

Taxing Energy Use 2018

Germany

This note describes the taxation of energy use in Germany. 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 note contains four energy tax profiles for Germany:

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

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

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

Figure 4: Effective tax rates on energy in 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>.

1. Energy tax profiles for Germany

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

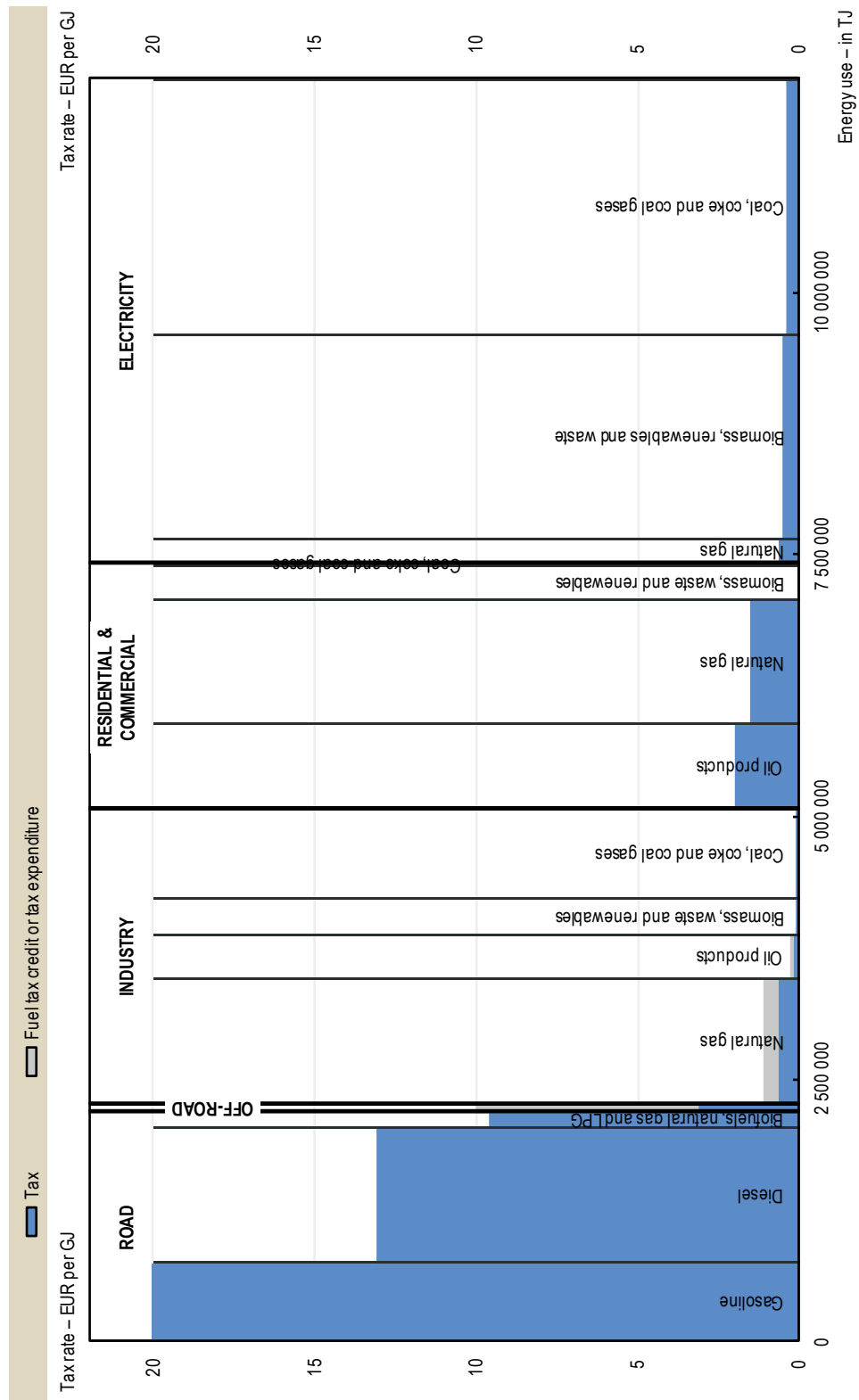


Figure 2. Effective tax rates on energy use in EUR/tCO₂, 2015, including electricity output taxes and carbon emissions from biomass

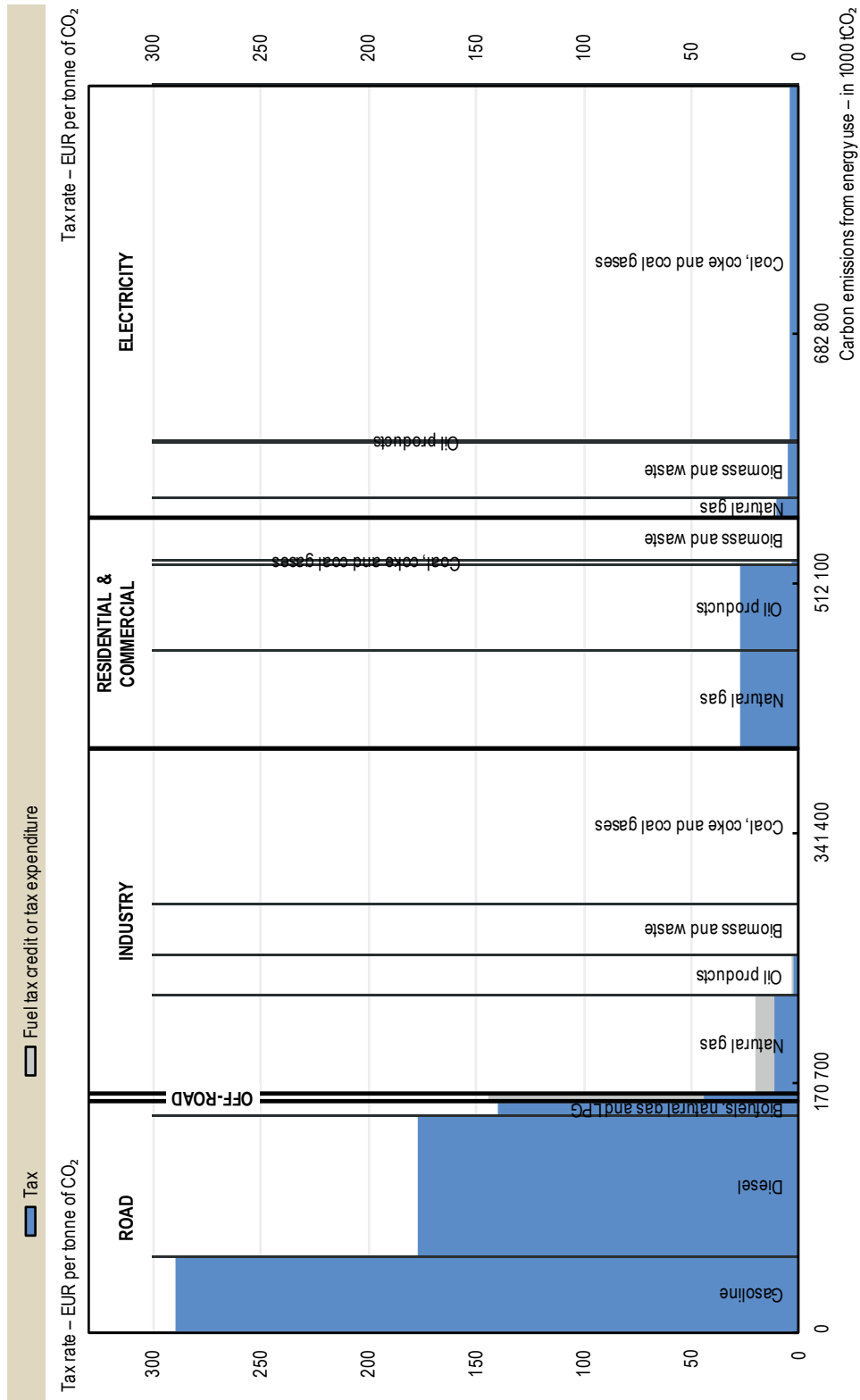


Figure 3. Effective tax rates on energy use in EUR/tCO₂, 2015, excluding taxes on electricity output, including carbon emissions from biomass

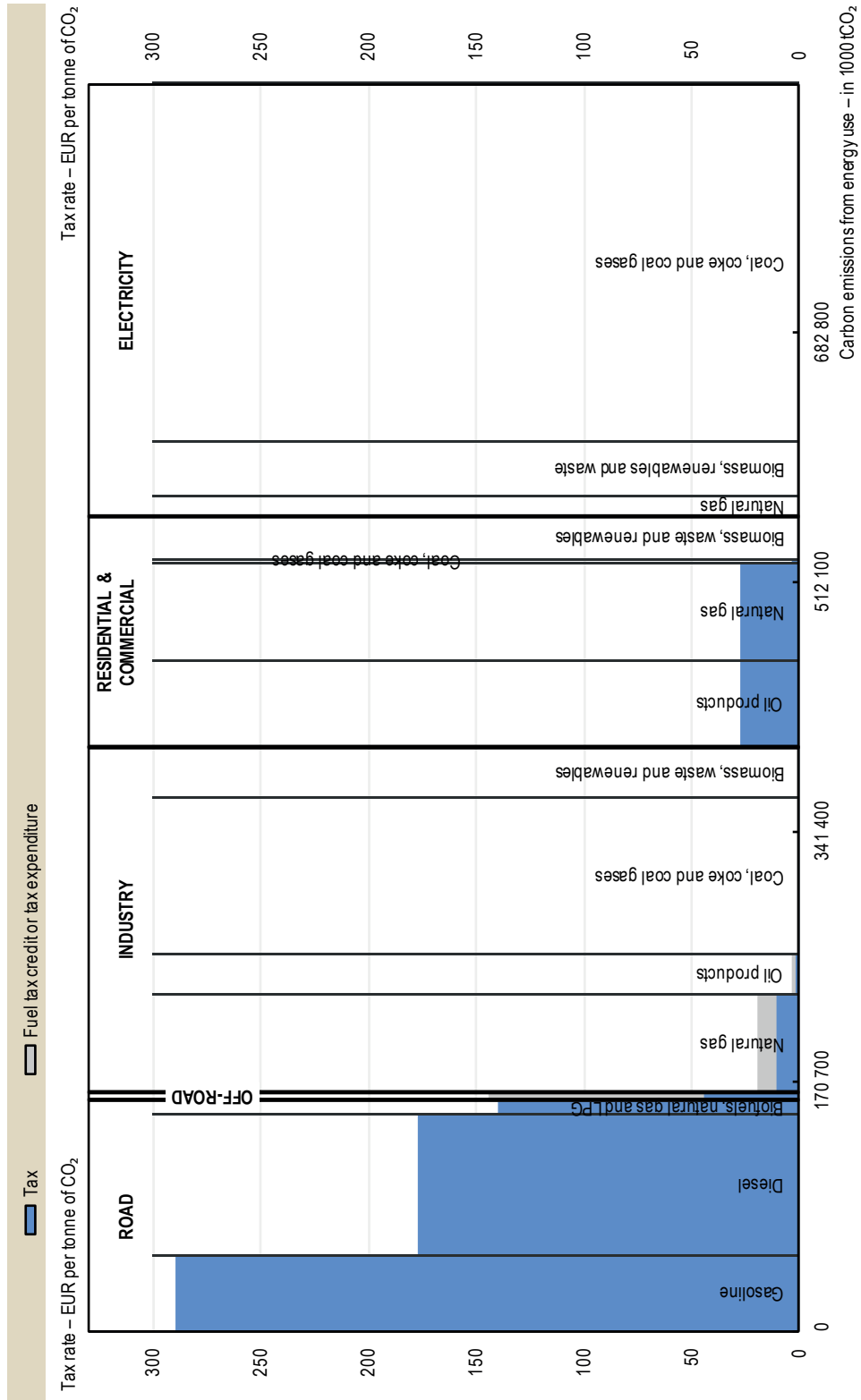
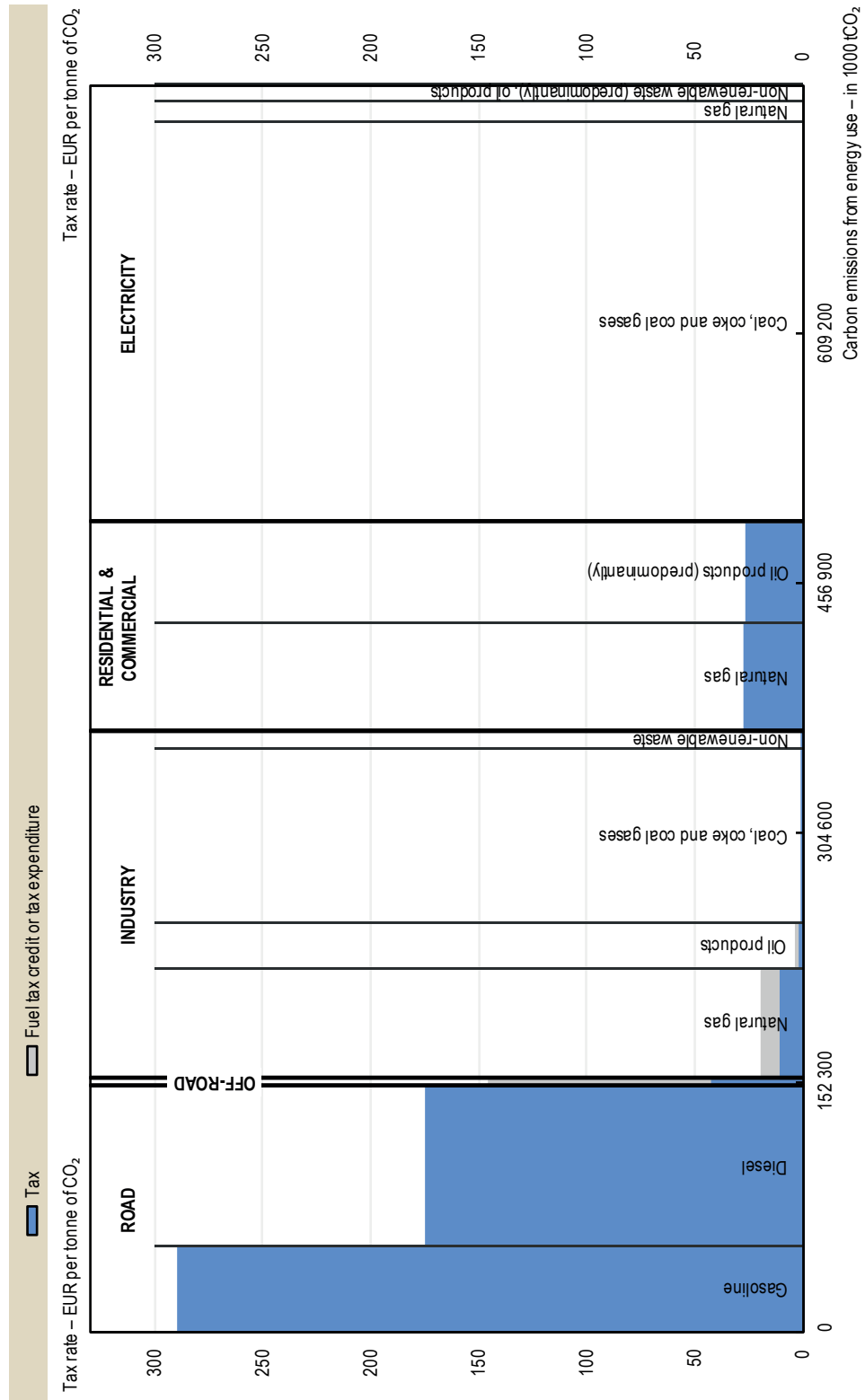


Figure 4. Effective tax rates on energy use in EUR/tCO₂, 2015, excluding taxes on electricity output and carbon emissions from biomass



2. Country-specific notes

This note describes the taxation of energy use in Germany. 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).

Germany participates in the European Union emissions trading system (ETS), not shown in the energy tax profiles.¹

Energy and carbon taxes

Energy taxes in Germany 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 Germany are the following:

- An energy tax applies to oil products, natural gas and coal and coke products, at rates differing according to whether the product is used as a transport fuel or for heating and process purposes.
- Fuels are untaxed when they are used to generate electricity in power stations larger than 2MW or when certain requirements for cogeneration of heat and power are fulfilled. Electricity output is taxed (per MWh).

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 Germany, 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 Germany's energy use² to calculate effective tax rates on energy use (in EUR/TJ) or CO₂ emissions from energy use (in 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 and commercial, and electricity.

The German 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 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.

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 Chapter 1 of *Taxing Energy Use 2018* (OECD, 2018) for additional detail.

- 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 rate by far, diesel is taxed at a lower rate in terms of TJ and in terms of CO₂.

Until December 2015, a full tax refund was available for bioethanol, so it is included as untaxed in the *Taxing Energy Use* data. Biodiesel is shown as taxed like its fossil fuel equivalent.

LPG is also taxed, but at a substantially lower effective rate than gasoline and diesel and biofuels.

- Effective tax rates in **off-road** transport are lower than in road transport. Domestic aviation and navigation fuels are fully exempt from taxation, so the only fuels taxed at positive rates in this sector are fuels used in railways transport.
- Fuel use in **industry** and in **agriculture and fishing** is generally taxed, but exemptions and refunds apply as follows, and are included in the *Taxing Energy Use* data where so indicated:
 - Manufacturing industry and users in the agriculture, forestry and fishing sector receive a tax refund of 25% of their total tax liability on diesel, fuel oil, LPG and natural gas based on certain conditions. In line with previous *Taxing Energy Use* publications, the entire industry, and agriculture and fishing sectors are shown as taxed at this reduced rate.
 - In addition to the general tax reduction described in the previous bullet, manufacturing industry can claim a refund depending on the total amount of electricity tax paid, and the individual company's pension scheme contributions. Due to data limitations these additional refunds could not be included in the data.
 - Certain energy-intensive processes and procedures receive a total reduction from their taxes on diesel, fuel oil, LPG, natural gas and coal. In line with previous *Taxing Energy Use* publications, energy use in the iron and steel, non-ferrous metals, non-metallic minerals, chemical and petrochemical sectors are included as benefitting from this full tax exemption.
- Fuels used to generate **electricity** are untaxed where the power station has a capacity of more than 2MW. In power stations with a capacity of less than 2MW, energy products are untaxed where certain requirements for the cogeneration of heat and power are fulfilled. Due to data limitations on the amount of fuels used to generate electricity that are taxed, all fuels used to generate electricity are shown as untaxed in the *Taxing Energy Use* data.

Electricity output is taxed (per MWh), at a general rate of EUR 20.5 per MWh, but reduced rates and exemptions apply as follows and are included in the *Taxing Energy Use* data where so indicated:

- Electricity is taxed at a lower rate when used in rail and bus transport. Due to unavailability of the amount of electricity consumed in busses, this reduced rate is only included for rail transport. However, calculations based on Destatis (2015) indicate that the amount of fuel used in public transport is relatively small (<2% of energy use and carbon emissions from energy use).

- A general tax refund of 25% applies to electricity used in manufacturing industry and agriculture, forestry and fishing based on certain conditions. In line with previous *Taxing Energy Use* publications, this refund is assumed to apply to all electricity used in industry and manufacturing and agriculture.
- Beyond these general tax refunds, manufacturing industry can apply for additional electricity tax refunds depending on the total amount of electricity tax paid, and the individual company's pension scheme contributions. Due to data limitations, these additional refunds are not included in the data.
- Fuels used in certain energy intensive processes are fully exempt from the electricity tax. In line with previous *Taxing Energy Use* publications, the total iron and steel, non-ferrous metals, non-metallic minerals, chemical and petrochemical sectors are included as benefitting from a full exemption of the electricity tax.

Reported tax expenditures and rebates

The following reported tax expenditures are included in the *Taxing Energy Use* data for Germany. These reductions and tax exemptions are described in more detail in the previous section.

- Until the end of 2015, a full tax refund was available for bioethanol. Domestic aviation and marine fuels are tax exempt.
- Manufacturing industry and agriculture can claim partial tax refunds for diesel, fuel oil, LPG and natural gas for fuels if total tax liability exceeds a certain threshold, full refunds can be claimed for diesel, fuel oil, LPG, natural gas and coal use in certain energy-intensive processes and procedures.
- Electricity used in manufacturing industry and agriculture can claim partial tax refunds for their taxes on electricity output, a full tax refund can be claimed for electricity used in certain energy-intensive processes and procedures. Electricity used in rail and bus transport benefits from a full tax refund.

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 Chapter 1 of *Taxing Energy Use 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 following country-specific sources were used.