SWITZERLAND: INVENTORY OF ESTIMATED BUDGETARY SUPPORT AND TAX EXPENDITURES FOR FOSSIL-FUELS

Energy resources and market structure

Switzerland does not produce any fossil fuels and relies heavily on hydro-electricity and nuclear power to meet its electricity needs. Energy imports account for about 60% of the country's total primary energy supply and for about 79% of its total final energy consumption. Oil is by far the largest contributor (45%) to its TPES, followed by nuclear power (23%), hydro-electric power (12%) and natural gas (10%). The rest is supplied by renewable sources of energy such as solar, wind and waste. The importance of hydro-electric power in the total energy mix owes much to Switzerland's mountainous geography. Its central location in Western Europe makes the country a major transit route for natural gas and electricity.

Switzerland imports all of the petroleum it consumes, including in the form of crude oil. The country's two refineries are majority-owned by the private sector and have a combined output covering 36% of total domestic demand for petroleum products. The retail market is fully liberalised and dominated by BP, Exxon, Shell and Tamoil. In addition, more than 5% of the country's filling stations sell biofuels. Switzerland is also entirely dependent on imports for the natural gas it uses, the market for which is not liberalised. The law allows for open third-party access to the high-pressure grid but transmission and distribution are still vertically integrated for the most part. The Swiss Gas Industry Association has, however, formulated basic principles for local natural-gas suppliers to calculate charges for using their networks.

Fossil fuels contribute very little to electricity generation in Switzerland since hydro-electric and nuclear power can cover up to 97% of the country's electricity needs, depending on hydrological conditions. With a few exceptions in recent years (2005, 2006, and 2010), the country has traditionally been a net exporter of electricity. Competition was only recently introduced for large customers with the 2008 Law on Electricity Supply (the *Stromversorgungsgesetz*), which unbundled the electricity market and established an independent regulator (ELCom) to oversee open and non-discriminatory access to the grid. The further introduction of competition for those end-users that have an annual consumption below 100 MWh remains subject to a facultative referendum. Electricity generation is dominated by four vertically integrated companies that are either partially or wholly owned by the cantons and municipalities (AXPO, BKW-FMB Energie, ALPIQ, and Elektrizitätswerk der Stadt Zürich). However, the 2008 Law on Electricity Supply foresees that the transmission network shall be owned by Swissgrid (the Swiss National Grid Company) by 2013.

Switzerland lies at the centre of several electricity transit routes. Imports generally come from France and Germany, while exports are primarily destined to Italy. Good interconnection management is therefore crucial for securing supply in the whole region. Switzerland has also entered negotiations on an agreement with the EU that would regulate cross-border electricity trade and grant mutual market access.

Prices, taxes and support mechanisms

The prices of petroleum products in Switzerland are set by the market. Wholesale prices for natural gas do not vary much across the country since it is sold to utilities at cost by Swissgas AG and four regional associations. Retail gas prices are, however, subject to more variation, depending on local circumstances. For electricity,

ELCom (*Commission fédérale de l'électricité*), the electricity regulator, monitors monopoly pricing and grid fees to prevent abuse. As in the case of natural gas, retail electricity prices vary significantly from one supply area to another. Final electricity consumption is subject to a grid levy of CHF 0.0077 per kWh, the purpose of which is to finance system services. The Swiss electricity market is only partially liberalised. Most companies and all households are subject to regulated prices, which in the past have generally been lower than the ones at the electricity exchange. In addition, energy-intensive industries must pay a capped surcharge to finance feed-in tariffs. This surcharge shall not exceed 3% of the electricity costs for consumers in cases where these costs account for more than 10% of a consumer's gross value added. This measure is in line with regulations in most EU countries.

All energy sales in Switzerland are subject to value-added tax (VAT) at the normal rate of 8%. In addition, a CO_2 levy on heating and process fuels was introduced in 2008 to internalise the external costs associated with CO_2 emissions and encourage a more efficient use of these particular fossil fuels. The tax is levied by the Federal Customs Administration (*Administration fédérale des douanes*) at a rate of CHF 36 per tonne of CO_2. Energy-intensive companies can, however, be exempted from the CO_2 tax provided they commit to legally binding CO_2 reduction targets. Revenues from the CO_2 tax are redistributed to the population through the social security system, and to businesses in proportion of wages paid. Since 2010, the tax has been partly earmarked for modernisation and promotion of renewable energies in buildings. For transport fuels, a private initiative known as the Climate Cent exists since 2005, whereby a surcharge of CHF 0.015 per litre is levied by mineral-oil importers on imports of both gasoline and diesel. Revenues from this surcharge are invested into CO_2-reduction projects both in Switzerland and abroad.

In addition, Switzerland levies excise duties on sales of mineral oils such as diesel (CHF 0.7587 per litre), unleaded petrol (CHF 0.7312 per litre) and light heating oil (CHF 0.003 per litre). Natural gas and LPG are also subject to excise duties. Because gasoline in Switzerland is taxed at a lower rate than in neighbouring countries, and depending on the prevailing exchange rate between the euro and the Swiss franc, the country can sell considerable volumes of fuel to drivers from France, Germany and Italy in a given year. With high values for the Swiss franc compared to the euro over the last 12 to 18 months, this phenomenon has, however, been less pronounced. The performance-related heavy-vehicle fee (HVF), which has been in force since 2001, is a federal tax levied on the basis of total weight, emissions level, and the distance (in kilometres) travelled inside Switzerland. It is levied on all vehicles and trailers that have a total weight above 3.5 tonnes, are used for freight, are licensed in Switzerland and abroad, and make use of the country's public-roads network.

At the federal level, a few tax exemptions and reductions provide some form of support to users of fossil fuels and biofuels. Farmers, foresters, fishermen, as well as certain public transport companies benefit from reductions in the rate of the excise tax. Since July 2008, biofuels have attracted either full or partial relief from the excise tax, provided they comply with certain environmental and social criteria. Some vehicles are also exempt from the HVF: agricultural vehicles; vehicles used for the concessionary transport of persons; vehicles used by emergency services; military vehicles; etc..

Data documentation

General notes

The fiscal year in Switzerland coincides with the calendar year.

Consumer Support Estimate

Excise Tax Exemption for Certain Transport Companies (data for 2004 and 2010)

This tax provision allows companies that have been granted a concession for the transport of persons to benefit from a reduction in the rate of the excise tax that normally applies to mineral oils consumed in Switzerland.

The annual estimates reported in Département Fédéral des Finances (2011) are allocated to diesel fuel and gasoline on the basis of the IEA's Energy Balances for the road transport sector.

Sources: Département Fédéral des Finances (2011), IEA.

Tag: CHE_te_01

Excise Tax Refund for Farming, Forestry and Fishing (data for 1997-)

The use of fuel for farming, forestry and fishing purposes is entitled to a refund from the excise tax that normally applies to mineral oils consumed in Switzerland.

We allocate the annual estimates provided by the Département Fédéral des Finances to diesel fuel and gasoline on the basis of the measure's actual breakdown by fuel for the year 2010.

Sources: Département Fédéral des Finances (2011).

Tag: CHE_te_02

Excise Tax Refund for Public Interest (data for 2004 and 2010)

The use of fuels is in certain cases of public interest entitled to a refund of the excise tax that normally applies to most sales of mineral oils in Switzerland (e.g. stationary electricity generation).

In the absence of more details, we allocate this measure to diesel fuel.

Sources: Département Fédéral des Finances (2011).

Tag: CHE_te_03

CO_2-Tax Exemption for Large Consumers (data for 2008-)

This measure exempts certain large consumers (i.e. energy-intensive companies) from Switzerland's CO_2 tax on heating and process fuels. Companies exempted from the CO_2 tax must, however, commit to legally-binding CO_2 reduction targets.

The annual estimates reported in Département Fédéral des Finances (2011) are allocated to the different types of fossil fuels on the basis of the IEA's Energy Balances for energy-intensive sectors such as the iron and steel industry, the cement industry, and the paper and pulp industry.

Sources: Département Fédéral des Finances (2011), IEA.

Tag: CHE_te_04

Sources

Policies or transfers

Département Fédéral des Finances (2011), *Quels sont les allégements fiscaux accordés par la Confédération?*, Administration Fédérale des Contributions, Division Études et Support, Available at: *www.estv.admin.ch/dokumentation/00075/00803/index.html?lang=fr*

Energy statistics

IEA (2011), *Energy Balances of OECD Countries*, International Energy Agency, Paris.