



EFCTC NEWSLETTER

An update on fluorocarbons and sulfur hexafluoride

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EFCTC POSITION PAPER ON PROJECTED HFC EMISSIONS

HFC consumption is on the rise, predominantly due to the accelerated HCFC phase-out and the rapid economic development in developing countries.

Concerned with higher emissions, EFCTC has evaluated in a position paper the [Projections of Global demand for HFCs](#). Ongoing technology developments, regulations and other government actions, that are either implemented now or proposed for the near future, will result in significant reductions in the projected emission rates of HFCs.

This pragmatic analysis provides a different perspective on the projections in a recent paper by Velders et al* (see EFCTC [Position Paper](#)) which appear to be based on business-as-usual, continuing the rapid increases that occurred during phase out of CFCs. Moreover, the effects of present and future regulations, as well as of technology developments, are not taken into account.

Furthermore, the demand for resources implied by such unchecked growth in HFC consumption would exceed the known and potential reserves of raw materials for the production of HFCs.

(*)"The large contribution of projected HFC emissions to future climate forcing" by G.J.M. Velders, D.W. Fahey, J.S. Daniel, M. McFarland and S.O. Andersen - Proceedings of the National Academy of Sciences, 22 June 2009 <http://www.pnas.org/content/106/27/10949>

NEW VERSION OF EFCTC CLIMATE BROCHURE

EFCTC has released [a new version of its Climate \(the "Two Dogs"\) Brochure](#), showing how responsible use of HFCs could contribute to the EU target to reduce emissions of all greenhouse gases by 20% in 2020. The brochure is available in English, French, German, Italian, Polish and Spanish.

The [previous version](#) was released before the F-Gas Regulation was launched. It showed how HFCs significantly contributed to the reduction of greenhouse gases thanks to the elimination of CFCs they replaced and to their energy efficiency, provided containment is implemented.

Now that the F-gas Regulation is in place, ensuring that emissions of F-gases will be substantially reduced, EFCTC claims that going further than the F-gas Regulation is possible through:

- reducing charge sizes and leakage rates for new equipment;
- developing new fluorinated compounds with lower GWP that retain the excellent properties of HFCs;



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- further improving recovery and recycle of F-gases throughout their complete lifecycle.

[To download the brochure](#)

SCHOOLS WITHOUT AIR CONDITIONING CRITICIZED AFTER AN HEAT WAVE

During the recent end of June heat wave, newly built schools in Bradford (West Yorkshire, UK), that had been designed to rely only on natural and mechanical ventilation to minimize environmental impact, have been criticized due to overheating problems, which have seen temperatures rise to over 35°C, causing three pupils to faint.

These new schools were built as part of the region's flagship Building Schools for Future (BSF) programme, said to boast state-of-the-art facilities.

Temperatures were reported as high as 38°C at three schools in a certain area. School rooms had to be closed off, and pupils and staff moved to cooler parts of the building.

Building Bulletin guidance was followed, insofar they did not require providing [air conditioning](#) in classes, while it was required for the computer server rooms.

Source : <http://www.acr-news.com/news/news.asp?id=1595> and <http://www.tes.co.uk/article.aspx?storycode=6017935>

EUROPE'S LARGEST GEOTHERMAL LAKE LOOP USING HFC

Europe's largest geothermal lake loop was recently completed at Kings Hill Hospital in Mansfield, Nottinghamshire (UK).

The renewable ground source cooling and heating system is using a network of heat exchangers submerged in nearby Kings Mill Reservoir, connected to HFC based heat pumps installed in the hospital buildings. It is designed to provide Mansfield Hospital with 5.4 MW of cooling and 5MW of heating. The reservoir will provide either a source of, or a sink for, heat to or from the heat pumps.

The ambitious project involved sinking 140 special [stainless steel pipes](#), secured in frames, into the nearby 65,000 m² reservoir and linking them to a bank of 42 heat pumps in the hospital plant space with polyethylene pipes running under the busy A38 roadway.

The new system is expected to save the hospital around 9,600 MW of gas and electricity a year, whilst reducing the amount of CO₂ generated per annum by 1,700 tonnes.



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When the water flows back through the heat exchanger plates in the reservoir the temperature imbalance is partly restored by the reservoir without contamination because the system is a closed loop system and no reservoir water is used directly.



Source : "[UK hospital goes green](#)" and Product Manufacturer

REFRIGERATION CONTRIBUTION TO GLOBAL FOOD SECURITY

The International Institute for refrigeration ([IIR](#)) has recently released an Information Note "[Refrigeration and Food](#)", on the Role of Refrigeration in Worldwide Nutrition, showing how Refrigeration could bring to the ever increasing world population food safety and food security by improving cold chains effectiveness.

The note underlines "the vital role of refrigeration technologies to ensure better worldwide nutrition, in terms of both quantity and quality".

The quantity of available food could be increased by using more refrigerated transport and by installing more refrigerated storage all along the distribution chain, from production sites through intermediate storages and to urban areas where most of the population will live in the future.

Refrigeration is also vital to preserve the quality of food, often highly perishable, subject to bacterial contamination and proliferation, especially in warm climates. The rate of undesirable chemical or organoleptic modifications can also be reduced by refrigeration.

Besides specific agricultural measures, food availability could be substantially increased by reducing post-harvest losses along the cold chain, during processing, storage, transport and delivery to the final consumer. These losses can reach 28 % of the food production in developing countries, a figure to be compared to 10 % in developed countries.



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NEW ON FLUOROCARBONS.ORG

A new section [Heat Pumps](#) has been added to the Applications Panel on the [Home Page](#).


The page [Regulatory Developments – Ozone Depletion – Europe](#) has been updated, following the adoption of the EU Ozone Depleting Substances Regulation recast.

Three July 2009 EFCTC Position papers:

[EFCTC Views on International Principles for a regime to control HFC Emissions](#)  127 KB

[Projections of Global demand for HFCs](#)  575 KB

[EFCTC comment on the paper on future HFC emissions by Velders et al.](#)  136 KB

August 2009 Position Paper: [EFCTC Position on the Technical Specifications for Green Public Procurement "Thermal Insulation Background Report" and "Thermal Insulation Product Sheet"](#) 

NEW ON FIGAROO.ORG



[Case Studies](#) on line (thanks to [RealZero](#))

NEW LINKS ADDED

New links to Heat Pumps Organizations:

REFRIGERATION - EU

European Heat Pump Association (EHPA)

<http://www.ehpa.org/>

Informationszentrum Wärmepumpen und Kältetechnik (in German)

<http://www.izw-online.de/>



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Wärmepumpen in Industrie- und Großbauten - Energie sparen und Umwelt schützen (in German)

<http://www.industrielle-waermepumpen.de/gwps.html>

Ground Source Heat Pumps – best practice

<http://groundreach.fiz-karlsruhe.de/en/bestpractice/>