

# Greenpeace and F-gases: The Story

## Glossary

**F-gases:** CFCs, HCFCs and HFCs are all part of a family of gases known as F-gases or fluorocarbons. The regulatory control of F-gases is split between the Montreal Protocol and the Kyoto Protocol.

**CFCs:** Chlorofluorocarbons (and their close cousins HCFCs) are ozone layer depleting substances and are regulated by the Montreal Protocol. These are also strong greenhouse gases but were excluded from the Kyoto Protocol because they were already being regulated.

**HFCs:** Hydrofluorocarbons are strong greenhouse gases and are regulated by the Kyoto Protocol. HFCs are not ozone-depleting and were developed as replacements for CFCs.

**Kyoto Protocol:** A 1997 international treaty to solve global warming by curtailing emissions of greenhouse gases.

**Montreal Protocol:** A 1987 international treaty to heal the ozone layer by controlling ozone depleting substances.

**Natural Refrigerants:** Common natural refrigerants include isobutane and other hydrocarbons, ammonia, water, air, and carbon dioxide.

**GWP:** Global Warming Potential is the relative power of a given pollutant to cause global warming over a given timescale, factoring its ability to trap the sun's heat and its atmospheric lifetime. GWPs are measured relative to carbon dioxide, which is given a GWP of 1.

**ODP:** Ozone Depleting Potential is a factor indicating a substance's relative ozone damaging power.

## How long has Greenpeace been fighting against F-gases?

Greenpeace began its activities to protect the ozone layer in 1986, with high profile protests against the use of CFCs in aerosol cans and other uses. During the following years the organization launched over 100 initiatives world wide to put pressure on governments and industry to act with a sense of urgency in response to the ozone crisis. Greenpeace published a large volume of reports related to ozone layer protection and participated in countless international negotiations to establish and enforce the global ozone treaty, the Montreal Protocol. The success of these tactics led us to adopt the same strategy in our fight against HFCs.

## How did the Greenpeace ozone campaign work?

The campaign pursued four broad streams of activities:

- Public outreach to spur demand on governments and corporations to take effective and immediate action to protect the ozone layer
- Policy advocacy to put continuous pressure on governments to accelerate the phase-out of ozone-depleting substances under the Montreal Protocol
- Confronting the producers and users to stop producing and using ozone-depleting and potent global warming substances
- Intervening in the market with environmentally safer alternatives to the chemical industry's fluorocarbon substitutes to CFCs

## What is Greenpeace's best campaign success story?

Greenpeace's most lasting achievements were through innovative market interventions GreenFreeze: The HFC-free domestic "GreenFreeze" refrigerator (safe for both the ozone layer and the climate) was developed by Greenpeace in 1993. The hydrocarbon technology used in GreenFreeze refrigerators makes them typically more efficient than their HFC counterparts. The more than 300 million GreenFreeze refrigerators in the world today make up approximately 40% of the 80 million refrigerators produced annually. This technology dominates the domestic refrigeration markets of Europe, is prominent in the markets of Japan and China, but is conspicuously unavailable in North America due to obsolete regulatory obstacles.

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## When did the fight against HFCs take center stage?

From the beginning of the ozone crisis, Greenpeace was outspoken in its opposition to HCFCs and HFCs. As our Greenfreeze technology demonstrates, natural solutions were available from day one. Unfortunately, HFCs took hold in the marketplace., Greenpeace stepped up the campaign against HFCs nearly ten years ago.

### **Sydney Olympics:**

Prior to the 2000 Sydney Olympics, Greenpeace challenged the major corporate sponsors of the games to refrain from using HFC-based cooling technologies do to their increasing global warming impact.

### **Refrigerants Naturally:**

In 2004, three of the 2000 Olympic sponsors, Coca-Cola, McDonald's and Unilever launched the 'Refrigerants, Naturally!' global initiative, in cooperation with UNEP (the United Nations Environment Program) and Greenpeace, with the explicit aim of phasing out the use of HFCs in their extensive fleet of point-of-sale cooling equipment such as vending machines, display cabinets, ice cream freezers, etc.. In 2006, PepsiCo, Carlsberg Beer and IKEA also joined the initiative. Membership in the coalition is open and other major corporations are presently considering becoming members.

### **SolarChill:**

In 2000, together with UNEP, Greenpeace co-initiated and secured the initial funding for the SolarChill Project. The aim of the SolarChill Project is to deliver environmentally sustainable, solar-powered and lead battery-free vaccine and food refrigeration to regions of the world that are without electricity or have inadequate electrical supply. The SolarChill Project evolved into a unique partnership between seven diverse international organizations, including the Danish Technological Institute (DTI), German Government Development Agency (GTZ ProKlima), Greenpeace, Programs for Appropriate Technologies in Health (PATH), United Nations Environment Program (UNEP), United Nations Children's Fund (UNICEF) and the World Health Organization (WHO). SolarChill thus bridges health, development, and environmental issues. Today, SolarChill is an award winning technology and is currently being commercialized by Vestfrost Company of Denmark.

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## Has Greenpeace been alone in its efforts?

No. From its inception in 1987, the Montreal Protocol welcomed the active participation of Non-Governmental Organizations (NGOs). Over 25 NGOs participated, at various times and to varying degrees in our “observer” status as conferred by the UN, in the meetings of the Montreal Protocol. Many of these NGOs, working with progressive nations and intervening from the sidelines of the Montreal Protocol, have made significant contributions towards the international community’s response to the ozone crisis.

- They persistently challenged and inspired governments to do more. They generated public awareness and a sense of urgency regarding the dangers of ozone layer depletion and challenged governments to act.
- They presented new and invaluable data during policy and technical discussions.
- They confronted and challenged the chemical corporations and their industrial partners to stop producing and using ozone depleting and potent global warming substances such as CFCs. On top of this, they rallied against the replacement of CFCs with the second generation of ozone depleting substances, HCFCs, and powerful greenhouse gases such as HFCs.

Within the Montreal Protocol, NGO’s strived to counterbalance the inordinate influence that the multinational chemical corporations exerted upon the regulatory regime of the Protocol. These companies maintained their influence through extensive public relations campaigns, well-funded lobby initiatives, long term relationships with governments, historical business ties to manufacturers, and representative sponsorship of experts who sit on the technical committees of the Montreal Protocol and other international bodies upon whose advice governments formulate policies.