

Taxing Energy Use 2018

Korea

This note describes the taxation of energy use in Korea. 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 Korea:

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>.

1. Energy tax profiles for Korea

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

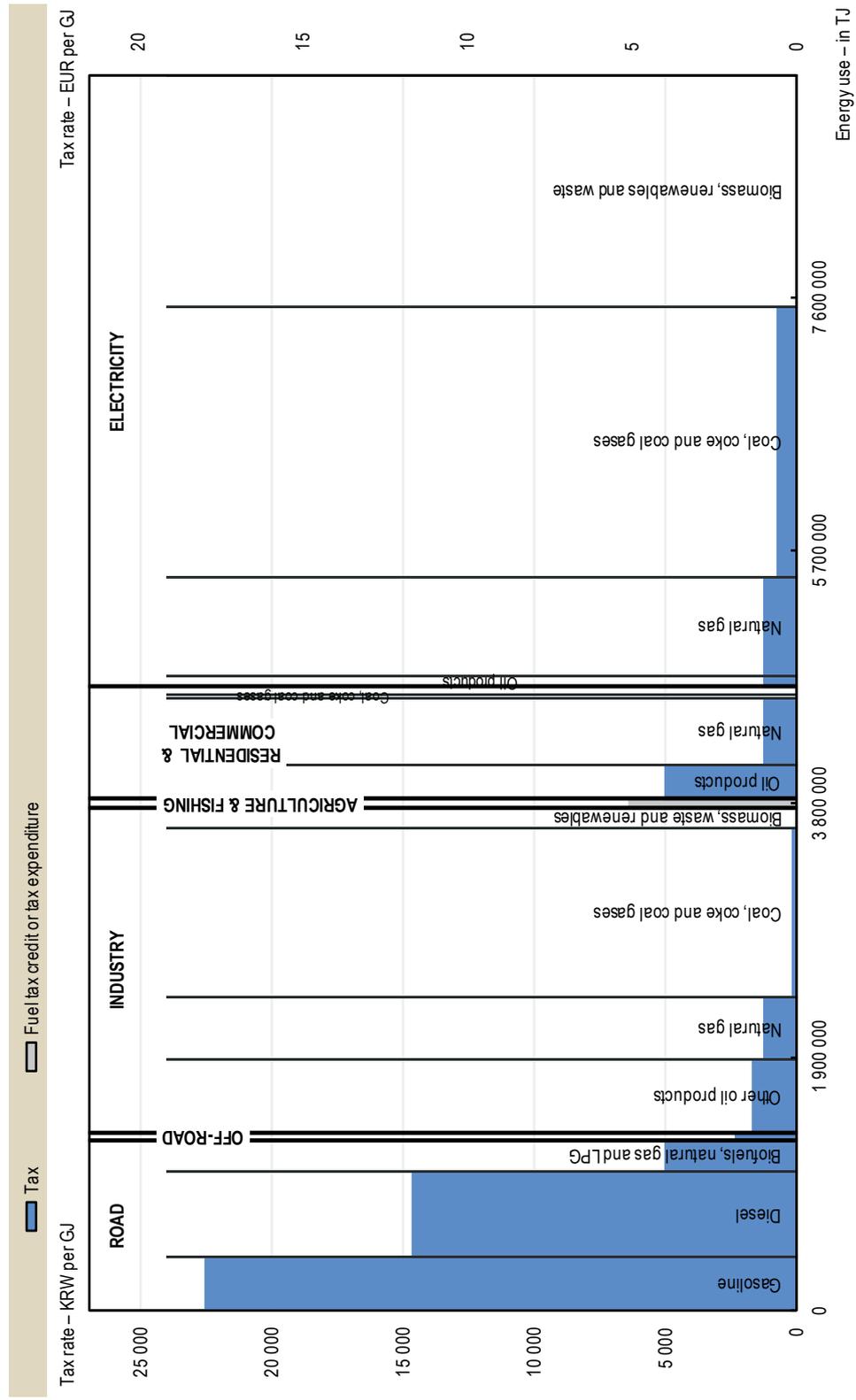


Figure 2. Effective tax rates on energy use in national currency and EUR/tCO₂, 2015, including electricity output taxes and carbon emissions from biomass

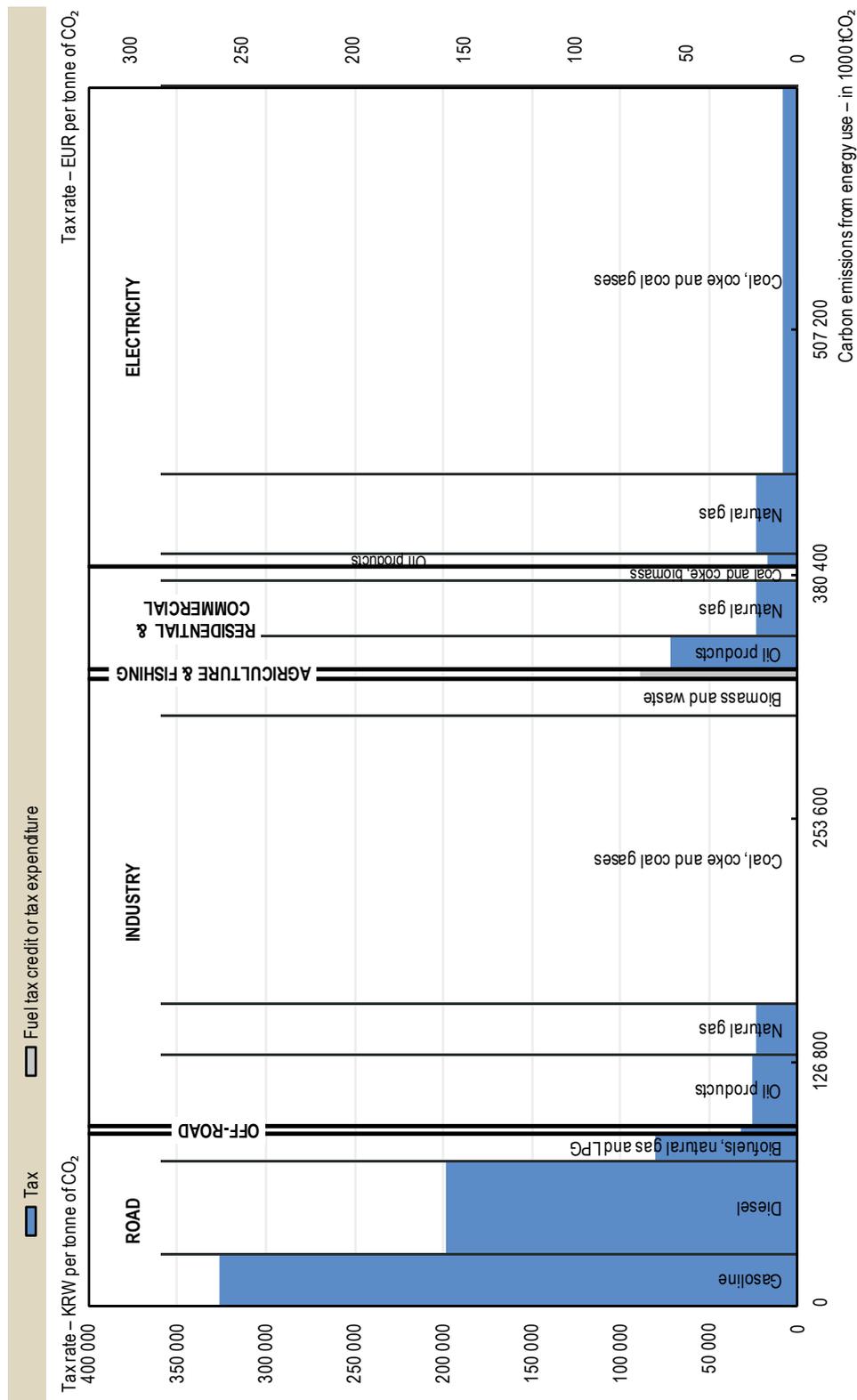


Figure 3. Effective tax rates on energy use in national currency and EUR/tCO₂, 2015, excluding taxes on electricity output, including carbon emissions from biomass

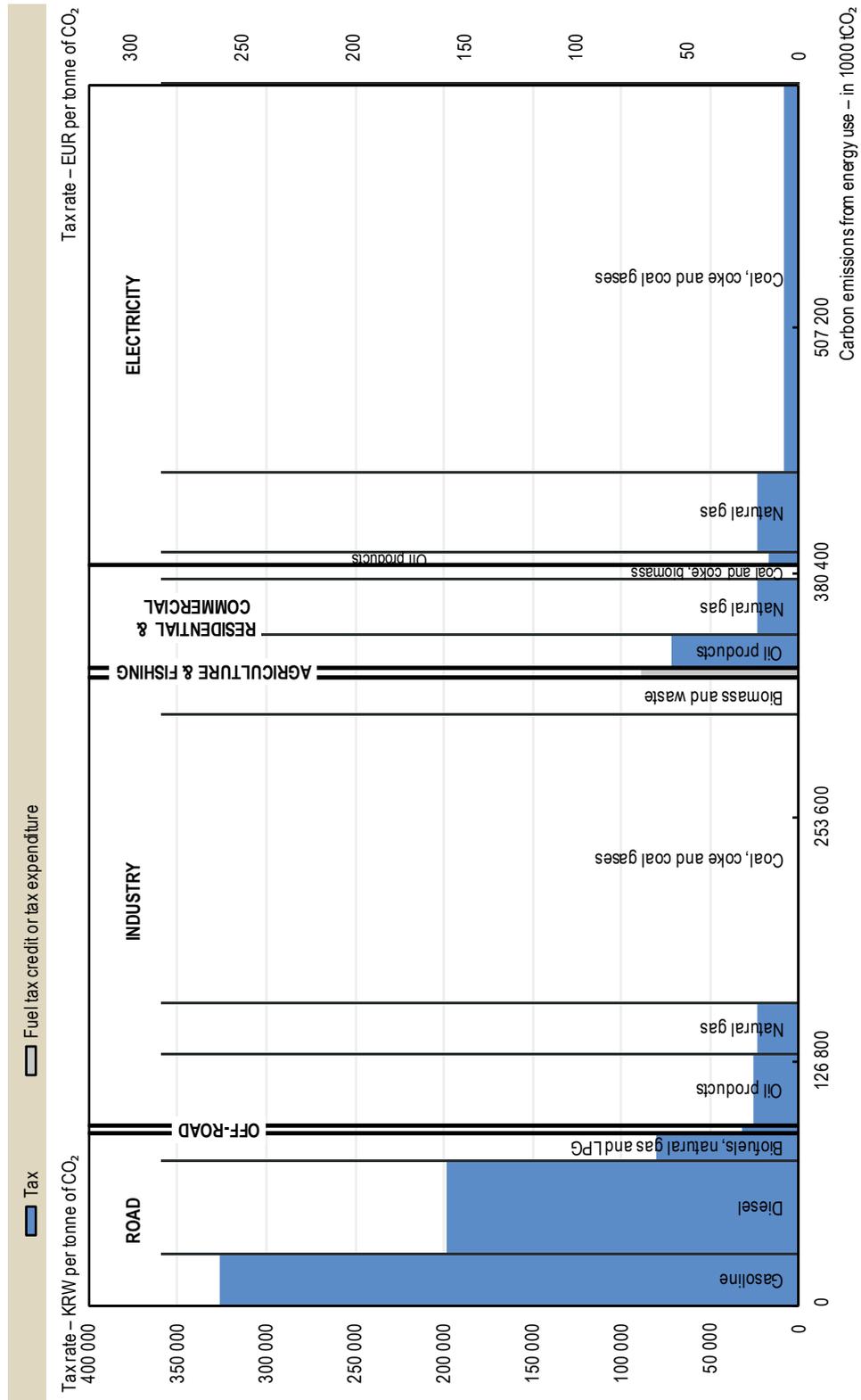
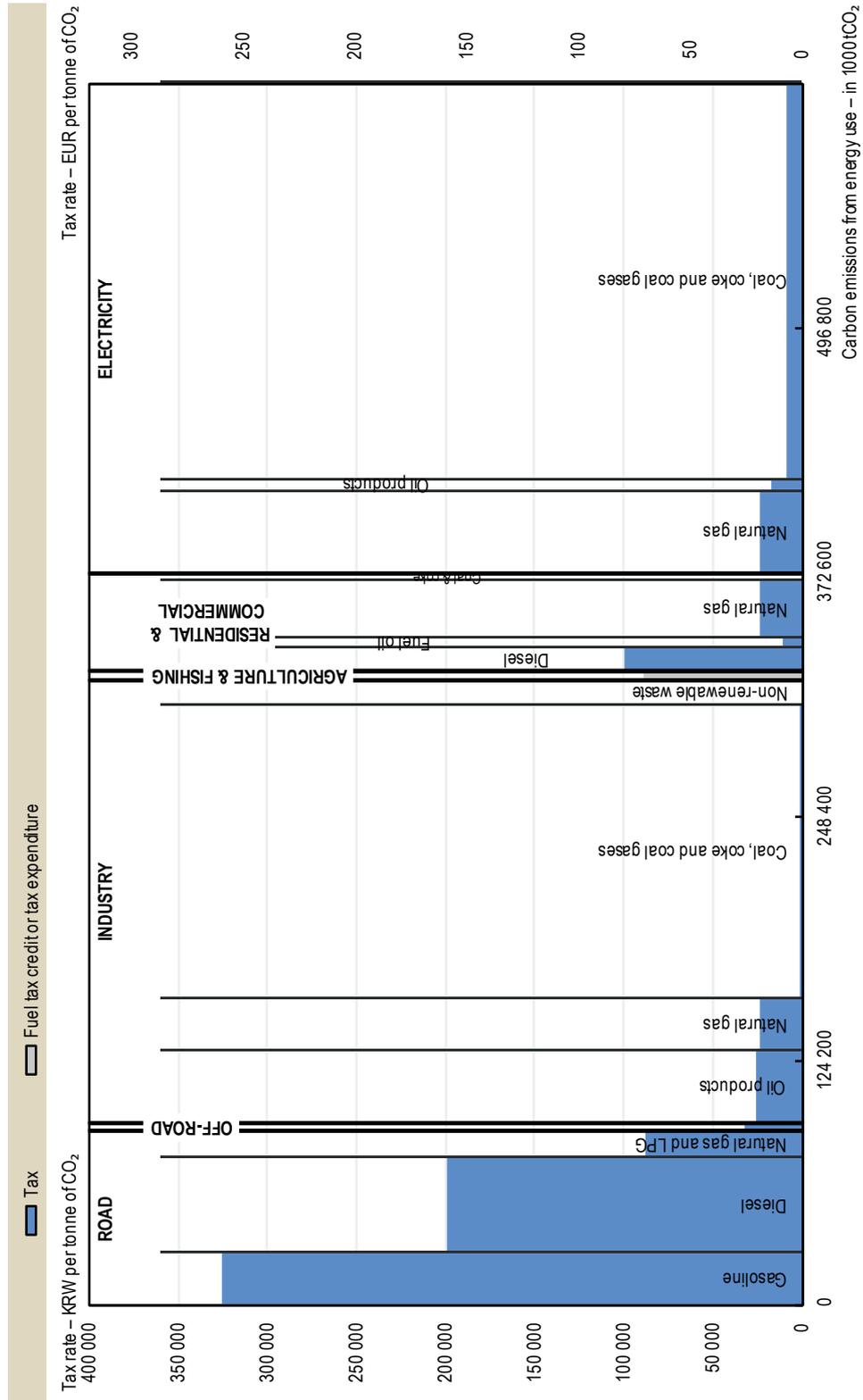


Figure 4. Effective tax rates on energy use in national currency and EUR/tCO₂, 2015, excluding taxes on electricity output and carbon emissions from biomass



2. Country-specific notes

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

Korea operates a national emissions trading system (ETS), not shown in the energy tax profiles.¹

Energy and carbon taxes

The main taxes on energy use in Korea are the following:

- The transport energy environment tax (TEET) applies to gasoline for road use and to diesel across all sectors;
- The Individual Consumption Tax (ICT) applies to kerosene, heavy fuel oil, LPG, natural gas and bituminous coal, at rates which sometimes differ across sectors;
- An education tax applies to all fuels taxed by the TEET or the ICT, as a percentage (15% or 30%) of their respective tax rate, and is added to the total per-unit tax;
- The regional motor fuel tax applies to all fuels taxed by the TEET, at 26% of the TEET per-unit rate.

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

These taxes are included in the energy tax profiles of Korea. 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 Korea's energy use² to calculate effective tax rates on energy use (in KRW/TJ and EUR/TJ) or CO₂ emissions from energy use (in KRW/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 and commercial, and electricity.

The Korean 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, fuels used for **road** transport are taxed at the highest rates by far. Within the road sector, the highest effective tax rate applies to gasoline. Diesel is taxed at lower rates, resulting in a much lower effective tax rate. Natural gas and LPG are also taxed when used in road transport, but effective tax rates are much lower than in the case of gasoline and diesel. Biofuels are also used as a road fuel, but are untaxed.
- The tax treatment of fuels used in **offroad transport** is identical to that of other non-road sectors, and no specific rates apply to fuels used for domestic navigation and aviation. Diesel and fuel oil are the main fuels used in offroad transport.
- Fuel use in the **industry**, and the **residential and commercial** sectors is a mix of oil products, natural gas and fuel oil, and the tax rates levied on these fuels vary widely by their energy and carbon content. While oil products and natural gas are taxed at higher rates, the tax rate on coal is much lower, resulting in a much lower tax rate in terms of the energy and carbon content of coal. Renewables and waste energy are untaxed.
- LPG, kerosene and fuel oil are exempt from all energy taxes when they are used in **agriculture and fishing**, resulting in a zero effective tax rate. In this category, most of the fuel use is diesel, and since diesel is taxed at the highest rates, the largest amount of the tax expenditure relates to diesel.
- Fuels used to generate **electricity** are taxed at the same rates as fuel use in the industry and residential and commercial sectors. Electricity is predominantly generated from bituminous coal, which is taxed under the ICT.

Assumptions and caveats

Korea operates a national emissions trading system (ETS). Until the end of 2017, all firms which participate in this system are exempt from excise taxation. Since the estimate of the coverage of the Korean ETS for *Effective Carbon Rates* was based on allocated emissions (as opposed to verified emissions), this provision is not currently reflected in the data.

Reported tax expenditures and rebates

The following tax expenditures are included in the *Taxing Energy Use* data for Korea:

- A full tax reduction is applied to all fuels used for agricultural and for fishing activities.

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, the following country-specific source was used:

Korean Ministry of Finance (2015), “Korean Taxation 2015”, <http://english.mosf.go.kr/eco/view.do?bcd=E0009&seq=107&bPage=1>.