

**Speech by State Secretary Van Geel of the Ministry of Housing, Spatial Planning and the Environment (VROM) at the congress “Refrigerants, Naturally” in Brussels on 22 June 2004**

[Introduction]

When I was invited to come here and speak to you about “**Refrigerants, Naturally**”, I immediately thought of icehouses. On country estates you can often still find small hillocks left over from the time before fridges were invented. In the winter, people used to cut blocks of ice from ponds and store them until the summer in an icehouse, which was a small underground hut, well insulated with a thick layer of earth and an air duct. These huts now mainly serve as sleeping quarters for bats.

That method of refrigeration is not very practical in our modern society, especially not for industrial refrigeration. This is actually a great pity, for there is no more natural way to refrigerate, since absolutely no greenhouse gasses are produced. As you know, the HFC greenhouse gasses released by modern refrigeration systems are the big problem nowadays. This is why tests are being carried out with the underground seasonal storage of ice or cold water, which is vaguely reminiscent of the old-fashioned icehouses. Such new refrigeration techniques that do not produce greenhouse gasses are necessary, to combat the climate change that is threatening to have disastrous consequences for a large proportion of the world’s population. This is why the Netherlands signed the Kyoto Protocol. Before 2012, we must achieve a 6 percent reduction in the emission of greenhouse gasses, compared to 1990 levels. Twenty percent of this objective can be achieved by tackling the emission of fluorinated greenhouse gasses.

[Lisbon]

This can partly be achieved by technological innovation. Refrigeration units must both use and lose less greenhouse gas. Of course, the new refrigeration technology that is required costs money. But it also brings benefits. Sustainable innovation delivers significant economic benefits; by making more efficient use of materials and energy, and by generating fewer emissions and less waste.

Since the EU does not have low wages and cheap resources, we have to compete globally by being innovative. Eco-efficient innovation is good not only for the environment, but also for economic growth and employment in Europe.

This fits in perfectly with the European Union's ambition, better known as the Lisbon Strategy, which is that by 2020 the EU must be the most competitive, dynamic and eco-efficient knowledge economy in the world. The European Commission's Spring Report observes, however, that European growth is not yet sustainable enough. The answer is sustainable innovation.

That innovation is also important for reducing the emission of fluorinated gasses. This can be achieved by replacing F-gasses - as far as possible – with natural refrigerants such as ammonia, hydrocarbons, CO<sub>2</sub> and new technology. This is necessary, as F-gasses contribute a thousand-fold to climate change. If we cannot do without F-gasses for specific application areas, their emissions must be minimised.

[Ammonia]

For many years, ammonia has been the predominant refrigerant in industrial refrigeration in most parts of the world. As ammonia is a natural refrigerant and does not add to global warming, the use of ammonia should be encouraged, also in other application areas.

[CO<sub>2</sub>/ammonia]

Industry has not yet turned the corner where natural refrigerants are concerned. I am nevertheless prepared to stand up for this cause. The large-scale use of natural refrigerants has become both economically and technically viable in the last few years. The Dutch government supports this development. CO<sub>2</sub> was often used in ships transporting refrigerated and frozen products until the 1950s. Nowadays it is used mainly for storing vegetables, meat and fish. Where fish is concerned, CO<sub>2</sub> is not only used on land, but also on trawlers in refrigeration and freezer units. Moreover, in Haarlem the Netherlands has built the world's first 400 metre long ice rink that runs on CO<sub>2</sub>.

#### [Hydrocarbons]

In Europe, hydrocarbons are increasingly being used in consumer products. Already there are tens of millions of fridges with hydrocarbons in use, often using names such as Greenfreeze. In the Netherlands, there are already many air-conditioning units that run on hydrocarbons and small freezer cabinets are starting to enter the market.

#### [F-gasses]

Natural refrigerants are therefore becoming increasingly viable. I realise, however, that I cannot ask the companies represented here to forgo the use of F-gasses altogether. Nevertheless, you will have to prepare for their use being increasingly limited.

The EU's is working towards fluorinated greenhouse gases only being permitted in products if no other alternative is possible. And, as there are more and more good alternatives, natural refrigerants will have to be chosen more and more frequently.

#### [Companies]

Companies must, in any event, limit the emission of these gasses as much as possible. The Dutch government is devoting a great deal of attention to training refrigeration engineers. The quality of their work largely determines how many leakages occur over time. Companies with qualified personnel receive a stamp of approval bearing the abbreviation STEK from a government-appointed organisation. This approach has achieved a considerable reduction in the loss of CFCs, HCFCs and HFCs from refrigeration units, amounting to reductions of several tens of percentage points at some companies.

New refrigeration techniques have also contributed to lower emissions. It pleases me to know that the Dutch and European business community is so keen to embrace technological innovation. This is shown by the fact that industrial refrigeration based on CO<sub>2</sub> has once again broken through. Alternatives to fluorinated gasses have also been developed for use in products. Various technical improvements have reduced emissions. I expect that in the business community you will want to continue in this direction because sustainable refrigeration techniques are good for both business and the environment. The Dutch government therefore wishes to encourage the use

of sustainable refrigeration techniques, by offering financial support to model projects using innovative technology.

At the same time, I do understand the concerns of the business community. I feel that a ban is not suitable in cases where there is no good alternative for F-gasses in specific application areas. I shall therefore put forward that standpoint during the discussion of the EU's draft regulation on fluorinated gasses.

In the final analysis, nothing is for nothing. The organisers of this congress – Coca Cola, McDonald's and Unilever – agreed at the Olympic Games in Sydney to emit less F-gasses. In the meantime, they have decided to invest millions in HFC-free equipment such as bottle coolers and ice-cream freezers. I hope that more and more companies will adopt equally responsible attitudes.

Ideally, of course, refrigeration techniques will become so sustainable that the EU will not have to ban anything. This will not happen overnight. The introduction of new technology and improvements in the prevention of leakages from existing installations takes time. However, I am convinced not only that this has to be done, but that it can be done.

Thank you for your attention.