

OZONENEWS

15 March 2015

Vol. XV

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A fortnightly electronic news update on ozone and climate protection and the implementation of the Montreal Protocol



Two New Publications Just Launched by OzonAction

Guide on Good Practices: Phasing out HCFCs in the Refrigeration and Air-conditioning Servicing Sector



The main purpose of this Guide on Good Practices: Phasing-out HCFCs in the Refrigeration and Air-conditioning Servicing Sector is to provide National Ozone Units and refrigeration and air-conditioning training institutes with a standardized module for delivering training programmes under HCFC

Phase-out Management Plans. It can be used together with web-based slides and an interactive animated exercise. The publication can serve as a guide for other multilateral environmental agreements to also think globally and act locally.

Phasing out HCFCs in Small and Medium-sized Foam Enterprises



This booklet aims to assist foam enterprises, especially SMEs, to better understand policies on HCFC phase-out, access to assistance from the Multilateral Fund for the Implementation of the Montreal Protocol and access alternative technologies in different foam applications taking into account challenges in converting to alternative technology. It also

discusses some tips on how to identify enterprises that may use HCFCs and verify the HCFCs consumption of enterprises.



GLOBAL

1. Thirty Year of the Vienna Convention for the Protection of the Ozone Layer



This year marks the 30th anniversary of the adoption of the Vienna Convention for the Protection of the Ozone Layer on 22 March 1985. The Vienna Convention is the framework Convention for the Montreal Protocol on Substances that Deplete the Ozone Layer.

The anniversary presents an opportunity to celebrate the achievements of the last 30 years and to explore how the ozone success story could serve as a model for international action to

tackle other environmental challenges.

The Vienna Convention and the Montreal Protocol are the first and only global environmental treaties so far to achieve universal ratification, having been ratified by 197 parties.

As a result of 30 years of concerted global efforts, the ozone layer is healing itself and is expected to recover by the middle of this century.

The Montreal Protocol has led to the phase-out of over 98 per cent of the historic levels of production and consumption of ozone-depleting substances globally. Through ozone protection efforts, up to 2 million cases of skin cancer may be prevented each year by 2030, and adverse impacts on agriculture, animals, forests, marine life, natural ecosystems and materials have been avoided.

Further, ozone protection efforts have significantly contributed to the mitigation of climate change, as the Montreal Protocol has averted more than 135 billion tonnes of carbon dioxide equivalent emissions going to the atmosphere.

The Ozone Secretariat invites parties to the Vienna Convention and the Montreal Protocol to share information on their commemorative events and activities to mark the 30th anniversary of the Vienna Convention.

Such information material will be posted on the Secretariat's website for wide dissemination. Kindly send them to the Secretariat at ozoneinfo@unep.org



2. Advancing Ozone & Climate Protection Technologies: Food Cold Chain, 18 July 2015, Paris, France

The United Nations Environment Programme, the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants, the United States of America, and the Alliance for Responsible Atmospheric Policy are pleased to announce the *Advancing Ozone & Climate Protection Technologies: Food Cold Chain* to be held July 18, 2015, Paris, France.

This workshop will provide an opportunity to share information and expertise on technologies and policy measures with a focus on the food cold chain -- how we bring food from farm to market. There are climate-friendly alternatives to ozone-depleting substances and high-global warming potential hydrofluorocarbons (HFCs) in each part of the cold food chain where refrigeration is necessary.

The food cold chain represents about a fifth of all HFCs use today, and the use of HFCs is expanding. While there is no “one-size fits all” alternative, a growing range of solutions are becoming available that protect the ozone layer, are much less harmful to the climate system and enhance energy efficiency while minimizing food spoilage.

This workshop will include technical presentations on non-fluorinated and fluorinated alternatives as well as the challenges being faced. Government and civil society policy measures will also be considered.

When: July 18th, 2015, the Saturday prior to the Montreal Protocol’s 36th Open-Ended Working Group meeting.

Where: United Nations Educational, Scientific and Cultural Organization (UNESCO) Fontenoy Building, 125 Avenue de Suffren, Paris 75007, France.

Who: The event is open to all participants of the Open-ended Working Group, as well as any other interested industry, government, or NGO representatives.

The event will be free, however there will be a pre-registration process.

Language: The conference will be conducted in the English language (interpretation will not be available).

▶ [UNEP OzoneAction Branch](#) - *Additional details will be provided shortly.*

3. 15th Session of African Ministerial Conference on the Environment



“All 54 countries of the African continent have endorsed the start of formal negotiations to eliminate hydrofluorocarbons (HFCs)”.

African countries support HFC phase down under Montreal Protocol. The move is expected to provide momentum to climate negotiations at the Paris summit in December

All 54 countries of the African continent have endorsed the start of formal negotiations to eliminate hydrofluorocarbons (HFCs), one of the six main greenhouse gases responsible for global warming. Meeting at the 15th session of the African Ministerial Conference on the Environment in Cairo, the countries requested member states to form a contact group to begin negotiations this year.

Durwood Zaelke, president of the Institute for Governance and Sustainable Development, said in an official press release, “The 54 countries of Africa face some of the most immediate and damaging climate impacts, and they recognise that cutting HFCs through the Montreal Protocol will be a huge climate victory both for the continent, and for all nations throughout the world.” He added that phasing down HFCs would provide tremendous momentum to negotiating an ambitious climate agreement at the Paris summit later this year.

HFCs are up to 10,000 times more potent than carbon dioxide. Reducing the production and consumption of

HFCs under the Montreal Protocol is expected to help avoid 0.5°C of warming by 2100.

“Though HFCs currently represent a small fraction of the total greenhouse gas emissions, their global warming potential is very high, and their emissions could rise even up to 40 per cent of annual carbon dioxide emissions by the middle of the century if society continues,” said UNEP Executive Director Achim Steiner in his address at the Cairo meeting.

The Montreal Protocol will conduct an extraordinary meeting in April where several groups of countries are likely to submit formal proposals to phase down HFCs.

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Excerpt from the: Keynote Address by UN Under-Secretary-General and UNEP Executive Director Achim Steiner at the Opening of the 15th Session of the African Ministerial Conference on the Environment (AMCEN), Cairo Egypt, 4 March 2015- Excerpt related to the Montreal Protocol

[...] Vienna Convention Celebrates 30 Years & Eliminating HFCs

Excellencies, ladies and gentlemen,

Two weeks from today, the world will mark another 30th Anniversary; that of the adoption of the Vienna Convention.

The efforts, commitment, collaboration and action by the parties to the Vienna Convention and its Montreal Protocol towards protecting the ozone layer continue to serve as a model for united action globally.

The Montreal Protocol has so far led to the phase-out of 98 per cent of the historic levels of production and consumption of ozone-depleting substances globally. As a result of thirty years of concerted global efforts, up to 2 million cases of skin cancer may be prevented each year by 2030 and the ozone layer is healing. The international community has demonstrated what humanity is capable of achieving when nations reconcile their different needs and act as one on a global challenge.

African countries should be proud of their immense contribution to global efforts to protect the ozone layer. All 54 countries in Africa are parties to the Convention and its Protocol and all of its amendments, and have demonstrated unyielding commitment to the ongoing mission of ozone protection.

UNEP supports and works closely with the 54 National Ozone Officers across Africa. Over the years, the Multilateral Fund for the Implementation of the Montreal Protocol has provided African countries with US\$286 million for the phase-out of over 23,700 tonnes of ozone-depleting substances. This includes over US\$32 million supporting National Ozone Units in 53 countries.

The Fund is also supporting the world's newest country, South Sudan, in phasing out controlled substances by providing funding for institutional assistance and for preparation of a phase-out plan that would be funded once it has been completed.

With the Fund's assistance, African countries were able to completely phase out the consumption of ozone-depleting substances chlorofluorocarbons, halons and carbon tetrachloride ahead of schedule.

Now, in the meetings of the Montreal Protocol, parties discuss a new challenge: HFCs.

Like the ozone-depleting substances they replace, most HFCs are potent greenhouse gases. Though HFCs currently represent a small fraction of the total greenhouse gas emissions, their global-warming-potential is very high, and their emissions could rise even up to 40% of annual carbon dioxide emissions by the middle of the century if society continues to accelerate their use. This could offset the climate benefits achieved by the Montreal Protocol.

The parties will have to decide whether the mechanisms and institutional infrastructure of the Montreal Protocol could be leveraged to address the urgent task of managing HFCs to protect the climate. [...]

▶ UNEP, [News Centre](#), 4 March 2015

See also:

▶ The [15th Session of the AMCEN](#) held from 2-6 March 2015, Cairo, Egypt

▶ African Countries Endorse HFC Phase Down Under Montreal Protocol Support start of formal negotiations to eliminate one of six main greenhouse gases Success will provide fast climate benefits for vulnerable continent, IGSD, [Press release](#), 6 March 2015

4. Learning the Politics of the Possible: An E-Course on the International Environmental Law Protecting the Ozone Layer

The Montreal Protocol is highlighted as a successful international multilateral environmental agreement (MEA) through which international cooperation has led to the reduction of ozone depleting substances. The Vienna Convention for the Protection of the Ozone Layer, its Montreal Protocol on Substances that Deplete the Ozone Layer and several subsequent amendments are noted to exhibit two types of multilateral success – reaching agreement among states with varied interests and achieving real-world reductions of harmful pollutants. The Protocol offers the international community an exemplary process and outcome from which it can extrapolate and apply lessons learnt to current negotiations and discourse.



Given the important lessons to be learned from its example, this policy update explores the potential for improving knowledge of the Montreal Protocol through an [e-course offered by InforMEA](#), a project of the MEA Information and Knowledge Management Initiative ([InforMEA](#)). The course offers a tool to help stakeholders build awareness of what multilateral success looks like, with a view to facilitating further protection of the ozone layer and lending support to other processes that rely on successful interstate cooperation to achieve critical environmental outcomes.

The e-course is a brief guide to the international legal framework protecting the ozone layer. Using accessible language and videos, it leads users through several units that begin with the science of ozone depletion, particularly important findings such as the 1985 discovery of a hole in the ozone layer over the Antarctic, and then discuss the international response. The e-course then details the provisions of the Vienna Convention, the Montreal Protocol, the amendments to the Protocol, and touches on issues such as the compliance mechanism, implementation measures and future challenges. The multilateral response to ozone depletion represents, as the e-course highlights, a milestone among MEAs for two reasons: it set targets and timelines; and laid the foundations for the emergence of the precautionary principle.

The Montreal Protocol was the first MEA to set targets and timelines to phase out chemicals harmful to the atmosphere. These phase outs were for both the production and consumption of ozone-depleting chemicals. They were designed in way that protected the interests of producers and importers, preventing high price inflation or overproduction during the phase out period of the targeted gases. In other words, the design of the targets was intended to avoid market fluctuations while achieving environmental goals.

The second milestone of the Montreal Protocol is its responsiveness to science. It was the first Convention to acknowledge the benefit of taking preventative action, before evidence of the harmfulness of ozone-depleting substances was firmly established. In this way, the Montreal Protocol is a landmark for the emergence of the precautionary principle in international environmental law.

The e-course also outlines factors that have contributed to the successful implementation of the Montreal Protocol and significant reductions in ozone-depleting substances. First, the Montreal Protocol employed a stepwise approach to rule making. Countries negotiated the Vienna Convention, then the Montreal Protocol before adding new substances slated for elimination in the London, Copenhagen, Montreal and Beijing Amendments. Through this stepwise approach, the Montreal Protocol has been able reflect emerging science and identify best available technologies that could be used as alternatives on a case-by-case basis for specific ozone-depleting chemicals. The use of amendments has aided progressive, smaller scale agreements and, in turn, implementation.

Second, the flexible arrangements for implementation used by developing countries have helped address concerns regarding the affordability of switching to safer alternatives. Under the Protocol, developing countries have special provisions, including a ten-year delay for implementation and financial assistance. These provisions have allowed all countries to undertake efforts to reduce ozone-depleting substances by using available alternatives to ozone-depleting chemicals, regardless of their development status. While the Montreal Protocol does not include the principle of common but differentiated responsibilities (CBDR) per se, it does operationalize the principle's core idea that all have a responsibility for protecting the atmosphere and can do so when the necessary financial and technical assistance and flexibility to implement safer alternatives is offered.

The design of the Montreal Protocol, securing small agreements in amendments and flexible implementation for Parties requiring assistance, has led to real-world success and is a model worth studying. So far, 98% of historic levels of production and consumption of ozone-depleting substances such as chlorofluorocarbons (CFCs), halons, carbon tetrachloride, methyl chloroform, n-propyl bromide and chlorobromomethane have been phased

out. These chemicals were used in products, such as refrigerants, fire suppressants and solvents, for which cost-effective alternatives were developed during the negotiation of the Protocol. The ozone layer shows signs of recovery owing to the reductions of these harmful chemicals in the atmosphere.

In addition to profiling the Protocol's success, the e-course discusses future challenges for multilateral efforts to protect the ozone layer, namely achieving the total recovery of the ozone layer and using more climate-friendly alternatives. It highlights the example of hydrofluorocarbons (HFCs), which are ozone-friendly, but are potent greenhouse gases and introduced as a substitute for CFCs and hydrochlorofluorocarbons (HCFCs). HFCs are among the basket of six greenhouse gases that the Kyoto Protocol, negotiated under the auspices of the UN Framework Convention on Climate Change (UNFCCC), seeks to reduce. There remains an ongoing debate as to which Protocol is best suited for future action on HFCs, leaving the question of how to address the issue in a complementary manner as a key question for the Montreal Protocol's future. Given the overlap between climate and ozone issues, greater understanding of the provisions of the Montreal Protocol could help achieve the synergies necessary to lower atmospheric concentrations of greenhouse gases and to continue stabilizing the ozone layer.

For those interested in the politics of the possible, the Montreal Protocol is a lesson worth studying. InforMEA's e-course seeks to equip stakeholders with an understanding of the most impactful elements of the Montreal Protocol, particularly its provisions for implementation by developing countries and step-wise approach to governance.

▶ [IISD Reporting Services](#), 10 March 2015, By: Jennifer Allan, Writer/Editor

▶ [Introductory Course to the International Legal Framework on Ozone Depletion](#)

▶ <http://e-learning.informea.org/course/index.php?categoryid=7>

5. Global Foam Blowing Agents Market is Anticipated to Reach US\$ 843.8 Mn by 2020: Transparency Market Research (TMR)

Transparency Market Research has published a new report titled "Foam Blowing Agents Market - Global Industry Analysis, Size, Share, Growth, Trends and Forecast, 2014 - 2020" According to the report, the global foam blowing agents market was valued at US\$ 631.3 Mn in 2013 and is expected to reach US\$ 843.8 Mn by 2020, expanding at a CAGR of 4.4% during the forecast period from 2014 to 2020. In terms of volume, the global foam blowing agents market stood at 310.5 kilo tons in 2013.

High growth in the construction industry across the world has led to the rise in demand for insulating foams. This, in turn, is anticipated to drive demand for foam blowing agents that are utilized for the manufacture of foams. Polyurethane foams application is another major driver for the foam blowing agents market. However, strict regulations against chemicals, which are harmful to the environment, are leading to phasing-out of hydrochlorofluorocarbons (HCFC). This would hamper market growth in the next few years. Additionally, volatility in crude oil prices puts pressure on manufacturers' margins. This further affects market growth. Development and commercialization of new eco-friendly products, such as hydrofluoroolefins (HFO), is anticipated to drive the foam blowing agents market in the near future.

Hydrocarbon foam blowing agents dominated the global foam blowing agents market, accounting for more than half of the market share in terms of volume in 2013. Key hydrocarbon foam blowing agents include n-pentane, cyclopentane, isopentane, n-butane and isobutene. These foam blowing agents are available at low cost and the machinery that previously used HCFCs can be modified for usage with these agents at less cost. Additionally, hydrocarbon foam blowing agents do not deplete the ozone layer and have very low global warming potential. Other foam blowing agents such as azodicarbonamide, hydrazine, CO₂ and water are being increasingly adopted due to their eco-friendly properties and lower prices. Hydrofluorocarbons (HFC) and HCFC foam blowing agents are widely used products due to their excellent thermal properties and low boiling points. However, HCFCs are being phased out due to their high ozone depletion and global warming potential.

In terms of volume, polyurethane (PU) foams is estimated to be the largest and the fastest growing segment, and accounted for nearly 50% of the global foam blowing agents market in 2013. Demand for PU foams is primarily driven by construction and insulation industries. Polystyrene (PS) foams is projected to be another fast growing application segment during the forecast period due to rising demand for PS foams in the automotive industry.

In terms of volume, Asia Pacific led the global foam blowing agents market in 2013. It is also projected to be the fastest growing region between 2014 and 2020, driven by high growth in the automotive and construction industries in the region. The construction industry emerged as the major consumer of foam blowing agents used for insulating foams in North America. In terms of volume, North America accounted for 24% of the global

foam blowing agents market in 2013.

The global foam blowing agents market is consolidated in nature; some of the large players in the market are focusing on enhancing their position and expanding product portfolio in the emerging markets. Leading players in the foam blowing agents market include Exxon Mobil Corporation, Arkema S.A., E. I. du Pont de Nemours and Company, Solvay S.A., Honeywell International Inc. and Daikin Industries Ltd.

The report segments the global foam blowing agents market as:

Foam Blowing Agents Market & Product Segment Analysis

- Hydrocarbons (HC)

- Hydrofluorocarbons (HFC) - Hydrochlorofluorocarbons (HCFC) - Others (including azodicarbonamide, hydrazine, CO₂, water, etc.) Foam Blowing Agents Market & Application Analysis- Polyurethane (PU) foams

- Polystyrene (PS) foams- Polyolefin foams- Others (including polyvinyl chloride (PVC) foams, phenolic foams, etc.) Foam Blowing Agents Market - Regional Analysis- North America- Europe- Asia Pacific [...]

▶ Get [Sample Report Copy](#)

▶ [Digital Journal](#), 2 March 2015

See also:

[World Fluorochemicals Market](#), World demand to rise nearly 4% annually through 2018



AFRICA

6. Half-day Dialogue with Importers on Hydrocarbon Technology: Celebration of the 30th Anniversary of the Vienna Convention (22 March 2015)



Mauritius will kick start the celebration of the 30th Anniversary of the Vienna Convention on 3 March through a half-day dialogue. The objective is to encourage the promotion of hydrocarbon air-conditioners (R 290).

This half-day dialogue scheduled 3 March 2015, was the first type of its kind for networking and learning from the experiences/expertise from India on climate-friendly and energy-efficient air-conditioners. The Godrej Indian Company is promoting hydrocarbon technology and other cooling technology in India and has shown interest to explore the possibility of enabling the technology transfer in Mauritius.

Though Mauritius has long been undertaking capacity building and sensitization of different target groups on the benefits of natural refrigerants namely hydrocarbons, carbon dioxide and ammonia, the adoption and imports of these technologies have been slow. With the promulgation of the regulations to ban import of HCFCs equipment and appliances in January 2013, the shift to climate friendly refrigerants while avoiding the transition through high global warming hydrofluorocarbons (HFCs), has become an enormous challenge.

Therefore, Mauritius has adopted an innovative approach to enhance technology transfer in 2015 Action Plan on implementation of the obligations under the Montreal Protocol. In this perspective, jointly with GIZ - the implementing agency for the implementation of the HPMP, the visit of a representative from Godrej Company, India was planned.

This interactive forum has come at an opportune time to mark the 30th Anniversary of the Vienna Convention. It is an initiative to further promote public-private partnership and aims at creating a supply chain for R290 air conditioners in Mauritius.

In line with the 2014 slogan, "Ozone Layer Protection: The Mission Goes On", Mauritius will continue to contribute to meet its obligations with the Montreal Protocol.

▶ UNEP, [Ozone Secretariat](#), March 2015



ASIA PACIFIC

7. Joint Network Meeting of Ozone Officers of South Asia and Southeast Asia and the Pacific: “An inclusive approach for connecting stakeholders”



Goyang City, 10 March 2015 – The “Joint Network Meeting of Ozone Officers of South Asia and Southeast Asia and the Pacific” has commenced today, in Goyang City, with National Ozone Officers (NOOs) from 21 countries. The meeting hosted by the Government of the Republic of Korea is being organised as part of the UNEP Compliance Assistance Programme (CAP) funded by the Multilateral Fund for the Implementation of the Montreal Protocol.

Countries present in the meeting are: nine countries of the South Asia NOOs Network (Afghanistan, Bhutan, China, Iran, Republic of Korea, Maldives, Mongolia, Nepal and Sri Lanka), 11 countries of the Southeast Asia and the Pacific Network (Brunei Darussalam, Cambodia, Indonesia, Lao PDR, Malaysia, Myanmar, Philippines, Singapore, Thailand, Timor-Leste and Viet Nam) and Fiji representing the network of Pacific Island Countries. Japan is the developed country partner of the South Asia network that is also attending the meeting.

For the next two days, the group will share national experiences with the aim of remaining in compliance with national control measures under the Montreal Protocol on Substances that Deplete the Ozone Layer. This universally ratified multilateral environmental agreement sets time-bound deadlines to phase out ozone depleting substances (ODS) by the Parties, with a 10% reduction of hydrochlorofluorocarbons (HCFCs) in 2015 and a 35% reduction by 1 January 2020. The meeting also includes important current issues on the agenda such as sustainability training on good practices for the refrigeration servicing sector, monitoring the use of pre-blended polyol, and key considerations for the update of the technology and policy regulatory frameworks on the ozone and climate friendly alternatives refrigerants.

Mr. Eduardo Ganem, Chief Officer of the Multilateral Fund Secretariat, urged for governmental actions to advance further on the phase-out by quoting a Korean proverb: 오늘 걷지 않으면 내일은 뛰어야 한다, meaning “If you don’t walk today, you will have to run tomorrow”.

The Vienna Convention for the Protection of the Ozone Layer – which has served as a framework for efforts to protect the stratospheric ozone layer - is celebrating its 30th anniversary this year. Executive Secretary of the Ozone Secretariat, Ms. Tina Birmpili, spoke of unprecedented contributions that the Vienna Convention and the Montreal Protocol have made towards environmental protection and human well-being, including over 2 million cases of skin cancers to be prevented by 2030.

Ms. Shamila Nair-Bedouelle, Head of OzonAction Branch of UNEP Division of Technology, Industry and Economics, spoke of Project Genesis – a new beginning in the current era of HCFCs phase-out – that calls for

continued innovation to remain in compliance with the Montreal Protocol, new responsibilities under the HCFC phase-out and how to stay ahead with an ever-dynamic panorama of technology advancement and policy developments concerning the Montreal Protocol.

Representing the host country Government, Mr. Byung-Nae Yang of the Ministry of Trade, Industry and Energy commented on the merit of networking among the countries since ODS phase-out requires “collective intelligence and action”. The Republic of Korea has controlled ODS production and import rigorously since 1992 and in 2014, reporting on ODS export too became mandatory. Another progressive/important initiative was the establishment of a local Fund imposing compulsory tax known as ODS Levy to producer and importer of ODS under the management of the Korea Specialty Chemical Industry Association (KSCIA). The fund is used for developing alternative technology and replacing ODS use in small and medium-sized enterprises.

Other events and meetings running concurrently this week in Goyang City are the Ozone2Climate Technology Roadshow (10 - 13 March), the Ozone2Climate Industry Roundtable (12 March) and the Workshop on Promoting Public Procurement of Climate Friendly Alternatives to HFCs in Asia Pacific (13 March) jointly organized by the United States Environment Protection Agency (US EPA) and the UNEP Compliance Assistance Programme.

▶ UNEP DTIE, [OzonAction Branch](#)

8. Good Environmental Choice Australia Releases New Refrigerants Standard



A new standard for refrigerants from Good Environmental Choice Australia (GECA) has been released last week and is accepting applications for certification.

GECA’s Refrigerants standard has been updated, with revised criteria to set new environmental benchmarks and reflect industry changes. Refrigerant manufacturers can choose to have their products certified against this standard to demonstrate their environmental, health and ethical credentials. Manufacturers who meet GECA’s standard will also meet the requirements for the “refrigerant impacts” credit in the “emissions” category of the Green Building Council of Australia’s Green Star “Design & As Built” and “Interiors” ratings tools.

The standard covers refrigerants used in domestic and industrial air conditioning systems, domestic and industrial refrigerators, and vehicle air conditioning systems.

Refrigerants commonly used in air conditioning and refrigeration have significantly contributed to global warming in addition to ozone depletion. While ozone-depleting CFC and HCFC compounds have been slowly phased out of use, many of the HFC and other compounds used to replace the original CFC refrigerants also contribute to the global warming problem.

GECA’s new standard requires that refrigerants must have an ozone depletion potential equal to zero, as well as a global warming potential of less than 10. The standard also sets out requirements for packaging, which must be easily recyclable or subject to a product stewardship take-back arrangement with the manufacturer or agent.

A copy of the standard is available on the GECA website at www.geca.org.au

▶ [Good Environmental Choice Australia](#) (GECA), 9 March 2015

9. Lesson on Ozone Layer Falls from Sky (Australia)



Mytchall Bransgrove - OZONE EDUCATION: School pupils - from left, Charlotte Watson, Briannah Hadfield-Broatch, Maggie Divan, and Clint Christey - investigate the Niwa ozone sonde which fell near the school.

When a pupil at Albury School wanted to learn about the ozone layer, the answers fell from the sky.

A National Institute of Water and Atmospheric Research (Niwa) ozone sonde (a form of balloon) landed in a paddock which belongs to a family at the school.

They brought it in to school and the school intends to return it to the Niwa Atmospheric Observatory in Lauder, Central Otago.

The arrival of the ozone sonde was well-timed as the previous week one of the pupils had asked about learning more on what the ozone layer was.

In return for the balloon, Niwa said it would send them more information. There was also a reward of \$60 for

anyone who returned the sonde with the form filled out with the co-ordinates of where and when it was found.

The sonde was released from Lauder on January 7 and was part of a programme which measures and monitors atmospheric composition. The sonde has sensor technology which takes a profile of the ozone layer as it goes up and goes down. One sonde is released each week, and has been done so since 1987.

Niwa atmospheric scientist Olaf Morgenstern said there were radio transmitters in each sonde which allowed the scientists to receive data in real time, as most were never seen again.

If possible, Morgenstern said, Niwa would like to reuse the sondes. However, of those released only a quarter were returned. He said a lot of the sondes fell into the ocean or in remote places on land.

The Niwa group in Lauder is part of a global network which monitors what is going on in the atmosphere. The nearest sites are at the South Pole, and in Australia and South America.

► [The Timaru Herald](#), 4 March 2015, Natasha Thyne



EUROPE AND CENTRAL ASIA

Invitation of Nominations for the ECA Ozone Protection Award for Europe & Central Asia 2016 (4th edition)

The Europe & Central Asia (ECA) network is inviting the customs & enforcement community to submit nominations for the 4th edition of the ECA Ozone Protection Award. It is a regional award for the ECA network & associated CEIT countries as well as their trade partners. The award ceremony is scheduled in Ashgabat, Turkmenistan in May 2016.

The nomination including a detailed description of the case, any evidence and photographs should be submitted to Halvart Koeppen, UNEP DTIE OzonAction Programme, Email: halvart.koppen@unep.org using the nomination form included in the [info note on the seizures and iPIC](#), as soon as the information is available but at the latest by 30 April 2016.

The ECA Ozone Protection Award for Customs & Enforcement Officers aims to provide incentive and recognition to customs and enforcement officers and their respective organizations, who successfully prevented illegal / unwanted trade of substances, equipment or products relevant for the implementation of the Montreal Protocol. It contributes to raising awareness about the Montreal Protocol and promotes cooperation between national customs services and ozone units.

► Contact: [Halvart Koeppen](#), Coordinator of [ECA network](#), UNEP OzonAction Compliance Assistance Programme

10. Natural Refrigerants in Europe: The Drivers and Challenges for European Food Retailers

Data insights from new survey of food retail professionals.

Over the past decade, the use of alternative technologies to the hydrofluorocarbon (HFC) direct-expansion system for supermarket refrigeration has gained interest and momentum, with European food retailers leading the adoption of natural refrigerant technologies globally. The uptake of natural refrigerants in food retail has doubled in the last two years alone. Today, as energy consumption and leakage of traditional fluorinated gases are increasing areas of concern, a growing number of food retailers are revising their strategies to incorporate more sustainable refrigeration solutions.



Fluorinated gases (F-gases) found in synthetic coolants are significant contributors to global warming, relative to natural coolants. While F-gases replace ozone-depleting and high global-warming chlorofluorocarbons (CFCs), they still have a global warming potential (GWP) up to 23,000 times greater than carbon dioxide (CO₂). F-gases can escape into the atmosphere from leaks within the miles of pipework involved in refrigeration systems in supermarkets.

While CO₂ is not the most effective solution for all refrigeration and air-conditioning applications, it has proven

especially economically and environmentally effective for food retail applications. CO₂ as a refrigerant is environmentally sustainable, safe and energy efficient for food retail applications; it also has unlimited availability. Despite being a greenhouse gas itself, CO₂ as a natural refrigerant is considered to be climate-neutral because it is captured from the atmosphere into hermetically sealed systems and then released when the system reaches the end of its life. CO₂ is a more effective refrigerant for food retail because of its thermodynamic properties even though it requires higher pressures to function than HFCs.

Some believe the introduction of European F-gas Regulation, including a phase-out of high GWP HFCs used in refrigeration by 2022, will be the tipping point the industry needs for mainstream adoption of sustainable refrigeration solutions. Others believe the combination of public pressure from environmentally aware consumers and the commercial imperative to reduce energy costs have been, and will continue to be, the real catalysts for industrywide change.

Evidence from countries leading the adoption of natural refrigerants suggests legislation is a key factor when it comes to deciding what types of refrigeration systems to invest in for the long term. This is especially true in Denmark where taxes on HFCs have been introduced. Similar initiatives can be seen in Norway and Switzerland, sometimes in combination with incentives for research and training.

Other countries have opted for government-funded financial incentives for end users. Germany, for example, has provided research and development support for pilot projects for halogen-free substances and direct financial incentives for using natural refrigerants in commercial refrigeration.

Finally, some countries, like the UK and Sweden, have shown an industry driven swing toward natural refrigerants. Pressure from environmental groups has contributed to this move in the UK, where food retailers are proactively communicating about the use of natural refrigerants in their stores to their customers.

This report, developed by Carrier in partnership with market development specialist shecco, seeks to provide a clear picture of the key drivers for and against the adoption of sustainable refrigeration and refrigerant options, and the impact of legislation on such developments across Europe.

▶ [Natural Leader](#), 2014

11. EU Submits INDC, Reports on State of Europe's Environment



The EU has submitted its intended nationally determined contribution (INDC) to the UNFCCC Secretariat, the second party to do so after Switzerland. The contribution, approved by the Environment Council, indicates that the EU intends to achieve at least a 40% domestic reduction in greenhouse gas (GHG) emissions below 1990 levels by 2030, in line with the EU 2030 Climate and Energy Framework, which was agreed by the European Council in October 2014.

The EU's INDC covers the energy, industrial processes and product use, agriculture, waste, and land-use, land-use change and forestry (LULUCF) sectors. The GHGs included are those not covered by the Montreal Protocol: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF₆) and nitrogen trifluoride (NF₃).

The EU's INDC comes in advance of a new universal climate agreement, which is scheduled to be adopted at the UN climate conference in Paris, France, in December 2015. Governments have agreed to submit their INDCs in advance of Paris with many developed and bigger developing countries expected to do so in the first quarter of this year.

The submission came just after the European Environment Agency (EEA) released its five-year assessment of Europe's environment on 2 March 2015. The report, 'European Environment - State and Outlook 2015 (SOER 2015),' evaluates the impact of EU environmental policies and identifies trends in Europe's natural capital, resource efficiency, and health and well-being.

SOER 2015 gives a very positive review of the benefits EU policies have delivered, but finds many remaining challenges that will "require fundamental changes in the systems of production and consumption that are the root cause of environmental problems." While Europeans enjoy a higher quality of life, cleaner air and water, increased innovation, and job creation and growth thanks to their climate and environmental policies, the report cites such formidable challenges as biodiversity loss, climate change, negation of efficiency gains from increased consumption, ocean acidification, growing use of chemicals and resource depletion.

The report highlights that in order to meet the 7th Environment Action Programme's objective of "living well within the limits of the planet" by 2050, not only must current policies be fully implemented, but more ambitious policies must be established.

See also:

[[UNFCCC Press Release](#)] [[European Commission Press Release](#)] [[EU INDC](#)]

[[EEA Press Release](#)] [Publication: [European Environment - State and Outlook 2015](#)]

[[IISD RS Story on Switzerland's INDC](#)]

▶ [Climate Change Policy & Practice](#), IISD Reporting Services, 6 March 2015

12. The Department of Energy and Climate Change to Deliver Roadshows on Heat Pumps (UK)

The United Kingdom government has announced details of a series of training courses offering businesses, developers and housing providers the chance to learn more about heat pumps and understand how they can be financed through the renewable heat incentive.

Organised by the Department of Energy and Climate Change (Decc), the free, one-day training courses are not designed for installers or consultants, but to help potential heat pump customers in both the domestic and non-domestic sectors. [...]

Places can be booked online at www.deccheatpumptraining2015.eventbrite.co.uk or by calling 020 8469 1333.

It is understood that a further event looking specifically at opportunities for water source heat pumps will be announced shortly.

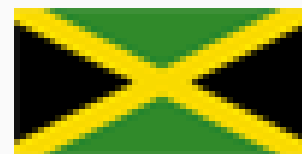
▶ [Energy and environment Management](#), 6 March 2015



LATIN AMERICA & CARIBBEAN

13. Project to Phase out HCFCs Gets \$11 Million (Jamaica)

A sum of \$11.2 million has been allocated for the hydrochlorofluorocarbons (HCFC) Phase out Management Plan Implementation Project, in the 2015/16 Estimates of Expenditure.



The proposed budget is now before the Standing Finance Committee of the House of Representatives.

The project seeks to freeze importation of HCFCs at 2009 and 2010 average import levels (baseline consumption) and reduce baseline consumption by 10 per cent.

Anticipated targets for the new fiscal year include: hosting one 3-day training of trainers workshop on good practices on refrigeration and alternatives to HCFC in Westmoreland; hosting one 1-day good practice training workshop for technicians in the air-conditioning and refrigeration sectors in Kingston; procuring equipment for use during the train the trainers and technicians' workshops and for distribution to 20 technicians.

Also, procuring a consultant to revise the code of practice for the refrigeration and air conditioning industry; engaging firms to do artwork and print revised code of practice for the refrigeration and air-conditioning industry; procuring a refrigerant identifier for Jamaica Customs Agency; and conducting a workshop on use of refrigerant identifier.

Some of the achievements of the project since it started in June 2012 include: the hosting of several workshops across the island; the hiring of local and international consultants; procuring of equipment, such as four multi-refrigerant identifiers, recovery machines, safety glasses and workman gloves, recovery cylinders, among others.

The project is being financed by the United Nations Development Programme, and the United Nations Environmental Programme and is scheduled to end in March 2016.

It falls under the Ministry of Water, Land, Environment and Climate Change, and will be implemented by the National Environment and Planning Agency.

▶ [Jamaica Information Service](#), 12 March 2015

14. Refrigeration and Air Conditioning Training in Carriacou (Grenada)



The National Ozone Unit (NOU) of the Energy Division, Ministry of Finance and Energy, continues to create opportunities for persons interested in the refrigeration and air-conditioning sector.

Having already completed three very successful training sessions in Refrigeration and Air-conditioning Fundamentals in Grenada (two in St. George's and one in St. Mark), over the last eighteen (18) months, the NOU took its training to the sister isle of Carriacou, on March 9th 2015.

From March 9th – 20th, 2015, twenty-two (22) persons will be participating in the training in Carriacou. Among them are four (4) females and one (1) male from Petite Martinique. The training is being facilitated by the National Ozone Unit's certified trainer, Mr. Henry Frederick and involves both theoretical and practical components.

This training was organized in consultation with the non-governmental organization, GRENCASE, and formed part of the capacity building component of Grenada's Hydrofluorocarbon (HCFC) Phase out Management Plan (HPMP) for phasing out Ozone Depleting Substances under the Montreal Protocol.

Funding was made available by the Multilateral Fund for the implementation of the Montreal Protocol through United Nations Environment Programme (UNEP) as the implementing agency.

In a short opening ceremony on Monday March 9th, at the Resource Centre, Hillsborough, National Ozone Officer, Mr. Leslie Smith, was among officials who addressed the participants. Mr. Smith in his presentation outlined to the participants the link between the National Ozone Unit and the Refrigeration and air-conditioning sector.

He also reiterated the need for persons to get involved in the sector because of the demand for the services on the island and the shortage of local technicians. Mr. Smith also gave special recognition to the four females who were participating in the training.

Persons at the opening ceremony included representatives from GRENCASE and the Ministry of Carriacou and Petite Martinique Affairs.

► [Government of Grenada](#), 11 March 2015

15. Gov't Urges Enforcement of Regulations for the Sale of Refrigerant (Saint Lucia)

The National Ozone Unit in the Ministry of Sustainable Development, Energy, Science and Technology is again advising importers and commercial stores that the sale of refrigerants to unlicensed technicians is illegal.

Officials of the Ministry of Sustainable Development, Energy, Science and Technology have received several reports of refrigerants being sold to individuals who are not certified technicians.

These actions are in violation of the law. As party to the Montreal Protocol on Substances that Deplete the Ozone Layer, Saint Lucia is obligated to phase out the use of Ozone Depleting Substances (ODS), namely hydrochlorofluorocarbons (HCFCs).

This is being done through the implementation of the Montreal Protocol Substances that Deplete the Ozone Layer Act (11 of 2011). According to Section 3L of the Act:

(1) A person shall not sell a refrigerant to a person who is not a certified technician.

(2) In this section "certified technician" means a person who has completed a training programme with the National Ozone Unit and has obtained a certificate from the National Ozone Unit. In this regard, business owners are urged to ensure all refrigerants sold at their establishments are sold only to certified technicians.

All certified technicians must present their Certified Technician's identification card endorsed by the Ministry of Sustainable Development, Energy, Science and Technology. When purchasing such items. All establishments should adhere to this because failure to comply is an offence pursuant to the Act that is punishable under law.

► [Saint Lucia News Online](#), 10 March 2015



16. Negative Effects of Solar Radiation Can Be Controlled, Experts Say (Peru)



High levels of solar radiation are a global problem and in Andean countries, like Peru, they reach extremes, but their negative effects can be controlled with appropriate measures, experts said.

Several regions of Peru reported levels of solar radiation of 14-15, considered too high, in recent days.

On Feb. 16, the National Meteorology and Hydrology Service, or Senamhi, recorded a maximum of 16 points of solar radiation in the central Andean region of Junin, with measurements of 15 in the northern region of Piura and in the southern areas of Cuzco, Ica, Arequipa and Moquegua.

In other regions, such as Cajamarca in the north, Tacna in the south and Lima, solar radiation was at 14, a level considered too high.

"We know that radiation levels are high all around the world," Orlando Ccora, a Senamhi meteorologist who specializes in radiation, told Efe.

"When there is over exposure to radiation, there is an increase in the number of skin cancer cases, damage to eyes and the onset of cataracts, and a weakening of the immune system," the specialist said.

In South America, the highest levels of solar radiation can be measured in Peru, Ecuador, the Bolivian highlands and northern Chile and Argentina.

The high levels of solar radiation in Southern Hemisphere countries are a result of the erosion of the atmosphere's ozone layer, proximity to the equator and high altitudes in the Andes.

"Altitude is another factor to keep in mind, since we have millions of people living in Andean regions, in cities located more than 2,000 meters (6,500 feet) above sea level," Ccora said.

Senamhi advises the public to take protective measures, such as using sunglasses, wide-brimmed hats, umbrellas and sunscreen, to reduce skin burns, eye injuries and diseases caused by extended exposure to the Sun.

Sun exposure should be curtailed between 10:00 a.m. and 4:00 p.m., the hours of maximum radiation, and special attention should be given to children, transit police, street vendors, tourists and beachgoers who spend more time outdoors.

"We do not want to cause alarm because, otherwise, nobody would want to go out of the house," Ccora said. "All that's required is to take appropriate precautions. If a person takes care, there will be no harm. We need to create a culture of prevention."

► [Fox News Latino](#), 2 March 2015, By: David Blanco Bonilla



NORTH AMERICA

17. US EPA Tackles Emissions from Refrigerators, Air Conditioners



The Environmental Protection Agency (EPA) is looking to cut down on emissions from refrigerators. The EPA announced recently it is approving the use of new "climate-friendly" refrigerants that could replace those already in use in refrigerators and air conditioners.

This comes as part of the Obama administration's climate action plan. The new rule will affect household refrigerators and freezers, restaurant refrigerators, and room air conditioners, the EPA noted.

"Today's rule is an example of how we can turn the challenge on climate change into an opportunity to innovate our way to a better future," EPA administrator Gina McCarthy

said.

The new rule is intended to better protect public health and the environment.

The EPA is approving several new climate-friendly refrigerants as substitute chemicals under the agency's significant new alternatives policy program, because they "offer better climate protection without harming the ozone layer."

These new refrigerants have "low global warming potential" the EPA says, and it hopes they will replace many of the older ozone-depleting substances currently in use.

According to the EPA, the older refrigerants have global warming potentials of 1,400 to 4,000 — but the new refrigerants could cut that number to between 3 and 675 GWPs, greatly reducing emissions.

The climate-friendly refrigerants include ethane, isobutane, propane, hydrocarbon blend R-441A, difluoromethane.

▶ [Protection of Stratospheric Ozone: Listing of Substitutes for Refrigeration and Air Conditioning and Revision of the Venting Prohibition for Certain Refrigerant Substitutes](#). Environmental Protection Agency 40 CFR Part 82 [EPA-HQ-OAR-2013-0748; FRL-9922-26-OAR] RIN: 2060-AS04

▶ [The Hill](#), 2 March 2015, By: Tim Devaney



WEST ASIA

18. Developing Alternatives to ODS is GCC Priority (Kuwait)



Developing safe and efficient alternatives to ozone-depleting substances (ODS) is a priority for the Gulf Cooperation Council (GCC) at present, a senior Kuwaiti environment official has said.

Chairman and Director General of the Environment Public Authority (EPA) Sheikh Abdullah Ahmad Al-Humoud Al-Sabah made the statement to KUNA on Thursday after a consultation meeting for the Undersecretaries of the GCC environment affairs ministries.

The meeting discussed topics on the agenda of the 27th Meeting of the Parties to the Montreal Protocol, Dubai.

Leading the Kuwaiti delegation to the GCC meeting, Sheikh Abdullah stressed keenness by the EPA on having ceaseless consultations with other GCC states on relevant issues of common concern to unify the GCC stance in November negotiations.

The delegation included EPA senior officials and a member of the National Ozone Committee (NOC) of Kuwait Yaqoub Al-Matouq.

▶ [Kuwait News Agency \(KUNA\)](#), 5 March 2015



FEATURED

OZONE SECRETARIAT

What's New Highlights: http://ozone.unep.org/en/in_focus.php?year=2014

Registration for the 35th Meeting of the Open-ended Working Group (OEWG) of the Parties to the Montreal Protocol, 22-24 April 2015, and the Workshop on HFC Management, 20-21 April 2015

Online registration for the thirty-fifth meeting of the Open-ended Working Group (OEWG) of the Parties to the Montreal Protocol, 22-24 April 2015, and the Workshop on HFC Management, 20-21 April 2015, Bangkok, Thailand, is now open and will close on 10 April 2015 in order to comply with UNCC security requirements.

Delegates are encouraged to register online to avoid long queues at the UNCC in Bangkok. The link to the registration site is <https://registration.unon.org/ozone/>

Before registering, delegates are requested to update their profile and if possible, upload a current photograph in order to comply with UNCC security requirements for badges. If photographs are not uploaded online, a photo will be taken at the site. On-site registration will begin at the UNCC on Sunday 19th April 2015 from 10:00 a.m.

Delegates are required to submit two separate registrations, one for the Workshop on HFC Management and one for the thirty-fifth meeting of the OEWG. The registration code for both meetings is: OEW.

Delegates who require visas prior to departure from their countries: please initiate the visa application process as soon as possible. For more information on visa application kindly refer to the Information Note by the Secretariat which is posted on the meeting portal at: <http://conf.montreal-protocol.org/meeting/oewg/oewg-35/default.aspx>

- ▶ Contact: Betty Kamanga, Betty.Kamanga@unep.org or Lora Manasseh, Lora.Manasseh@unep.org
- ▶ Provisional Agenda ([A C E F R S](#)) - UNEP/OzL.Pro.WG.1/35/1
- ▶ UNEP [Ozone Secretariat](#), February 2015



- [Information on the Contribution of Rising VSLs to Ozone Depletion](#) Recent media reports on the findings of a new study published on 16 February 2015 in the Nature Geoscience journal indicate that the atmospheric abundance of dichloromethane ▶ [Read more](#)
- [IMPCOM53: Report of the Implementation Committee under the Non Compliance Procedure for the Montreal Protocol on the work of its fifty-third meeting](#)
- [Report of the 10th meeting of the Conference of the Parties to the Vienna Convention for the Protection of the Ozone Layer and the report of the 26th MOP - \[\[A C E F R S\]\(#\) \]](#)

[Montreal Protocol Meetings](#) Dates and Venues

- Workshop on Hydrofluorocarbon Management, Bangkok, Thailand, 20 - 21 April 2015
- [35th Meeting of the Open-Ended Working Group](#) of the Parties to the Montreal Protocol, Bangkok, Thailand, 22 - 24 April 2015. [Provisional agenda](#) - Advance copy - UNEP/OzL.Pro.WG.1/35/1

- [Methyl Bromide Technical Options Committee 2014 Assessment Report](#)
- [Medical Technical Options Committee 2014 Assessment Report](#)

Progress & Quadrennial Assessment Reports:

- Environmental Effect Assessment Panel ([EEAP](#))
- Scientific Assessment Panel ([SAP](#))
- Technology and Economic Assessment Panel ([TEAP](#))

Halon Technical Options Committee Reports:

- [Halons Technical Options Committee 2014 Assessment Report \(Volume 1\)](#)
- [Halons Technical Options Committee 2014 Supplementary Report #1 - Civil Aviation \(Volume 2\)](#)
- [Halons Technical Options Committee 2014 Supplementary Report #2 - Global Halon 1211, 1301, and 2402 Banking \(Volume 3\)](#)

- [Technical Note #1 - Revision 4 - Fire Protection Alternatives to Halon - 2014](#)
- [Technical Note #2 - Revision 2 - Halon Emission Reduction Strategies - 2014](#)
- [Technical Note #3 - Revision 2 - Explosion Protection - Halon Use and Alternatives - 2014](#)
- [Technical Note #4 - Recommend Practices for Recycling Halon and Halocarbon Alternatives - 2014](#)
- [Technical Note #5 - Halon Destruction - 2014](#)

THE MULTILATERAL FUND FOR THE IMPLEMENTATION OF THE MONTREAL PROTOCOL



- The Executive Committee of the Multilateral Fund 74th meeting is scheduled to take place in Montreal, Canada, 18 - 22 May 2015.
- The 73rd meeting of the Executive Committee of the Multilateral Fund took place 7 - 13 November 2014, Paris, France. The final report of the meeting containing the 75 decisions taken by the Committee is available as document UNEP/OzL.Pro/ ExCom/73/62 on the Multilateral Fund's web site.

The Executive Committee approved a total of US \$68,784,379 including support costs for agencies for phase-out projects and activities in 62 Article 5 countries.

[▶ Learn more](#)

OZONACTION

NEW Publications/ Factsheets Launched by OzonAction During MOP-26:



[Financing the Climate Co-benefits of the HCFC Phase-out](#)



[UNEP OzonAction CAP Achievements 2014](#)



[OzonAction Special Issue 2014: New Responsibilities under the HCFC Phase-out](#)



[Demonstrating the feasibility of R-290 based AC manufacturing: China's Midea and Meizhi case](#)



[Low-GWP Alternative for Small Rigid PU Foam Enterprises](#)

[▶ Learn more](#) about OzonAction publications and events throughout the MOP-26



2015



[ATMOsphere Europe 2015 "Natural Refrigerants - Solutions for Europe"](#), 16-17 March at the Crowne Plaza, Le Palace Hotel, Brussels, Belgium



[Tour de France des alternatives aux pesticides: Demandez le programme](#) – 20-30 mars 2015, de Lille à Toulouse en passant par Poitiers, Beaune, Mouans Sartoux... le Tour de France des alternatives aux pesticides s'invite au programme de la 10^{ème} Semaine pour les alternatives aux pesticides.



International Conference IIR Commission B2 with B1 and D1 / Ammonia and CO₂ - Refrigeration Technologies, 16-18 April 2015, Ohrid, Republic of Macedonia. See more events from the [IIR website](#)



REHVA Annual Meeting and Conference 2015, 6-9 May 2015, Riga, Latvia, This event will bring together leading experts from the international heating, ventilation and air condition community.



Come and discuss **legislation and refrigerant options at F-Gas Question Time** -On Friday May 22, RAC will host its second Question Time devoted to the issues around the new F-Gas legislation, at the Royal Society of Chemistry in Piccadilly, London.



The 6th International Conference on Heating, Ventilating and Air Conditioning, 26-28 May 2015, RIPI Conventions Center, Tehran, Iran



AIRAH's Refrigeration 2015 Conference will be held on Wednesday, 3 June, Sydney, Australia. The conference committee is now **calling for abstracts**, due on 19 March 2015.



FRIGAIR Africa 2015 is a go! 3-5 June 2015, Gallagher Estate, Midrand. South Africa. FRIGAIR 2015 Showcasing the crucial role played by the HEVAC&R industry and the rapidly developing technology in eco-friendly efficiency.



16th European Conference The Latest Technology in Air Conditioning and Refrigeration Industry with Particular Reference to F-Gas Regulation Revision, New Refrigerants, New Regulations, New Plants. 12-13 June 2015, Milano, Italy



4th Annual ATMOsphere America 2015 – The Business Case for Natural Refrigerants in North America will take place on 25-26 June 2015, Atlanta, Georgia, USA



ASHRAE's 2015 Annual Conference will take place on 27 June – 1 July 2015, in Atlanta, Georgia, USA



Advancing Ozone & Climate Protection Technologies: Food Cold Chain, 18 July 2015, Paris, France - The United Nations Environment Programme, the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants, the United States of America, and the Alliance for Responsible Atmospheric Policy are pleased to announce the Advancing Ozone & Climate Protection Technologies: Food Cold Chain to be held July 18, 2015, Paris, France.



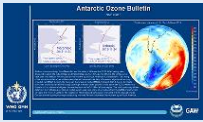
The Future of HVAC Conference 2015 - Calls for abstracts – 18-19 August 2015, Melbourne, Australia



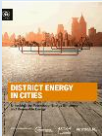
Salon Energies Froid, 2-3 Décembre 2015, Nantes, France



READING

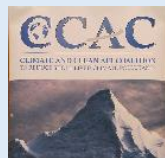


WMO Antarctic Ozone 2014 Bulletins - The World Meteorological Organization Secretariat issues bulletins containing information on the state of the ozone layer in the Antarctic at roughly two week intervals from August to November. The bulletins are based on data provided by WMO Members which operate ozone monitoring stations in the southern hemisphere and satellites to observe ozone globally.



District Energy in Cities: Unlocking the Potential of Energy Efficiency and Renewable Energy is among the first publication to provide concrete policy, finance and technology best practice guidance on addressing the heating and cooling sectors in cities through energy-efficiency improvements and the integration of renewable energy technology. ...

Related [video](#) | [UNEP Press Release](#)



Summary of The meeting of the Climate and Clean Air Coalition to Reduce Short-Lived Climate Pollutants (CCAC) Working Group took place from 24-25 February 2015 in Kathmandu, Nepal. More than 100 participants attended the meeting which focused on developing a 5-year Strategic Plan for the CCAC, as requested by Ministers and Heads of the CCAC Partner organizations. During the meeting, the Working Group made progress on developing key elements of the Strategic Plan. It also approved the SAP Work Plan, together with six funding requests for Initiatives on Agriculture, Diesel, Hydrofluorocarbons (HFCs), Regional Assessment and Supporting National Planning for Action on SLCPs (SNAP). The Working Group also adopted decisions on Demonstrating Impact, the 5-Year Strategic Plan, and the Road to Paris...



Low-GWP Alternatives in Commercial Refrigeration: Propane, CO₂ and HFO Case Studies The CCAC has launched a transformative initiative (entitled 'The HFC Initiative, Promoting HFC Alternative Technology and Standards') for rapid implementation aimed at promoting HFC alternative technologies and standards to significantly reduce the projected growth in the use and emissions of high-global warming potential (GWP) HFCs in coming decades relative to business-as-usual scenarios. The objectives of the initiative are to mobilise efforts of the private sector, civil society, international organisations, and governments...



Drawing down N₂O to protect climate and the ozone layer A UNEP synthesis report addressing the benefits of drawing down nitrous oxide (N₂O) emissions. N₂O is now the most significant ozone-depleting substance emission and the third most important greenhouse gas released into the atmosphere...



AREA Guidance on minimum requirements for contractors' training & certification on low GWP Refrigerants - AREA has updated its Guidance on minimum requirements for contractors' training & certification on low GWP Refrigerants. The revision includes an Annex II, which lists training facilities in AREA countries. The list provides website addresses and information on the type of training (theoretical and/or practical) by type of low GWP refrigerant.



Free guide to F-gas changes The European contractors association AREA has produced a timely guide to the F-gas regulations which clarifies the new rules, their impact and their practical application... [Read more](#)



The recent [Alternatives to HCFCs/HFCs in developing countries](#) with a focus on high ambient temperatures” study carried out by Öko-Recherche for the European Commission stresses that the refrigerant and blowing agent demand is expected to triple by 2030 in developing countries as a result of economic growth. A sector by sector analysis shows that a climate-friendly replacement for current and future of HCFCs and high GWP HFCs is possible in most applications ...



Loopholes & ODS illegal trade threaten ozone layer recovery. EIA’s latest briefing [New Trends in ODS Smuggling](#) highlights the growing threat of illegal trade in ozone depleting substances (ODS).



[Primer on Hydrofluorocarbons](#), Fast action under the Montreal Protocol can limit growth of HFCs, prevent up to 100 billion tonnes of CO₂-eq emissions by 2050, and avoid up to 0.5°C of warming by 2100. IGSD, January 2014, Lead authors: Durwood Zaelke, Nathan Borgford-Parnell, and Danielle Fest Grabiell. Contributing authors: Stephen O. Andersen, Xiaopu Sun, Dennis Clare, Yuzhe Peng Ling, and Alex Milgroom.



[Flammable Refrigerants Safety Guide](#), AIRAH - Many of the refrigerants traditionally used in refrigeration and air conditioning systems in Australia have been non-flammable, non-toxic, synthetic greenhouse gases (SGGs) that have a high global warming potential (GWP). These were typically synthetic refrigerants including CFCs, HCFCs and HFCs. Due to the growing national and international concern regarding the resulting atmospheric effects of SGGs, the use of alternative low GWP refrigerants is increasing. ...



[Global Automotive HVAC Market 2015-2019](#) - The analysts forecast the Global Automotive HVAC market to grow at a CAGR of 7.72 percent over the period 2014-2019.



[Energy Efficiency Fact Sheet: Refrigeration](#) - Refrigeration is of critical importance to many small businesses – from keeping simple kitchen facilities in commercial premises to equipment for the food service industry where needing to preserve perishable items or cool non-perishable products for sale is a day to day imperative. [...] Whether making the most out of existing refrigeration solutions or implementing new energy efficient ones, energy can be saved through quick wins or longer term projects...

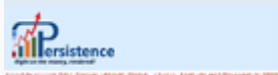


[Recent Trends in Global Emissions of Hydrochlorofluorocarbons and Hydrofluorocarbons: Reflecting on the 2007 Adjustments to the Montreal Protocol](#).

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† Earth System Research Laboratory, National Oceanic and Atmospheric Administration, Boulder, Colorado 80305, United States ‡ DuPont Chemicals & Fluoroproducts, Wilmington, Delaware 19805, United States § Institute for Governance & Sustainable Development, Washington, D.C. 20007, United States|| Cooperative Institute for Research in Environmental Sciences, University of Colorado, Boulder, Colorado 80309, United States

Read/download the report: [The Journal of Physical Chemistry](#)



[Global Non-Melanoma Skin Cancer Market - Industry Size, Share, Segment Analysis and Forecast to 2020](#)



[The natural refrigerant set to reduce supermarket energy use](#). A new waste product derived from sugar beet could help cut supermarket energy consumption from refrigeration..., The Guardian, 4 March 2015



[Offshore Air Handling Units - Global Industry Analysis, Market Size, Share, Growth, Trends And Forecast 2014 - 2020](#)

[E-Bulletin MOPIA March 2015](#), Manitoba Ozone Protection Industry Association (MOPIA)

[A Reagan Approach to Climate Change](#) - The trend of disappearing summer sea ice in the Arctic is clear even though there is always some variability from year to year. Severe winter weather underscores the importance of keeping track of significant trends. Here are the numbers, according to Julienne Stroeve, of the National Snow and Ice Data Center in Boulder, Colo., as reported in the Economist in February...

[Geothermal Heating and Cooling: Design of Ground-Source Heat Pump Systems](#)- ASHRAE

[Principles of Heating, Ventilating and Air-Conditioning, 7th Ed.](#) ASHRAE



MISCELLANEOUS

The United Nations Environment Programme (UNEP) is inviting nominations for the [2015 Champions of the Earth](#) - the United Nations flagship environment award, which recognizes outstanding environmental visionaries and leaders and seeks to build momentum for the transition to a sustainable future. ▶ [Learn more](#)



REAL Alternative Refrigerants e-Learning Launch, Webinar on Thursday, 19 March 2015 at 14:00 GMT - Check you time zone at: www.greenwichmeantime.com/time-zone/world/

Please register at: <https://attendee.gotowebinar.com/register/4615928298460323329>

The English version of new REAL Alternatives Blended learning programme will be launched on 19 March with a free webinar introduction organised by the Institute of Refrigeration (IOR). The programme has been developed by a consortium including AREA to respond to the need for reliable, independent information on the safe, efficient and reliable application of low GWP refrigerants such as carbon dioxide, hydrocarbon, HFOs and ammonia.

The webinar starts at 2pm GMT and closes at approx 3.15pm. It will feature the presentations below:

The evolution of approaches to Refrigerant Emissions and Leakage reduction, from Graeme Maidment, IOR President

- The link between efficiency, cost and leakage
- Good practice in design and maintenance of systems
- Why Alternative refrigerants?
- The blended learning approach (materials, library, e-learning and classroom)

Legislative drivers and limitations for moving to alternative refrigerants, Ray Gluckman, legislation expert

- The impact of the F Gas Regulations
- Challenges for the future of refrigeration use

- The wider international context

REAL Alternatives: safety, efficiency, containment and training, Jane Gartshore, Training Consultant to the programme

- What is an alternative refrigerant and why are they different?
- Design choices for minimising environmental impact
- Delivering improved knowledge and understanding for technicians

Followed by a demonstration of REAL Alternatives e-learning, library and training booklets and a Question and Answer session with listeners.

Find out more about the project and sign up for the English Language version of the new e-learning programme due to launch on 19 March visit the project website at www.realalternatives.eu

Additional language versions also available: Polish (from 3rd March). Coming soon: Italian, German, Dutch and French

Modernizing District Energy Systems Could Reduce Heating and Cooling Primary Energy Consumption by up to 50% finds New Report - Reducing Cities' Heating and Cooling Energy Consumption Key to Keeping Global Temperature Rise to 2°C... Download the [full report](#)



AIRAH “[Calculating Cool Online HVAC Tool](#)” Imagine if there was a way of ranking different HVAC systems during design, installation and operation. And what if this method was freely available online and able to be used to drive improvement? Following the official launch of the Calculating Cool online benchmarking tool it’s now possible for building owners and operators, HVAC industry professionals, facility managers and other stakeholders to measure the efficiency of a variety of HVAC systems.

[Ammonia Refrigeration System Safety](#), Course April 13-15, 2015, Pyle Center, 702 Langdon Street, Madison, Wisconsin, Course Fee: \$1095. By attending this course you will:

- Learn best practices for ammonia system safety and operation
- Understand relevant safety codes and standards
- Get answers to your specific questions
- Avoid operational risks with a solid understanding of safety in ammonia refrigeration
- Receive the latest updates on ammonia safety regulations



[That’s Cool: Cold Storage Warehouse with Shuttles at -24°C](#) – Video



[High Alert’ to Prevent Refrigerant Abuse](#) - 15-21 March is **National Inhalants and Poisons Awareness Week**, and the Alliance for Consumer Education (ACE) is urging members of the HVAC community to be on “**high alert**” for signs of refrigerant abuse. According to ACE, one in five American teens has used household products — including refrigerants — to get high. Consequences are severe and can result in death (sudden sniffing death syndrome) — even on the first use... ACHR News.



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