

OZONNEWS

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



GLOBAL

1. Post Meeting Summary of the 74th Meeting of the Executive Committee of the Multilateral Fund for the Implementation of the Montreal Protocol

Introduction

The 74th meeting of the Executive Committee, which took place in Montreal, Canada from 18 to 22 May 2015, was attended by the representatives of 14 of the Executive Committee member Parties and by participants co-opted from 19 other countries (see Annex I attached). Mr. John Thompson of the United States of America presided over the meeting as Chair of the Executive Committee in 2015.

Representatives of the Ozone Secretariat, implementing agencies, UNEP as the Treasurer, and representatives from the Alliance for Responsible Atmospheric Policy, and the Environmental Investigation Agency also attended the meeting.

The 74th meeting was the first of the two meeting per year scheduled for 2015 and the first meeting of the 2015 to 2017 triennium. Agenda items included the update on the 2015-2017 business plan of the Multilateral Fund and financial planning for the triennium, the return of project balances, tranche implementation delays, country programme data and prospects for compliance, and status reports and specific reports on projects. Monitoring and evaluation matters included the consolidated project completion report, the report on the multi-year agreement database, the final report on the evaluation of HCFC phase-out projects in the foam sector, and the terms of reference for two desk studies.

Several policy matters were considered including the criteria for funding the HCFC consumption phase-out in stage II of HCFC phase-out management plans (HPMPs), the review of institutional strengthening (IS) funding, follow-up to decision XXVI/9 (paragraph 4) of the Twenty-sixth Meeting of the Parties on additional funding to conduct inventories or surveys on ODS alternatives, the analysis of the remaining eligible HCFC consumption in various sectors and subsectors of potential demonstration relevance, and the report on the status of consolidation of the accounts of the Multilateral Fund. In the margins of the meeting, the Sub-group on the Production Sector discussed the HCFC production phase-out management plan (HPPMP) for China, the format for the submission of annual implementation plans and progress reports for an HPPMP, as well as the request for the technical audit of the HCFC production sector in Mexico.

Project proposals submitted for consideration included one stage II of an HPMP, tranches of approved HPMPs and an HPPMP, a methyl bromide (MB) technical assistance programme, renewals of IS projects, project preparation related to stage II of HPMPs, project preparation and two fully developed projects to demonstrate low-global-warming potential (GWP) technologies, feasibility studies on district cooling, and surveys on ODS alternatives.

The Committee took a total of 58 decisions and approved investment projects and work programme activities for 113 countries with a value of just over US \$55.5 million plus US \$3.9 million in support costs for bilateral and implementing agencies. [...]

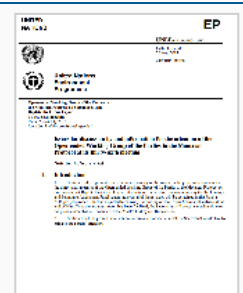
[▶ The Multilateral Fund for the Implementation of the Montreal Protocol](#), June 2015

2. Issues for Discussion by and Information for the Attention of the Open-Ended Working Group of the Parties to the Montreal Protocol at its Thirty-Sixth Meeting

Note by the Secretariat

I. Introduction

1. Section II of the present note sets out a summary of the issues on the provisional agenda for the thirty-sixth meeting of the Open-ended Working Group of the Parties to the Montreal Protocol on Substances that Deplete the Ozone Layer. Information from and recommendations by the Technology and



Economic Assessment Panel regarding several of those issues will be contained in the Panel's 2015 progress report which is expected to be ready for posting on the Ozone Secretariat website at the end of May. Once the progress report has been finalized, the Secretariat will prepare an addendum to the present note that will summarize the Panel's findings on those issues.

2. Section III of the present note sets out information on matters that the Secretariat would like to bring to the parties' attention.

II. Summary of issues for discussion by the Open-ended Working Group at its thirty-sixth meeting

Agenda item 3 2014 quadrennial assessment reports of the Scientific Assessment Panel, the Environmental Effects Assessment Panel and the Technology and Economic Assessment Panel

Agenda item 4 2015 progress report of the Technology and Economic Assessment Panel

Agenda item 5 Issues related to exemptions under Article 2A–2I of the Montreal Protocol

Agenda item 6 Issues related to alternatives to ozone-depleting substances

Agenda item 7 Outcome of the intersessional informal discussions on the feasibility and ways of managing hydrofluorocarbons (UNEP/OzL.Pro.WG.1/35/6, paragraph 128 and annex II)

Agenda item 8 Proposed amendments to the Montreal Protocol

Agenda item 9 Issues related to hydrochlorofluorocarbons phase-out

Agenda item 10 Measures to facilitate the monitoring of trade in hydrochlorofluorocarbons and substituting substances (decision XXVI/8)

Agenda item 11 Potential areas of focus for the assessment panels' 2018 quadrennial reports

▶ Read [full text](#)

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

3. Information on the Outcome of the Intersessional Informal Meeting on HFCs, Vienna, 12-13 June 2015

Message from Tina Birmpili, Executive Secretary, Ozone Secretariat

Ref: OzL.Sec/35OEWG/Intersessional informal meeting-Vienna. Date: 29 June 2015

Dear Sir/Madam,

I have the pleasure to inform you that the inter-sessional informal meeting was held on the 12 and 13 June 2015, in Vienna, co-convened by Mr. Patrick McInerney (Australia) and Mr. Rafael da Solar (Brazil).

The informal meeting was held pursuant to the agreement of the Open-ended Working Group of the Parties to the Montreal Protocol, at its thirty-fifth meeting held in Bangkok, 22-24 April 2015, to continue to work inter-sessionally in an informal manner to study the feasibility and ways of managing HFCs, including, inter alia, the related challenges set out in annex II to the report of that meeting (UNEP/OzL.Pro.WG.1/35/6), with a view to the establishment of a contact group on the feasibility and ways of managing HFCs at the thirty-sixth meeting of the Open-ended Working Group. One of the components of the inter-sessional work was the informal meeting in Vienna.

Please find attached a [letter of the co-conveners](#) sent to the participants of the thirty-fifth meeting of the Open-ended Working Group to inform them of the outcome of its agreement and [the factual record of the key issues raised](#) in the discussion on the feasibility and ways of managing hydrofluorocarbons. The letter, the factual record of the informal meeting (as a non-paper) as well as the informal briefing notes made available as background document for the informal meeting will be posted at the meeting portal for the upcoming thirty-sixth meeting of the Open-ended Working Group, 20-24 July 2015, Paris.

Looking forward to working with many of you in Paris.

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

4. Posters and Logo for 30th Anniversary of the Vienna Convention, International Ozone Day 2015 and Mobile App for the 36th OEWG Meeting

30th Anniversary and International Ozone Day

The Ozone Secretariat has developed posters, roll-up banners and logos for downloading and dissemination to mark the 30th anniversary of the Vienna Convention and the commemoration of the International Day for the Preservation of the Ozone Layer on 16 September.

The material produced in the six official languages of the United Nations can be downloaded from the Secretariat's website at this link: http://ozone.unep.org/en/ozoneday_2015_posters.php

Their design is aligned with our theme for the celebration of this year's International Ozone Day and the 30th anniversary of the Vienna Convention, **"30 Years of Healing the Ozone Together"** and the supporting slogan, **"Ozone: All there is between you and UV."**

The posters and banners are provided in two sets – one with the International Ozone Day text and date, and another without – to allow flexibility in their usage. Short videos and other information material being produced as part of the Secretariat's digital campaign to commemorate the 30th anniversary of the Vienna Convention will be shared in the coming weeks.

Many commemorative events are already being planned by various parties for this year's celebrations. The Secretariat has posted the national plans submitted so far by parties at this link: http://ozone.unep.org/en/30_anniversary-vienna_convention_and_ozoneday_2015.php. We look forward to receiving more plans and information material.

Mobile App for the 36th OEWG Meeting

Once again, we have created a mobile app for the forthcoming 36th Meeting of the Open-Ended Working Group of the Parties to the Montreal Protocol, to be held in Paris, France, from 20 to 24 July 2015. The app contains general information about the meeting and meeting documents. The content of the app will be updated continuously before and during the meeting to keep parties updated. To get the app:

Step 1: Tap the 'App Store' icon (on Apple iOS devices) or the 'Google play store' icon (on Android devices). You will be prompted to enter your iTunes or Google password and if you don't already have an account, you will need to create one.

Step 2: Search for the 'UNEP Events' app in the store and install it on your device.

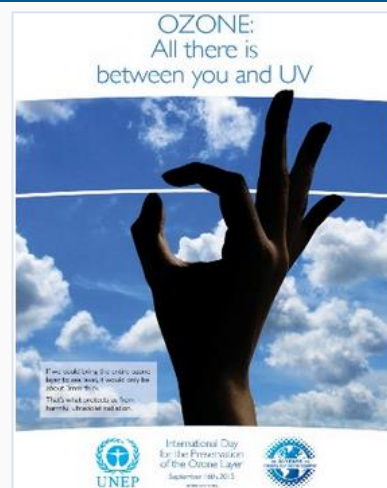
Step 3: Open the 'UNEP Events' app and tap the event titled '36th Meeting of the Open-Ended Working Group of the Parties to the Montreal Protocol' to download it.

Step 4: Once the download is complete, the app is available to use. Tap any icon on the app to browse and engage with the content.

You can also download the app by scanning the QR Code available on our conference portal at this link: <http://conf.montreal-protocol.org/meeting/oewg/oewg-36/SitePages/Home.aspx>.

The content of the app can also be accessed through any web browser at this link: <https://event.crowdcompass.com/oewg36>

► Contact: [Dan Teng'o](mailto:Dan.Teng@unep.org), Communications Officer, Ozone Secretariat



5. 2015: The Revolution of Refrigeration and Air Conditioning Systems Begins at the EXPO



The XVI EU Conference was the only event at EXPO2015 dedicated to the Technology of Refrigeration for food preservation and conservation. The aim of the Conference is to present innovative and advanced solutions, which are environmentally-friendly and can be used by all the nations of the world; by exporting long-established European best practice and expertise globally.

The XVI EU conference organized by UNEP, IIR, CSG, EEC, ATF was host the Presidents of the Major Global Associations at the Politecnico of Milan and EXPO2015 on the 12nd/13th June 2015

In developing countries, 40% of fruit and vegetables (see below) are wasted during transportation or during sowing, harvesting or distribution, before arriving to consumers. In developed countries this shocking percentage is reduced to 10% but this can still be

improved.

What important announcement could have been made at the Expo to help reduce the percentage of fruit and vegetables wasted in nations throughout the world? Our sector could once again help reach the goal of the zero hunger challenge and determine the fate of our planet. The sector has already been able to win the battle to reduce the hole in the Ozone Layer, which was responsible for increased rates of skin cancer and cataracts, and we are now fighting against climate change.

	Global	Developed countries	Developing countries
Population in 2009 (billion inhabitants)	6.83	1.23	5.60
Population in 2050 (forecast, billion inhabitants)	9.15	1.28	7.87
Refrigerated storage capacity (m ³ /1000 inhabitants)	52	200	19
Food losses (all products) (%)	25%	10%	28%
Losses of fruit and vegetables (%)	35%	15%	40%
Losses of perishable foodstuffs through a lack of refrigeration (%)	20%	9%	23%

Source IIR 2009

In this moment of global transformations, the United Nations, FAO and Centro Studi Galileo launched the theme of the Universal Exhibition EXPO2015 Milan “Feeding the Planet: Energy For life” at the EXPO. Refrigeration plays a fundamental role in this goal. For this reason the slogan of EXPO for this event has been changed and extended to

“Feeding the Planet thanks to Refrigeration”

It is important to highlight that in order to reach the noble target of EXPO2015, the world should focus on the main method of preserving and conserving food: refrigeration

To fulfil this aim, the prestigious agencies of United Nations FAO, UNEP and UNIDO (Food and Agriculture Organization of United Nations, United Nations Environment Programme and United Nations Development Organization) have joined Centro Studi Galileo CSG, the European Energy Centre EEC and the Italian Association of Refrigeration Technicians ATF, to cover in technical detail the current revolution, which will facilitate the distribution of food in developing countries.

ATF together with CSG have over the last few years been deeply involved in helping developing countries improve living conditions, by improving refrigeration and air conditioning systems and processes, through capacity building and training technicians to [install, repair, maintain and design numerous projects with United Nations in Africa and Asia \(Ethiopia, Rwanda, Ghana, Tunisia, Eritrea, Benin, Bahrain, Sri Lanka etc...\)](#)

The huge changes in the refrigerant gas industry will involve the entire cooling sector through a far-reaching revolution.

We have the duty to find technological solutions to reduce and fight against environmental issues also related to energy efficiency, in order to benefit the consumer and the whole society. Our sector is vital to improve comfortable living standards (air conditioning) and to end food poverty (refrigeration).

Therefore at the XVI European Conference in Milan-EXPO2015 innovative technologies such as magnetic refrigeration, the use of solar energy, new heat pumps using CO₂, reduction of refrigerant charging, the use of turbo in refrigeration, CO₂ transcritical in warm climates, and many more were discussed. As was the new refrigerants, which are a means to improve systems to guarantee the best comfort for our society.

The entire world is looking to Europe to provide guidance, and all of Europe is looking to Milan, to Politecnico and EXPO2015, for the XVI EU Conference, which will explain the latest transformations in our continent and share our knowledge with the rest of the world, for the wellbeing of the planet.

This short article was provided by M. Buoni, Centro Studi Galileo

▶ [Centro Studi di Galileo](#), June 2015



ASIA PACIFIC

6. India's Montreal Protocol Proposal Could Cut HFC Emissions by 64% - Study

India's Long Term Hydrofluorocarbon Emissions; A Detailed Cross Sectoral Analysis Within an Integrated Assessment Modelling Framework

India is following the Hydrochlorofluorocarbon Phaseout Management Plan (HPMP) as part of its international commitment under the Montreal Protocol to mitigate consumption of ozone depleting substances. This transition is almost complete in developed countries. However, the phaseout of Hydrochlorofluorocarbons (HCFCs) has largely resulted in a transition towards Hydrofluorocarbons (HFCs), which are potent greenhouse gases.

Within India, almost all refrigeration and air-conditioning systems produced and marketed use HCFC-22. The impending transition away from HCFCs would in all probability lead to higher consumption and emission of HFCs in India. If India moves towards HFCs across sectors, there will be significant increase in the emissions of HFCs. However, the pace and magnitude of these emissions is not well understood. The Council on Energy, Environment and Water (CEEW, India) along with the International Institute for Applied Systems Analysis (IIASA, Austria) has initiated joint research to address this research gap. The research aims at understanding the following research questions:

- What will be the global warming impact of high GWP HFC emissions from the residential, commercial, transportation and industrial sectors in India under the business-as-usual (BAU) or reference scenario?
- What is the techno-economic feasibility of India adopting aggressive domestic policy measures to transition away from HFC emissions across sectors, given India's current development context?
- What is the maximum feasible reduction possible across HFC emission sectors based on the advanced control technologies/options (ACT) available globally and what is the cost optimal strategy for the same? Can India leapfrog high-GWP HFCs immediately?
- What are the implications of a global deal on HFCs as per proposed MP amendments?

This report focuses on the first research question, that is establishing the 'Business as Usual' or 'Reference' scenario for understanding the magnitude of HFC emissions across sectors until 2050. We undertake this analysis within the integrated assessment modelling framework of Global Change Assessment Model (GCAM).



GCAM models key energy service demands like cooling energy, refrigeration, as well as transportation. GCAM output informs us about the penetration of residential air-conditioning and refrigeration, commercial air-conditioning and refrigeration, and transportation modes like cars, buses, etc. We then develop a bottom up HFC calculation module to estimate long term HFC emissions based on output from GCAM. Our estimation process ensures that we meet the HPMP phase out targets in our reference scenario. We also model emissions for three key industrial sectors: foams, aerosols and solvents. The second phase of this research will focus on the next set of questions and aims at understanding the mitigation potential across sectors and potential cost of a transition away from HFCs. This analysis will be undertaken with the framework of Greenhouse Gas and Air Pollution Interaction and Synergies (GAINS) model, IIASA's in-house model. One important element in our research has been continuous engagement with industry and civil society stakeholders. The industry experts have informed our technical assumptions as well as given feedback on the initial findings from our research. The civil society experts have given feedback on our modelling approach as well as key policy issues and challenges relevant for the HFC debate within India.

We find that with economic growth and increasing per-capita incomes, more and more people will buy air-conditioners, refrigerators, as well as personal vehicles. Higher penetration of all these technologies in the residential and commercial sectors forms the key driver of higher consumption and emission of HFCs. If HFC's consumption is not phased down, total HFC emissions will increase to 500 MtCO₂-eq in 2050. This is based on the assumption that HFCs used as alternatives in developed countries will replace HCFCs in India as well. The biggest share of HFC emissions will be taken up by the residential and commercial cooling sectors (~35 % and ~28% respectively in 2050), followed by mobile air-conditioning in cars (~15%), and then commercial refrigeration (14%). All other sectors put together will have a low share in India's total HFC emissions, which is consistent with findings from other international assessments.

► [CEEW-IIASA Report](#), May 2015

7. Mongolia Conducted Training on Control of Import and Export of Ozone Depleting Substances

Training on "Control on importing and exporting of ozone depleting substance" was conducted for the officers of customs administration.



Under the scope and assistance of management of substances effective for global warming such as hydrochlorofluorocarbons (HCFC) implemented by the United Nations Environment Programme, Ministry of Environment, Green development and Tourism of Mongolia, in particular, the National Ozone Unit has been organizing and planning to conduct regional trainings on "Control on importing and exporting of ozone depleting substance and capacity building trainings for customs officers" from 2012-2020.

In connection with the above planning, the particular training was conducted for the customs officers of the customhouses in Ulaanbaatar on 15-16 June 2015. The target participants were customs officers who have not attended previous trainings and eventually, to select 25 customs officers for further training for specialists in the use of equipment for determining the ozone depleting substance and its substituents.

A total of 15 presentations were made during the 2-day training. In the end, participants were given discussion session for concluding and coming up with results and guidelines. Lastly, the participants were awarded by certificates of attendance

► [Mongolian Customs](#), 24 June 2015



8. Introductory Workshop on HFC 32 as alternative with Low Global Warming Potential - 9th June 2015 Ceylon German Technical Training Institute (CGTTI)

Introductory Workshop on "HFC 32 as efficient alternative with zero Ozone Depleting Potential and Low Global Warming Potential" was Organized by the National Ozone Unit in collaboration with UNDP and with Technical support of DAIKIN Air Conditioning India Pvt Ltd. For this occasion Mr. Hitoshi Tanaka, Deputy Managing Director, Mr. K.D. Virmani, Senior Vice President Mr. Rajesh Nagpal, Marketing Executive and two other representatives of DAIKIN Air Conditioning India Pte Ltd were participated.

Senior Assistant Secretary/ Director of National Ozone Unit, Mr. G.M.J.K. Gunawardana delivered the Welcome Address and the opening statement. In this opening statement he highlighted in converting in to zero ODP and low GWP refrigerants. Mr. Shantha Karunaratne, Director/Principal of CGTTI addressed the audience and elaborated the corporation CGTTI maintain with NOU in hosting this kind of workshops. Presentation on “World trend in promoting Low GWP HFC for Air Conditioning” was delivered by Mr. Hitoshi Tanaka Deputy Managing Director DAIKIN Air Conditioning India. Mr. G.M.J.K. Gunawardana, Director of National Ozone Unit, Mr. S.P.K. Amarasinghe, Senior Training Engineer of CGTTI and Mr. K.D. Virmani, Senior Vice President of DAIKIN Air Conditioning India were the resource persons.



Mr. K.D. Virmani made very impressive presentation on “HFC 32 as prospective replacement for higher GWP HFC refrigerants”. He gave detailed scenario on research and Development of HFC 32 applying to the air conditioning. In his presentation he made a link between refrigerants that are used at present and future innovations. The Demonstration Session was conducted by Mr. M. M M. Senevirathne Coordinator, Technical, National Ozone Unit and DAIKIN experts. Nearly 75 participants enthusiastically participated and gathered information on this new technology.

► Sri Lanka, [National Ozone Unit](#), 9 June 2015

9. Hotel to Get DENR Subsidy for Environment-friendly Chillers

Radisson Blu general manager Nishan Silva shakes the hand of Environment Management Bureau Assistant Director Eva Ocfemia after signing the PCEEP sub-grant agreement at the hotel’s boardroom. Witnessing the signing were hotel and department officials, including DENR Assistant Secretary Rommel Abesamis (seated, right) (Sun.Star Photo/Alex Badayos)



RADISSON Blu Hotel Cebu will get a 15 percent subsidy from the Department of Environment and Natural Resources (DENR) for its environment-friendly air-conditioning system.

The 400-room hotel is the latest project participant of the Philippine Chiller Energy Efficiency Project, (PCEEP), a World Bank- assisted energy efficient program funded by the Global Environment Facility (GEF) and the Multi-lateral Fund.

Radisson Blu recently purchased two new environment-friendly chillers that will save up to P8.5 million yearly on its electricity consumption. This cost them some \$350,000 for each new unit. The hotel maintains four chillers.

“We have been supporting environmental initiatives through responsible business. This is part of our initiative in going green,” said Nishan Silva, the hotel’s general manager during the signing of the sub-grant agreement with the DENR, sealing the hotel’s participation in the PCEEP program yesterday.

Silva disclosed they are committed to replace two old chillers to environment-friendly ones in the future. He also promised the DENR that he will raise this campaign to the Hotels Resort and Restaurants Association of Cebu, where he sits as a board member.

DENR officials welcomed Radisson Blu’s inclusion in the program and lauded the hotel’s effort to become a model institution for environmental sustainability in Cebu through their participation in the PCEEP.

The PCEEP encourages hotels, factories, malls and other big establishments to replace inefficient chillers and other cooling equipment that contains ozone-depleting substances (ODS), like chlorofluorocarbons or CFCs. It is funded by a \$2.6-million grant from the GEF and \$1 million from the Ozone Trust Fund.

PCEEP is in support of the country’s commitments to the Montreal Protocol on Substances that Deplete the Ozone Layer and the Kyoto Protocol to the United Nations Framework Convention on Climate Change.

To date, at least 10 establishments received the subsidies from the PCEEP and benefited from the improved performance of their chiller efficiencies.

Last year, the DENR provided more than P24 million in subsidies to the private sector. This included the first recipient in the Visayas, SM City Iloilo. Several chiller replacements have been completed in Visayas and Mindanao, aside from those already completed in Metro Manila that included malls, hotels and office buildings.

“The chiller replacements from these establishments contributed to the overall sustainability strategy of their business operations particularly the reduction of energy intensity, electricity cost and greenhouse gas emissions,” said Rommel Abesamis, Assistant Secretary for Foreign Assisted and Specials Projects under the DENR.

Despite the clear benefits of investing in efficient chillers, early replacement of chillers is a hard business decision to make, according to DENR- Environmental Management Bureau (EMB) Assistant Director Eva Ocfemia.

“Various financial and technological considerations are to be considered. Competing financial priorities and opportunities oftentimes overshadow interests to invest in environment-enhancing technologies,” she said.

However, Ocfemia emphasized that business-as-usual schemes are no longer enough to justify commercial profits and economic gains because of the effects these activities have brought on the environment.

“Now is the time for innovations that lower ecological footprints of business operations,” she said.

DENR, she added, will constantly encourage companies to look beyond and require environmental protection measures as integral part of their business decisions and operations.

“By incorporating environmental consciousness in investment decisions, businesses help promote preservation of environmental integrity as well as intergenerational equity for our children’s sake,” said Ocfemia.

At the end of the project in January 2017, PCEEP aims to replace a total of 30,650 tons of refrigeration that used about 5.7 tons of ozone depleting potentials.

The installation of new energy efficient chillers is expected to generate 124.7 gigawatt-hours in energy savings, abating approximately 10 megawatt of power demand (equivalent to the construction of a \$30 to \$50 million power plant), and reducing about 64,000 tons of carbon dioxide.

▶ [SunStar](#), 26 June 2015, By: Katlene O. Cacho

10. Keeping it Simple

Interview with Australian Refrigeration Association (ARA) president, Tim Edwards - Australian Refrigeration Association president, Tim Edwards, explains why the future refrigerant landscape will be reduced to HFOs and naturals.[...]

"We all know that HCFCs are history and that HFCs are not too far behind. The future is really down to natural refrigerants versus HFOs," [...]

▶ [Climate Control News \(CCN\)](#), 19 June 2015



11. Developing More Environmentally Friendly Refrigerants

Interview with Dr. Stephen Ritter, Senior Correspondent for Chemical & Engineering News, speaks to AZoCleantech about the various chemicals used as refrigerants and how recent attempts have been made to make them more environmentally friendly. [...]

▶ [AZoCleantech](#), 29 June 2015



EUROPE AND CENTRAL ASIA

12. F-Gas : « trouver le juste milieu entre risque perçu et risque réel »



Les participants à l'assemblée générale annuelle le 11 juin dernier. Photo : EPEE.

Face aux échéances de la F-Gas et au calendrier lié à l'Ecodesign, l'EPEE prodigue ses recommandations pour que le marché puisse intégrer ces nouvelles règles.

Début juin, se déroulait l'assemblée générale annuelle de l'EPEE. L'occasion d'y organiser une conférence de presse, au cours de laquelle ont été abordés des sujets tels que la F-Gas ou encore Ecodesign.

« Dans le cadre de la F-Gas, une première grande étape du "phase down" est déjà prévue pour 2018 alors que l'interdiction des fluides avec un GWP au-delà de 2500 entrera en vigueur deux ans plus tard, en 2020, rappelle

Andrea Voigt, directrice générale de l'EPEE (European Partnership for Energy and the Environment). Les industriels ne peuvent donc pas se permettre d'attendre cette limite de GWP mais doivent agir avant. »

Elle souligne le fait que plus on diminue le GWP plus on est confronté à des problèmes d'inflammabilité : « Nous devons prendre en compte deux types de risques : d'une part, le fait que les installateurs ne sont pas tous entraînés à manipuler ce genre de fluides inflammables et, d'autre part, que la réglementation des bâtiments et les normes n'y sont pas adaptées. Les utilisateurs doivent être sensibilisés aux risques avec mesure, pour qu'ils ne craignent pas de les manipuler. Il s'agit de trouver le juste milieu entre risque perçu et risque réel. »

« Ce qui est crucial c'est que la réglementation européenne soit respectée et que les importations illégales ne s'amplifient pas, poursuit Andrea Voigt. Si la surveillance fonctionne, alors le "phase down" est un bon système. L'avenir nous dira si cela est pertinent. » Elle indique en outre que si l'Europe devait revoir sa copie, celle-ci serait plutôt plus sévère. « En 2017, différentes prévisions vont être réétudiées, notamment celle sur la limite de GWP de 150 dans les larges installations commerciales. Ce sera l'occasion de voir si le marché s'est adapté ou non. D'autres examens beaucoup plus larges sont prévus en 2020 et en 2022 pour vérifier si tout est en ordre par rapport au "phase down". Tout cela sera suivi, mais est-ce que cela entraînera des modifications, nous ne le savons pas aujourd'hui. En tout cas, je serais étonnée que les seuils soient révisés à la baisse. » [...]

► [La RPF](#), 19 juin 2015, Par : Elise Kuntzelmann

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 [Europe & Central Asia](#), UNEP OzonAction Compliance Assistance Programme

Seizures of Ozone-Depleting Substances

Numerous seizures of ozone-depleting substances, mixtures and equipment have been reported in the past. One of them was the seizure of 1150 cylinders containing 13,6 kg of R22 each (15,640 kg in total) in Vaalimaa, Finland, in 2011. The cylinders were hidden in truck on its way to Russia and detected through X-ray scan. Finnish customs estimates the costs of destruction of the seized chemicals at 54,000 Euros and would be interested in knowing how other countries have solved similar cases.

Therefore, we would appreciate it if you could inform us how you dealt with similar seizures in your respective countries. Were they returned to the country of origin and how was the shipment monitored? Were they destroyed and who paid for it? Were they auctioned to eligible buyers and what was the procedure? Or are they still stored in customs warehouses and what are the costs? It would be useful to provide a short description of the seizure case and explanation how the seized goods were disposed of.

We intend to compile this information and to share it widely with interested stakeholders. Many thanks in advance for your cooperation.

- ▶ Contact: [Halvart Koeppen](#), Coordinator [Europe & Central Asia](#), UNEP OzonAction Compliance Assistance Programme



LATIN AMERICA & CARIBBEAN

13. 10 años estudiando la capa de ozono desde la Patagonia

La región es clave, ya que desde agosto a diciembre el agujero de ozono se ubica sobre el sur. Se miden los rayos ultravioleta, que tienen su máximo en octubre.

El doctor Eduardo Quel, director la Unidad de Investigación y Desarrollo Estratégicos para la Defensa (Unidef-Citedef-Conicet), de la cual depende el Ceilap, comentó a la Agencia CTyS que "la estación terrena fue incorporando más instrumentos para estudiar la capa de ozono en esta década, hasta convertirse en una de las más importantes del mundo". Ahora, en colaboración con Japón y Chile, está adquiriendo un equipamiento más, que representa una inversión cercana a los 4 millones de dólares.



Pese a que se buscan indicios de la recuperación de la capa de ozono, hay una gran incertidumbre al respecto. "No hay una certeza de que haya una tendencia positiva; se puede hablar de estabilización, pero no se puede afirmar que haya una recuperación hasta el momento", comentó Quel.

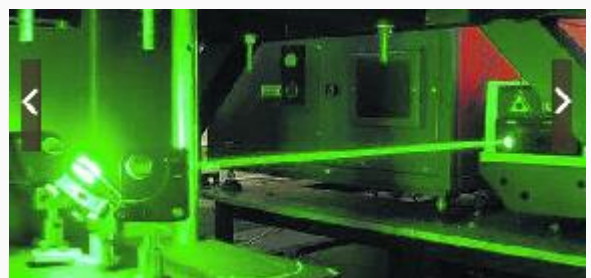
Desde agosto a diciembre, el agujero de ozono se ubica sobre el sector sur de la Patagonia. En efecto, también hay instrumentos para detectar la incidencia de los rayos

ultravioleta, cuyo punto máximo acontece en el mes de octubre.

Fue una decisión estratégica ubicar una estación terrena en Río Gallegos, porque, desde allí, según el momento del año, se puede estudiar el agujero de ozono, el borde del mismo y la parte en que la capa no está tan afectada.

Todo comenzó hace exactamente 10 años, cuando se colocó allí el sistema láser desarrollado por la División Lidar del Ceilap, que permite medir el ozono entre los 10 y 50 kilómetros de altura. Otro paso muy importante se dio en 2010, al incorporar un instrumento japonés que complementa el análisis del ozono entre los 30 y 80 kilómetros de altura.

"Ambos equipamientos operan de maneras muy diferentes, lo cual enriquece el estudio, pero ello implica un desafío a la hora de unificar los datos que ofrecen", explicó el físico Quel. Mientras el láser envía pulsos a la atmósfera y analiza cómo dichos fotones son absorbidos por la capa de ozono, el instrumento japonés mide la radiación de microondas emitidas por el ozono.



Además, a partir de la colaboración con investigadores chilenos, se utilizan globos sondas para estudiar el ozono entre los 10 y 30 kilómetros de altura. De esta manera, se obtienen datos superpuestos a través de diversos métodos de estudio y la expectativa es continuar incrementando el potencial de la estación terrena.

"Es muy rico todo el sistema de medición que poseemos", valoró Quel. Y aseveró: "Estamos usando prácticamente todo el potencial de medición de ozono que existe a nivel mundial: rayos láser, sondas, radiómetro y el instrumento Brewer que mide la columna total del ozono".

▶ [Editorial Rio Negro](#), 22 junio 2015

14. Almería sienta cátedra en Argentina y Uruguay sobre prácticas agrícolas



Los investigadores de la UAL Francisco Camacho Ferre y Julio César Tello llevan casi veinte años dando charlas sobre alternativas al bromuro de metilo.



Francisco Camacho Ferre dio una clase magistral en México el pasado marzo.

El investigador de la UAL Francisco Camacho aborda las alternativas al bromuro de metilo en universidades y centros de I+D

La agricultura almeriense es un referente internacional desde hace años por sus buenas prácticas agrícolas, a lo que se suma también el conocimiento aplicado al campo por parte de los investigadores de esta tierra. Prueba de ello son las continuas conferencias que la comunidad científica almeriense imparte a lo largo y ancho del mundo, explicando el buen hacer de la agricultura intensiva almeriense, con especial hincapié en la optimización del uso del agua para riego, el respeto al medio ambiente gracias a su decidida apuesta por el control biológico en detrimento de los productos químicos y el cuidado del suelo, entre otros factores.

En este sentido, el investigador de la Universidad de Almería (UAL), catedrático de Producción Vegetal y director de la Cátedra Cajamar de Economía y Agroalimentación, lleva alrededor de una veintena de años impartiendo conferencias como miembro del Grupo de Investigación AGR-200 de la UAL, junto a su colega Julio César Tello, ambos como colaboradores del Protocolo de Montreal, establecido a finales de los años 90, haciendo hincapié en la eliminación

del bromuro de metilo en el mundo, por tratarse de un biocida utilizado en agricultura y que se demostró que era un agotador de la capa de ozono estratosférico, por lo tanto, muy perjudicial para la salud humana.

Camacho Ferre está participando, a lo largo de esta semana y principios de la que viene en una ronda de encuentros y charlas por Argentina y Uruguay, con el objetivo de ahondar en la búsqueda de alternativas al uso del bromuro de metilo para desinfectar el suelo en los cultivos de frutas y hortalizas.

En concreto, el investigador almeriense tiene previsto realizar un 'tour' con conferencias y demostraciones a pie de campo, en fincas, en centros de investigación pertenecientes al Instituto Nacional de Tecnología Agropecuaria (INTA) en Mar del Plata, La Plata y Buenos Aires (Argentina), así como para el Instituto Nacional de Investigación Agropecuaria (INIA), en Salto (Uruguay).

La experiencia de Francisco Camacho Ferre en esta materia le ha llevado a impartir charlas periódicamente, todos los años, pues el 31 de diciembre acabó la moratoria concedida para el uso del bromuro de metilo en los países en vías de desarrollo, pues en otras zonas como España, su utilización se erradicó en 2005, aunque con dos años de prórroga para los denominados "usos críticos", recuerda el investigador.

La agencia perteneciente a la ONU que desarrolla en diversos países el proyecto 'Alternativas al uso de bromuro de metilo' es la ONUDI (Organización de Naciones Unidas para el Desarrollo Industrial), a través de la que colaboran Camacho Ferre y Tello desde hace muchos años.

▶ [Diario de Almería](#), 21.junio.2015, Autor: Elio Sancho



NORTH AMERICA

15. Use of Ozone-Depleting Substances; Request for Comment Concerning Essential-Use Designations

AGENCY: Food and Drug Administration, HHS.

ACTION: Notice and request for public comment.

SUMMARY: The Food and Drug Administration (FDA or Agency) is seeking public comment on whether the uses of ozone-depleting substances (ODSs), including chlorofluorocarbons (CFCs), in certain FDA-regulated products currently designated essential are no longer essential under the Clean Air Act due to the availability of alternatives that do not use CFCs or because the products are no longer being marketed.

Essential-use products are exempt from FDA's ban on the use of CFC propellants in FDA-regulated products and the Environmental Protection Agency's (EPA's) ban on the use of CFCs in pressurized dispensers. FDA is seeking public comment because it is responsible for determining which FDA-regulated products that release CFCs or other ODSs are essential uses under the Clean Air Act. FDA is soliciting comments to assist the Agency in striking an appropriate balance that will best protect the public health, both by ensuring the availability of an adequate number of alternatives and by curtailing the release of ODSs.

DATES: Submit written or electronic comments by August 28, 2015.

▶ US Federal Register [Volume 80, Number 124](#), 29 June 2015



WEST ASIA

16. UAE on-Track for Hosting 27th Meeting of the Parties to the Montreal Protocol

The Ministry of Environment and Water has said that it is on-track with their preparations to host the 27th Meeting of the Parties to the Montreal Protocol on Substances Depleting the Ozone Layer at the end of this year in Dubai.

In line with this, the Ministry has signed a Memorandum of Agreement (MoA) with the Secretariat of the Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol during a recent series of preparation meetings held in Vienna, Austria.

The meetings, which were held under the United Nations Environment Programme (UNEP), was approved by the open-ended Working Group of Member States of the Montreal Protocol during its 35th meeting in Bangkok last April.

Present during the signing were Abdul Rahim Al Hammadi, Assistant Under-Secretary for Environmental Affairs, Ministry of Environment and Water; Dr. Saad Al Numairi, Advisor to the Ministry of Environment and Water, along with representatives from 20 countries, which also includes the current European Union representative and members of the open-ended working group.

The meeting also discussed the possibility of establishing a contact group and determining its mandate on the feasibility and methods of the management of HCFCs, which will be discussed at its next meeting in Paris on August 20 to August 24, 2015.

According to Al Hammadi, hosting the 27th Meeting of the Parties to the Montreal Protocol in Dubai from November 1 to November 5, 2015, reflects the UAE's steadfast commitment to the Vienna Convention for the Protection of the Ozone Layer and the Montreal Protocol on Substances that Deplete the Ozone Layer, as well as its ongoing support to all relevant regional and international efforts in the field.

He also added that the international cooperation is an integral component of the national agenda, which remains dedicated to strengthening communication channels and addressing international environmental problems.

Al Hammadi added that signing the agreement with UNEP signals the beginning of the UAE's preparations as the host country, which will include key duties such as establishing a smooth work flow for the convention and developing an agenda that will foster the development of plans and programs for achieving the objectives of the protocol agreement which will culminate in a decision that all 197 member state will adhere to.

The conference will be attended by more than 50 ministers and key influencers from environmental, labor, economic and industrial sectors. In addition, it will also feature the participation of notable leaders of international organizations, along with 500 top-ranking representatives from the United Nations, the private sector, universities, research centers, and regional organizations.

The UAE's plans to host the conference in Dubai was announced during the 10th Meeting of the Conference of

the Vienna Convention for the Protection of the Ozone Layer, and the Montreal Protocol on Substances that Deplete the Ozone Layer which was held last November in Paris.

The UAE recently established a programme that aims to dispose of HCFC compounds, an ingredient toxic to the ozone layer which has been widely used in refrigeration and sponge [foam] production industries since 2012. This policy represents one of the many green initiatives being developed in agreement with the provisions of the Montreal Protocol, particularly in observance of the Council of Ministers Decision No. 26 of 2014 which sets national objectives to reduce the consumption of substances that deplete the ozone layer.

▶ [MENA FN](#) - Emirates News Agency, 17 June 2015

17. Draft Law Seeks to Phase Out Ozone-Depleting Substances

The weekly Cabinet meeting, presided over by HE the Prime Minister Sheikh Abdullah bin Nasser bin Khalifa al-Thani, issued a draft law to implement a Unified Regulation on Substances that deplete the ozone layer of the Gulf Co-operation Council (GCC).

The regulation aims to completely phase out consumption of ozone-depleting substances and establish safe alternatives in accordance with the provisions of the Montreal Protocol.

It will also regulate the import and re-export, transport, storage and handling, processing and use of controlled substances and develop and implement the GCC plans for the rehabilitation of the sectors that depend on the activities of controlled substances, assist them in the commitment to sound practices in the repair and maintenance operations and the transition to appropriate alternatives.

Under the provisions of the draft law, the Ministry of Environment shall identify the import quotas of such substances stipulated in the annex.

The person concerned can appeal the decision determining his share to the Minister. A decision by the Minister shall specify the fees for the services performed by the ministry. [...]

▶ [Gulf Times](#), 25 June 2015



FEATURED

OZONE SECRETARIAT

– Browse through the Ozone Secretariat “[In Focus](#)” to learn about latest updates.



Logo for the 30th anniversary of the Vienna Convention

This year marks the 30th anniversary of the Vienna Convention for the Protection of the Ozone Layer, an important milestone in the protection of the ozone layer. The theme for the celebration of the anniversary and this year’s International Day for the Preservation of the Ozone Layer to be marked on 16 September is, “30 Years of Healing the Ozone Together.” The theme is supported by the slogan, “**Ozone: All there is between you and UV.**”

The theme celebrates the collective efforts of the parties to the Vienna Convention and the Montreal Protocol in protecting the ozone layer over the past three decades, and the supporting slogan highlights the importance of the ozone layer in protecting life on Earth from the harmful effects of UV radiation.

As part of the commemorative activities, the Ozone Secretariat will conduct a smart digital campaign that will entail the dissemination of powerful communications products such as interactive videos, animations, infographics, posters and social media messages through various outlets to celebrate the many successes achieved under the ozone protection regime over the past 30 years. ... [Read More](#)

[Montreal Protocol Meetings](#) Dates and Venues

– [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 took place in Montreal, Canada, 18 - 22 May 2015. The related documents are available [here](#)

▶ [Learn more](#)

OZONACTION

NEW Publications Recently Launched



[Guide on Good Practices: Phasing out HCFCs in the Refrigeration and Air-conditioning Servicing Sector](#) -



[Phasing out HCFCs in Small and Medium-sized Foam Enterprises](#)

Publications/ Factsheets Launched 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



EVENTS

2015



The **24th International Congress of Refrigeration**, 16-22 August 2015, Yokohama, Japan.

[See more events from the IIR website](#)



The Future of HVAC Conference 2015, 18-19 August 2015, Melbourne, Australia.



Équipements frigorifiques à fluides "naturels" - Mise en service et maintenance (COSTIC), 2-4 Septembre 2015, Saint-Rémy-lès-Chevreuse - France



CCAC Working Group Meeting, 8-9 September 2015, Paris, France. The Working Group of the Climate and Clean Air Coalition will meet in Paris on 8 and 9 September to review and further elaborate on the 5-Year Strategic Plan that will outline the

Coalition's strategy and actions for 2015 – 2020, discuss outreach strategy and communication plan focusing on the Road to Paris and CCAC's presence at COP21, as well as review and approve new funding requests from initiatives.



Salon interprofessionnel du froid et de ses applications (SIFA), 13 au 15 octobre 2015, Event Center (Porte de la Villette), Paris, France



4th European Heat Pump Summit, 20-21 October 2015, Nuremberg, Germany.



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



India Cold Chain Show 2015 Conference (ICCS), 16 - 18 December 2015, Goregaon (east), Mumbai, is the leading exhibition and conference for cold chain, cold logistics, temperature controlling, refrigeration, storage, distribution and cold supply chain sectors...

[View details](#) | [are you attending?](#)

2016



12th IIR Gustav Lorentzen Natural Working Fluids Conference, 21 - 24 August 2016, Edinburgh, Scotland. World experts gather in Edinburgh to discuss the future of natural working fluid...



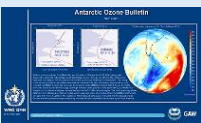
READING



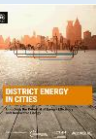
A new publication, [Twenty Questions and Answers About the Ozone Layer](#), presents complex science in a straightforward manner. It complements the [2014 Scientific Assessment Report of Ozone Depletion](#) by WMO and the U.N. Environment Programme.



[Our Planet: Time for Global Action](#) - As we move towards the historic post-2015 Summit at the 70th UN General Assembly next September, governments will be expected to adopt a transformational sustainable development agenda, including the finalization of the Sustainable Development Goals. The March 2015 issue emphasizes the importance of an integrated and universal approach to the Sustainable Development Goals and the post-2015 agenda. ...



[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...



[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.

Latest issue of Centro Studi Galileo magazine [Industria & Formazione](#).



[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 ...



[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 Grabel. 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. ...



[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](#). S. A. Montzka *†, M. McFarland ‡, S. O. Andersen §, B. R. Miller †||, D. W. Fahey †, B. D. Hall †, L. Hu †||, C. Siso †||, and J. W. Elkins †

† 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



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



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



A first edition, the IIR guide “[CO₂ as a Refrigerant](#)” highlights the application of carbon dioxide in supermarkets, industrial freezers, refrigerated transport, and cold stores as well as ice rinks, chillers, air conditioning systems, data centers and heat pumps. This guide is for design and development engineers needing instruction and inspiration as well as non-technical experts seeking background information on a specific topic. Publication, IIR Technical Guide, 2014.



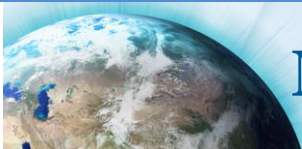
[Bottled air from all over the world tells story of ozone-depleting gases and their connection to climate change](#) [...] Filled with air samples from all over the world, the flasks arrive week in and week out at Montzka’s lab in Boulder, Colorado, where he leads NOAA’s effort to monitor the atmospheric concentration of the chemicals that, thanks to the Montreal Protocol, are replacing the CFCs that harm Earth’s ozone layer. [...]



GUIDE to Natural Refrigerants in China - State of the Industry 2015 - Launched by shecco - is the first-ever in-depth report on the use of natural refrigerants - carbon dioxide (CO₂), hydrocarbons (HCs), ammonia (NH₃), water (H₂O) and air - in China. The GUIDE done in collaboration with the Chinese Association of Refrigeration (CAR) identifies market trends, business opportunities, policy drivers, and outlines suitable applications for natural refrigerants in the country's cooling, heating and refrigeration sectors...



Chlorofluorocarbon Market: Global Industry Analysis and Forecast 2014 – 2020, [...] The key segments considered for this market include North America, Europe, Asia Pacific and Rest of the World (RoW). The market for chlorofluorocarbons is mature in North America and Europe and is not expected to rise by much in the next few years. This is due to the stringent and restricted policies passed by the respective governments due to the harmful effects they cause to the environment especially the upper layer of the ozone and due to the green house effects that it causes. In these countries, the demand for green refrigerants is expected to rise in the next few years. The market for chlorofluorocarbons is still high in India, Latin American and Middle Eastern countries and is expected to rise due to its ever-growing economy and fast expanding manufacturing bases and lack of laws and regulations against its use. India and China manufacture chlorofluorocarbons to a huge extent and the market demand for the compound is still large here and not expected to decline anytime soon over the next few years. [...]



MISCELLANEOUS



La découverte de la couche d'ozone, "Le Trou d'ozone en Antarctique - De la découverte au rétablissement, un Voyage Scientifique".

Isabelle Bouloc a rencontré l'une des spécialistes françaises du trou dans la couche d'Ozone : Sophie Godin-Beekmann, Directrice, Observatoire de Versailles Saint-Quentin-en-Yvelines.

France 2, TéléMatin, Extrait Diffusion du 9 juin 2015, à 07h10



US EPA, GreenChill Webinar: Best Practices for Leak-tight Installations

Date: Tuesday, July 28, 2015 | **Time:** 2:00 pm to 3:00 pm (Eastern time)

Description: Dustan Atkinson (Kysor Warren) and Bruce Hierlmeier (Zero Zone) will lead a discussion on best practices for leak-tight refrigeration system installations. The presentation will include an overview of the GreenChill Best Practices Guideline for Ensuring Leak-tight Installations.

Join the webinar: 1. Go to https://epa.connectsolutions.com/leaktight_installations/ 2. Select "Enter as a Guest". It is important that you select the option to enter as a guest. 3. Enter your name. 4. Click "Enter Room". 5. Click "OK".

For audio: 1. Call the toll free call-in number: 1-866-299-3188 (706-758-1822 from outside the U.S.) 2. Use Conference Code: 202 343 9185#

The pope v the UN: who will save the world first? Both Pope Francis and the United Nations have issued big statements about where they feel the world should be going. ...

The [Global Cold Chain Directory](#), is an annual buyer's guide featuring listings of GCCA member companies from every sector of the cold chain, including cold storage warehouses, logistics providers, construction companies, and industry suppliers. The directory is available in print, [online](#), and, now, as a mobile app. [Browse the Directory](#). Download the GCCA Directory App - Download the new mobile app of the Global Cold Chain Directory for a convenient way to access the world's largest directory of cold chain providers on tablets or Smart Phones. The app is available for complimentary download in [iTunes App Store](#) or [Google Play](#).



[Modernizing District Energy Systems](#) Could Reduce Heating and Cooling Primary Energy Consumption by up to 50% finds New Report ... Download the [full report](#)



[ASEAN Japan Chemical Safety Database \(AJCSD\)](#). The on-line database is a product of a two year-long and ongoing collaborative effort among Japan and each of the member states of the Association of Southeast Asian Nations (ASEAN). AJCSD is intended to serve as an information sharing platform for government agencies as well as a comprehensive compliance resource for chemical manufacturers and suppliers ...

["Keep Cool!" workshop for kids](#). Introducing a set of new experiments to help kids understand more about how things "Keep Cool!" with different materials, at the upcoming BASF Kids' Lab. As part of the Roppongi Hills Summer Kids' Workshop program, BASF Kids' Lab will take place on July 24, 2015 in Tokyo, Japan.



The [AIRAH Awards 2015](#) - Nominations are now open for AIRAH's annual accolades, which acknowledge the HVAC&R industry's outstanding achievements. Nominations close: Monday, 3 August 2015.



MONTREAL PROTOCOL
WHO'S WHO

The Montreal Protocol Who's Who

Nominate Ozone Layer Protection Champion

From Your Country /Region >>

<http://www.unep.fr/ozonaction/montrealprotocolwhoswho>

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If you have questions or comments regarding any news item, please contact directly the source indicated at the bottom of each article.

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Reviewed by: Shamila Nair-Bedouelle, Head OzonAction Branch, and Ezra Clark, OzonAction

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