

Taxing Energy Use 2019: Country Note – Switzerland

This note explains how Switzerland taxes energy use. The note shows the distribution of effective energy tax rates – the sum of fuel excise taxes, explicit carbon taxes, and electricity excise taxes, net of applicable exemptions, rate reductions, and refunds – across all domestic energy use. It also details the country-specific assumptions made when calculating effective energy tax rates and matching tax rates to the corresponding energy base.

The note complements the Taxing Energy Use 2019 report that is available at <http://oe.cd/TEU2019>. The report analyses where OECD and G20 countries stand in deploying energy and carbon taxes, tracks progress made, and makes actionable recommendations on how governments could do better to use taxes to reach environmental and climate goals.

The general methodology employed to calculate effective energy tax rates and assign tax rates to the energy base is explained in Chapter 1 of the report. The official energy tax profile for Switzerland can be found in Chapter 2 of the report. Chapter 3 additionally shows effective carbon tax rates per tonne of CO₂, and presents the corresponding carbon tax profiles for all countries. The report also contains StatLinks to the official data.

Structure of energy taxation in Switzerland

As at 1 July 2018, the main taxes on energy use in Switzerland are the following:

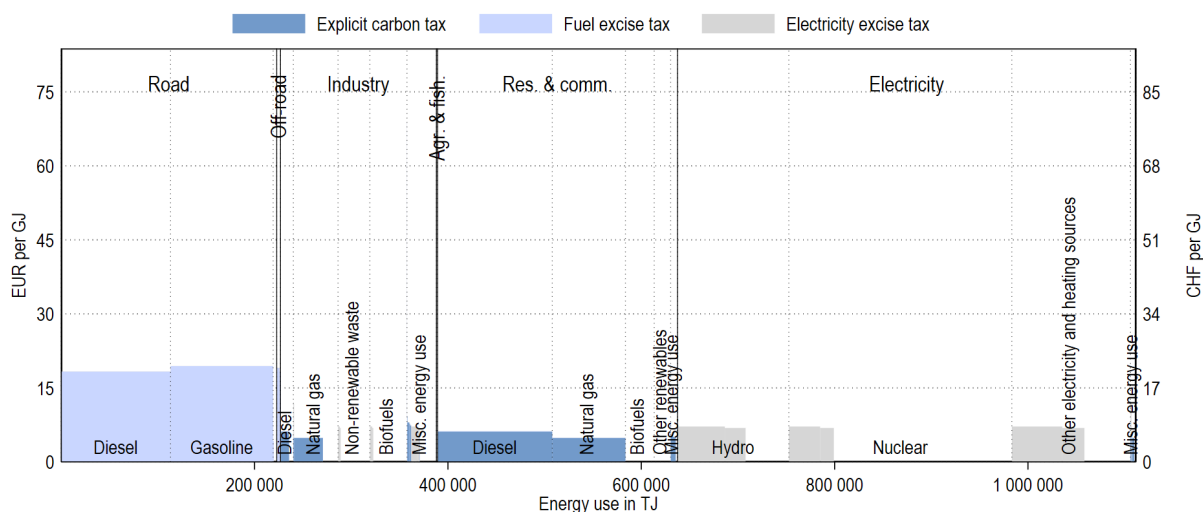
- The CO₂ tax applies to solid, liquid, and gaseous fossil fuels when used for heating purposes and to fuel stationary motors at a uniform rate of CHF 96 per tCO₂.
- The Tax on Mineral Oils (*impôt sur les huiles minérales*) applies to liquid and gaseous fuels. The Surtax on Mineral Oils (*surtaxe sur les huiles minérales*) applies to liquid fuels, as well as to gaseous fuels, when such fuels are used in road or off-road transport.
- Electricity consumption is subject to the Federal Compensatory Feed-in Remuneration Fee (*rétribution à prix coûtant du courant injecté - RPC*); in line with the previous vintage of TEU, this is classified as an “electricity excise tax”. Local taxes may additionally apply to electricity consumption as further discussed below.

Switzerland operates an emissions trading system (ETS) (OECD, 2018^[1]). Energy use that is covered by the ETS is exempt from the carbon tax. Permit prices are not shown in the energy tax profiles.

Effective tax rates on energy use in Switzerland

Tax rates can differ across energy products and users, as described below. Figure 1 provides an overview of how energy and carbon taxes apply to different energy categories across the economy. The remainder of this document discusses details on tax rates and tax bases for each of the six economic sectors.

Figure 1. Effective tax rates on energy use by sector and energy category

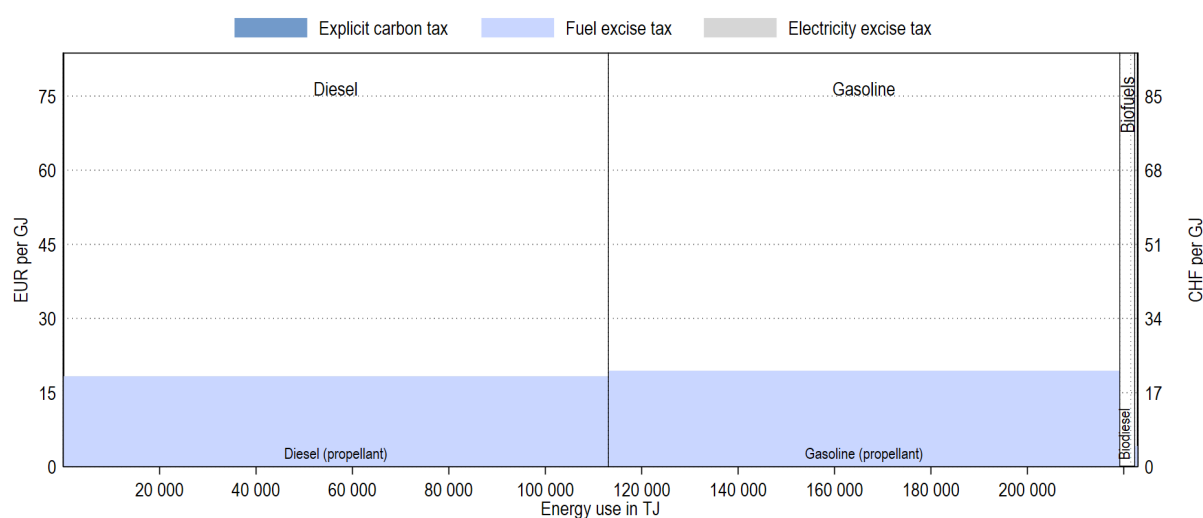


Note: Tax rates applicable on 1 July 2018. Energy use data is for 2016 and adapted from IEA (2018^[2]), *World Energy Statistics and Balances*. Energy categories (labelled at the bottom) that represent less than 1% of a country's energy consumption are grouped into "misc. energy use" and may not be labelled.

Road

Figure 2 shows that within the road sector, gasoline is taxed at a slightly higher effective tax rate than diesel. Notice, however, that the statutory tax rate per litre is higher for diesel than for gasoline. Given that the energy content of a litre of diesel is higher though, its effective tax rate per GJ is lower. Biofuels benefit from a tax relief as far as they fulfil certain ecological and social conditions according to Swiss MOT law/ordinance. They are normally produced and/or imported pure and are later blended with fossil fuels.

Figure 2. Effective tax rates on energy use in the road sector

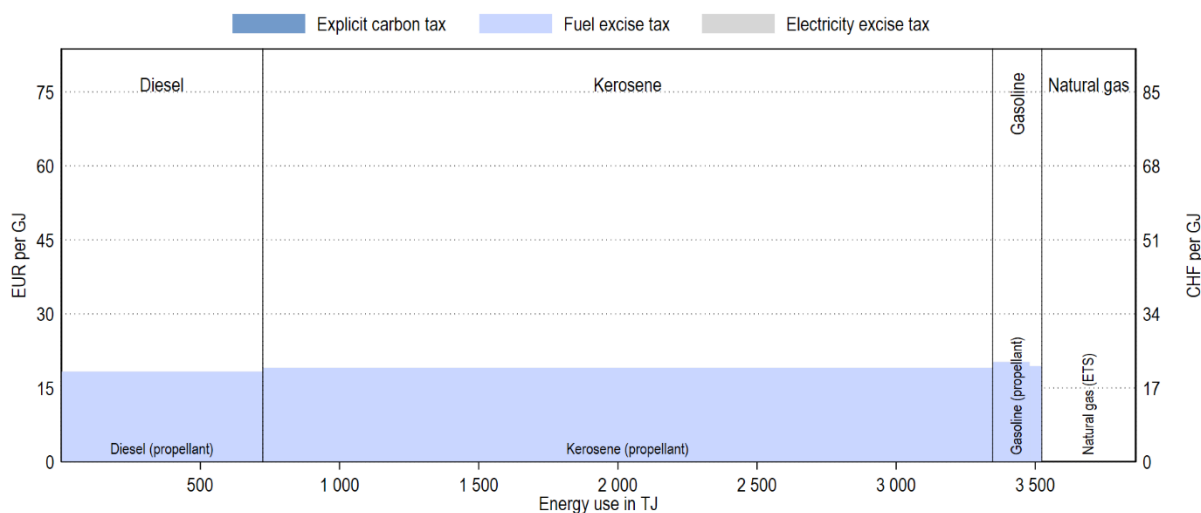


Note: Tax rates applicable on 1 July 2018. Energy use data is for 2016 and adapted from IEA (2018^[2]), *World Energy Statistics and Balances*. Energy categories (labelled at the top) that represent less than 1% of a sector's energy consumption are grouped into "misc. energy use" and may not be labelled. Similarly, rate labels (shown at the bottom) are grouped into "misc. rates" using the same threshold.

Off-road

In the off-road sector (Figure 3), diesel and gasoline used for domestic aviation, domestic navigation as well as diesel used for railway transport are taxed at the standard rates for propellants. Natural gas used for pipeline transport is taxed at the standard rate for non-propellant use inside the ETS.

Figure 3. Effective tax rates on energy use in the off-road sector



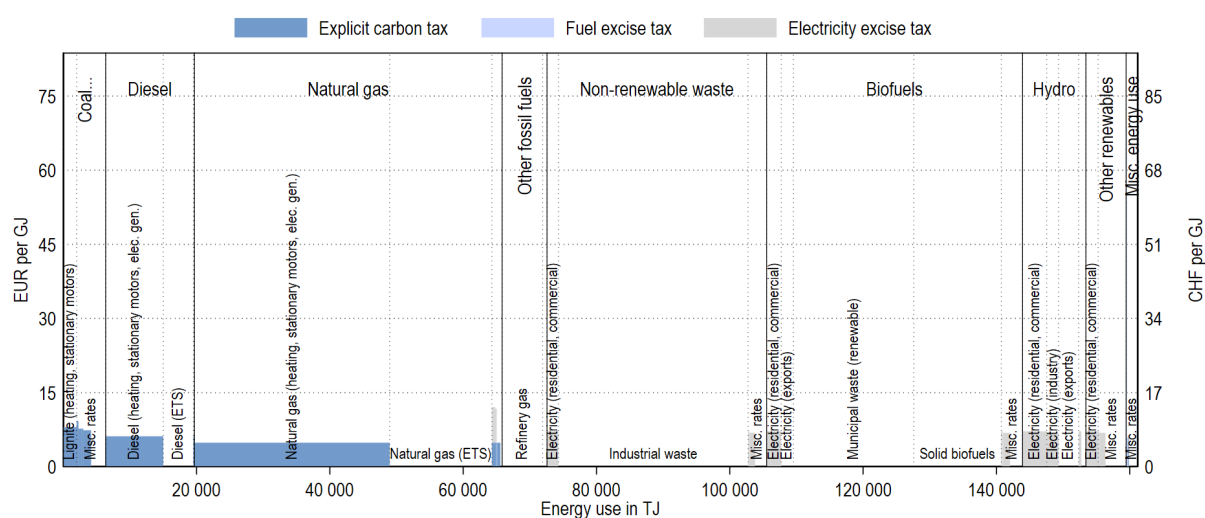
Note: Tax rates applicable on 1 July 2018. Energy use data is for 2016 and adapted from IEA (2018^[2]), *World Energy Statistics and Balances*. Energy categories (labelled at the top) that represent less than 1% of a sector's energy consumption are grouped into "misc. energy use" and may not be labelled. Similarly, rate labels (shown at the bottom) are grouped into "misc. rates" using the same threshold.

Industry

Fossil fuels used in the industry are generally subject to the carbon tax, unless entities are covered by the ETS (Figure 4). Non-renewable waste, biofuel, hydro and other renewables are not taxed.

Electricity from autoproducer plants is generally subject to electricity taxes (see electricity section below).

Figure 4. Effective tax rates on energy use in the industry sector

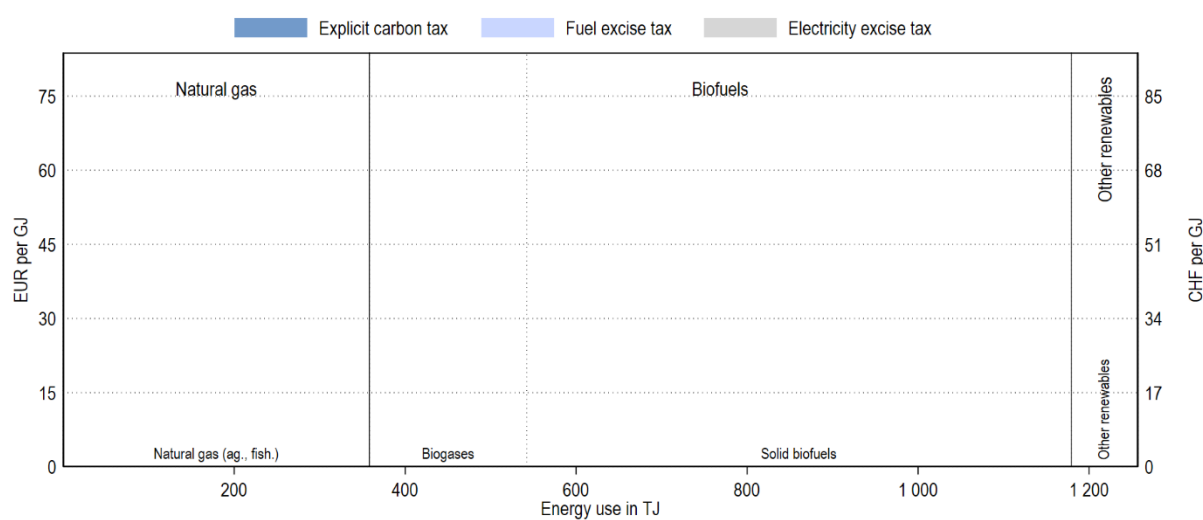


Note: Tax rates applicable on 1 July 2018. Energy use data is for 2016 and adapted from IEA (2018^[2]), *World Energy Statistics and Balances*. Energy categories (labelled at the top) that represent less than 1% of a sector’s energy consumption are grouped into “misc. energy use” and may not be labelled. Similarly, rate labels (shown at the bottom) are grouped into “misc. rates” using the same threshold.

Agriculture and fisheries

Natural gas used in the agriculture and fisheries sector (Figure 5) is not taxed. Biofuels and other renewables used in the agricultural sector are not taxed either.

Figure 5. Effective tax rates on energy use in the agriculture & fisheries sector



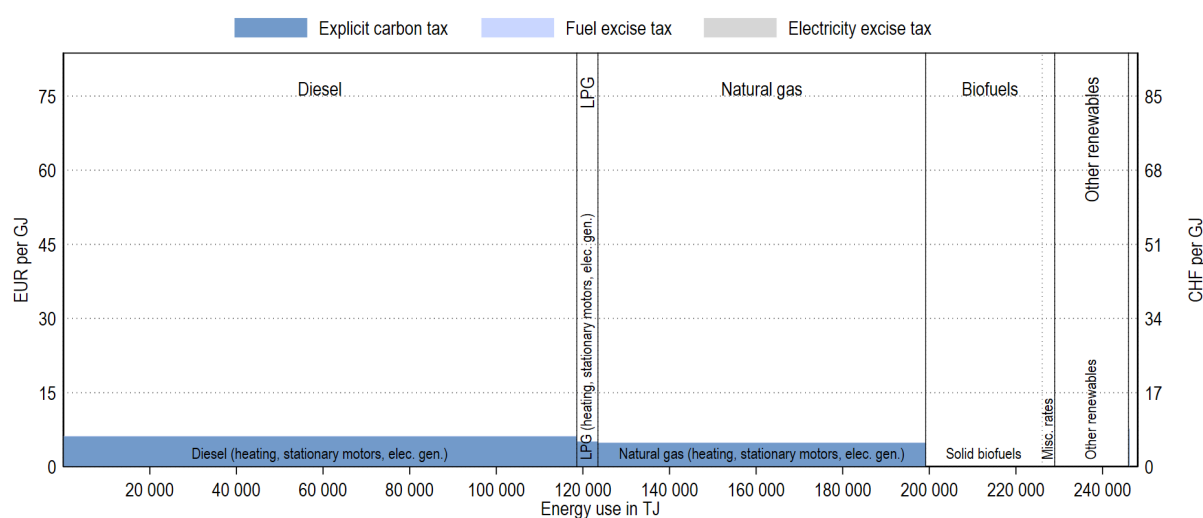
Note: Tax rates applicable on 1 July 2018. Energy use data is for 2016 and adapted from IEA (2018^[2]), *World Energy Statistics and Balances*. Energy categories (labelled at the top) that represent less than 1% of a sector's energy consumption are grouped into "misc. energy use" and may not be labelled. Similarly, rate labels (shown at the bottom) are grouped into "misc. rates" using the same threshold.

Residential and commercial

In the residential and commercial sector (Figure 6), fossil fuels are subject to the carbon tax. Biofuels and other renewables are not taxed.

Notice that TEU reports the energy use associated with electricity and district heating consumption in the industry and electricity sector as that is where the primary energy consumption occurs.

Figure 6. Effective tax rates on energy use in the residential & commercial sector



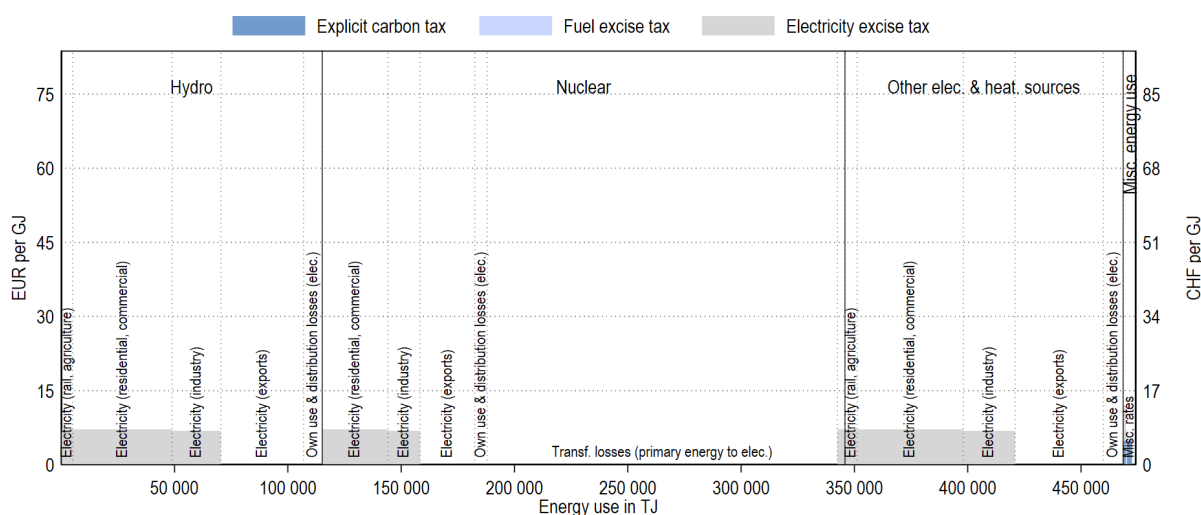
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Electricity

Figure 7 shows how the electricity sector, as defined in TEU, is taxed in Switzerland. Fossil fuels used to generate electricity are taxed, but their use is too low to be discernible in the figure. Hydro, nuclear, and electricity imported from abroad (grouped under “other elec. & heat. sources”) are not taxed.

The final consumption of electricity, on the other hand, is taxed. In addition to the federal tax, local taxes on electricity consumption apply that differ by user and by locality, but these tend to be rather low.¹ As is standard, electricity exports are not subject to electricity taxes in Switzerland, but may be taxed elsewhere. Own-use by the electricity industry and electricity that never reaches end users (transmission & distribution losses) are not taxed either.

Figure 7. Effective tax rates on energy use in the electricity sector



Note: Tax rates applicable on 1 July 2018. Energy use data is for 2016 and adapted from IEA (2018^[2]), *World Energy Statistics and Balances*. Energy categories (labelled at the top) that represent less than 1% of a sector’s energy consumption are grouped into “misc. energy use” and may not be labelled. Similarly, rate labels (shown at the bottom) are grouped into “misc. rates” using the same threshold.

References

¹ The Swiss Electricity Federal Council provides data on the local taxes paid by network provider and by electricity consumption category. Based on the pre-defined electricity consumption categories, TEU includes unweighted averages for the local taxes paid by households (categories H1 through H8), by business (categories C1 through C3) and by industries (categories C4 through C8). Local rates approximately amount to CHF 0.007 per KWh on electricity consumed by households and by businesses, and to around CHF 0.006 per KWh on electricity consumed by industry.

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- IEA (2018), “Extended world energy balances”, *IEA World Energy Statistics and Balances* (database), <http://dx.doi.org/10.1787/data-00513-en> (accessed on 16 October 2018). [2]
- OECD (2018), *Effective Carbon Rates 2018: Pricing Carbon Emissions Through Taxes and Emissions Trading*, OECD Publishing, Paris, <https://dx.doi.org/10.1787/9789264305304-en>. [1]