

# Environmental management

## Climate change and Initiatives

### Swiss Post's stance on climate change

Swiss Post has adopted not only Switzerland's objectives under the Kyoto Protocol and the objectives of the EnergieSchweiz programme, but also PostEurop's greenhouse gas reduction targets, and made them its own.

The organization thereby recognizes the need for action at company level resulting from climate change, a product of the increase in greenhouse gas emissions.

The following provides a brief explanation of the key terms and initiatives.

### Key terms

#### Climate change

For around 250 years, human beings have been adding to the natural greenhouse effect. Mainly through the use of coal, oil and gas in industrial production and for heating and transportation, we emit large quantities of extra CO<sub>2</sub> into the atmosphere, thereby increasing temperatures. The temperature in Switzerland, for example, has risen by 1.5°C since the 1970s. Depending on future developments, experts estimate that the average global temperature may rise again by anything between 1.4°C and 5.8°C by 2100. The impact on the environment, the economy and society is

difficult to predict and will vary from region to region. Increased precipitation and natural disasters in our area of the world, more frequent and intense storms, rising sea levels, desertification and the spread of temperature-dependent infectious diseases (e.g. malaria) are just some of the negative effects forecast.

#### Greenhouse effect

Our life on earth requires a set of very specific climatic conditions, which are created by the atmosphere – a layer of gases surrounding the earth. As solar radiation reaches the earth's surface, it is converted into heat and re-emitted into the atmosphere as infrared radiation. Without the atmosphere, all energy from solar radiation would escape into space, and the temperature on earth would be minus 18°C. So-called greenhouse gases (carbon dioxide, methane, nitrous oxide, ozone, etc.), of which there are only traces in the atmosphere, are responsible for reducing the amount of solar radiation re-emitted into space, thus ensuring a complex and delicate balance on earth between solar radiation coming into the atmosphere and earth's radiation going out. Over the last 100 years, the concentration of CO<sub>2</sub> in the earth's atmosphere has increased by around 30% because of the use of fossil fuels. It is now an undisputed fact that this will lead to climate change. The consequences of climate change, however, remain difficult to predict.

#### Greenhouse gases

Various greenhouse gases contribute directly or indirectly to climate change. These include methane and nitrous oxide, as well as the best-known greenhouse gas, carbon dioxide (CO<sub>2</sub>).

CO<sub>2</sub> in its current concentration is the main greenhouse gas produced by humans; it has a climate-warming effect. The pre-industrial concentration of CO<sub>2</sub> around 1800 was about 280 ppm (1 ppm CO<sub>2</sub> means one part per million, i.e. one molecule of CO<sub>2</sub> per one million molecules of air). Due to human activity, the figure is currently about 370 ppm and rising at a rate of 1.7 ppm a year. The breakdown of atmospheric carbon dioxide is a very slow process: on average, it remains present for around 100 years.

## Initiatives

### The Kyoto Protocol

The 1992 Earth Summit in Rio laid the foundations for an international climate policy. The main aim of the climate convention is to maintain the concentration of greenhouse gases in the atmosphere at a level that prevents a dangerous effect on the climate system. However, the emissions reduction targets set out in the convention are non-binding.

In 1997, 38 industrialized nations signed the Kyoto Protocol, thereby undertaking to reduce their emissions of greenhouse gases. Specific reduction targets, to be achieved by 2010 relative to emissions in 1990, were set for six greenhouse gases or classes of gases: carbon dioxide (CO<sub>2</sub>), methane (CH<sub>4</sub>), nitrous oxide (N<sub>2</sub>O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulphur hexafluoride (SF<sub>6</sub>). This Protocol, like the

climate convention, needs to be ratified and is binding on the signatory nations.

It is a condition of the Protocol that it must be ratified by at least 55 countries. This requirement was satisfied in 2004 when Russia added its signature, and the Kyoto Protocol thus came into force. Switzerland ratified the Protocol in summer 2003.

The Kyoto Protocol explicitly excludes international aviation (and shipping). Instead of containing a binding reduction target, the Protocol merely states that climate protection measures in the aviation sector should be implemented by other international institutions.

### A 2000-watt society

In its Sustainable Development Strategy, the Swiss Federal Council outlines its long-term goals. From today's perspective and under the proviso that global warming continues at the expected rate, the effects of climate change to be expected between now and 2050 seem manageable for Switzerland. However, there is a lack of detailed cost assessment of changes and measures that would have an effect on the whole economy. It is also important to remember that the long-term developments in the second half of the 21st century are greatly dependent on the emission-reducing measures to be put into practice in the coming years and decades, and that the consequences of "business-as-usual" developments could be far more serious. Furthermore, several countries in the world – in particular the poorer developing countries – will not only have to face much more serious consequences of climate change, but will also not have the financial means to make the necessary changes to adapt. Geopolitical developments arising from this situation

could certainly also affect Switzerland. The slowing down of climate change is one of the most pressing priorities for a society based on sustainability. It is believed that a 0.2°C rise in atmospheric temperature per decade would represent no threat to the range of species in existence or to the ecosystem. Studies carried out by the Intergovernmental Panel for Climate Change (IPCC) show that the CO<sub>2</sub> level in the atmosphere needs to be stabilized at 550 ppm for such a small rise in temperature to remain possible. Because the burning of fossil fuels is responsible for the majority of man-made CO<sub>2</sub> emissions, drastic reductions are necessary in this area. Worldwide CO<sub>2</sub> emissions currently stand at four tonnes per person – a total of 24 billion tonnes. This rate of emissions equates to a continuous output of 1800 watts per person. In order to stop climate change, CO<sub>2</sub> emissions must be reduced to less than one tonne per person, or just 500 watts. But in order to accommodate prosperity and economic growth, an output of 2000 watts per person is necessary. Primary energy consumption in Switzerland currently stands at 6000 watts per person: primary energy consumption in developed countries must be reduced to 2000 watts per person. So that the rise in temperature mentioned above is not exceeded, the proportion of this caused by fossil fuels must not be more than 500 watts per person. The shortfall of 1500 watts must therefore be produced by non-fossil fuels, i.e. fuels that produce no CO<sub>2</sub>.

## **The PostEurop Greenhouse Gas Reduction Programme**

By entering into the Union of European Postal Companies (PostEurop) Climate Protection Programme, Swiss Post has committed itself to lowering its CO<sub>2</sub> emissions by 10% again in the next five years. Swiss Post sees its consistent business management as an

opportunity. In so doing, it wants to take care of its resources, reduce costs and develop its business with energy and CO<sub>2</sub>-efficient services.

## **CO<sub>2</sub> Act**

By signing the Kyoto Protocol in 1997, Switzerland undertook to reduce its greenhouse gas emissions by 8% compared to the 1990 level, by 2010.

Parliament therefore passed the CO<sub>2</sub> Act, which stipulates an overall reduction in CO<sub>2</sub> emissions of 10 percent relative to 1990 emissions by 2010 (with emissions arising from combustible fuels cut by 15% and those arising from transport fuels cut by 8%). This is to be achieved primarily through energy, transport, environmental and financial policy measures and through voluntary actions.

Fuels:

According to the CO<sub>2</sub> Act, the climate cent is a voluntary economical measure. It is therefore not levied by the Swiss government, but by the Climate Cent Foundation, a special body established for this purpose. The total deduction is between 1.3 and 1.9 centimes per litre of petrol or diesel. The current deduction, which has remained the same since the climate cent was introduced on 1 October 2005, is 1.5 cents per litre. The Climate Cent Foundation is governed by private law and is free to choose its own projects: it acts autonomously and decides under its own steam where its funds are to be spent and which projects they are to finance. The Foundation provides information on and is the first point of contact for applications for such projects.

Combustible fuels:

In the absence of a measurable reduction in greenhouse gas emissions, the price of a litre of heating

oil will rise by 3 cents in 2008, 6 cents in 2009 and 9 cents in 2010. The tax deducted is paid out again directly rather than providing a surplus for the government: it will be paid to businesses and the population via Switzerland's old age and survivors' insurance (AHV) and health insurance schemes and therefore will not have a financing or subsidy function.

## **EnergieSchweiz**

EnergieSchweiz (SwissEnergy) is the partnership programme set up to promote the implementation of Switzerland's energy and climate targets. It aims to achieve a sustainable (i.e. secure, economical and environmentally-compatible) energy supply through the sparing and rational use of energy and through the inclusion of renewable energy. EnergieSchweiz can be seen as a success. Without the programme, current CO<sub>2</sub> emissions would be 6% to 9% higher.

### **Publisher and information point**

Swiss Post  
Communication  
Sustainability  
Viktoriastrasse 21  
P.O. Box  
3030 Berne

E-mail [sustainability@post.ch](mailto:sustainability@post.ch)  
Website [www.swisspost.ch](http://www.swisspost.ch)