

## **PART III. NATIONAL REPORTING GUIDELINES FOR CSD-14/15 THEMATIC AREAS**

### **A. ATMOSPHERE/AIR POLLUTION/CLIMATE POLICY**

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#### **Swiss climate policy**

##### **1. Introduction**

Climate policy in Switzerland is incorporated in the different policies for sectors, which existed before climate change became an important issue. The new CO<sub>2</sub> legislation provides a framework by fixing reduction targets and related instruments: **Federal law on the reduction of CO<sub>2</sub> emissions**, in force since 1 May 2000. This recent law is the core element of Swiss climate policy.

This law takes place within the context of sustainable development for which the Federal Council adopted a revised sustainable development strategy in spring 2002. This took place in the framework of the preparation of the World Summit on Sustainable Development held in Johannesburg in summer 2002.

##### **2. The CO<sub>2</sub> Law**

It was adopted in October 1999 and stipulates an overall target of 10 per cent reduction by 2010 compared to 1990 levels for energy-related CO<sub>2</sub> emissions. Emissions from combustible fuels must be cut by 15 per cent and from petrol/diesel by 8 per cent. The law on CO<sub>2</sub> has been implemented in two stages.

The law gives high priority to voluntary action by the business community and particulars. To outline voluntary measures to reduce energy consumption and thus CO<sub>2</sub> emissions were released on July 2<sup>nd</sup> 2001. The annex to the guidelines companies in setting targets and setting up an energy accounting system. Moreover, two different approaches are displayed, one for big consumers and the other for small entrepreneurs.

The first phase from 2000 to 2004 focused on voluntary measures taken by industries and households to decrease CO<sub>2</sub> emissions due to energy consumption. This approach is fully compatible with the Swiss energy policy and related energy efficiency programmes. Only if the reduction targets seem unlikely to be met, will an incentive tax on fossil fuels (CO<sub>2</sub> tax) be levied in the second phase from 2004 onwards. The maximum rate is fixed at 210 CHF per tonne of CO<sub>2</sub>. The tax rates have to be approved by parliament. The necessity for the tax and the appropriate tax rate depend on the effect of voluntary action, and on the effectiveness of other instruments available, which are relevant to CO<sub>2</sub>, e.g., the energy law (see below). The mechanism of the law on the reduction of CO<sub>2</sub> emissions suggests that private initiative is given priority over state intervention.

If an incentive tax turns out to be nevertheless necessary, exemption from the tax will be granted to industries entering a legally binding CO<sub>2</sub> reduction commitment, for which energy intensive companies, big emitters and associated groups of emitters are eligible. Net tax revenues will be fully redistributed -

without increasing national budgets - to the economy in proportion to the wages paid and to the population on a per capita basis.

### **3. Implementation of the CO2 Law**

The CO2 Law is being implemented in a two-stage process. Only if voluntary and other CO2-related measures turn out to be insufficient to achieve the reduction targets will a CO2 tax be introduced. The two federal offices responsible for the implementation of the voluntary phase (Swiss Agency for the Environment, Forests and Landscape/SAEFL and Federal Office for Energy/FOE) are cooperating closely with private-sector energy agencies.

#### **Voluntary phase**

The CO2 Law gives high priority to voluntary measures. The 2 July the [SAEFL/FOE Guidelines 2001](#) and its corresponding annex outline a framework for the business community's efforts. Companies can pursue two different tracks: they can enter into an agreement or sign a formal commitment. Agreements are designed for industries willing to take voluntary action to limit energy consumption and CO2 emissions and thereby prevent the introduction of a CO2 tax. Formal commitments on the other hand place more stringent requirements on the measures to be taken, as they entitle companies to be exempted from the possible CO2 tax.

#### **Partners**

Because of the strong correlation between energy consumption and CO2 emissions, the voluntary phase is being implemented jointly with the Federal Office for Energy. A framework is provided by the [SwissEnergy](#) programme, launched on 30 January 2001, aiming to enhance energy efficiency and promote the use of renewables. The main focus is on voluntary measures in the business, buildings and transport sectors, with responsibility being assigned to private-sector agencies. For this purpose, performance agreements were signed on 2 July 2001 with the [Energy Agency for Industry](#) (EnAW, French/German website) and the [Agency for Renewable Energies and Energy Efficiency](#) (AEE, French/German/Italian website).

#### **Industry**

The Energy Agency for Industry provides a focus for activities and guides interested companies in assessing their potential for reducing emissions. The companies form groups and are supported by EnAW moderators in the process of agreeing targets. In April 2004 an initial set of target agreements was signed by Federal Councillor Leuenberger with 45 groups, bringing together a total of more than 600 companies. A target agreement had already been concluded with the cement industry in February 2003.

#### **Buildings sector**

The buildings sector accounts for a considerable proportion of heating fuel consumption. Important measures in this area include global subsidies from the federal government to the cantons, the harmonisation of cantonal energy legislation and support programmes, and the [Minergie](#) standard. In the summer of 2002, the FOE signed a performance agreement with the MINERGIE Association, under which MINERGIE is committed to developing a joint strategy with the cantons and providing support for implementation. The goal is to increase the market share of MINERGIE buildings to 15 per cent in the new-building sector and 4 per cent for refurbished properties.

## **Transport sector**

In the area of motor fuels, voluntary measures need to be strengthened. As a first step, an agreement was signed with the car industry on 19 February 2002: in the period up to 2008, the average fuel consumption of new cars is to be reduced by 3 per cent a year to 6.4 litres per 100 km. As a guide for consumers, an energy label for cars has been a legal requirement since 1 January 2003.

Since 1 January 2004, measures have been in place to promote sulphur-free motor fuels, which permit the use of more efficient petrol engines and the installation of filters designed to trap carcinogenic fine particles in diesel-powered vehicles.

## **Subsidiary CO<sub>2</sub> tax**

If it seems unlikely that the reduction targets will be achieved through voluntary action alone, the Federal Council will be required to introduce a tax on fossil fuels. The rate will be set according to the shortfall calculated on the basis of updated energy projections, taking voluntary measures into account. The tax rate will have to be approved by Parliament.

## **Tax exemption**

According to Article 9 of the CO<sub>2</sub> Law, major emitters, groups of energy consumers, and energy-intensive companies may gain exemption from the CO<sub>2</sub> tax by signing a legally binding reduction commitment. The requirements that voluntary measures must meet for the purposes of tax exemption are specified in Part II of the [Guidelines](#). Among other things, a commitment must include an absolute CO<sub>2</sub> emission target for 2010. To ensure that compliance remains possible in spite of unforeseeable events, provision is made for various options, such as target adjustments based on growth in output, emissions trading, and application of the flexible mechanisms outlined in the Kyoto Protocol ([SwissFlex](#)).

## **3. Energy policy with respect to the CO<sub>2</sub> Law (for general information on the Swiss Energy policy please see below Part III, B, Energy)**

Switzerland is pursuing a clearly defined objective in line with its declarations within the scope of the Kyoto Treaty and in accordance with the provisions of the CO<sub>2</sub> Law : to reduce CO<sub>2</sub> emissions by 10% by 2010 versus the 1990 level. The practical implementation of this objective is the principal focus of SwissEnergy. SwissEnergy was adopted on 17 January 2001 by the Federal Council and launched on 30 January 2001 in collaboration with the cantons, the municipalities, industry and the environmental organisations. The programme has clear quantitative objectives and comprehensive strategies for energy efficiency and utilisation of renewable energy in industry, buildings and transport, and is based on a broad partnership. The task of SwissEnergy is to fulfill the national energy and climate policy objectives, and to initiate a sustainable energy supply based on innovation and new technologies. (For further informations please see below, Part III, B, on Energy). Other goals include limiting the growth of electricity consumption, maintaining the production of hydropower and promoting the production of electricity and heat from other forms of renewable energy such as wood, biomass, sewage gas, solar power, geothermal heat, ambient heat and wind. SwissEnergy is intended to pave the way for securing a sustainable energy supply through efficient energy use and the utilisation of renewable forms of energy.

Well over 78 per cent of gross GHG emissions in Switzerland are emitted as CO<sub>2</sub> stemming from the combustion of fossil fuels. This underlines the importance of the CO<sub>2</sub> Law as the backbone of Swiss climate policy. The remaining 22 per cent can be attributed to the other gases as follows: CH<sub>4</sub> (8-9%), N<sub>2</sub>O (6-7%), HFC, PFC und SF<sub>6</sub> (1-2%), non energy-related CO<sub>2</sub> (4-5%).

Non energy-combustion related GHG emissions are regulated by the following policy fields: Environmental policy, Agricultural policy and Forest policy.

### **Environmental policy**

Environmental policy supports and complements climate and energy policy with a view to the reduction of energy-related emissions by means of :

- definition of **CO2 emission reduction targets**
- measures of **air pollution control**
- preparations for an **ecological tax reform**

In addition, environmental policy regulates emissions from the **waste sector** (landfills, waste combustion) as well as **industrial processes** (in particular, cement production and the use of synthetic GHGs for cooling, foam blowing, solvents etc.). Taken together these two sectors account for some 10 per cent of total gross emissions. While emissions from the waste sector are constantly decreasing, synthetic greenhouse gases (HFC, PFC, SF6) are showing a fast upward trend since the mid-90s. Due to their high global warming potential (GWP) they afford measures aimed at avoiding or limiting their use in the context of environmental policy

### **Agricultural policy**

Agriculture is responsible for about 11 to 12 per cent of Swiss GHG emissions. Main sources are enteric fermentation in cattle (CH<sub>4</sub>) and the storage and application of manure (N<sub>2</sub>O). In the late 90s the "Agricultural Policy Programme 2002" was put into operation leading, i.a., to less GHG emitting production practices (e.g., integrated farming, lowering of cattle density).

### **Forest policy**

Forest policy is of particular importance in Switzerland since forest growth compensates for close to 10 per cent of total CO<sub>2</sub> emissions (so-called **carbon sink**). The Kyoto Protocol allows for the accounting of selected activities in the forestry sector towards the emissions reduction target. Switzerland is practising **sustainable forestry** since the late 19th century. This policy is an important contribution to climate protection and the foundation for the sound use of wood as a CO<sub>2</sub> neutral raw material and energy source.

## **5. Ratification of the Kyoto Protocol**

The Protocol sets down reduction goals for greenhouse gas emissions for all industrialised states. During the commitment period 2008 – 2012 the industrialised countries have to reduce their emissions by 5.2% compared with 1990. Switzerland has committed to an 8% reduction. A large contribution to the reduction is expected in Switzerland in accordance with the provisions of the CO<sub>2</sub> act from voluntary measures on the part of the economy and transport.

The Kyoto Protocol was adopted in 1997 within the framework of the UN Climate Convention and signed by Switzerland in 1998. In 2001 the Climate Conference in Marrakesh adopted the modalities for the implementation of the Protocol. The Swiss government then submitted the ratification to Parliament. The Council of States approved the ratification in December 2002 and the National Council in June 2003.

## **6. Examples of measures**

### **Heavy vehicle fee (HVF)**

Successfully implemented in 2001, the Swiss HVF is applied to vehicles for passenger and freight transport of more than 3.5 tonnes gross weight per vehicle. The fee is calculated according to three criteria: the kilometres travelled on Swiss roads, the highest authorised gross weight, and the pollutants emitted by the vehicle, according to EURO classes. The implementation follows three steps: The first step 2001 introduced a fee with a level of 1.6 Swiss cents per km and tonne. The instrument is accompanied by an increase of the general Swiss weight limit from 28 to 34 tonnes per truck. The second stage (2005) increases the rate up to 2.5 Swiss cents (average) with an increase of the weight limit up to 40 tonnes. A last stage is foreseen at the opening of the Lötschberg railway base tunnel (2009). 2 thirds of the revenues are used to finance large railways infrastructure projects. One third is transferred to the cantons budgets.

By far the biggest impact of the new traffic regime with the HVF and higher weight limits was certainly on the development of road performance. Following a significant increase of 5–6 per cent per year before the introduction of the fee, there was an average reduction of 5 per cent in each of the first two years.

### **Modal shift freight from road to rail**

In addition to the HVF, the policy of transferring traffic from road to rail contains the following elements to promote public transport. The Federal Law on the Transfer of Transalpine Freight Traffic to Rail fixes the maximum target of 650,000 heavy goods vehicles per year crossing the Alps by road, at the latest two years after the opening of the first alpine base tunnel. This means that, compared with 1999 levels, half of the heavy vehicles crossing the Alps should be transferred from road to rail. The first experiences are positive. The recent figures show a boost in combined transport volumes (nearly 30% within the last three years), whereas the traffic volumes of heavy goods vehicles has diminished by around 10%. This success is very important for the acceptability for a Swiss transport policy strongly focussing on the potentials of the railways.

The railway reform is an additional important element to increase the efficiency of rail transport. The reform came in force on 1 January 1999, and it ensures the adaptation of the railway to meet the requirements of a modern transport system. It is one of the most important preconditions to ensure that public transport in Switzerland is strengthened and gains an increasing share of the market. A second reform package is in parliamentary consultation. This package aims at a new organisation of the financing systems for rail operation and infrastructure.