Volume XXIV | 15 October 2024

In this issue:

GLOBAL

1. Kigali Amendment latest ratifications

Congratulations to the latest countries which have ratified the Kigali Amendment:

United Arab Emirates, 19 April 2024
Thailand, 3 April 2024
Djibouti, 8 Mar 2024
Guatemala, 11 January 2024

At the Twenty-Eighth Meeting of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer, held in Kigali from 10 to 15 October 2016, the Parties adopted, in accordance with the procedure laid down in paragraph 4 of article 9 of the 1985 Vienna Convention for the Protection of the Ozone Layer, a further amendment to the Montreal Protocol as set out in Annex I to the report of the Twenty-Eighth Meeting of the Parties (Decision XXVIII/1).

Kigali Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer, Status of Ratification 15 October 2016 to **date**.

United Nations Treaty Collection

Image: UN Treaty Collection website

2. Combined thirteenth meeting of the Conference of the Parties and Thirty-Sixth Meeting of the Parties

Combined thirteenth meeting of the Conference of the Parties **(COP13)** and the Thirty-Sixth Meeting of the Parties to the Montreal Protocol (**MOP36**), combined meeting of the Bureau of the twelfth meeting of the Conference of the Parties (COP12) and the Thirty-Fifth Meeting of the Parties, and the seventy-third meeting of the Implementation Committee (**ImpCom73**) will be convened **in-person in Bangkok, Thailand** as follows:

- COP12/MOP35 Bureau – 25 October 2024
- ImpCom73 – 25 October 2024
- Workshop on Life-cycle Refrigerant Management (LRM) – 27 October 2024
- COP13/MOP36 – 28 October-1 November 202

The meeting and the workshop will be held in person at the following venue: United Nations Conference Centre (UNCC) United Nations Economic and Social Commission for Asia and the Pacific (ESCAP), Rajadamnern Nok Avenue, Bangkok, Thailand

Live streaming of the plenary proceedings will be provided for viewing.

Related documents and side events information are available from the Ozone Secretariat's website

The Ozone Secretariat looks forward to welcoming you in Bangkok and working with you to achieve a successful outcome of our meetings.

UNEP Ozone Secretariat, October 2024

Image: UNEP Ozone Secretariat

3. The Multilateral Fund New Core Products

The Multilateral Fund work transforms people's lives. Visit The Multilateral Fund's new knowledge management

system, learn more about the following Core products and more. Discover how the implementation of the Montreal Protocol through the Multilateral Fund (MLF) is making a global impact.

1. **New website** – please have a look at https://multilateralfund.org/ – Please also have a look at "**Our impact**" https://multilateralfund.org/our-impact including our SDGs page.

2. **QuiriO_3** – https://multilateralfund.org/resources/decisions a dynamic search engine and repository of more than 10,000 Executive Committee decisions. The search engine works like "google". Inspired by the Latin word "quaerere," which means "to seek" or "to inquire", Quiri nods to the search and discovery aspect of the engine and fittingly reflects its role in the user's pursuit of knowledge. O_3 is the ozone molecule. We are also trying to link our QuiriO_3 with AI to enhance even more the user experience.

4. **Online country programme data** – this covers the country program data that are reported by all developing countries on an annual basis. Webinars and in person training sessions will be organized with the National Ozone Officers to facilitate their reporting.
5. The new **meeting portal**, https://multilateralfund.org/meetings where the new navigation will facilitate easy access to, search for and download of meeting documents, for both pre-session and in-session. All documents for the 93rd and 94th meetings have been structured according to the new framework while documents for the previous meetings retain the legacy document structure. All documents remain searchable and accessible through a new filter that was added in the meeting portal home page. Documents are tagged per agenda item, CRPs and working texts are filtered per agenda item, per type, date and time that were posted.

The Multilateral Fund October 2024

Image: The Multilateral Fund

4. Arctic ozone reaches record high in positive step for climate

Earth's ozone layer holes over polar regions, where the stratospheric ozone level is significantly depleted, have been a prevalent feature of climate change news in recent decades. Anthropogenic-sourced chlorofluorocarbons (CFCs) are the primary cause, released from household items such as coolants in fridges, air conditioners and spray cans. Restricting their use has been and remains paramount to ozone hole recovery as they have multi-decadal lifetimes in the atmosphere.

Policies to address ozone depletion, such as the 1987 international agreement of the Montreal Protocol, aim to stop the production and consumption of ozone-depleting substances in order to heal these ozone holes by 2045 and 2066 over the Arctic and Antarctic respectively. As such, since early 2000, levels of stratospheric ozone-depleting inorganic chlorine and bromine in the Arctic have declined, albeit rather slowly.

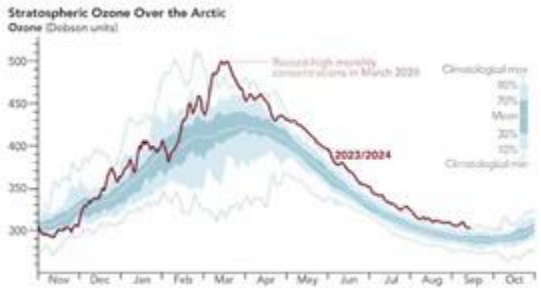
Amidst this bleak forecast, research published in *Geophysical Research Letters* has hinted at a brighter future to come. Dr. Paul Newman, Chief Scientist for Earth Scientists at NASA's Goddard Space Flight Center, and colleagues identified March 2024 as a record high month for Arctic ozone since the 1970s, following a period of overall increase through winter 2023 to 2024.

Above-average ozone levels continued to persist through September 2024. This is significant as, previously, spring has been associated with ozone depletion when high CFC levels were coincident with large, cold, rotating low-pressure meteorological systems, known as polar vortices.

The research team highlights the significance of this research as preliminary evidence that CFC levels are now declining, in order to allow the ozone layer to begin its lengthy recovery. Dr. Newman said, "Ozone is the Earth's natural sunscreen. Increased ozone is a positive story, since it's good for the environment and encouraging news that the global Montreal Protocol agreement is producing positive results."

To explore this change, Dr. Newman and colleagues investigated meteorological and satellite backscatter ultraviolet data to observe the total column ozone (the total amount of ozone from Earth's surface to the top of a particular column of the atmosphere) since 1979.

The March 2024 ozone average peaked at 477 Dobson units (DU), which is 6 DU higher than the previous record in March 1979 and 60 DU higher than the average for the study period (1979 to 2023). Daily record levels for the Arctic occurred for approximately half of the month, with March 20th seeing the maximum of 499 DU.



They found that the lowermost portion of the stratosphere (10–20 km above Earth's surface) experienced record high temperatures for 23 days of the month, coincident with these elevated ozone levels due to warmer weather systems moving up from the underlying troposphere into the stratosphere.

This contrasts with known extreme ozone depletion events in 1997, 2011 and 2020, which occurred during periods of prolonged polar vortices.

The causal mechanism for these anomalous temperature and ozone levels in March 2024 is attributed to enhanced winter eddy heat fluxes from atmospheric Rossby waves. These waves move into the stratosphere and cause a downward motion in the polar regions, leading to warmer polar temperatures.

The waves also slow the stratospheric polar night jet stream (polar vortex) around the Arctic, leading to air from the mid-latitudes converging on the pole, transporting more ozone into the region than normal.

Arctic ozone is controlled by direct depletion of ozone by chlorine and bromine compounds and ozone transport," Dr. Newman explains.

"For the former scenario, the temperatures were too warm for much depletion. For the latter case, waves that propagate into the stratosphere from the troposphere move ozone into the Arctic, warm the polar region, and decelerate the polar vortex. El Niño events and Siberian snow cover have been examined as controlling processes for ozone transport, but do not appear to have a major impact.

"The stronger than normal transport seems to be caused by a random weather year with significant propagation of Rossby waves into the stratosphere. It is likely that the declining levels of oxygen depleting substances and rising levels of carbon dioxide helped further elevate Arctic ozone to a record level."

Given that carbon dioxide levels are still projected to increase in the years to come, Dr. Newman states that is "highly likely" that more of these record ozone events will continue to occur.

"Climate change is believed to be impacting the strength and stability of the stratospheric polar vortex. For example, changes in surface temperature and pressure that result from sea ice loss can increase generation of Rossby waves, resulting in a weaker and unstable polar vortex.

"In addition, global ozone is expected to slowly increase because of the Montreal Protocol. The combination of these two factors will create favorable conditions for higher polar ozone values."

While the Artic and Antarctic overall respond similarly to the effect of Rossby waves, those in the Arctic are much stronger and therefore, ozone levels are higher than in the southern hemisphere, which experiences more pronounced ozone holes.

"The Arctic has a much stronger source of Rossby waves propagating upward into the stratosphere (quantified by the stronger eddy heat flux). Hence, the Arctic is warmer, has a weaker vortex, and much more ozone. Because the Antarctic has a very cold vortex that can contain the reactive chlorine, we have deep ozone holes each year," Dr. Newman states.
Using this insight, coupled chemistry and climate models project a 10–30 DU increase in Arctic ozone from 2000 to 2025, resulting from reduced ozone depleting substances in the atmosphere and elevated greenhouse gas levels.

Furthermore, calculating an ultraviolet (UV) index for a clear sky at noon based upon this data, the 2024 Arctic ozone levels screen more UV, leading to a 5% reduction in the UV index compared to the average across the 1979 to 2023 study interval.

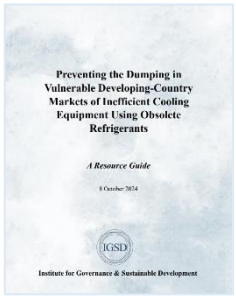
Ultimately, ozone recovery is paramount to protecting life on Earth, otherwise the increased incoming UV radiation from space can have a plethora of consequences, from reducing plant growth (affecting the 'lungs of the Earth' and agricultural food supply) and disrupting marine food chains by impacting growth or primary producers, to enhanced incidence of skin cancer and immune deficiency disorders in humans.

There is now hope that one day these ozone holes will heal.

More information: Paul A. Newman et al, Record High March 2024 Arctic Total Column Ozone, *Geophysical Research Letters* (2024). DOI: 10.1029/2024GL110924

Journal information: Geophysical Research Letters

5. Guide on Preventing the Dumping of Inefficient Cooling Equipment Using Obsolete Refrigerants in Vulnerable Developing-Country Markets - New IGSD Resource



The IGSD Resource Guide on Preventing the Dumping of Inefficient Cooling Equipment provides information and resources for government representatives and their advisors, researchers, academics, non-profit, philanthropic and other nongovernmental organizations, and other citizens to understand the practice of environmentally harmful dumping of new but energy-inefficient cooling equipment that uses high global-warming-potential refrigerants. The Resource Guide also provides insights for those working in other product areas, such as heavy-duty vehicles, involving environmentally harmful product dumping in vulnerable developing countries. The Resource Guide is available here.

- *Section 1* defines terms and reviews how dumping damages the stratospheric ozone layer, forces climate change, endangers public health, and other harm arising from the practice.
- *Section 2* reviews relevant decisions of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer and the Montreal Protocol Multilateral Fund Executive Committee.
- *Section 3* provides insights into the origins of the use of the word "dumping" from Montreal Protocol meeting reports as early as 1993 during the transition from chlorofluorocarbons.
- *Section 4* covers international and country-led initiatives highlighting the importance of preventing dumping and enabling vulnerable developing countries to gain access to life- and planet-saving next-generation cooling technology, with summaries of the Wilmington Declaration from Australia, India, Japan, and the United States (2024) and initiatives of the Climate & Clean Air Coalition.
- *Section 5* catalogs technical reports, workshop proceedings, and research papers contributing to understanding environmental dumping practices, and
- *Section 6* includes examples of media coverage of environmental dumping.

Institute For Governance & Sustainable Development (IGSD), 8 October 2024

Image: IGSD

6. Trees offer sustainable cooling solution in urban communities

DETROIT — Along a busy road in west Detroit, there's little respite from the sun for residents stopping for gasoline, attending places of worship, or bringing children to daycare. But a budding canopy of trees planted this year will change the look and feel of this corridor.

It's the latest U.N. effort to help countries and cities cool buildings without adding air conditioners, raise energy efficiency standards for cooling equipment and phase down highly polluting refrigerants. The goal is to get to near-zero emissions from cooling by 2050.

"We're faced with record-breaking temperatures. We need to save people from extreme heat," said Lily Riahi, global coordinator for the UNEP-led Cool Coalition. "But we have to find a way to cool the planet in a way that doesn't create more heat."

Globally, 20% of electricity is used for cooling. If nothing changes, the demand for equipment, such as air conditioners and refrigerators, is projected to triple by 2050, doubling electricity consumption and driving up emissions from fossil fuels, according to UNEP. At last year's U.N. climate talks, a Global Cooling Pledge was launched to reduce emissions from cooling. And Riahi says the United States, one of 71 countries to endorse it, is a leader in using nature for cooling to tackle extreme heat.

A historic investment in urban trees is currently underway. The U.S. Forest Service Urban and Community Forestry Program received $1.5 billion through the Inflation Reduction Act in 2022. Grant applications flooded in as heat records were shattered in 2023. Nearly 400 projects were picked for funding.
Typically, the program gets about $40 million annually.

The cost of planting and maintenance is the major obstacle for most greening projects, said Daniel Metzger, a fellow at the Sabin Center for Climate Change Law. Where a project is transforming previously paved space, removing asphalt or concrete is generally the biggest expense, he said.

Urban areas often bear the brunt of harmful health and environmental effects from heat waves. It's hotter in urban areas than surrounding suburbs — the "urban heat island" effect — because of abundant heat-absorbing surfaces. Trees and vegetation provide shade while lowering surface and air temperatures.
Increasing a city's tree canopy by 10% lowers the temperature by 1.8 degrees Fahrenheit, according to the Smart Surfaces Coalition. The coalition helps cities integrate cool roofs, green roofs, solar, porous pavement, and urban trees.

"We can't air condition our way out of this problem," said coalition founder Greg Kats. "The way to solve it is citywide cooling." […]

The Associated Press, 30 September 2024

Image: A Bee City USA sign is displayed in a meadow in Detroit on Sept. 10. The U.S. Forest Service Urban and Community Forestry Program received $1.5 billion to put towards sustainable cooling projects such as planting trees for shade. (AP Photo: Paul Sancya)

7. Learning from the Montreal Protocol to improve the global governance of antimicrobial resistance


Learning from the Montreal Protocol to improve the global governance of antimicrobial resistance

ABSTRACT

The Montreal Protocol has played a critical role in promoting global collective action to phase out the use of ozone-depleting substances, ultimately preventing millions of cases of skin cancer, cataracts and other health issues related to ultraviolet radiation exposure.

This success entails transferable lessons for coordinated action required to improve the global governance of other challenges. Like ozone depletion, antimicrobial resistance (AMR) is a challenge of the global commons, requiring coordinated actions across human, animal and environmental sectors

We identify equity, flexibility and accountability as three core governance principles that underlie the success of the protocol and employ the 3-i framework to understand how interests, ideas and institutions contributed to the protocol's success.

Equity-promoting strategies consisted of an inclusive negotiation process, supporting developing countries with multilateral funding and a progressive compliance model.

Flexibility was built into the protocol through the development of country-specific strategies, reorienting incentive structures for industry and facilitating regular amendments in response to emerging scientific evidence.

Accountability was promoted by mobilising public advocacy, establishing targets and enforcement mechanisms and conducting independent scientific and technical assessments. Applying our proposed principles presents an opportunity to improve the global governance of AMR.

Finally, we acknowledge limitations to our analysis, including our focus on a single environmental treaty, significantly greater funding requirements and multifaceted stakeholder involvement in the case of AMR, differing market and incentives structures in antibiotic development and distribution, and ethical concerns with using trade restrictions as a policy tool.

Authors: Tina Nanyangwe-Moyo, Gabriel C Fezza, Susan Rogers Van Katwyk, Steven J Hoffman, Arne Ruckert, Samuel Orubu, Mathieu JP Poirier

BMJ Glob Health, 3 October 2024

Image: BMJ Glob Health

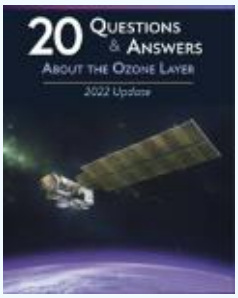
UNEP OzonAction supports women in cooling at Chillventa - UNEP OzonAction joined other international organizations to promote opportunities for women in the refrigeration, air conditioning, and heat pump (RACHP) sector at the INWIC stand in Hall 9 at Chillventa. INWIC, the International Network for Women in Cooling, is one of the 900-plus exhibitors represented at **Chillventa, the biennial trade fair in Nuremberg, Germany, that took place this year from 8 to 10 October**. UNEP OzonAction is one of the INWIC founding partners. **Learn more about**

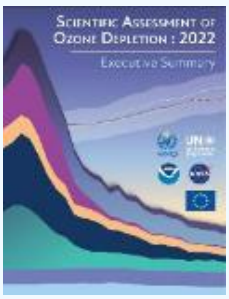
>>> Chillventa

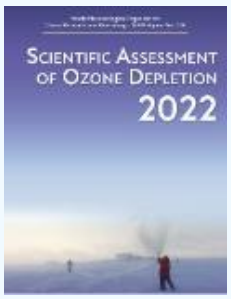
>>> INWIC activities and how it is inspiring women worldwide to become engaged in RAC

Guidebook on Mainstreaming Gender in the Implementation of the Montreal Protocol - OzonAction, in consultation with UN Women and a gender expert, has developed this Guidebook on Mainstreaming Gender in the Implementation of the Montreal Protocol to advance the agenda of gender equality and women's empowerment through the implementation of Montreal Protocol activities. The Guidebook is designed to assist National Ozone Officers with addressing gender issues through their daily work and operations. **Read/download** English | Russian

Upcoming [2024 World Cold Chain Symposium](#) (WCCS) - Less food waste. Reduced greenhouse gas emissions. Greater food security. This is the path to addressing hunger and a better future. It takes a more sustainable cold chain to get us there. The WCCS is a global conference organized by The Global Food Cold Chain Council (GFCCC) in partnership with the United Nations Environment Programme, OzonAction and sponsored by Carrier. [The 2024 World Cold Chain Symposium, Bangkok, Thailand, on Saturday, 26 October 2024.](#) [Register now](#) to join the Global Food Cold Chain Council and experts worldwide, as we come together for an in-person, complimentary event focused on the benefits of building efficient and sustainable business models for the development of the cold chain around the globe.







[Watch out for Illegal Trade of HCFCs and HFCs](#): Lessons learnt from the Global Montreal Protocol Award for Customs and Enforcement Officers. This publication provides an analysis of the cases submitted in the context of the [Global Montreal Protocol Award for Customs and Enforcement Officers](#). The Global Award was launched in 2018 by UNEP OzonAction. This Global Award is intended to raise awareness about the Montreal Protocol and to recognise customs and enforcement officials for their efforts in preventing and combating illicit traffic in Montreal Protocol and Kigali Amendment-regulated substances. Ozone-depleting substances (ODS) include hydrochlorofluorocarbons (HCFCs) and other compounds with a high Global Warming Potential (GWP), particularly hydrofluorocarbons (HFCs).

UNEP OzonAction, ASHRAE, April 2023 Fact sheet: [Update on New Refrigerants Designations and Safety Classifications](). The purpose of this fact sheet is to provide an update on ASHRAE standards for refrigerants and to introduce the new refrigerants that have been awarded an «R» number over the last few years and introduced into the international market.

[Sustainable cold chains: Virtual Exhibition]() - **The virtual exhibition for sustainable cold chains aims to highlight the critical role of cold chains in ensuring food safety and security, access to vaccines, reducing global warming and preventing ozone layer depletion.** The exhibition is ongoing and continuously updated with submissions accepted on a rolling basis. The partners of the exhibition will continue promoting the exhibition at all relevant events and throughout 2022 and beyond. [Learn more/submit nomination]() >>>

These technologies and approaches directly contribute to meeting national obligations under the Montreal Protocol on Substances that Deplete the Ozone Layer including its Kigali Amendment and the Paris Agreement on Climate Change. Sustainable cold chain contributes to the achievement of many [Sustainable Development Goals]().

The exhibition is ongoing and continuously updated with submissions accepted on a rolling basis. The partners of the exhibition will continue promoting the exhibition at all relevant events and throughout 2022 and beyond.

Click [here]() for more information / submit a nomination >>>

Image: Sustainable cold chains website

Vanuatu's Case Study on Integrating ODS/HFC Module into the National Single Window System - The National Single Window is a centralized system that links all relevant government approving authorities and acts as a 'one-stop-shop' where importers and exporters may submit applications electronically including information and all required paperwork to support the application and approval process. **Read/Download the** [Factsheet >>>]

Recognition of Prior Learning Scheme for Refrigeration and Air-Conditioning Servicing Technicians in Mongolia - The Recognition of Prior Learning (RPL) process can help those in the industry acquire a formal qualification that matches their knowledge and skills and thereby contributes to improving their employability, mobility, and lifelong learning. RPL can make a significant contribution to providing the relevant learning framework necessary for the present and ongoing maintenance of a quality workforce, especially in the RAC servicing sector. In Mongolia, the RPL process has been rolled out in over 30 TVET trades in the construction, mining, and other sectors, including apparel and culinary etc. Mongolia initiated

the RPL scheme for RAC servicing technicians as part of their implementation of the HPMP in cooperation with various national stakeholders. **Read/ Download the** Factsheet >>>

AFRICA

8. NSCP Seeks NTA Partnership to Promote Energy-Efficient Air Conditioners

Maputo — The Mozambican Ministry of Land and Environment has introduced a decree which bans ozone-destroying gases, and has called on those involved in the import, inspection and sale of refrigeration equipment to ensure that they do not use such gases.

The Nigeria Sustainable Cooling Project (NSCP) is seeking a partnership with the Nigerian Television Authority (NTA) to raise awareness about the benefits of energy-efficient air conditioners in Nigeria.

During a courtesy visit to NTA headquarters in Abuja, NSCP's project director, Dr. Shehu Mustafa, emphasised the importance of educating the public on energy conservation and reducing environmental impact through the use of energy-efficient cooling systems.

The project, "Scaling Up Energy-Efficient and Climate-Friendly Cooling in Nigeria's NDC Revision," is funded by the Clean Cooling Collaborative (CCC) and supported by the United Nations Environment Programme (UNEP). Mustafa explained that energy-efficient air conditioners can significantly reduce Nigeria's energy consumption, particularly in residential, commercial and public buildings. He stressed that NTA's extensive reach makes it the ideal partner for spreading this important message to both rural and urban populations.

NSCP's national project director, Mr. Etiosa Uyigue, highlighted that air conditioners account for a significant portion of electricity usage in Nigeria, with 60% in public buildings and 40% in households. The project aims to accelerate the adoption of energy-efficient ACs, which will not only reduce electricity bills but also optimize the grid system and lessen pressure on transformers.

NTA's executive director of engineering, Engr. Ijeh Osagie expressed the station's readiness to support the project and recognised its value for both economic and environmental development.

The project is also working with the Standards Organisation of Nigeria (SON) to implement a Minimum Energy Performance Standard (MEPS) by 2026, which will guide the production of energy-efficient cooling systems in the country.

Science Nigeria, 18 September 2024, By Nkechi Isaac

Image: L-R: The executive director of engineering, Nigeran Television Authority, Engr. Ijeh Osagie presenting a souvenir to the project director, Nigeria Sustainable Cooling Project, Dr. Shehu Mustafa when the project team paid a courtesy call to the television house headquarters in Abuja.

LATIN AMERICA AND THE CARIBBEAN

9. Cuba fosters good practices in refrigeration and air conditioning

CIEGO DE AVILA, Cuba, Oct 7 (ACN) The training to more than 5,000 workers in the state and non-state sectors in the country, linked to refrigeration and air conditioning activities, represents a guarantee for the fulfillment of the responsibilities of Cuba as a signatory of the Montreal Protocol and the Kigali Amendment, global regulations aimed at preserving the ozone layer.

Engineer Armando Lazaro Gomez Diaz, specialist Ozone Technical Office (Otoz), stressed that the training is conducted in 17 classroom-laboratories of good practices in refrigeration and air conditioning enabled in polytechnic institutes (IP) of all Cuban provinces, where courses related to these tasks, such as the Middle Technician in Mechanics Refrigeration Installations.

Teachers from these technical-professional education centers, previously prepared by Otoz, teach classes on global provisions for the management of ozone-depleting substances (ODS), international trends in the use of refrigerants and technologies, aspects related to energy efficiency, properties, and use of ODS and hydrocarbons.

Trainees also acquired appropriate knowledge related to welding, safety standards inherent in these functions and reconversions of domestic refrigeration and air conditioning equipment.

The courses of good practices are a prerequisite for performance in this work area, as established in Resolution number 107 of 2024, issued by the Ministry of Science, Technology and Environment.
Equipped with modern equipment, accessories and tools, acquired through international collaboration agreements, the classroom laboratories create facilities to develop practical activities that reinforce theoretical knowledge through demonstrative exercises.

In addition to training personnel in charge of refrigeration and air conditioning work, Cuba is moving forward in the replacement of devices that use Sao, from compliance with a schedule drawn up in the nation to eliminate, permanently and before 2030, the use of hydrofluorocarbons (HFCs) and hydrochlorofluorocarbons (HCFCs).

Agencia Cubana de noticias (ANC), 8 October 2024
Image: ANC

NORTH AMERICA

10. Keep Your Cool: EPA Expands Requirements to Address Leaks of Climate Super Pollutant Hydrofluorocarbons from Refrigerant-Containing Appliances

On October 11, 2024, the Environmental Protection Agency (EPA) published its latest rule in a suite of measures to address hydrofluorocarbons (HFCs) under the American Innovation and Manufacturing (AIM) Act. In the nearly four years since the AIM Act was enacted and two years since President Biden signed the Kigali Amendment to the Montreal Protocol, EPA has approached its mandates to reduce HFCs with vigor.

This latest rule establishes what EPA calls an Emissions Reduction and Reclamation Program to address leaks from refrigeration and air conditioning equipment. At a high-level, this rule will be most impactful to entities in the refrigeration, air conditioning, and heat pump sector, including supermarkets, cold storage warehouses, refrigerated transport, and manufacturing facilities. The rule includes requirements for:

- Leak repair;
- Automatic leak detection (ALD) systems;
- Servicing and repair of supermarket refrigeration systems, refrigerated transport, and commercial ice makers.

For entities accustomed to EPA's requirements for ozone depleting substances in refrigeration and air conditioning under Clean Air Act section 608, much in this rule will feel familiar. But there are some notable differences and expansions in these HFC regulations, which are highlighted below.

The rule also contains AIM Act requirements for fire suppression equipment, HFC reclaimers, and disposable cylinders, as well as alternative standards for certain ignitable used refrigerants under the Resource Conservation and Recovery Act (RCRA). This alert does not focus on those requirements. Entities impacted by those provisions should carefully review their compliance requirements under the rule.

New HFC requirements can be found in the regulations at 40 C.F.R. Part 84, Subpart C. Any party seeking to challenge the final rule has 60 days from the date of publication in the Federal Register to file a petition for judicial review. […]

Rule Requirements and Compliance Deadlines

- **Leak repair.** The rule's leak repair requirements apply to appliances with a charge size of 15 pounds or more and that contain an HFC or substitute for an HFC with a global warming potential greater than 53. EPA finalized a narrow exemption for the leak repair requirement for residential and light commercial air conditioning and heat pumps. Similar Title VI requirements have historically applied to appliances with a charge size of 50 pounds or more. This lower applicable charge size will increase the universe of regulated appliances subject to these requirements. Other than the change in charge size applicability, EPA assures entities in this final rule that the leak repair provisions are otherwise "identical or similar to" requirements for ozone-depleting substances (ODS) refrigerants, including the methodology for determining the leak rate, repair timing, and verification tests.

Entities must still calculate a leak rate every time refrigerant is added to an appliance (unless certain exceptions apply), use an annualizing or rolling monthly average method for calculating a leak rate, and repair an appliance within 30 days (or 120 days if an industrial process shutdown is required) of refrigerant being added if the appliance is leaking above the applicable leak rate. Leak rate thresholds vary by category of appliances (e.g., a 20% leak rate trigger for commercial refrigeration, 10% for refrigerated transport – rail).
Compliance date: January 1, 2026 […]

Womble Bond Dickinson Newsletter, 15 October 2024
Image: WBD

11. CARB Releases Final Funding Guidelines for the F-gas Reduction Incentive Program

Applications for FRIP will be open from October 14 to January 31, 2025 and a total of $65 million has been allocated to the program.

The California Air Resources Board (CARB) has released the final funding guidelines for the F-gas Reduction Incentive Program (FRIP) for Commercial and Industrial Refrigeration.

FRIP will be open for submissions from October 14 to January 31, 2025, and will target three primary sectors: retail food refrigeration, industrial process refrigeration, cold storage and other refrigeration.

A total of $65 million (€58.2 million) has been allocated to the program, of which $38.5 million (€34.5 million) is dedicated to replacing refrigeration systems with more than 50 pounds (22.6kg) of refrigerant in existing commercial and industrial facilities.

Of the rest, $2 million (€1.7 million) will go toward commercial and industrial refrigeration facilities with systems using less than or equal to 50lb of refrigerant, $18 million (€16.1 million) is earmarked for sectors to be determined and $6.5 million (€5.8 million) is budgeted for the North American Sustainable Refrigeration Council's (NASRC) administration of the program.

To be eligible for an award, a store or facility must have equipment using f-gas that meets the minimum GWP and refrigerant charge requirements […]

Natural Refrigerants News, 19 September 2024, By Cinzia Verzeletti
Image: The California Capitol building in Sacramento. Photo credit: Sundry Photography for Shutterstock.

EUROPE AND CENTRAL ASIA

12. Customs discover R404A in car LPG tank – Poland

Polish customs officers discovered an attempt to smuggle R404A refrigerant in an LPG gas tank in the boot of a car stopped in Korczowa at the border with Ukraine.

During the inspection using an X-ray device, it was revealed that the LPG gas cylinder in the boot of the vehicle was filled with 100kg of R404a refrigerant, valued in Poland at PLN12,000 (€2,800)

The gas and the vehicle were seized. PLN4,800 (€1,117) was secured as part of the penalty, and a criminal and fiscal case was initiated against the Ukrainian car driver.

CoolingPost, 16 October 2024

Image: CoolingPost

How to set up and manage logbooks for refrigeration, air-conditioning, heat pump and other types of equipment - Background: This technical brief reflects the Polish experience of setting up and managing logbooks for refrigeration, air-conditioning, heat pump (RACHP) and other types of equipment. It also provides examples of similar equipment databases used in other developed and developing countries. It explains how equipment logbooks and electronic databases can facilitate a smooth hydrochlorofluorocarbon (HCFC) phase-out and hydrofluorocarbon (HFC) phase-down. It also provides guidance on the contents and format of the equipment logbooks, and on how to set up and manage the related databases. The Appendix describes the step-by-step approach for setting up and managing equipment logbooks and the relevant electronic databases. **This factsheet is available in English and Russian**

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