

Taxing Energy Use

Sweden

This note describes the taxation of energy use in Sweden. It contains the country's energy tax profiles, followed by country-specific information to complement the general discussion in *Taxing Energy Use 2018* (OECD, 2018). The profile contains four energy tax profiles for Sweden:

Figure 1: Effective tax rates on energy use in national currency and EUR/GJ, 2015, including electricity output taxes and energy use from biomass

Figure 2: Effective tax rates on energy use in national currency and EUR/tCO₂, 2015, including electricity output taxes and energy use from biomass

Figure 3: Effective tax rates on energy use in national currency and EUR/tCO₂, 2015, excluding taxes on electricity output, including carbon emissions from biomass

Figure 4: Effective tax rates on energy in national currency and EUR/tCO₂, 2015, excluding taxes on electricity output and carbon emissions from biomass

The main insights from the second vintage of the *Taxing Energy Use* database, including a systematic comparison of patterns of the taxation of energy use across countries, sectors and fuels are available in *Taxing Energy Use 2018* (OECD, 2018) at: <http://oe.cd/TEU2018>.

Energy tax profiles for Sweden

Figure 1: Effective tax rates on energy use in national currency and EUR/GJ, 2015, including electricity output taxes and energy use from biomass

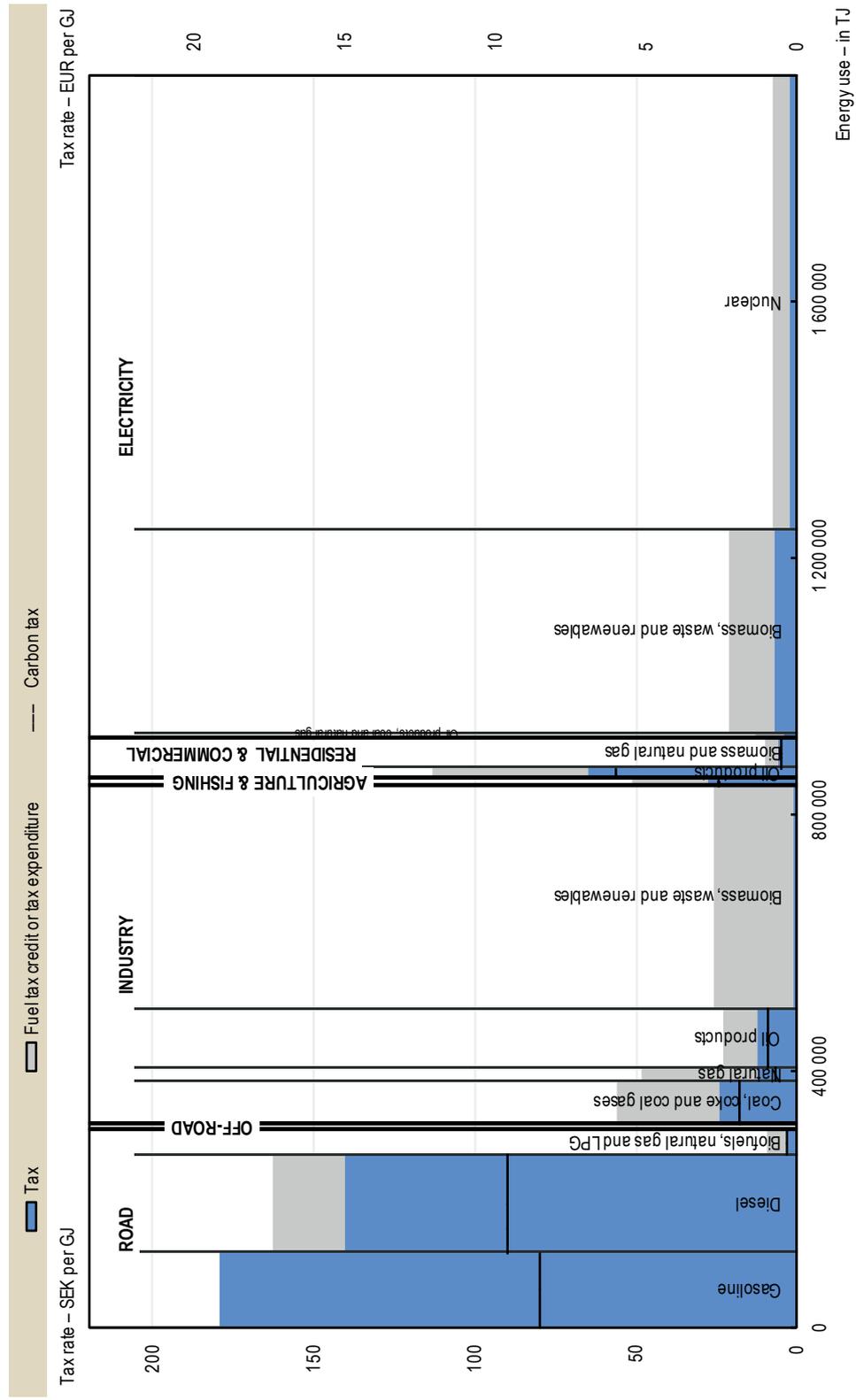


Figure 2: Effective tax rates on energy use in national currency and EUR/tCO₂, 2015, including electricity output taxes and carbon emissions from biomass

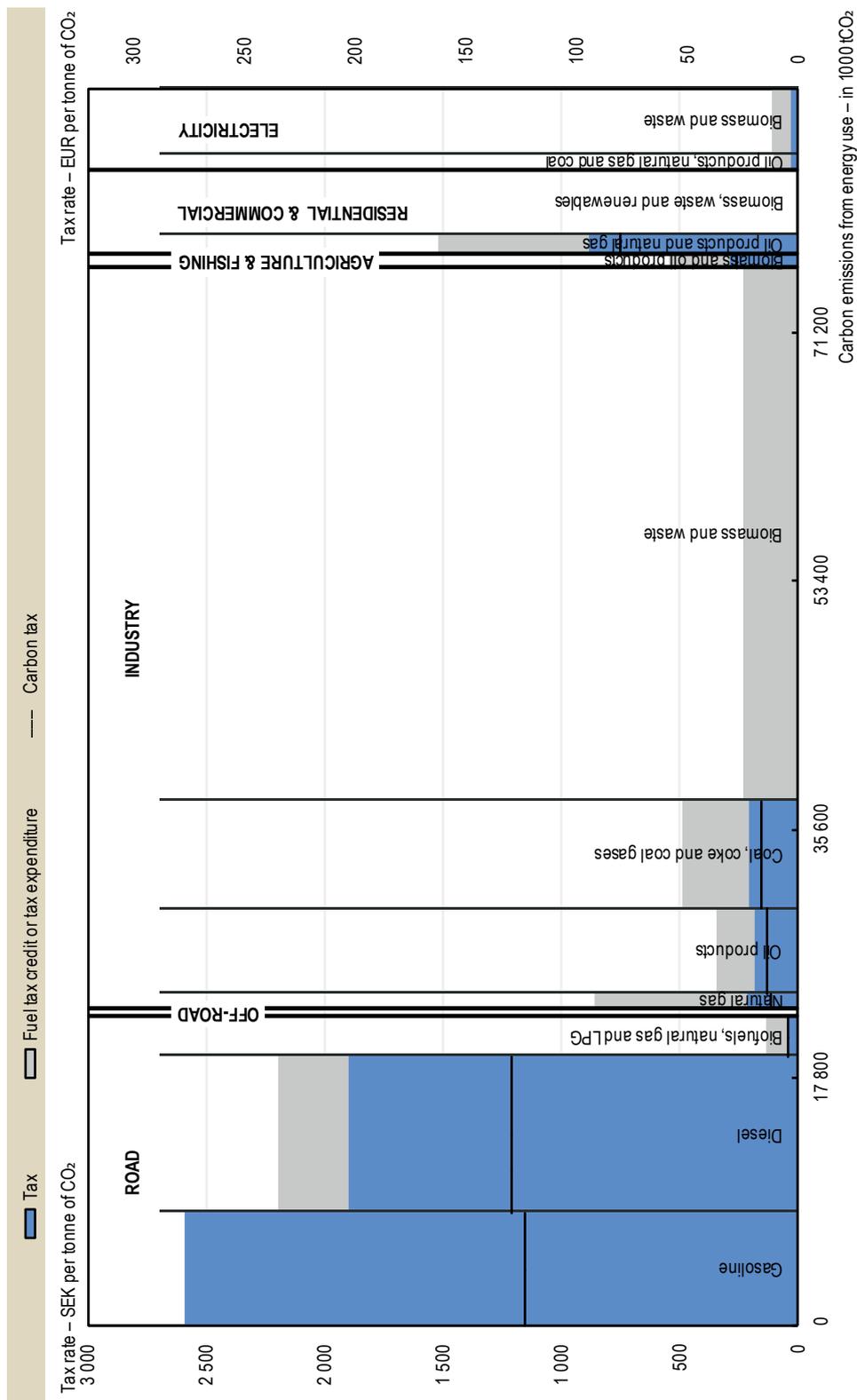


Figure 3: Effective tax rates on energy use in national currency and EUR/tCO₂, 2015, excluding taxes on electricity output, including carbon emissions from biomass

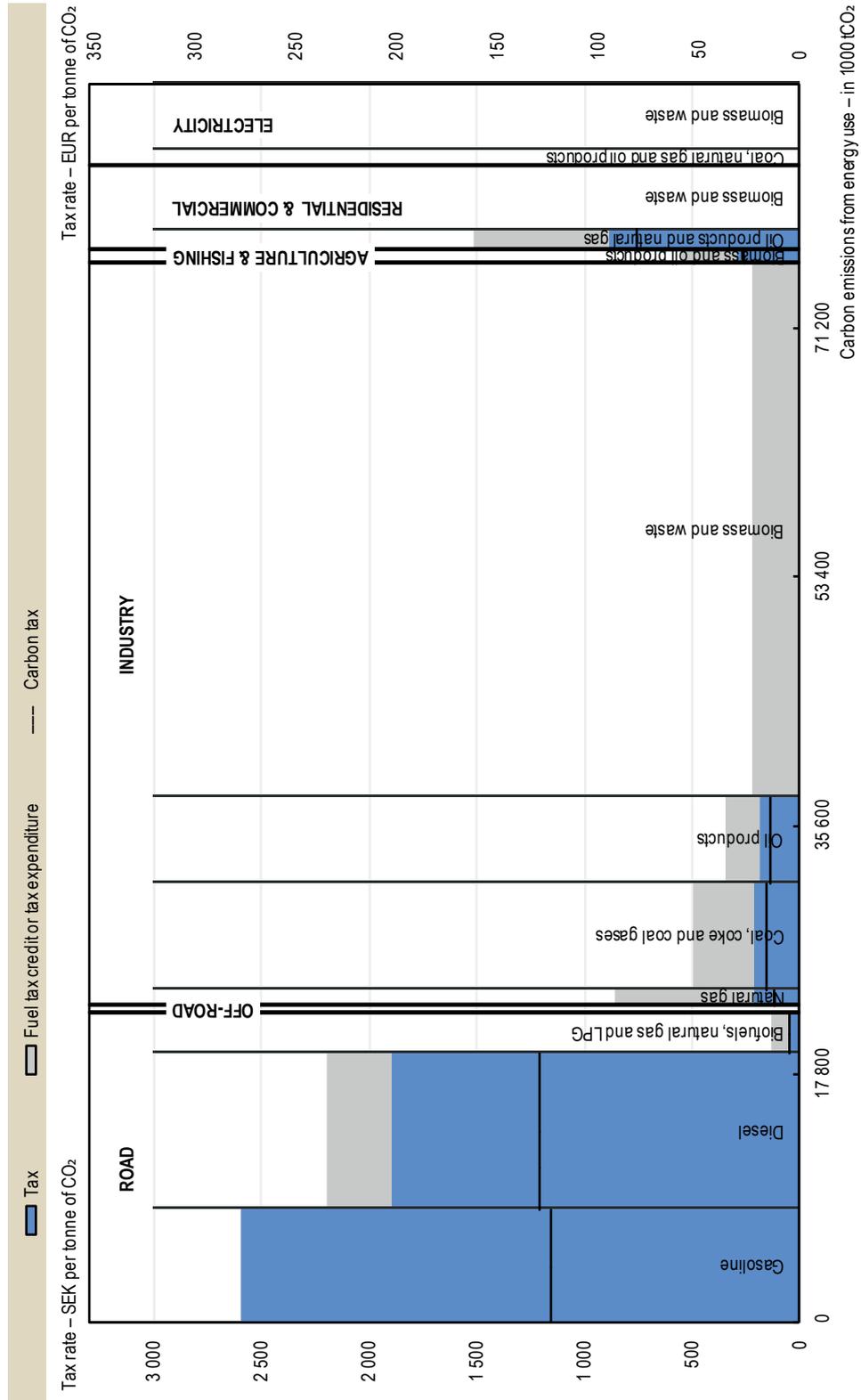
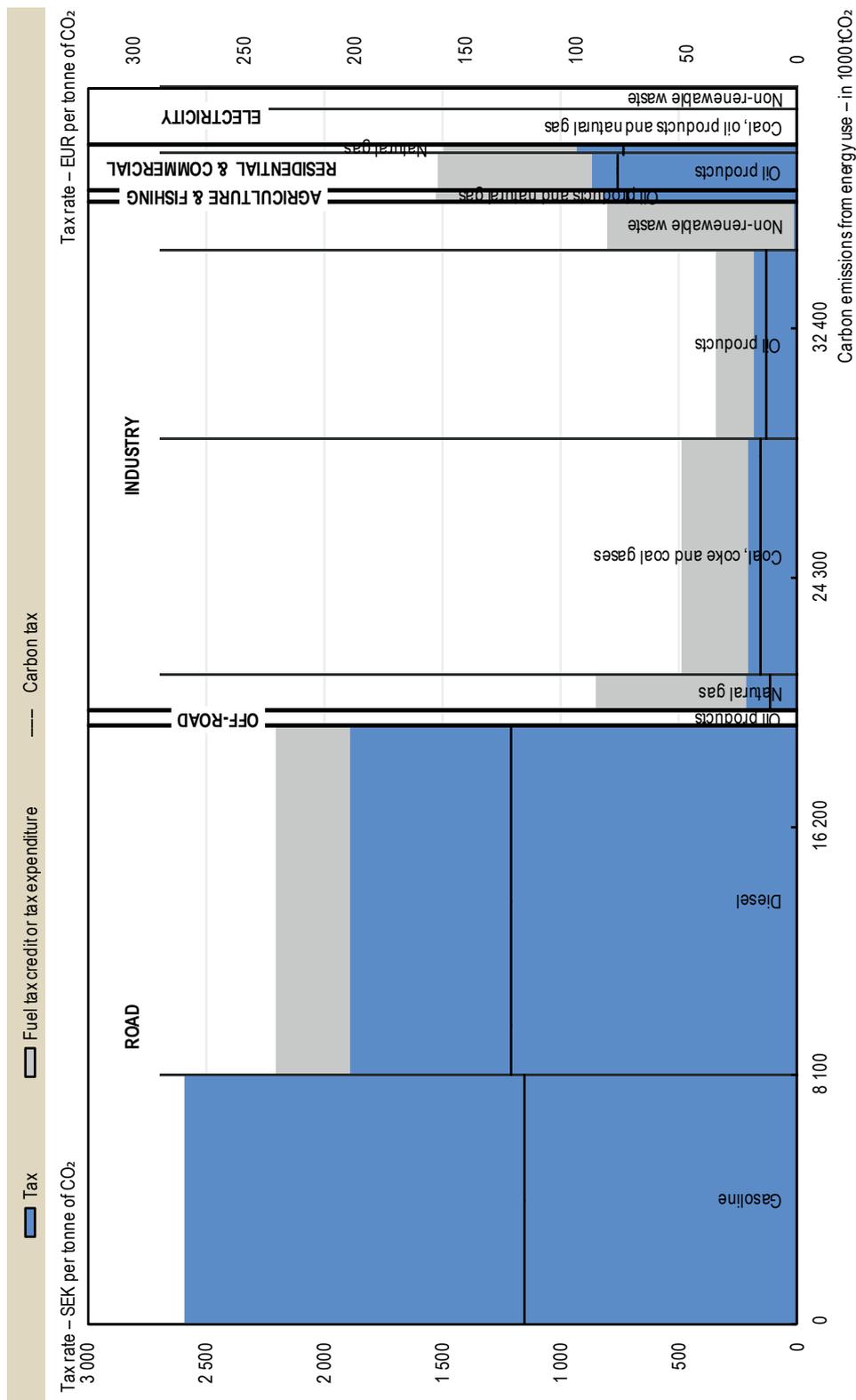


Figure 4: Effective tax rates on energy use in national currency and EUR/tCO₂, 2015, excluding taxes on electricity output and carbon emissions from biomass



Country-specific notes

This note describes the taxation of energy use in Sweden. It contains the country's energy tax profiles, accompanied by country-specific information to complement the general discussion in *Taxing Energy Use 2018* (OECD, 2018). Tax rates are those applicable in April 2015, energy use data are for 2014.

The data shown in the energy tax profiles is from the OECD's *Taxing Energy Use* (TEU) Database. More detail on the TEU Database, the calculation of effective tax rates on energy use and the interpretation of the energy tax profiles can be found in *Taxing Energy Use 2018* (OECD, 2018).

Sweden participates in the European Union emissions trading system (ETS), not shown in the energy tax profiles.¹ Since the firms which participate in the EU ETS are not covered by the CO₂ tax, a corresponding amount of carbon emissions from energy use is shown as untaxed under the CO₂ tax in the industry and the residential and commercial sector.

Energy and carbon taxes

Energy and carbon taxes in Sweden are levied within the framework of the 2003 EU Energy Tax Directive, which sets minimum rates for the taxation of energy products in member states. Within this framework, the main taxes on energy use in Sweden are the following:

- An energy applies to oil products, natural gas and coal and coke consumption at rates varying in proportion to the fuels' energy content;
- A CO₂ tax applies to the same fossil fuels taxed under the energy tax, at rates varying in proportion to fuels' carbon content;
- Electricity output is taxed (per MWh). Industrial and agricultural users pay a higher statutory tax rate on electricity than households and commercial users.

The rates at which these taxes apply can further differ across fuels and different users, as described below.

These taxes are included in the energy tax profiles of Sweden, but the tax on electricity output is only included when separately indicated (see below). Where more than one tax rate applies to an energy user or fuel, the energy tax profile shows their sum.

Effective tax rates on energy use for different fuels and users

The tax rates on different fuels and uses are linked to the Sweden's energy use² to calculate effective tax rates on energy use (in SEK/TJ and EUR/TJ) or CO₂ emissions from energy use (in SEK/tCO₂ and EUR/tCO₂). Energy use and the CO₂ emissions associated with it are shown for six economic sectors: road transport, domestic offroad transport, industry, agriculture and fishing, residential & commercial, and electricity.

The Swedish energy tax profiles (Figures 1 and 2) show effective tax rates for different fuels and uses in terms of the fuels' energy and carbon content, respectively. Figures 1 and 2 include energy use and carbon emissions from biomass and they show output taxes

1. The OECD's [Effective Carbon Rates](#) contains information on emissions trading systems.
 2. Data on energy use is taken from the IEA's Extended World Energy Balances, see section 2.2 of *Taxing Energy Use 2018* (OECD, 2018) for additional detail.

on electricity. Figure 3 is identical to Figure 2, except that taxes on electricity output are excluded. Figure 4 excludes carbon emissions from biomass and taxes on electricity output.

- Of the six economic sectors, the **road** sector is taxed at the highest rates, both in terms of the fuels' energy and carbon content. Within the road sector, gasoline is taxed at the highest effective tax rate, diesel is taxed at a lower rate in terms of TJ and in terms of CO₂. Diesel is taxed at a higher effective rate by the CO₂ tax than gasoline. Natural gas is taxed at a lower effective rate than gasoline and diesel. Biofuels are untaxed.

The Swedish energy tax rates for gasoline, diesel and kerosene differ between environmental classes 1 to 3. Based on data provided by national officials it has been assumed that fuels from environmental class 1 are most prominently used, and these have correspondingly been included in the *Taxing Energy Use* data.

- Fossil fuels used in the **off-road** sector are untaxed.
- Fossil fuels used in the **industry**, the **residential and commercial** and **agriculture and fishing** sectors are taxed, except when entities participate in the EU ETS.

In line with data from the OECD's *Effective Carbon Rates*, the EU ETS covers 23% of the industry sector and less than 1% of the residential and commercial sector in Sweden, and the carbon tax is thus taken out for these shares of energy use and carbon emissions from energy use.

- The fuels used to generate **electricity** are untaxed. **Electricity output** is taxed (per MWh). The statutory tax rates on electricity output is lower for households residing in Northern Sweden, but this rate is not included in the energy tax profiles.

Reported tax expenditures and rebates

Sweden has a very elaborate system for the calculation and reporting of tax expenditures. The starting point for establishing the benchmark against which energy tax expenditures are measured is that all energy use should be subject to the same tax rate per unit of energy content. Two types of differentiation are made: i) a higher benchmark rate is applied to electricity, to reflect the fact that one energy unit of electricity represents more than one energy unit of basic fuels, due to the energy loss in electricity generation; and ii) a higher benchmark rate is applied to transport fuels than for heating and process fuels, to reflect the additional externalities associated with road transport. For the CO₂ tax expenditures, no differentiation is made in the official tax expenditure estimates, so the standard CO₂ tax rate is the benchmark.

The Swedish tax expenditures have been included in the *Taxing Energy Use* data based on consultation with national officials. Where tax expenditures are reported both in respect of the energy and the carbon tax, a combined tax expenditure is shown.

Reported tax expenditures or rebates might be averaged with tax rates on other energy uses, in which cases they are not visibly identifiable in the graphical profile. Additional detail on the treatment of tax expenditures is available in section 2.2 of *Taxing Energy Use 2018* (OECD, 2018).

Sources

The main insights from the second vintage of the *Taxing Energy Use* database are analysed in:

OECD (2018), *Taxing Energy Use 2018 – Companion to the Taxing Energy Use Database*, OECD Publishing, Paris. <http://dx.doi.org/10.1787/9789264289635-en>

Apart from the sources included in *Taxing Energy Use 2018* (OECD, 2018), and consultation with national delegates, no country-specific sources were used.