



# EFCTC NEWSLETTER

## An update on fluorocarbons and sulfur hexafluoride

**ISSUE 15 – July 2004**

### **About the “Refrigerants, Naturally” Conference - Energy Efficiency the primary Objective**

---

About the [“Refrigerants, Naturally Conference”](#) held in Brussels, the [European Partnership for Energy and the Environment EPEE](#) had published a [Press Release](#) welcoming the freedom of refrigerant choice, but reminding that, as there is no perfect refrigerant, they have all to be used responsibly and contained effectively.

Energy efficiency is the primary objective. On average, over 80 per cent of the impact of equipment on the climate comes from the CO<sub>2</sub> produced in generating the energy to power equipment - for small factory sealed systems this can be even higher. Under this aspect HFCs are demonstrating improved energy efficiency across a range of refrigeration and air-conditioning applications.

Energy efficiency achievements are deriving from the optimization of operating conditions, the use of up-to-date components, and the improvement of maintenance operations, rather than to the shift to alternative refrigerants.

It is thus not relevant to compare inefficient older HFC systems with optimized non-HFC systems. For instance a [recent study](#) showed that an HFC-based system had a better environmental performance than propane in a commercial refrigeration system.

Caution must therefore be kept regarding replacement technologies, which might not better protect the climate. In a different context, this was already the message from the [Mobile Air Conditioning Climate Protection Partnership](#) which advised carefulness since *“it is not yet clear whether replacement technology will better protect the climate.”*

### **HFCs at the Athens Olympics**

---

The Athens Olympic Games will take place in August 2004. For the building infrastructure of the Games, the warm climate conditions require extensive [Refrigeration](#) and [Air Conditioning](#) equipment, to keep athletes, officials and spectators comfortable.

Among the many units that have been installed, HFCs play a key role, being able to deliver the most energy efficient solutions for each application. Some impressive examples are



# EFCTC NEWSLETTER

## An update on fluorocarbons and sulfur hexafluoride

- the Athens Olympic Organizing Committee building
  - the Olympic Village, home to 16,000 athletes and officials
  - the Olympic Stadium at Marousi, to keep 75,000 spectators cool
  - the Thessaloniki Olympic Swimming Centre
- in addition of Hospitals, Buses, new refurbished Hotels, etc.

Source: Various Equipment Manufacturers

### USA SF<sub>6</sub> emissions on the decrease

SF<sub>6</sub> Emissions from Electric Power Systems and Original Equipment Manufactures in the US have peaked in 2000 to 187 tonnes/year.

Recently, these emissions have significantly decreased, down to 152 tonnes/year in 2001 and to 144 in 2002.

This result has been achieved through the "[SF<sub>6</sub> Emissions Reduction Partnership for Electric Power Systems](#)", which is promoted by the US EPA.

The partnership provides a forum for EPA and the electric power industry to work together to reduce SF<sub>6</sub> emissions to technically and economically feasible levels.

The merit of voluntary programs is to offer flexibility, cost-effective measures, technological innovation and information sharing and quick implementation.

Source:

[EPA](#)

### Hydrocarbons: a useful document

[ACRIB](#) (The UK Air Conditioning and Refrigeration Industry Board) is very concerned that unaware people might use hydrocarbons at a rate that could raise significant safety handling and application issues. As safety is a particular concern, it was felt important to provide guidance on the use of Hydrocarbons in any specific application.

Few publications address the use of Hydrocarbons refrigerants. It is therefore useful to know that [ACRIB](#) has produced some time ago a **guidance document** covering all aspects of working with these products, addressing the selection and use of the most suitable refrigerants for any specific application, in order to ensure a high level of training for engineers working with them.

Among other points, the document deals with:

- properties and selection of refrigerants
- allowable refrigerant charge
- flammable properties of hydrocarbons

To unsubscribe: [vno@cefic.be](mailto:vno@cefic.be)

For further information about EFCTC: Valentina Bertato: [vbe@cefic.be](mailto:vbe@cefic.be)

Cefic/EFCTC – Avenue E Van Nieuwenhuyse 4, Box 2 – 1160 Brussels

Tel : 32 2 676 72 40 – Fax : 32 2 676 72 41



# EFCTC NEWSLETTER

## An update on fluorocarbons and sulfur hexafluoride

- safety standards and codes of practice
- design, installation, and general considerations for hydrocarbon usage
- service, maintenance and handling practices

The publication [\*Guidelines for the Use of Hydrocarbon Refrigerants in Static Refrigeration and Air Conditioning Systems\*](#) has been produced by a special ACRIB working group, and has received the support of the UK Department of Trade and Industry.

<http://www.acrib.org.uk/latest.htm>

### NEW ON OUR SITE

### NEW IN THE LIBRARY

Guidelines for the Use of Hydrocarbon Refrigerants in Static Refrigeration and Air Conditioning Systems ([ACRIB](#) Guidance document)

### NEW LINKS ADDED

#### ***OZONE LINK***

**Handbook for the International Treaties for the Protection of the Ozone Layer**

6th Edition (2003), available in [English](#) only

5th Edition (2000), available in [French](#) and [Spanish](#)

### ***REFRIGERATION LINKS***

<http://cetc-varenes.nrcan.gc.ca/en/ref.html>

The Refrigeration Sector of the CANMET Energy Technology Centre–Varenes (Quebec – Canada), working on technological solutions to reduce GHG emissions and to promote energy efficiency.