

# Climate Change



## What is Roche's strategy to minimise its impact on climate change?

Roche supports the efforts of the international community, as laid down in the Kyoto Protocol, to adopt a worldwide approach to controlling global warming and the greenhouse gases which are suspected to be responsible for it. We therefore strive to minimise the air pollution caused by all areas of Roche's activities, including heating and cooling of buildings, production and travel.

## What is Roche doing to reduce greenhouse gas emissions?

The Roche climate strategy prescribes measures to lower the company's output of the pollutants CO<sub>2</sub>, SO<sub>x</sub> and NO<sub>x</sub> from power generation and emissions of halogenated coolants (CFCs and similar compounds) and volatile organic compounds (VOCs). Aggressive goals have been set.

A Group directive mandates all sites to phase out all halogenated coolants and fire fighting agents with an ozone-depleting potential by 2010 (fully halogenated compounds and hydrochlorofluorocarbons) and 2015 (all others, including partially fluorinated compounds). This has triggered – and will continue to trigger over the coming years – a number of investment projects throughout the Roche Group aimed at replacing existing cooling equipment with alternative technologies. Simultaneously, these projects provide an excellent opportunity to reduce the installations' energy consumption.

We have set specific goals for reducing energy consumption, the main source of CO<sub>2</sub> emissions, and VOC emissions throughout the Group. Earlier goals for 2003–2008 have been augmented by new goals for 2005–2010 which will reduce energy consumption and CO<sub>2</sub> emissions still further.

## Facts & Figures

Year	Energy consumption (MJ per employee)	CO <sub>2</sub> emissions (t per CHF m sales)	VOC emissions (t per CHF m sales)	Halogenated coolants and fire fighting agents (inventory; t)
2003 actual		16.11	0.016	122.3
2007 actual	178.80	7.42	0.005	148.2
Old 2008 goal		14.51	0.014	
2010 goal	165.11			0 (CFC, HCFC)
2015 goal				0

## **What results have been achieved?**

Although Roche's plans for reducing greenhouse gas emissions have a long-term focus, we have already achieved significant short-term results. The Group-wide target of a 10% decrease in energy consumption and greenhouse gas emissions in relation to sales by 2008 has already been reached. What's more, we are on track to reach our new goals for 2005–2010.

Setting specific emission reduction goals has also encouraged greater interaction between the key people at Roche sites; they exchange information about how best to maximise the eco-efficiency of our operations – in other words, how to reduce environmental impact and save money at the same time.

Since production, transport and energy use are the main sources of greenhouse gas emissions and reducing energy consumption directly lowers costs, energy conservation is very much a focus of our activities throughout the Group. Our work in this area includes:

- constructing energy-efficient buildings,
- retrofitting heating, cooling and air conditioning installations,
- adjusting the range of acceptable temperatures in offices and other workplaces,
- purchasing energy-efficient equipment, including reduced-consumption cars (e.g. hybrid cars),
- changing work processes,
- reviewing employees' travel needs

We are also evaluating alternative sources of energy and implementing them where feasible, e.g. a geothermic cooling system at Welwyn (UK) and a wind generating plant at Palo Alto (USA).

## **Why reduce greenhouse gases?**

Calculations suggest that increased concentrations of greenhouse gases will cause climate changes that could increase the frequency of natural disasters. Carbon dioxide (CO<sub>2</sub>) formed during the combustion of fossil fuels has been identified as the major component of greenhouse gases.

Although the mechanisms are not yet fully understood, the precautionary principle dictates that we should take action to reduce our impact. We also have to face up to the fact that the availability of fossil fuels will start to decline in the foreseeable future and it will be difficult to make good this decline quickly using alternative energies.