



Actualités OFS BFS Aktuell FSO News



02 Territory and Environment

Neuchâtel, april 2016

Environmentally related taxes accounts

Tax revenue from fossil energy agents

From 1995 to 2014, revenue from taxes from fossil motor fuels and combustibles raised from CHF 4.4 to 5.8 billion, increasing by 34%, at current prices, thus slower than the gross domestic product (GDP) or than households' final consumption expenditure. During this period, the share of this revenue paid by the economy, in relation to the GDP, fell from 0.4% to 0.3%. The part paid by households, in relation to their final consumption expenditure, remained stable around 0.9%.

From 1995 to 2014, the total revenue from environmentally related taxes increased by 65%, rising from CHF 6.5 to 10.7 billion at current prices¹. In 2014, 58% of this revenue came from energy taxes, 40% from transport taxes and 2% from emission taxes. Environmentally related taxes are levied against environmentally damaging goods and services, therefore increasing the price of the latter and may encourage producers and consumers to consider the consequences of their choices in line with the polluter pays principle.

More than half of the revenue from environmental taxes comes from fossil energies

Taxes on fossil energy agents account for over 94% of revenue from energy taxes and thus over half of the total revenue from environmentally related taxes. They are levied against fossil motor fuels or combustibles. Taxes on fossil energy agents include taxes and surcharges on mineral oils as well as the CO₂ levy on fossil combustibles.

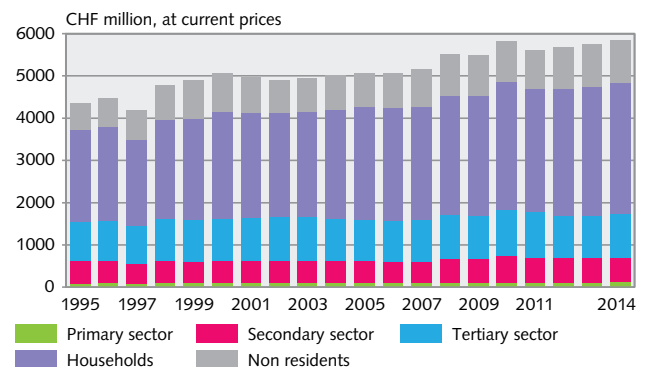
Half of the taxes on mineral oils fund the general federal budget, the other half and the entire surcharge are used for special financing of road transport. In 2014, around two

thirds of the CO₂ levy was distributed to the economy and households, the other third supported the Buildings Programme and the Technology Fund.

From 1995 to 2014, revenue² from taxes on fossil motor fuels and combustibles increased by 34%, rising from CHF 4.4 to 5.8 billion (G 1). The share paid by the economy passed from 1.6 to 1.7 billion, whereas the share from the households raised from 2.2 to 3.1 billion. The rest was paid by households and enterprises not resident in Switzerland³.

Tax revenue from fossil fuels

G 1



2014: Allocation estimated on the basis of the previous year

Source: FSO – Environmental accounts

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¹ The monetary variables are always specified here at current prices.

² Revenue from environmental taxes is recorded ex. VAT

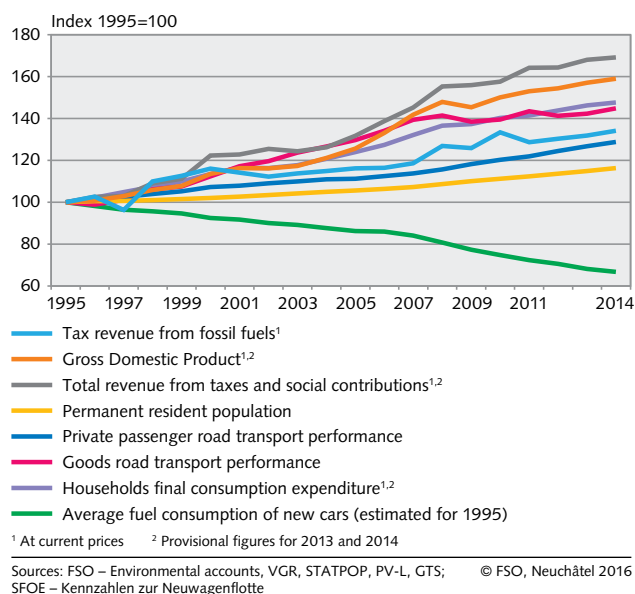
³ The breakdown by economic player is based on estimations.

Socio-economic context

The increase in revenue from taxes on fossil motor fuels and combustibles occurs in a context of larger growth (G2). From 1995 to 2014, the resident population raised by 17%, increasing from 7.1 to 8.2 million inhabitants. Mobility also increased with a 29% rise in passenger road transport and a 45% rise in freight transport by road. The average consumption of fuel from new cars fell by 33%. The total revenue from taxes and social contributions increased by 69%, faster than the revenue from taxes on motor fuels and combustibles (+34%). The gross domestic product (GDP) increased by 59% and households' final consumption expenditure by 48%.

Socio-economic context

G 2



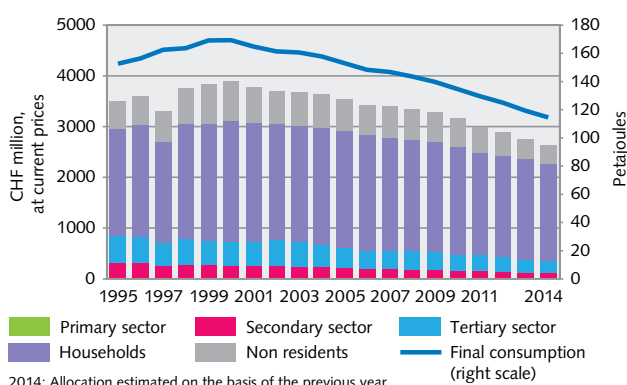
In this context of growth, the share of revenue from taxes on fossil motor fuels and combustibles paid by the economy, in relation to the GDP, fell from 0.4% to 0.3% from 1995 to 2014. Revenue paid by households, in relation to their final consumption expenditure, remained stable around 0.9%. The burden of these taxes for enterprises therefore decreased while for households remained stable.

Tax revenue from petrol decreases

From 1995 to 2014, revenue from tax and surcharge on mineral oils from petrol fell by 24% from CHF 3.5 to 2.6 billion (G3). During this period, the revenue paid by the households fell by 12% from CHF 2.1 to 1.85 billion. However, its total share rose from 60% to 72%. Revenue generated by the economy fell by 58% from CHF 850 million to CHF 360 million whereas its share fell from 24% to 14%. Finally, part of the revenue originates from enterprises and households not resident in Switzerland. Such revenue has fallen by 31% from CHF 540 million to CHF 380 million and its total share fell from 16% to 14%.

Revenue and final consumption of petrol

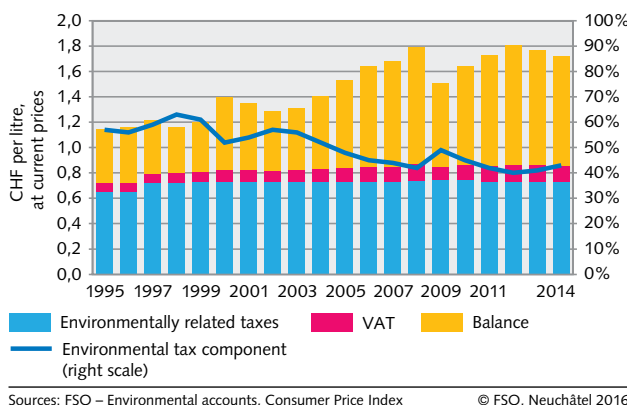
G 3



The development of the total revenue depends on the quantity of the petrol bought and the tax rate applied. During the period in question, petrol consumption fell by 25%, passing from 150 to 110 petajoules (PJ). However, the tax rate remained almost unchanged and corresponded to 73 cents per litre⁴ in 2014 (G4). The price of petrol fluctuated, increasing from CHF 1.14 per litre in 1995 to CHF 1.72 per litre in 2014. The environmental levy component on petrol has thus fallen from 57% to 43% during the period observed. However, it increased again since, following the drop of the price of petrol.

Price and environmental tax component of petrol

G 4



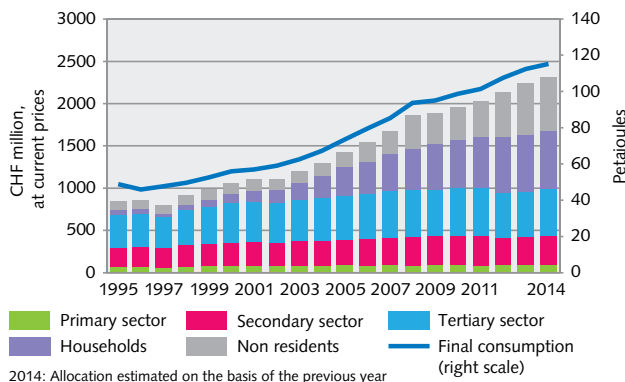
Households boost tax revenue from diesel

Revenue from tax and surcharge on mineral oils from diesel increased almost threefold, going from CHF 0.8 billion to CHF 2.3 billion between 1995 and 2014 (G5). Over this period, the stock of passenger cars with diesel engines has shown an elevenfold increase. Tax revenue on diesel from households strongly increased, rising from CHF 50 million to CHF 700 million whereas its total share increased from 6% to 30%. Revenue from the economy rose by 43% from CHF 690 million to CHF 990 million. Its total share fell from 82% to 43%. Revenue from non-resident businesses and households increased sixfold, rising from CHF 100 million to CHF 630 million. Its total share increased from 12% to 27%.

⁴ Unleaded petrol 95

Revenue and final consumption of diesel

G 5

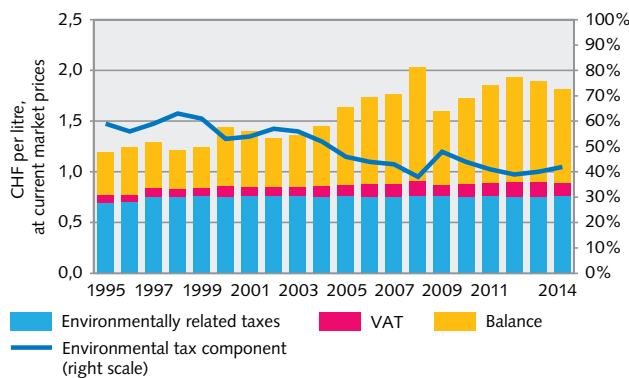


Sources: FSO – Environmental accounts; SFOE – Overall energy statistics © FSO, Neuchâtel 2016

The growth of the revenue depends on the quantity of the diesel bought and the tax rate applied. During the period in question, diesel consumption increased by 135%, going from 50 to 120 petajoules. The tax rate remained almost unchanged. It was 76 cents per litre in 2014 (G 6). The price of diesel has fluctuated, increasing from CHF 1.19 per litre in 1995 to CHF 1.82 per litre in 2014, which means that the environmental levy component has also decreased for this motor fuel, falling from 59% to 42% over the observed period. Nevertheless, it increased again since, following the drop of the price of diesel.

Price and environmental tax component of diesel

G 6



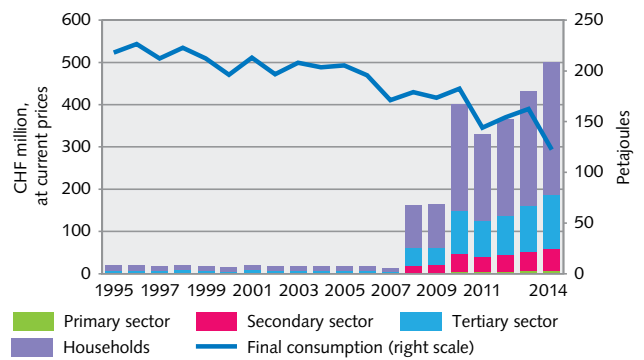
Sources: FSO – Environmental accounts, Consumer Price Index © FSO, Neuchâtel 2016

More than 60% of heating oil revenue comes from households

From 1995 to 2007, revenue from the tax on heating oil was less than CHF 20 million per year (G 7). It has increased from 2008 following the introduction of the CO₂ steering levy on fossil combustibles such as heating oil. In 2014, it was estimated at almost CHF 500 million. From 2008 to 2014, the share from the economy and households remained stable, with each accounting for approx. 38% and 62%.

Revenue and final consumption of heating oil

G 7

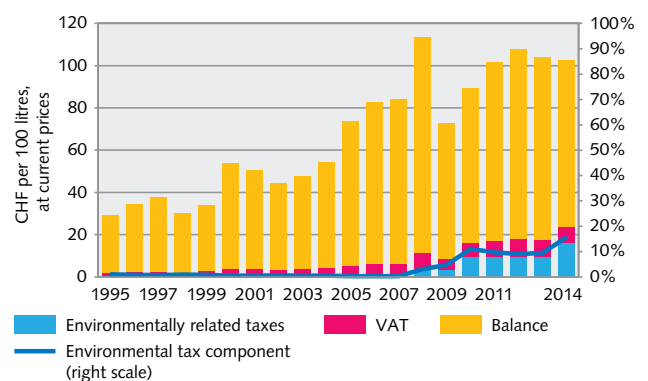


Sources: FSO – Environmental accounts; SFOE – Overall energy statistics © FSO, Neuchâtel 2016

The consumption of energy used for heating depends particularly on weather conditions. While fluctuating, heating oil consumption fell by 44%, passing from 220 to 120 petajoules between 1995 and 2014. In 2014, the tax rate for heating oil was CHF 16 per 100 litres (G 8). With annual variations, its sale price⁵ passed from CHF 29 to CHF 103 per 100 litres between 1995 and 2014. The environmental levy component has increased from 1% to 16% in the observed time frame. It continued to increase afterwards following the decrease of the price of heating oil. The accelerated drop in consumption seen from 2008 onwards seems to reflect, at least partly, the incentive effect of the CO₂ levy.

Price and environmental tax component of heating oil

G 8



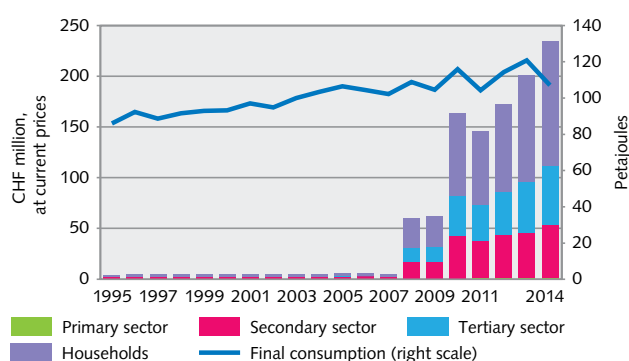
Sources: FSO – Environmental accounts, Consumer Price Index © FSO, Neuchâtel 2016

⁵ For the purchase of 1501 to 3000 litres of extra-light heating oil.

Economy and households contribute equally to the tax revenue from natural gas

From 1995 to 2007, revenue from taxes on natural gas remained below CHF 6 million per year (G 9). It has increased from 2008 following the introduction of the CO₂ steering levy on fossil combustibles such as natural gas. In 2014, it was estimated at CHF 230 million. From 2008 to 2014, the share of this revenue from the economy increased from 48% to 52%, whereas the share of revenue from households showed a reverse trend falling from 52% to 48%.

Revenue and final consumption of natural gas **G 9**

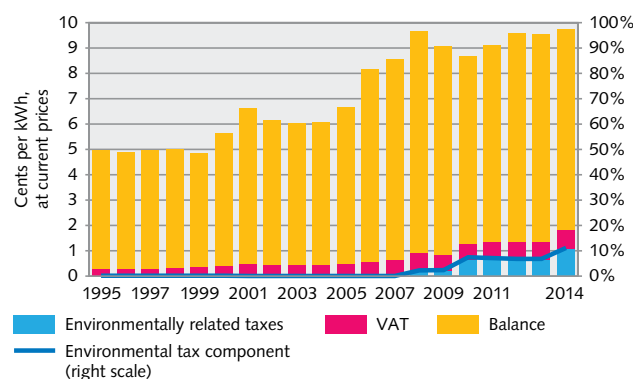


2014: Allocation estimated on the basis of the previous year

Sources: FSO – Environmental accounts; SFOE – Overall energy statistics © FSO, Neuchâtel 2016

The consumption of energy used for heating largely depends on weather conditions. While fluctuating, natural gas consumption increased by 23%, passing from 90 to 110 PJ between 1995 and 2014. In 2014, the tax rate for natural gas was 1.1 cents per kWh (G 10). Its sale price⁶ fluctuated from one year to the next, passing from 5 to 10 cents per kWh from 1995 to 2014. Consequently, the environmental levy component increased for this combustible, rising from 1% to 11% over the period observed.

Price and environmental tax component of natural gas **G 10**



Sources: FSO – Environmental accounts, Consumer Price Index

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⁶ Consumption type III: 50,000 kWh

Environmental Accounts

The analyses that are presented here are based on data taken from the environmental taxes accounts. This statistic is conducted within the scope of the environmental accounts which are in keeping with the UN's System of Environmental-Economic Accounting (SEEA). The environmental accounts complement the national accounts with an environmental dimension by respecting their concepts, definitions, classifications and accounting regulations. They make it possible to highlight the interactions between the environment and the economy.

Methodological note

The environmentally related taxes accounts provide information on revenue from these taxes by economic player. Environmentally related taxes are compulsory payments to the government without individual counterpart whereby the tax base is a physical unit that has a proven negative impact on the environment. It is of no concern whether such taxes were introduced to protect the environment, to generate revenues which can be used for environmental protection, for tax or other purposes. In terms of national and international comparability, only taxes considered as such by the national accounts are taken into consideration, and no other types of environmental tax levies, such as usage fees paid in exchange for an individual service from the government. Environmental tax revenue is calculated net of VAT, but includes the administrative costs linked to collection. Any tax refunds, cuts or exemptions from which some businesses benefit are taken into account; however, these are not considered in the final consumption of fossil fuels and combustibles. Estimates are made if no information is available on the breakdown by sector or by combustible (extra-light heating oil and natural gas). Internationally, environmentally related taxes can be split into four categories: tax on energy, transport, emissions and resources (the latter category does not exist in Switzerland). The environmental tax accounts are based on the methodology developed by Eurostat.

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Imprint

Publisher: Federal Statistical Office (FSO)

Concept, editor: Chiara Calabrese

Layout: FSO, DIAM Section, Prepress/Print

Translation: FSO language services Languages: Available as PDF file or in printed version in French, German, Italian and English

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