end-users*: Implement at least two demonstration projects using zero-GWP refrigerants as alternatives to HCFC-22 and conduct at least two dissemination meetings with participation from relevant stakeholders (UNIDO) (US \$62,530);
- (e) *Development of the refrigerant RRR network*: Organize at least two workshops for a total of 100 technicians and end users on strengthening technical capacities, promoting good practices in refrigerant handling, and encouraging the proper use of RRR technologies and procedures (UNIDO) (US \$5,000 and funds from the previous tranche);
- (f) *Dissemination and awareness-raising for HCFC phase-out*: An awareness-raising campaign to disseminate information among RAC servicing technicians, end users, and RAC instructors on HCFC phase-out, and CGO's participation in at least two events to raise awareness, such as seminars, trade fairs, guild events, conferences, and exhibitions (UNEP) (US \$3,000 and funds from the previous tranche); and
- (g) *Project implementation and monitoring (UNIDO) (US \$25,000 and funds from the previous tranche)*: Monitoring and coordination of the tranche implementation and drafting of a gender analysis report in the RAC servicing sector, with funding allocated for project staff (US \$10,000); and travel, meetings, and workshops (US \$15,000).

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

Early submission

18. As per the Agreement between the Government of the Plurinational State of Bolivia and the Executive Committee, the third tranche of stage II of the HPMP is only due at the 100th meeting in 2027. Noting the early approval of the second tranche, the substantive progress made in its implementation, the level of disbursement achieved, and the efforts to enhance the coordination across the HPMP and the KIP tranche, which is also submitted to the current meeting, and to minimize the associated reporting and

¹¹ Including multimeters, watt meters, laser thermometers, anemometers, contact thermometers

administrative burdens, upon consultation with the Secretariat, UNIDO submitted the present request in advance of the scheduled date. The Secretariat has reviewed and recommended approval of the tranche based on the level of progress and disbursement achieved (i.e., 70 per cent), noting that postponing the approval of this tranche could disrupt the momentum of implementation and that, after the approval of all projects and activities programmed in the business plan for this year, there would be sufficient funds for the approval of this tranche.

Progress report on the implementation of the second tranche of stage II of the HCFC phase-out management plan

Legal framework

19. The Government of the Plurinational State of Bolivia has issued HCFC import quotas for 2026 at 1.83 ODP tonnes, which is lower than the Montreal Protocol control targets and the maximum allowable consumption in its Agreement with the Executive Committee.

Refrigeration servicing sector

20. The Secretariat inquired about the progress towards certifying 800 RAC technicians, and UNIDO explained that, to date, a total of 255 RAC technicians had been certified/licensed, including 245 men and 10 women. During the implementation of the second tranche, additional certification activities continued to be carried out; however, the updated official number of certified/licensed technicians is still pending confirmation. For the third tranche, an additional target of 200 certified/licensed RAC technicians has been established. In addition, during the third and fourth tranches, the country expects to advance the issuance of identification cards for certified/licensed technicians through the National Registry for Refrigeration and Air-Conditioning Works, as part of the strengthening of the national registration and certification system for the RAC servicing sector. The country expects to progressively achieve the overall target of 800 certified/licensed RAC technicians during the remaining implementation period of stage II of the HPMP. Upon enquiry regarding budget allocations, UNIDO further explained that during the implementation of the second tranche, it has been necessary to adjust planning and reallocate resources within the component in order to continue advancing the labour competency-based certification process. Strengthening the certification system has required the development and consolidation of complementary activities that involve additional investment, such as institutional coordination with the Plurinational Certification System, the engagement of experts for the standardization process, the dissemination of the certification scheme, and the evaluation of certified technicians. Additionally, for the third tranche, part of the requested resources will be allocated to the purchase of consumables and the necessary equipment for the issuance of identification cards, which will formally certify that the holder is certified/licensed.

Implementation plan for the third tranche of stage II of the HCFC phase-out management plan

Project implementation and monitoring

21. As agreed with UNIDO, an adjustment was made to the project implementation and monitoring costs as the request for the third tranche exceeded the original budget allocation. Thus, the budget line for travel, meetings, and workshops was adjusted to US \$10,000 instead of US \$15,000 and the development of the refrigerant RRR network activity was adjusted from US \$5,000 to US \$10,000.

Gender policy implementation

22. In line with the National Plan for Equal Opportunities of the Plurinational State of Bolivia and with decisions 84/92(d) and 90/48(c), the participation of women in RAC sector has been promoted during the implementation for the second tranche, sex-disaggregated data has been collected and 30 per cent of the

customs officers trained and 3 per cent of the RAC technicians trained were women. These efforts will continue during the implementation of the third tranche.

Sustainability of the HCFC phase-out and assessment of risks

23. The long-term sustainability of HCFC phase-out under stage II of the HPMP in the Plurinational State of Bolivia is supported by strengthened regulations, institutional capacity, market mechanisms, technical assistance, and increased stakeholder engagement. The regulatory framework now bans HCFC-based equipment and substances, restricts intentional releases, and incorporates RAC life-cycle management into the extended producer responsibility regime, ensuring a solid legal basis and sound end-of-life management. Institutional sustainability is reinforced through the electronic licensing system within VUCE and continued coordination with the National Customs, improving control, traceability, and technical capacity. The servicing sector is supported by a consolidated RRR network, reducing demand for virgin refrigerants and strengthening national self-sufficiency. Training and certification have been institutionalized through the occupational standard for refrigeration technicians and its integration into the Plurinational Competency Certification System, embedding safety and environmental standards. Awareness-raising for technicians, end users, and importers, along with technical guides and the Zero Leaks programme, promotes behavioral change, emission reduction, and improved energy efficiency.

24. Key risks include institutional changes and staff turnover, limited retention of technical capacities, and market resistance to low-GWP alternatives due to higher upfront costs. Mitigation measures include strengthening legal instruments, institutionalizing the licensing and certification systems, integrating technical content into training and competency-based schemes, and implementing demonstrations and awareness activities that highlight the technical, environmental, and economic benefits of the transition.

Conclusion

25. The Government of the Plurinational State of Bolivia continues to comply with the targets determined under the Montreal Protocol and stated in its Agreement with the Executive Committee. With UNIDO's assistance, an extensive set of activities has been implemented to strengthen the national capacity to control trade in HCFCs, adopt technical standards on refrigeration, train 145 customs agents and brokers, certify 255 technicians, procured tool kits and equipment for technicians and training institutes, and promote refrigerant containment and leakage reduction among large end users. The overall disbursement rate stands at 80 per cent of the approved funding. The third tranche of stage II was only due at the 100th meeting of the Executive Committee, in 2027; however, given the level of progress and disbursement achieved so far, the Secretariat considers the approval of the third tranche at the present meeting to be conducive to ensuring a continued implementation of the phase-out activities, especially since it aligns with the submission of the KIP tranche and thus helps avoid the administrative burden for the Government, UNIDO, and UNEP. The Secretariat recommends blanket approval for the tranche since there are adequate funds in the current triennium.

RECOMMENDATION

26. The Fund Secretariat recommends that the Executive Committee note the progress report on the implementation of the second tranche of stage II of the HCFC phase-out management plan (HPMP) for the Plurinational State of Bolivia, and further recommends blanket approval of the third tranche of stage II of the HPMP and the corresponding 2026–2029 tranche implementation plan for the Plurinational State of Bolivia at the funding levels shown in the table below.

	Project title	Project funding (US \$)	Support costs (US \$)	Implementing agency
(a)	HCFC phase-out management plan (stage II, third tranche)	147,530	10,327	UNIDO
(b)	HCFC phase-out management plan (stage II, third tranche)	9,000	1,170	UNEP

PROJECT EVALUATION SHEET – MULTI-YEAR PROJECTS

The Plurinational State of Bolivia

PROJECT TITLE	AGENCY	MEETING APPROVED	CONTROL MEASURE
Kigali HFC implementation plan (stage I)	UNIDO (lead), UNEP	93 rd	15% phase-out by 2029

ARTICLE 7 DATA (Annex F)	Year: 2024	275.75 mt	647,503 CO ₂ -eq tonnes
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COUNTRY PROGRAMME SECTORAL DATA (CO ₂ -eq tonnes)								Year:	2025
Substance	Aerosol	Foam	Fire-fighting	Air-conditioning (AC) and refrigeration				Solvent	Other
				Manufacturing			Servicing		
				Refrigeration	AC	Other			
HFCs			3,220				412,008		
HFCs in imported pre-blended polyols*		2,891							

*Average consumption of HFCs contained in imported pre-blended polyols in 2022–2024: 35,527 CO₂-eq tonnes

CONSUMPTION DATA (CO ₂ -eq tonnes)			
HFC baseline:	677,884	Starting point for sustained aggregate reductions:	n/a
CONSUMPTION ELIGIBLE FOR FUNDING			
Already approved:	n/a	Remaining:	n/a

ENDORSED BUSINESS PLAN		2026	2027	2028	Total
UNIDO	HFC phase-down (mt)	0.00	12.12	0.00	12.12
	Funding (US \$)	0	88,705	0	88,705
UNEP	HFC phase-down (mt)	0.00	3.09	0.00	3.09
	Funding (US \$)	0	22,600	0	22,600

PROJECT DATA			2023	2024	2025	2026	2027*	2028	2029	2030	Total
Consumption (CO ₂ -eq tonnes)	Montreal Protocol limits		n/a	677,884	677,884	677,884	677,884	677,884	610,096	610,096	n/a
	Maximum allowable		n/a	677,884	677,884	677,884	677,884	677,884	576,201	576,201	n/a
	Reduction from baseline (%)		n/a	0.0	0.0	0.0	0.0	0.0	15.0	15.0	n/a
Amounts approved in principle (US \$)	UNIDO	Project costs	153,500	0	0	0	78,500	0	0	25,000	257,000
		Support costs	19,955	0	0	0	10,205	0	0	3,250	33,410
	UNEP	Project costs	40,500	0	0	0	20,000	0	0	7,500	68,000
		Support costs	5,265	0	0	0	2,600	0	0	975	8,840
Funds approved by ExCom (US \$)		Project costs	194,000	0	0	0	0	0	0	0	194,000
		Support costs	25,220	0	0	0	0	0	0	0	25,220
Total funds recommended for approval at this meeting (US \$)		Project costs				*245,290					245,290
		Support costs				*31,888					31,888

* Tranche recommended for approval at the present meeting, including US \$146,790, plus agency support costs of US \$19,083, for UNIDO for the project to phase out HFCs contained in imported pre blended polyols in the polyurethane foam sector.

Secretariat's recommendation	Individual consideration
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PROJECT DESCRIPTION

27. On behalf of the Government of the Plurinational State of Bolivia, UNIDO as the lead implementing agency has submitted requests for funding for the second tranche of stage I of the Kigali HFC implementation plan (KIP), at a total cost of US \$111,305, consisting of US \$78,500, plus agency support costs of US \$10,205, for UNIDO and US \$20,000, plus agency support costs of US \$2,600, for UNEP, and for a plan for the complete elimination of HFCs contained in imported pre-blended polyols in the polyurethane (PU) foam sector in line with decision 96/52, in the amount of US \$345,384, plus agency support costs of US \$42,966, as originally submitted.¹² The submission includes the progress report on the implementation of the first tranche and the tranche implementation plan for 2026 to 2029.

Report on HFC consumption

28. The Government of the Plurinational State of Bolivia reported a consumption of 415,228 CO₂-equivalent (CO₂-eq) tonnes of HFCs in 2025 under the CP report, which is 38.8 per cent below the country's HFC baseline for compliance. The Article 7 data for 2025 has not been reported yet. The 2021–2025 HFC consumption is shown in table 3.

Table 3. 2021–2025 HFC consumption and HFC baseline for the Plurinational State of Bolivia (Article 7 data)

HFCs	GWP	2021	2022	2023	2024	*2025
Metric tonnes (mt)						
HFC-32	675	0.00	0.91	0.47	4.17	6.18
HFC-134a	1,430	113.14	245.94	122.62	84.09	81.28
R-404A	3,922	29.62	64.03	34.93	33.79	25.44
R-410A	2,088	35.97	44.17	33.69	71.21	38.36
R-417A	2,346	0.00	0.85	12.72	16.93	7.21
R-438A	2,264	0.00	2.26	6.96	27.53	16.44
R-507A	3,985	14.19	4.92	7.91	33.34	10.54
**Other		0.79	7.10	9.45	4.69	8.79
Total (mt)		193.71	370.18	228.75	275.75	194.24
*In imported pre-blended polyols		0.00	38.78	39.20	32.60	3.00
CO₂-eq tonnes						
HFC-32	675	0	618	321	2,818	4,168
HFC-134a	1,430	161,784	351,692	175,347	120,247	116,236
R-404A	3,922	116,168	251,116	136,981	132,495	99,768
R-410A	2,088	75,083	92,204	70,328	148,647	80,084
R-417A	2,346	0	1,988	29,841	39,711	16,913
R-438A	2,264	0	5,118	15,760	62,333	37,231
R-507A	3,985	56,558	19,588	31,521	132,884	42,013
**Other		1,403	14,044	15,683	8,368	18,815
Total (CO₂-eq tonnes)		410,996	736,368	475,782	647,503	415,228
*In imported pre-blended polyols		0	37,377	37,782	31,421	2,891

¹² As per the letter of 13 March 2026 from the Ministry of Planning, Development and Environment of the Plurinational State of Bolivia to UNIDO.

HFC baseline calculation (CO₂-eq tonnes)	
HFC average consumption in 2020–2022	564,670
HCFC baseline (65%)	113,214
HFC baseline	677,884
Average consumption of HFCs in imported pre-blended polyols in 2022–2024	35,527

* CP data

** Including HFC-125, HFC-152a, HFC-227ea, HFC-365mfc, R-407C, R-422D

29. HFC consumption from 2021 to 2025 in the Plurinational State of Bolivia shows notable year-to-year variability, reflecting short-term supply and demand adjustments rather than structural changes in the market. These fluctuations are primarily driven by variations in import volumes, inventory management practices, and external economic conditions affecting purchasing capacity. As reported at the 93rd meeting, HFC consumption decreased significantly in 2021 due to the effects of the COVID-19 pandemic and the possible use of stockpiles. In 2022, the HFC consumption peaked and this is attributed to economic recovery and stockpiling, contributing to a subsequent decrease in 2023. Consumption rebounded slightly in 2024 and dropped again in 2025, a change attributed to temporary economic constraints affecting imports.

Updated assessment of HFC consumption trends and market demand in Bolivia (decision 93/55(b)(i))

30. In response to decision 93/55(b), the tranche request included an updated assessment of HFC consumption trends and explanations for the fluctuations in HFC consumption. The updated analysis confirmed that the 2022 consumption spike was exceptional and was driven by temporary market distortions such as excessive imports and stockpiling, rather than by a structural increase in domestic demand. The noticeable pattern over the last six years of high imports followed by reduced imports, reflects short-term supply and demand adjustments. In 2024, an economic recession began, which intensified in 2025. This recession, combined with a currency crisis, led to lower import purchasing power.

Consumption in the polyurethane foam sector

31. During the project preparation survey for the PU foam sector plan in February 2026, it was identified that, while total HFC consumption had been accurately reported at the national level, the embedded HFC component in imported polyol systems had not been consistently captured. Engagement with enterprises and sector stakeholders enabled the country to quantify and disaggregate this consumption segment. Accordingly, the country has updated its reporting to include HFCs contained in imported pre-blended polyols, thereby improving the accuracy and transparency of sectoral HFC consumption data. The consumption of HFCs contained in imported pre-blended polyols in the Plurinational State of Bolivia over the 2021–2025 period is presented in table 3.

Country programme implementation report

32. The HFC consumption data provided by the Government of the Plurinational State of Bolivia in its CP implementation report for 2024 is consistent with the data reported under Article 7 of the Montreal Protocol.

Progress report on the implementation of the first tranche of stage I of the Kigali HFC implementation plan

Legal framework

33. The Government established an operational licensing and quota system for controlling the import of HFCs through an administrative resolution in 2021. This was updated in 2025 to establish the regulation for

HFC import quota allocation and to strengthen monitoring of national consumption.¹³ Regulations were drafted to update Supreme Decree 27421 to include HFCs in the legislated licensing and quota system, and these are now pending approval. In October 2025, the electronic licensing system for controlled substances began to be incorporated into the VUCE¹⁴ in cooperation with the National Customs authority, which will improve monitoring of HFC imports (pure and blends) and should be fully operational by the end of 2026.

34. A feasibility study to identify the national supply of R-290 refrigerant was carried out including an evaluation of availability, academic tests and equipment trials. The results were presented to sector stakeholders, and technical and regulatory barriers for national supply were identified. Subsequently, in 2025, regulatory actions were advanced that enabled the legal import of R-290. A labour competency standard for technician certification in the handling of flammable refrigerants was developed and approved in coordination with the competency certification system.¹⁵

35. During the implementation of the first tranche, training materials on HFC import controls and the prevention of illegal trade were reviewed and updated to reflect current regulatory provisions and monitoring procedures. A technical training session was conducted for 20 participants including customs officers, clearance agents and laboratory personnel (including six women) on HFC identification, applicable regulations, quota control procedures and mechanisms to detect and prevent illegal trade.

Refrigeration servicing sector

36. The following activities were implemented under the first tranche of the KIP:

- (a) *Developing training manuals for handling flammable refrigerants:* Cooperation agreements were signed with the Universidad Mayor de San Simón, the Universidad Autónoma Gabriel René Moreno, the Universidad Técnica de Oruro, the Escuela Industrial Superior Pedro Domingo Murillo, and INFOCAL to support the training of instructors in HC-based technologies and energy efficiency. A training manual on good practices for the handling of HC-based equipment in the refrigeration sector was prepared and disseminated.
- (b) *A study tour to an international training centre to train two instructors; training 10 trainers in handling flammable refrigerants; and training 300 technicians in the proper handling of flammable refrigerants:* In 2024, two study tours were conducted in Colombia, with the participation of RAC sector instructors and professionals. The activities focused on the safe handling of flammable refrigerants, good operational practices, and energy efficiency in RAC systems. Two workshops and one technical training sessions were held for a total of 118 technicians (including 8 women), focusing on good refrigeration practices and the safe handling of flammable refrigerants. One seminar was held with the participation of 54 technicians (including 15 women), related to the use and characteristics of ammonia (NH₃), carbon dioxide (CO₂), and HC (R-290).
- (c) *Providing equipment to two training institutions:* Three sets of equipment¹⁶ were procured for the establishment and strengthening of training centers specialized in HC-based refrigerants with delivery expected by the end of 2026.

¹³ VMABCCGDF No. 023/2021 revised by VMABCCGDF No. 122/2025 (29 August 2025)

¹⁴ Single Window for Foreign Trade electronic system

¹⁵ As mentioned in paragraph 7 and footnote 6.

¹⁶ Each set was composed of specialized tools, measuring instruments, safety devices, recovery units, vacuum pumps, leak detection instruments, manifolds, nitrogen purging equipment, recovery cylinders, brazing equipment, hand tools, testing instruments, personal protective equipment, safety stations, and consumables required for practical training in installation, maintenance, diagnostics, and the safe handling of flammable refrigerants.

- (d) *Awareness-raising activities:* During the first tranche, an information campaign was developed targeting government actors, technical sectors, and users of refrigerant substances on regulatory mechanisms applicable to HFCs, compliance with licensing and quota systems, and the environmental benefits of transitioning to lower climate-impact and energy-efficient alternatives.

Project implementation and monitoring

37. Project management and monitoring activities were carried out to ensure effective coordination among implementing partners and national institutions. The funding allocated for these activities was adjusted from the US \$10,000 approved under the first tranche to US \$12,482, covering project staff and consultants (US \$9,550), domestic travel for monitoring visits (US \$2,932).

Level of fund disbursement

38. As of March 2026, of the US \$194,000 approved so far (US \$153,500 for UNIDO and US \$40,500 for UNEP), US \$82,721 (43 per cent) had been disbursed (US \$61,514 for UNIDO and US \$21,207 for UNEP). Of the balance of US \$111,279, more than 80 per cent has been committed and will be disbursed in 2026 with the remainder to be disbursed during the implementation of the second tranche.

Implementation plan for the second tranche of stage I of the Kigali HFC implementation plan

39. The following activities will be implemented between July 2026 and December 2029:

- (a) *Policy and regulatory strengthening:* Continue to integrate and optimize the electronic monitoring system for HFC imports, including the amalgamation of data analysis and verification modules and improved reporting functions; training for a total of 45 customs officers, clearance agents, and laboratory staff on HFC import control procedures and the prevention of illegal trade to enhance enforcement capacity at borders (UNEP) (US \$20,000);
- (b) *Training, equipment and certification:* Training for a total of 80 RAC technicians on the safe handling and proper use of flammable refrigerants through a structured programme combining theoretical instruction and practical sessions; complete delivery and distribution of equipment to the two training centres selected in the first tranche; procurement of standardized technical equipment kits and distribution to 13 local RAC associations¹⁷ (UNIDO) (US \$56,500 and funds from the previous tranche).
- (c) *Refrigerant management–RRR:* Procure and deliver two mobile refrigerant recovery units to strengthen national RRR practices and support technicians during field servicing operations, reducing refrigerant emissions and promoting reuse (UNIDO) (US \$15,000);
- (d) *Awareness-raising activities:* Continue strategic communications to strengthen institutional and sectoral awareness regarding HFC controls, the circular economy, climate change, and energy efficiency (UNEP) (Funds from the previous tranche);
- (e) *Project to phase out HFCs contained in imported pre-blended polyols in the PU foam sector:* The project is described in detail in paragraphs 39 to 48 of the present document; and

¹⁷ Including vacuum pumps and charging machines for flammable refrigerants, welding equipment, portable nitrogen blowing equipment, leak detectors, multimeters, and refrigerant recovery and recycling machines.

- (f) *Project monitoring:* Project management, coordination, monitoring, and reporting (UNIDO) (US \$7,000) covering consultants and staff (US \$5,000) and monitoring visits and consultation meetings (US \$2,000).

Project to phase out HFCs contained in imported pre-blended polyols in the polyurethane foam sector

Background

40. Consumption of HFC contained in imported pre-blended polyols and relevant PU foam enterprises has been confirmed in the country. In line with decision 96/52, the present sectoral plan is intended to address that consumption through a structured umbrella intervention covering all eligible enterprises identified in the sector. Under the country's HCFC phase-out management plan (HPMP), the starting point for aggregate reductions in the consumption of pure HCFC-141b was 0.97 ODP tonnes, and 0.60 ODP tonnes for HCFC-141b contained in imported pre-blended polyols. In 2024, the Plurinational State of Bolivia prohibited the import of HCFC-141b, both in pure form and contained in imported pre-blended polyols, fulfilling decision 87/36 (b)(ii).¹⁸ The country did not receive Multilateral Fund investment support for the conversion of PU foam enterprises from HCFC-141b, and the sector transitioned gradually through market adjustments and enterprise initiatives.

Project objective

41. The project proposes a sector-wide plan to eliminate the use of HFC-365mfc/227ea contained in imported pre-blended polyols in Bolivia's PU foam sector, covering all eligible enterprises identified during the sector survey. The selection of HFO technology is based on its commercial maturity, low-GWP, compatibility with existing equipment, and suitability for small- and medium-sized enterprises (SMEs) with limited safety infrastructure. The conversion, to be implemented over a four-year period, includes formula development, clustered validation trials, full enterprise conversion, and adoption of regulatory measures prohibiting the import and/or use of HFC-containing polyols upon project completion. The elimination of 33.86 metric tonnes (mt) of HFCs will result in a sustained annual reduction of approximately 32,195 CO₂-eq tonnes.

42. The two identified PU foam manufacturers, Isolacruz S.R.L. and Budova S.R.L., are enterprises established before 1 January 2020. The applicable cost-effectiveness threshold for the PU foam sector is US \$9.00/kg, with flexibility provisions for SMEs. Consistent with decision 95/86(d)(ii), the proposal applies a cost-effectiveness level of US \$9/kg for 22.57 mt for ISOLCRUZ S.R.L. and US \$12.60/kg for 11.29 mt for Budova S.R.L. (as an SME), for a total eligible consumption of 33.86 mt. The total funding request as submitted amounts to US \$345,384, plus agency support costs. In line with decision 96/52, this quantity will be treated separately from the national starting point for sustained aggregate reductions.

Sector background and consumption of HFCs contained in imported pre-blended polyols

43. HFC-365mfc/227ea contained in imported pre-blended polyols has grown in use in several foam applications, but primarily in rigid foam applications such as discontinuous panels and spray polyurethane foam. Only two enterprises were identified as users of HFC-containing imported pre-blended polyols from 2022–2024, with an average consumption during this period of 36.86 mt (35,526 CO₂-eq tonnes), as shown in table 4. The country does not have domestic PU system houses, and all polyol systems are imported primarily from Panama and Chile; no other exporting countries were identified.

¹⁸ To note the commitment of the Government of the Plurinational State of Bolivia to ban the import of HCFC-141b and HCFC-141b contained in pre-blended polyols by 1 January 2024.

Table 4. Eligible enterprises for conversion from HFC-365mfc/227ea in imported pre-blended polyols

Enterprise	Application	Average HFC consumption (mt) (2022-2024)
Isolcruz S.R.L.	Discontinuous panel / rigid foam	19.29
Isolcruz S.R.L.	Spray foam	11.66
Budova S.R.L.	Discontinuous panel / rigid foam	5.91
Total	n/a	36.86

Technology selection and phase-out strategy in the polyurethane foam sector

44. All eligible enterprises will transition to HFO-based pre-blended polyol systems (HFO-1233zd). The selection of HFO/HCFO-based systems is based on their commercial maturity at the international level, the compatibility with existing foam processing equipment, low-GWP, suitability for discontinuous panel and spray foam insulation applications, and reduced flammability risk compared to HC systems, which is particularly relevant for SMEs. Additionally, current generations of HFO-based pre-blended polyol systems have undergone technical improvements compared to earlier formulations. The use of a single technological pathway across applications simplifies implementation, facilitates supplier coordination, and reduces long-term regulatory uncertainty.

Incremental costs

45. The incremental capital costs (ICCs) of the project include: procurement of two units of HFO integration equipment for one enterprise (ISOLCRUZ S.R.L.) (US \$160,000); procurement of one unit of HFO processing equipment for one enterprise (Budova S.R.L.) (US \$80,000); three sets of portable thermal conductivity (K-factor) measurement equipment (US \$36,000); six reformulation trials (two rounds for each application) (US \$24,000); 10 practical and theoretical workshops on the safe handling of low-GWP alternatives for beneficiary enterprises (US \$10,000); preparation and implementation of regulatory updates to ban the import and use of HFCs in the PU foam sector, including hiring one national PU foam expert (US \$25,000) and one international PU foam technical expert (US \$10,384) to carry out sector-wide supervision, specialized oversight, and provide guidance in the reformulation phase.

46. Project implementation will be carried out under the overall supervision and technical coordination of UNIDO and in close cooperation with the CGO/national ozone unit. Monitoring arrangements will include the annual verification of import volumes of pre-blended polyols through the national licensing system, combined with enterprise-level validation of product performance using K-factor measurement equipment. Periodic technical missions and progress reporting will be conducted to ensure that conversion milestones are achieved within the agreed timeframe.

47. No incremental operating costs (IOCs) have been requested for this project.

48. The total cost of the PU foam sector conversion amounts to US \$345,384 at a cost effectiveness of US \$10.20/kg, as originally submitted, as shown in table 5. The project will be implemented in 48 months.

Table 5. ICCs of the conversion of two enterprises in the PU foam sector, as submitted

Component	Unitary cost (US \$)	Total cost (US \$)
HFO integration equipment – Isolcruz (2 units)	80,000	160,000
HFO processing equipment – Budova	80,000	80,000
Thermal conductivity measurement equipment (3 sets)	12,000	36,000
Reformulation trials (2 rounds per application for a total of 6)	4,000	24,000
Practical and theoretical workshops (10)	1,000	10,000

Component	Unitary cost (US \$)	Total cost (US \$)
National PU foam technical expert and Regulatory update and enforcement preparation	-	25,000
International PU foam technical expert (missions over 4 years)	-	10,384
Total	-	345,384

49. In accordance with decision 96/52(a)(iv), the Government of Bolivia commits to banning the imports and/or the use of HFCs, both pure and contained in pre-blended polyols, by the time the final foam manufacturing plant had been converted to a non-HFC technology.

SECRETARIAT'S COMMENTS AND RECOMMENDATION

COMMENTS

Early submission

50. As per the Agreement between the Government of the Plurinational State of Bolivia and the Executive Committee, the second tranche of stage I of the KIP was due at the 100th meeting in 2027. Noting the submission of the second tranche aligns with the submission of the foam sector plan, substantive progress has been made in the implementation of the first tranche, the level of disbursement achieved, and the efforts to enhance coordination across the KIP and the HPMP tranche, which is also submitted to the current meeting, and to minimize reporting and administrative burdens, UNIDO, upon consultation with the Secretariat, has submitted the present request in advance of the scheduled date. The Secretariat has reviewed and recommended approval of the tranche based on the level of progress and disbursement achieved (i.e., 43 per cent), noting that more than 80 per cent of the balance, of US \$111,279, has been committed and will be disbursed in 2026. The Secretariat also notes that approval of this tranche could help keep the momentum of implementation.

Report on HFC consumption, verification, and compliance with decision 93/55(b)

51. The Plurinational State of Bolivia is a low-volume-consuming (LVC) country and since they have three tranches under stage I of its KIP, a verification report will be required with the submission of the third tranche request.

Assessment of HFC imports in 2022 in light of additional data from 2025

52. Noting the peak in HFC consumption in 2022, the Secretariat considered five approaches to understand the baseline HFC consumption in the country: two excluding 2022 data (i.e., using an average of 2020, 2021, and 2023 data and using an average of 2020, 2021, 2023, and 2024 data), and three based on data from the last six, five, and four years (i.e., 2020-2025, 2021-2025, and 2022-2025, respectively). In all approaches, the average HFC consumption in the servicing sector in the baseline years remains between 200-300 mt, corresponding to the current funding level bracket. Therefore, using different base years to estimate the baseline would not have funding implications, despite the distortion caused by the unusually high level of imports in 2022. Furthermore, when assuming a lower baseline (651,968 CO₂-eq tonnes) using the average 2020-2025 consumption, a 10 per cent reduction would result in a maximum allowable consumption in 2029 of 586,771 CO₂-eq tonnes which is above the maximum allowable consumption in the Agreement between the Government and the Executive Committee of 576,201 CO₂-eq tonnes, which is equal to a 15 per cent reduction from the established baseline. It appears that the current target of a 15 per cent from the established baseline is at an adequate level of reduction based on this analysis. The Executive Committee may wish to consider re-examining the maximum allowable consumption limits after the verification report is submitted together with the final tranche of stage I.

Progress report on the implementation of the first tranche of stage I of the Kigali HFC implementation plan*Legal framework*

53. The Government of the Plurinational State of Bolivia has issued HFC import quotas for 2026 and 2027 in accordance with the Montreal Protocol control targets.

Refrigeration servicing sector

54. Due to the limited availability of the equipment in the international market, the procurement of the refrigerant identifier could not be completed during the reporting tranche. Consequently, the budget was reallocated to other project activities requiring additional resources. The possibility of acquiring the equipment remains open should market availability improve in future tranches.

55. The Secretariat enquired about the disbursements per activity and the reallocation of funds. UNIDO explained that no overall overspending occurred, but rather an internal reallocation of resources. Savings were generated in the procurement of equipment, which were reallocated to the development of the HC manuals. The reallocations do not comprise more than 30 per cent of the tranche and do not constitute a major change.

Implementation plan for the second tranche of stage I of the Kigali HFC implementation plan*Project to phase out HFCs contained in imported pre-blended polyols in the polyurethane foam sector*Issues related to the selected technologies

56. The Secretariat had multiple discussions with UNIDO regarding the selection of HFO-1233zd(E) noting the delays and cancellation of other PU foam projects in the region due to the low accessibility of HFOs at competitive prices. UNIDO explained that HFO-based systems had reached a higher level of commercial maturity at the international level, with increased production capacity, broader supplier availability, particularly from system houses in Latin America and Asia, and improved technical performance across a wider range of applications, including discontinuous panels and spray foam. UNIDO further explained that supply conditions had improved and HFO systems were now commercially available through established regional suppliers, and that the risk of reverting to HFCs was thus considered limited and would be mitigated through technical validation, supplier engagement, and, most importantly, regulatory measures. Given that all polyol systems are imported and there is no domestic formulation, this measure will effectively prevent the reintroduction of HFC-based systems, ensuring a sustained and irreversible phase-out.

Incremental costs of the foam sector plan

57. Since previous transitions from HCFC-141b and HFC-245fa to HFO-1233zd(E) required no modification to equipment, the HFO integration equipment and HFO processing equipment costs were removed; the thermal conductivity measurement equipment cost was also removed because it is considered basic equipment for operating foam manufacturing and thus is not an incremental cost in the transition to HFOs. The cost for reformulation trials was adjusted using a lower cost per unit, and practical and theoretical workshops costs were adjusted to two workshop per application. The costs for the regulatory update for a ban and enforcement preparation were removed because these should be covered under institutional strengthening or the overarching KIP, while the costs for national and international PU foam technical experts were combined into technical assistance and project management costs.

58. During the discussion, it was acknowledged that while the availability of HFO-based polyols increased in the country, the price was still higher than HFC-based polyols, on this basis, taking into

consideration prices provided by UNIDO, the IOCs for eligible enterprises were calculated for a typical formulation at US \$3.00/kg¹⁹, as per the cost guidelines for stage I of KIPs (decision 95/86(a), (b) and (d)(ii)), and have been calculated on the basis of the eligible portion of the consumption (36.86 mt). While the proposal estimated eligible consumption to be 33.86 mt, upon recalculations, it was noticed that a typo was introduced and all figures were recalculated using 36.86 mt, which is consistent with CP data. The Secretariat adjusted the eligible consumption based on the average consumption over the last three years,²⁰ which amounts to 24.93 mt.

59. On the basis of the above, the total cost of the project amounts to US \$146,790, to phase out 24.93 mt of HFCs contained in imported pre-blended polyols, with a cost-effectiveness of US \$5.89/kg. The funds requested by enterprises and technical assistance were adjusted accordingly, as shown in table 6.

Table 6. Agreed incremental costs for the conversion of two PU foam enterprises in the Plurinational State of Bolivia

Component	Cost (US \$)	
	As requested	As agreed
HFO integration equipment – Isolcruz (2 units)	160,000	0
HFO processing equipment – Budova	80,000	0
Thermal conductivity measurement equipment	36,000	0
Reformulation trials	24,000	18,000
Practical and theoretical workshops	10,000	9,000
National PU foam technical expert and Regulatory update and enforcement preparation	25,000	0
International PU foam technical expert (missions over 4 years)	10,384	0
Technical assistance and project management costs	0	45,000
Subtotal ICCs	345,384	72,000
IOCs	0	74,790
Total	345,384	146,790
Eligible consumption	33.86	24.93
Cost-effectiveness (US \$/kg)	10.20	5.89

60. In addition to the 24.93 mt of HFCs contained in imported pre-blended polyols eligible for funding, as shown in table 6, the sector is also consuming 11.66 mt not eligible for funding. This consumption will also be phased out during stage I of the KIP. The cost-effectiveness, including all tonnage being phased out in stage I, is US \$3.98/kg.

Impact on the climate of the foam sector plan

61. The conversion of the PU foam manufacturing enterprises in the Plurinational State of Bolivia would prevent the emission into the atmosphere of approximately 35,527 CO₂-eq tonnes of HFCs per year, as shown in table 7.

¹⁹ The price difference for the blowing agent was approximately US \$3-4.

²⁰ In line with the decision in paragraph 32 (b) in UNEP/OzL.Pro/ExCom/16/20

Table 7. Impact on the climate of the PU foam project in the Plurinational State of Bolivia

Year	Substance	GWP	Consumption in pre-blended polyols	
			mt	CO ₂ -eq tonnes
Before conversion				
2022	HFC-365mfc/227ea	963.82	38.78	37,377
2023	HFC-365mfc/227ea	963.82	39.20	37,782
2024	HFC-365mfc/227ea	963.82	32.60	31,421
2022-2024 average			36.86	35,527
After conversion				
	HFO-1233zd(E)	0	13.71	0
	Impact			35,527

Gender policy implementation

62. The Government of the Plurinational State of Bolivia has integrated the gender policy of the Multilateral Fund, in accordance with decisions 84/92(d) and 90/48(c) in the implementation of the KIP. During the implementation of the first tranche, women were encouraged to participate in the workshops, consultations, and training activities organized under the project and sex-disaggregated data was collected and reported. Women comprised 30 per cent of the participants in customs and enforcement training and 7 per cent of the participants in technician and instructor training. During the implementation of the second tranche, these efforts will continue in capacity-building, technical training, and stakeholder engagement activities. In addition, training institutions and sector associations will be encouraged to support the participation of women in the RAC sector. Communication and awareness-raising materials developed under the KIP will highlight opportunities for women's participation in technical professions and entrepreneurial initiatives related to the RAC servicing sector.

Updated Agreement

63. In view of the addition of the project to phase out HFCs contained in imported pre-blended polyols in the PU foam sector, the Agreement between the Government of the Plurinational State of Bolivia and the Executive Committee has been updated. Specifically, paragraph 2 and Appendices 1-A and 2-A have been revised; and paragraph 17 has been added to indicate that the updated Agreement supersedes that approved at the 97th meeting by decision 97/17(c), as contained in annex I to the present document. The full updated Agreement will be appended to the final report of the 98th meeting.

Sustainability of the HFC phase-out and assessment of risks

64. The long-term sustainability of the Plurinational State of Bolivia's HFC phase-down, aligned with the Kigali Amendment, will be ensured through strengthened regulations, institutional capacity, market transformation, and continued technical support to the RAC servicing sector. Strengthened HFC import controls, licensing, and quota management will provide a predictable regulatory framework for the transition to low-GWP alternatives. Institutional sustainability will be supported by the electronic licensing and monitoring system within the Single Window for Foreign Trade and ongoing coordination with the National Customs, ensuring transparency, traceability, and effective enforcement. In the servicing sector, enhanced training, certification, and good practices will build national capacity to safely handle alternative refrigerants, including low-GWP and mildly flammable options. Market transformation will be promoted through awareness activities, dissemination of technical guidelines, and demonstration initiatives that facilitate adoption of climate-friendly technologies. Sustainability is further reinforced through coordination among public institutions, training centers, industry stakeholders, and technicians' associations, ensuring long-term ownership of the transition.

65. Key risks include institutional changes and staff turnover, limited familiarity with alternative refrigerants, and market resistance due to higher upfront costs. Mitigation measures include strengthening

regulatory instruments, institutionalizing licensing and monitoring systems, integrating alternative-refrigerant training into national vocational programmes, and expanding technician certification. Awareness activities and technical demonstrations will help highlight the technical, environmental, and economic benefits of low-GWP technologies, supporting the long-term sustainability of the HFC phase-down.

Conclusion

66. The 2025 consumption of 415,228 CO₂-eq tonnes is 38.8 per cent below both the Montreal Protocol consumption limit and the maximum allowable consumption of 677,884 CO₂-eq tonnes stated in the Agreement. Activities completed during the first tranche of stage I include the implementation of the electronic import monitoring system, customs training, development of agreements with training institutions, procurement of tools and equipment for RAC training institutions, and awareness-raising activities. The disbursement rate for the first tranche is 43 per cent. The second tranche of stage I was due at the 100th meeting of the Executive Committee, in 2027; however, given the level of progress and disbursement achieved so far, the Secretariat considers the approval of the second tranche at the present meeting to be conducive to ensuring a continued implementation of the phase-down activities, especially since it aligns with the submission of the HPMP tranche and foam sector plan and thus helps avoid the administrative burden for the Government, UNIDO, and UNEP. Activities planned for the second tranche include continued training for customs/enforcement officers and RAC technicians, provision of equipment to RAC associations and training institutions, further development of the refrigerant RRR scheme, continuation of awareness-raising activities, and a plan to completely eliminate the use of HFCs in the PU foam sector.

RECOMMENDATION

67. The Executive Committee may wish to consider:

- (a) Noting:
 - (i) The progress report on the implementation of the first tranche of stage I of the Kigali HFC implementation plan (KIP) for the Plurinational State of Bolivia;
 - (ii) That the second tranche of stage I of the KIP included funding for a plan for the complete elimination of HFCs contained in imported pre-blended polyols in the polyurethane foam sector (foam sector plan), in the amount of US \$146,790, plus agency support costs of US \$19,083 for UNIDO;
 - (iii) The commitment of the Government of the Plurinational State of Bolivia to ban the imports and/or the use of HFCs, both pure and contained in pre-blended polyols, by the time the final foam manufacturing plant has been converted to a non-HFC technology and no later than 1 January 2030;
 - (iv) That the Fund Secretariat has updated the Agreement between the Government of the Plurinational State of Bolivia and the Executive Committee, as contained in annex I to the present document, specifically: paragraph 2 and Appendices 1-A and 2-A have been revised based on the inclusion of the foam sector plan and the accordingly revised funding level, and paragraph 17 has been added to indicate that the updated Agreement supersedes that approved at the 97th meeting;
 - (v) That 35,527 CO₂-equivalent tonnes will be deducted from the remaining eligible consumption for HFCs contained in imported pre-blended polyols; and

- (b) Approving the second tranche of stage I of the KIP for the Plurinational State of Bolivia, including the PU foam sector plan mentioned in subparagraph (a)(ii) above, and the corresponding 2026–2029 tranche implementation plan, in the amount of US \$277,178, consisting of US \$225,290, plus agency support costs of US \$29,288, for UNIDO and US \$20,000, plus agency support costs of US \$2,600, for UNEP.

Annex I

TEXT TO BE INCLUDED IN THE REVISED AGREEMENT BETWEEN THE GOVERNMENT OF THE PLURINATIONAL STATE OF BOLIVIA AND THE EXECUTIVE COMMITTEE OF THE MULTILATERAL FUND FOR THE REDUCTION IN CONSUMPTION OF HYDROFLUOROCARBONS IN ACCORDANCE WITH STAGE I OF THE KIGALI HFC IMPLEMENTATION PLAN

(Relevant changes are in bold font for ease of reference)

2. [...] and in respect to any consumption of Annex F substances that exceeds the levels defined in rows 4.1.3 (remaining consumption eligible for HFCs contained in imported pre-blended polyols (CO₂-eq tonnes)).

9. [...] The Country agrees to evaluations, which might be carried out **under the evaluation work programme** of the Multilateral Fund or the evaluation programme of the Lead IA taking part in this Agreement.

17. This updated Agreement supersedes the Agreement reached between Government of the Plurinational State of Bolivia and the Executive Committee at the 97th meeting of the Executive Committee.

18. APPENDIX 1-A: THE SUBSTANCES

Substances	Starting point for aggregate reductions in consumption (CO ₂ -eq tonnes)
HFCs	n/a
HFCs contained in imported pre-blended polyols	35,527

APPENDIX 2-A: THE TARGETS, AND FUNDING

Row	Particulars		2023	2024	2025	2026	2027	2028	2029	2030	Total
1.1	Montreal Protocol reduction schedule of Annex F substances	%	n/a	freeze	freeze	freeze	freeze	freeze	10	10	n/a
		CO ₂ -eq tonnes	n/a	677,884	677,884	677,884	677,884	677,884	610,096	610,096	n/a
1.2	Maximum allowable total consumption of Annex F substances	Reduction in %	n/a	0.0	0.0	0.0	0.0	0.0	15.0	15.0	n/a
		CO ₂ -eq tonnes	n/a	677,884	677,884	677,884	677,884	677,884	576,201	576,201	n/a
2.1	Lead IA (UNIDO) agreed funding (US \$)		153,500	0	0	225,290	0	0	0	25,000	403,790
2.2	Support costs for Lead IA (US \$)		19,955	0	0	29,288	0	0	0	3,250	52,493
2.3	Cooperating IA (UNEP) agreed funding (US \$)		40,500	0	0	20,000	0	0	0	7,500	68,000
2.4	Support costs for Cooperating IA (US \$)		5,265	0	0	2,600	0	0	0	975	8,840
3.1	Total agreed funding (US \$)		194,000	0	0	245,290	0	0	0	32,500	471,790
3.2	Total support costs (US \$)		25,220	0	0	31,888	0	0	0	4,225	61,333
3.3	Total agreed costs (US \$)		219,220	0	0	277,178	0	0	0	36,725	533,123
4.1.1	Deductions of HFCs contained in imported pre-blended polyols agreed under this Agreement (CO ₂ -eq tonnes)										35,527
4.1.2	Deductions of HFCs contained in imported pre-blended polyols from previously approved projects (CO ₂ -eq tonnes)										0
4.1.3	Remaining eligible consumption for HFCs contained in imported pre-blended polyols (CO ₂ -eq tonnes)										0