

REPORT
on activities of the Ozone Center in 2024

Improvement of the legal and regulatory framework for HFCs control

An official Order of the Government of the Kyrgyz Republic was issued **on January 24, 2024** on the introduction of a quota for the import of HFCs into the Kyrgyz Republic.

March 2, 2024 The Interstate Standard Refrigerating systems and heat pumps. Safety and environmental requirements. Part 1. Basic requirements, definitions, classification and selection criteria was approved. GOST 34891.1-2022

March 2, 2024 The Interstate Standard Refrigerating systems and heat pumps. Safety and environmental requirements. Part 2. Design, construction, testing, marking and documentation was approved. GOST 34891.2-2022

March 2, 2024 The Interstate Standard Refrigerating systems and heat pumps. Safety and environmental requirements. Part 3. Installation site and personal protection was approved. GOST 34891.3-2022

March 2, 2024 The Interstate Standard Refrigerating systems and heat pumps. Safety and environmental requirements. Part 4. Operation, maintenance, repair and recovery was approved. GOST 34891.4-2022

March 2, 2024 The Interstate Standard “Compressor and Condensing Units for Refrigeration”. Rating conditions, tolerances and presentation of manufacturer's performance data was approved. GOST EN 13215-2017

February and March 2024, a general survey of energy efficiency legislation in the field of refrigeration, air conditioning and heat pumps was carried out.

In April 2024, a brochure on energy efficiency in the refrigeration, air conditioning and heat pump sector was developed. The brochure covers the issue of energy efficiency, GWP of refrigerants, and equipment selection.

1 November 2024, the 36th Conference of the Parties to the Montreal Protocol endorsed Decision XXXVI/11: «Avoiding imports of energy inefficient products and equipment containing- or relying on controlled substances », developed and submitted by the delegation of Kyrgyzstan.

5 December 2024 The Executive Committee of the Multilateral Fund to Montreal Protocol reviewed the report submitted with the request for the renewal of the institutional strengthening project for Kyrgyzstan (phase XII) and approved the Project for Kyrgyzstan for the period 2025–2027.

Workshops in the framework of KIP and energy efficiency project

No.	Place	Date	Number of participants (number of women)
1.	Bishkek	14 th of February 2024	28 (6)
2.	Bishkek	5 th of April 2024	25 (4)
3.	Osh	28 th of May 2024	30 (2)
4.	Osh	29 th of May 2024	35 (2)
5.	Bulan-Sogottu village	7-8 th of June 2024	47 (10)

On February 14, 2024, a workshop “Energy efficiency in refrigeration and climate equipment” was held in Bishkek. Workshop participants were informed about the Kigali Amendment to the Montreal Protocol and energy efficiency in the refrigeration and air-conditioning sector. The national cooling action plans and the energy efficiency policies of the Kyrgyz Republic were discussed in detail. The technical regulations of the Eurasian Economic Union “On the requirements for energy efficiency of energy-consuming devices” were described in detail, the transition to natural refrigerants and the possibilities of increasing energy efficiency in the long term were also discussed.

On April 5, 2024, Bishkek, a workshop on the energy efficiency of refrigeration equipment and air conditioners for sellers and importers of refrigeration and air conditioning equipment was held. Participants were told in detail about the strategy of the Kyrgyzstan in phasing down of hydrofluorocarbons (HFCs) for 2024-2045, as well as the problems of energy efficiency in the refrigeration sector. The requirements of the technical regulations “On the requirements for energy efficiency of energy-consuming devices” of the EAEU for imported refrigeration equipment were described in detail and a review of legislation and regulatory requirements in the field of energy efficiency of refrigeration equipment and air conditioners was carried out. Practical cases of successful implementation of energy efficient solutions and innovative technologies in RAC sector were presented

May 28, 2024, a workshop on the energy efficiency of refrigeration equipment and air conditioners was held in Osh city for importers and sellers of refrigeration and air conditioning equipment. The seminar covered the importance of energy efficiency for business and the environment, and the direct and indirect emissions of the refrigeration and air conditioning sector. A detailed review of legislation and regulations for energy efficiency of refrigeration equipment and air conditioners was made. Participants were told about innovative technologies in RAC sector, practical cases of successful implementation of energy-efficient solutions in RAC sector were presented, refrigerants and energy efficiency in the long term and the use of HC as refrigerants in commercial refrigerators were discussed. Participants were also told about the certification requirements for RAC technicians and RAC enterprises of the Kyrgyz Republic.

May 29, 2024, a workshop on "Best Practices for Achieving Energy Efficiency in RAC Sector" was held in Osh city for refrigeration technicians. The participants were informed about the Kigali Amendment, climate change and the importance of improving energy efficiency in the refrigeration sector. The National Cooling Action Plans, the energy efficiency policy of the Kyrgyz Republic and the technical regulation of the Eurasian Economic Union "On requirements for the energy efficiency of energy-consuming devices" and their requirements for modern refrigeration equipment were presented. The technical characteristics of natural refrigerants and low-GWP HFCs were discussed, and an overview of energy-efficient refrigeration and air conditioning equipment was given.

June 7-8, 2024, a workshop on "Best Practices for Achieving Energy Efficiency in RAC Sector" was held in Bulan-Sogottu village. The participants were informed in detail about energy efficiency issues, climate change and the provisions of the Kigali Amendment. The technical regulation "On the requirements for energy efficiency of energy-consuming devices" of the EAEU for imported refrigeration equipment and the requirements of legislation and regulatory documents

for RAC sector were described in detail. Alternatives to HFCs with a lower GWP, aspects of energy efficiency of refrigeration and air conditioning equipment were discussed, and an overview of modern energy-efficient refrigeration units used in the industrial and commercial sectors, operating on HFCs with a low GWP and natural refrigerants, was given.

***Training of representatives of authorized state bodies
(Customs and border services and ecological and technical inspectorate)***

No.	Place	Date	Number of participants (women)	Institution
1	Osh city	12 th of November 2024	23 (4)	ETCS
2	Osh city	13 th of November 2024	28 (5)	SCS
3	Leninskoe village	19 th of November 2024	21 (7)	SCS
4	Bishkek city	21 st of November 2024	18 (7)	ETCS

November 12, 2024, a workshop “State Control over Compliance with Legislation in the Field of Energy Efficiency of RAC Equipment” for employees of the Environmental and Technical Control Service under the Ministry of Natural Resources, Ecology and Technical Control of the Kyrgyz Republic took place in Osh. The seminar focused on the protection of the ozone layer, energy efficiency, and regulation of hydrofluorocarbons (HFCs) in Kyrgyzstan. Participants learned about the Montreal Protocol, the Kigali Amendment, and their importance in combating climate change and protecting the ozone layer. Environmental indicators of ODS and HFCs, such as ozone depletion potential (ODP) and global warming potential (GWP), were discussed. The legislative framework for the protection of the ozone layer was discussed, including licensing for the import/export of HFCs. Particular attention was paid to energy efficiency, including standards, MEPS, and measures to support the transition to energy efficient equipment. Presentations included an analysis of the energy sector of Kyrgyzstan and proposed steps for its optimization. Participants were trained in the rules of technical supervision of refrigeration systems, including monitoring refrigerant leaks and log-books for equipment and refrigerants. The practical part included a demonstration of the use of gas analyzers and a leak detector for working with refrigerants. Particular attention was paid to safety issues when working with refrigerants. The seminar contributed to improving the professional competence of participants in monitoring of HFCs handling and the energy efficiency of refrigeration and air conditioning equipment in the country.

November 13, 2024, a workshop on state regulation of import/export/transit of HFCs and prevention of illegal trade in HFCs was held in Osh for officers of the State Customs Service. The participants were provided with information on stratospheric ozone, the impact of ultraviolet radiation on human health, as well as climate change issues and the Kigali Amendment. Particular attention was paid to the regulation of HFCs in the Kyrgyz Republic, it was said that HFCs are imported under license and ODS are completely banned from import in 2020. During the seminar, information was provided on HFCs and equipment containing these substances, including labeling, CAS/ASHRAE/UN numbers, color codes. Various sectors of the economy and types of equipment using HFCs were also discussed. A separate presentation was given on the methods of smuggling

HFCs and ODS, and the facts of smuggling ODS/HFCs in Kyrgyzstan were considered. The requirements for the energy class of imported equipment in accordance with the Technical Regulations of the EAEU were discussed. All participants of the seminar were provided with an information brochure "Recommendations for the implementation of state control over the import/export of ozone-depleting substances, hydrofluorocarbons and products containing them for employees of customs and law enforcement agencies". The seminar also included a practical lesson on the use of a refrigerant identifier (gas analyzer) to determine the type of refrigerant, as well as safety precautions when handling refrigerants and pressure vessels, including the necessary personal protective equipment.

November 19, 2024, in Leninskoye village a workshop was held for employees of the State Customs Service on state regulation of import/export/transit of HFCs and prevention of illegal trade in HFCs. The participants were provided with information on stratospheric ozone, the impact of ultraviolet radiation on human health, as well as climate change issues and the Kigali Amendment. The participants were informed that HFCs are imported under license and ODS are completely banned from import in 2020. The seminar covered HFCs and equipment containing HFCs, including labeling, CAS/ASHRAE/UN numbers, color codes, and discussed various economic sectors and types of equipment that use HFCs. A separate presentation was given on methods of smuggling HFCs and ODS, and facts of ODS smuggling in Kyrgyzstan were presented. The requirements of the technical regulations of the EAEU for the energy efficiency of imported RAC equipment were discussed. All participants of the seminar were given a brochure "Recommendations for the implementation of state control over the import/export of ozone-depleting substances, hydrofluorocarbons and products containing them for employees of customs and law enforcement agencies". The seminar also included a practical lesson on the use of a refrigerant identifier (gas analyzer) to determine the type of refrigerant, as well as information on safety rules when handling refrigerants and pressure vessels, and what personal protective equipment is used to handle refrigerants.

November 21, 2024, a workshop was held in Bishkek for employees of the Environmental and Technical Control Service, dedicated to the topic "State control over compliance with legislation in the field of energy efficiency of RAC equipment". During the workshop, the participants studied the issues of ozone layer protection, climate change mitigation, energy efficiency improvement and regulation of hydrofluorocarbons (HFCs) in Kyrgyzstan. Key aspects of the Montreal Protocol and the Kigali Amendment, their role in combating climate change and preserving the ozone layer were discussed. Environmental characteristics of ODS and HFCs, such as ODP and GWP, were considered. The participants were familiarized with the laws on the protection of the ozone layer and atmospheric air protection and their requirements for state inspection. Particular attention was paid to energy efficiency standards, MEPS and support for the introduction of environmentally friendly equipment. The requirements of Code and Technical Regulations for energy efficiency classes and GWP of refrigerants were discussed. Data on the energy sector of Kyrgyzstan were presented. In the practical part, the participants mastered the use of a gas analyzer and refrigerants leak detector. Safety measures were also considered. The seminar helped the participants strengthen their skills in monitoring the use of HFCs and RAC equipment working on HFCs.

Support local industrial sector

June 26-27, 2024, the XVIII Congress of Refrigeration Industry Specialists of the Kyrgyz Republic was held in Cholpon-Ata, Issyk-Kul Oblast. The congress was attended by representatives of universities, vocational schools, refrigeration industry and delegations of the RAC Association of the Republic of Kazakhstan. During the congress, issues such as legislation for the energy efficiency of refrigeration equipment, air conditioners and heat pumps, minimum energy efficiency standards were considered. Participants discussed the problems of increasing energy efficiency, energy labeling and the introduction of natural refrigerants in RAC sector.

The congress delegates discussed the problem of training refrigeration technicians/experts at the level of vocational schools and higher education, issues of certification to meet modern standards in connection with the transition to more complex modern equipment operating on HFCs with a low global warming potential and natural refrigerants. A review was made of modern refrigeration equipment, shock freezing technology and sandwich panels used in Kyrgyzstan.

The international cooperation

January 16, 2024 COPA webinar “Financing refrigerant management - including Article 6 of the Paris Agreement applicability to refrigerant recovery/reclaim/destruction projects.” This webinar examined Article 6 of the Paris Agreement and its implications for financing projects to reduce refrigerant emissions. An overview of the structure and financial instruments was provided, as well as the potential interaction of Article 6 with the Kigali Amendment to the Montreal Protocol.

March 20, 2024 ECA online meeting on "Energy-efficiency pilot projects in motion – the why, how, who, and when." A presentation was given Key components in pilot project to transform markets to energy efficient and low GWP cooling. The speakers shared their experience and recommendations for implementing energy efficiency projects in the RAC sector.

April 23-26, 2024 meeting of the ECA network and enforcement meeting. At the meeting there was a discussion of key decisions of the Executive Committee, the participants also spoke about the progress of projects implementation in their countries, there was a discussion of refrigerant life cycle management and issues related to the licensing and quota system for HFCs in countries and the exchange of national experience. Issues about the role of customs services in environmental protection were considered.

April 26-27, 2024 XIII International Scientific and Technical Conference Kazakhstan-Cold 2024 “Education - Science - Business - Production - Ecology”. The conference discussed topics such as energy-saving technologies in heating, cooling and air conditioning, strategies aimed at reducing greenhouse gas emissions and modern developments and refrigeration systems in Kazakhstan.

7-12 July 2024 Forty-sixth meeting of the Open-ended Working Group of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer in Montreal, Canada. The main topics of the meeting included life cycle management of refrigerants, climate-friendly alternatives to HFCs, country reports, HFC-23 emissions. Countries provided information on illegal trade, production and consumption of controlled substances.

11 September 2024 35th ECA online meeting on the preparation of inventories of banks of used or unwanted controlled substances. The meeting covered following topics: Circularity of refrigerants: Case study from Hungary, Circular Economy and lifecycle of refrigerants: Protecting

the environment by proper refrigerant handling and Lifecycle approach to refrigerants: Experiences from Poland on refrigerant RRR.

15 - 17 October 2024 Training for new staff of Montreal Protocol Units (MPU) in the Europe and Central Asia (ECA) Region, Paris, France. The training covered the following topics: ozone layer depletion and why it is necessary to protect the ozone layer, the achievements of the Montreal Protocol, the organizational structure of the MP, global commitments of the parties, data collection, monitoring and reporting, awareness raising and working with stakeholders and gender mainstreaming.

25 October – 1 November 2024 Thirteenth meeting of the Conference of the Parties to the Vienna Convention for the Protection of the Ozone Layer and Thirty-sixth Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer, Bangkok, Thailand. The meeting addressed energy efficiency, refrigerant life cycle management, HFC-23 and very short-lived HFCs, and combating illegal trade in HFCs.

11-13 December 2024, Europe and Central Asia (ECA) Network Meeting on the Kigali Amendment Implementation Plan (KIP)/Ozone2Climate, Belgrade, Serbia. Participants discussed ozone-friendly, climate-friendly and energy-efficient technologies in refrigeration, and countries presented reports on the implementation of KIP projects. Participants discussed approaches to preparing national inventories of used or unwanted controlled substances.

Printed literature

1. Brochure "Kigali Amendment to the Montreal Protocol: Every Action Matters" - 100 copies
2. Brochure "Automobile Air Conditioners Guide" - 100 copies
3. Brochure "Safety Regulations for Refrigeration Systems Using R717 (Ammonia)" - 100 copies
4. Brochure "Modern Air Conditioners: Installation, Operation, and Repair" - 100 copies
5. Brochure "Automation of Refrigeration Systems and Air Conditioning Systems" - 100 copies
6. Brochure "Brief Guide on Handling Flammable Refrigerants" - 100 copies
7. Practical Guide for Certification of Refrigeration and Air Conditioning Technicians - 100 copies
8. Guide for Calculating the Energy Efficiency of Refrigeration Equipment and Air Conditioners - 100 copies
9. Poster "Basic Safety Rules for Technicians in the Installation, Repair, and Service of Refrigeration Systems" - 100 copies
10. Poster "Installation, Repair, and Maintenance of Refrigeration Equipment and Air Conditioning Systems" - 100 copies
11. Poster "Ammonia as a Refrigerant" - 100 copies
12. Guide to energy efficiency of refrigeration equipment, air conditioners and heat pumps - 200 copies
13. Brochure "Energy efficiency of refrigeration equipment, air conditioners and heat pumps" - 200 copies
14. Interstate standards – 200 copies.
15. Poster "Safety is on the first place" in Russian - 50 copies
16. Poster " Safety is on the first place " in Kyrgyz - 50 copies
17. Brochure "Current State of the Ozone Layer" - 200 copies
18. Brochure "The Montreal Protocol and Human Health" - 200 copies

19. Brochure "The Montreal Protocol and SDGs" in Russian - 200 copies
20. Brochure "The Montreal Protocol and SDGs" in Kyrgyz - 200 copies
21. Information bulletin "Protection from harmful ultraviolet radiation" - 200 copies
22. Poster for September 16 "International Day for the Preservation of the Ozone Layer" - 11 copies
23. Brochure "The Role of the Montreal Protocol in Achieving Sustainable Development Goals" - 200 copies
24. Brochure "Energy efficiency of refrigeration equipment, air conditioners and heat pumps" in Kyrgyz language- 200 copies

List of official letters for the reporting period

1. Letter to the State Customs Service on reporting on imports of HFCs and natural refrigerants for 2023.
2. Letter to the National Statistical Committee of the Kyrgyz Republic on reporting on imports of HFCs and natural refrigerants for 2023.
3. Letters to the organizations Buudan LLC, Storozhenko PE, Ovsyannikova PE Promkholod LLC, KaribeYug LLC, CJSC Shoro, Samsung Service LLC, OJSC Rembytteknika, PE Podkopaev, Lotar LLC, Vinterlux LLC, Ntek LLC, PE Ovsyannikova, CJSC Arpa named after N. Urmanbetova, Riman Company LLC, Holod Trade LLC, Nissens LLC and Rempromkholod LLC about reporting on the import of HFCs and natural refrigerants and blowing agents in 2023.

Monitoring of HFCs consumption

In 2024, letters were sent to organizations using HFCs and natural refrigerants to provide reports on refrigerants for the year 2023. Based on the survey results, a report on the consumption of HFCs and natural refrigerants in Kyrgyzstan was compiled. The report on HFC consumption for 2023 was submitted to the Multilateral Fund on 30th of April 2024.

Regular reporting on the management of HFCs to the Secretariat of the Montreal Protocol, the Multilateral Fund of the Montreal Protocol, UNEP, UNDP

Data on HFCs consumption in 2023 were sent to the Multilateral Fund of the Montreal Protocol and UNEP Ozone Secretariat. Reports on the activities of the Ozone Center were sent to the UNEP Division of Technology, Industry and Energy in February 2023. Financial reports were sent to UNDP in January 2024.

Conducting a campaign to raise public awareness

A competition was held in **March 2024** to create 2 short videos and 2 infographics on energy efficiency and energy labelling of HVRAC equipment for the general public and customs officials. 2 videos and 2 infographics posters were produced and used for workshops on energy efficiency in the HVRAC sector.

Also 2 video films in Kyrgyz language with Russian subtitles were produced. The first one 'Modern technologies - demand of the population' - which tells about the EAEU Technical Regulations, which obliges to import into the country equipment with energy efficiency class not

lower than A and B and about the energy labelling of HVRAC. The second video film 'Efficient and modern life is good for us' - which tells about the right choice of refrigeration and air conditioning equipment for a wide range of viewers. These videos show what indicators paid attention should be to when buying refrigeration equipment.

June 29, 2024, an information campaign was held at the Altyn Balalyk children's rehabilitation camp. During the event, children and counselors were told about the most basic rules for protection from harmful solar UV, what protective equipment should be used and what time to sunbathe for the least harm from UV. Brochures and posters with information on the harm of UV and protective measures were distributed.

July 15-24, 2024, an information campaign "Protect yourself from the Sun" dedicated to the International Ozone Day was held in children's summer camps of the Issyk-Kul region. The main goal of the information campaign was to disseminate information about the harmful effects of solar ultraviolet radiation, as well as methods of protection from harmful UV radiation. Children and counselors were told about measures to protect against solar UV, choosing the right clothes and sunglasses. More than 2,500 children participated in this campaign.

September 16, 2024, the Kutman Tan TV program hosted an interview with an expert on climate and the ozone layer, dedicated to September 16, World Ozone Day. The interview was about the Montreal Protocol, the role of stratospheric ozone in protecting against harmful ultraviolet radiation, as well as the global problem of climate change and the Kigali Amendment to the Montreal Protocol. An article about climate protection was also published in the Erkin-Too newspaper.

September 16, 2024, an environmental event "Montreal Protocol: Stepping Up the Fight Against Climate Change" was held at Lyceum No. 76 in Bishkek. Participants were told about the depletion of the ozone layer and measures to protect against increased solar UV. It was told about the Vienna Convention and the Montreal Protocol. 8th year schoolchildren talked about the protection of the ozone layer, the harm of solar UV. A question-and-answer competition was held on knowledge about the ozone layer and climate change. A creative competition on the topic of "Climate Change Mitigation" was also organized. A total of 40 schoolchildren participated.

September 16, 2024, an event was held for schoolchildren at the secondary school in the village of Budenovka, Issyk-Ata district. Schoolchildren were told in detail about the protection of the ozone layer and the Montreal Protocol on Substances that Deplete the Ozone Layer, the relationship of the Montreal Protocol with 17 Sustainable Development Goals (SDGs). They were told why it is so important to preserve the ozone layer and how to protect themselves from harmful solar UV. A total of 40 schoolchildren took part in the event.

September 24, 2024, a workshop for teachers was held in Bishkek at Secondary School No. 69. During the seminar, teachers were told in detail about the problems of protecting the ozone layer and combating climate change. The Montreal Protocol, regulation of ODS/HFCs, the Kigali Amendment to the Montreal Protocol and the contribution of the amendment to climate change mitigation were also discussed. The connection between the Montreal Protocol and the 17 Sustainable Development Goals (SDGs) was also highlighted. The schoolchildren also prepared a performance on the importance of preserving the ozone layer and climate, they told in the form of a play how solar UV affects the planet and what is being done in the world to protect the planet from solar UV. 110 schoolchildren and 15 teachers took part in the event.

September 25, 2024, the Ozone Center organized a seminar at Vocational Lyceum No. 93 in Bishkek. Ozone Center representatives spoke about the Montreal Protocol, its history and current achievements. They also explained about the ozone layer, its role for humans and the consequences of ozone layer depletion. The problem of climate change and the adoption of the Kigali Amendment and the regulation of HFCs were also discussed. The participants were told

about the importance of choosing the right refrigerants taking into account their impact on the climate. 17 students and 1 master attended the seminar.

September 26, 2024, a workshop dedicated to the World Ozone Day was held at the Kyrgyz State Technical University. The seminar was attended by teachers and students of the Food Engineering Department. The agenda of the seminar included the following topics: Kigali Amendment to the Montreal Protocol, the problem of climate change. Participants were recommended to choose energy-efficient refrigeration equipment working on natural refrigerants. 23 students and 6 teachers attended the workshop.

September 27, 2024, the Ozone Center held a workshop at Vocational Lyceum No. 94 in Bishkek. All participants were told about ozone layer depletion and the impact of UV on human health, the problem of climate change and how the Kigali Amendment contributes to the fight against climate change were also covered. The participants were told about GWP and how to take this parameter into account when choosing refrigerants for refrigeration equipment. 15 students attended the workshop.

In 2024, there was conducted updating and replenishment with thematic information the following sites: www.climate.kg, www.ozoncenter.kg, www.ecoholod.com.kg. These websites are regularly updated as soon as new information appears.

All activities carried out within the framework of the project were covered in the main mass media of the country:

- <http://ozoncenter.kg/>
- <http://www.climate.kg>
- <http://www.ecoholod.com.kg>
- <http://ekois.net/>
- <http://www.akipress.kg>
- Erkin-Too Newspaper from 17.09.2024
- Kurman Tan TV program 16.09.2024
- <https://mnr.gov.kg/ru/posts/news/2024-zyldyn-7-sentyabrynan-tartyp-7-oktyabryna-ceiinki-mezgili-taza-aba-bir-ailygy-dep-zaryyalandy>
- <https://eco.akipress.org/news:2165835?from=portal&place=last>

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