

## Taxing Energy Use 2019: Country Note – Portugal

*This note explains how Portugal 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 Portugal can be found in Chapter 2 of the report. Chapter 3 additionally shows effective carbon tax rates per tonne of CO<sub>2</sub>, and presents the corresponding carbon tax profiles for all countries. The report also contains StatLinks to the official data.*

### Structure of energy taxation

Energy and carbon taxes in Portugal are levied within the framework of the 2003 European Union (EU) Energy Tax Directive, which sets minimum rates for the taxation of energy products in EU member states. Within this framework, as at 1 July 2018, the main taxes on energy use in Portugal are the following:

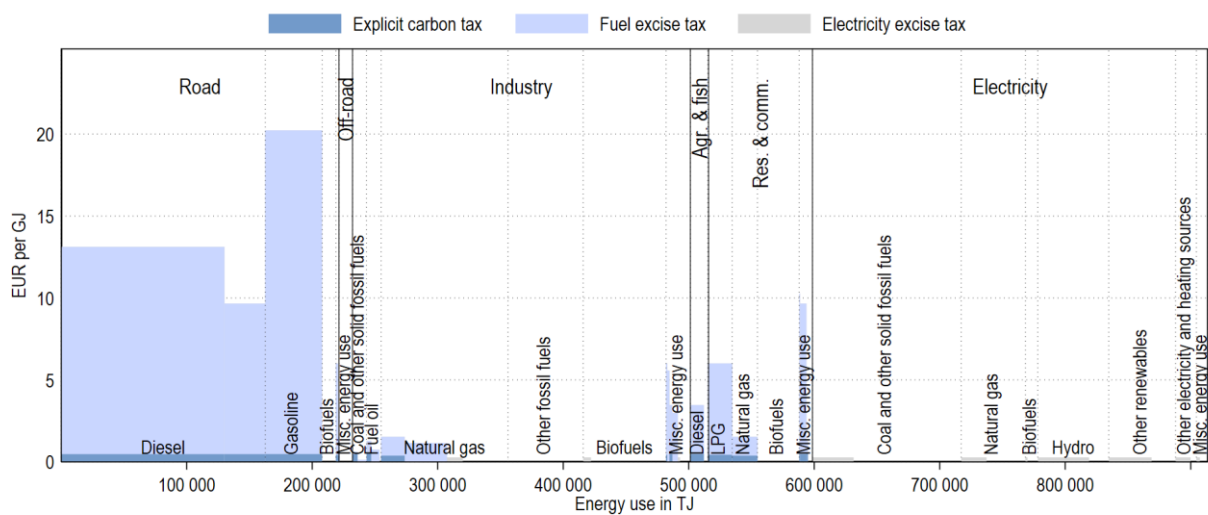
- The energy tax applies to most forms of fossil fuel use.
- The CO<sub>2</sub> tax applies to the same fuels subject to the energy tax at a nominal rate of EUR 7 per tonne of CO<sub>2</sub>.
- The Road Service Tax applies to oil products used in road transport, in addition to the carbon and the energy tax.
- An electricity excise tax applies to most forms of electricity consumption.

Portugal participates in the EU emissions trading system (ETS) (OECD, 2018<sub>[1]</sub>). Facilities that are covered by the ETS generally do not pay the carbon tax (or receive a full refund). Permit prices are not shown in the energy tax profiles.

## Effective tax rates on energy use in Portugal

The taxes result in effective tax rates that can differ across energy products and uses, as described below. Figure 1 provides an overview of how energy and carbon taxes apply 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**

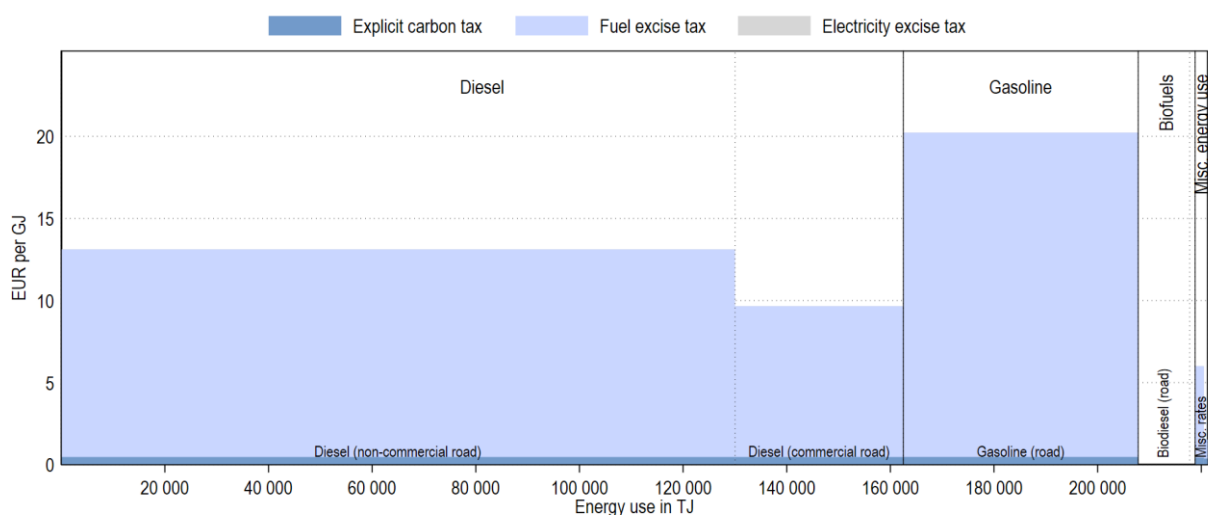


*Note:* Tax rates applicable on 1 July 2018. Energy use data is for 2016 and adapted from IEA (2018<sup>[2]</sup>), *World Energy Statistics and Balances*. Energy categories (labelled at the bottom) that represent less than 1% of a country's energy consumption are grouped into "misc. energy use" and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

### Road

In the road sector, gasoline is taxed at a higher rate than diesel fuel. Commercial diesel used as propellant benefits from a partial refund, which results in a lower effective tax rate than non-commercial diesel.

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

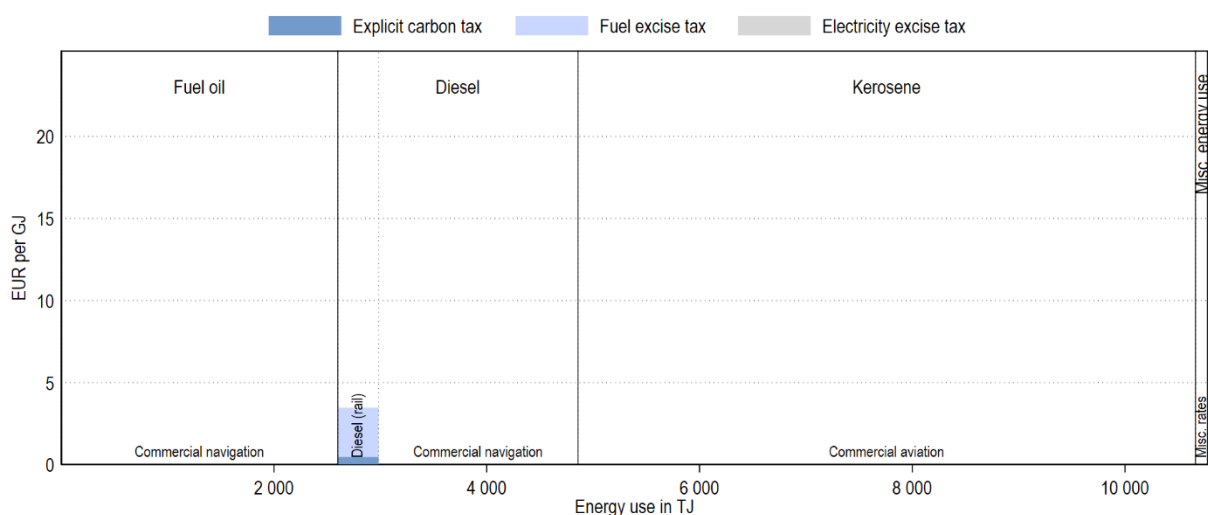


*Note:* Tax rates applicable on 1 July 2018. Energy use data is for 2016 and adapted from IEA (2018<sup>[2]</sup>), *World Energy Statistics and Balances*. Energy categories (labelled at the top) that represent less than 1% of a sector’s energy consumption are grouped into “misc. energy use” and may 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, fuels used for commercial navigation and commercial aviation are not taxed. Diesel used in rail is taxed, albeit at a lower rate than in road transport.

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



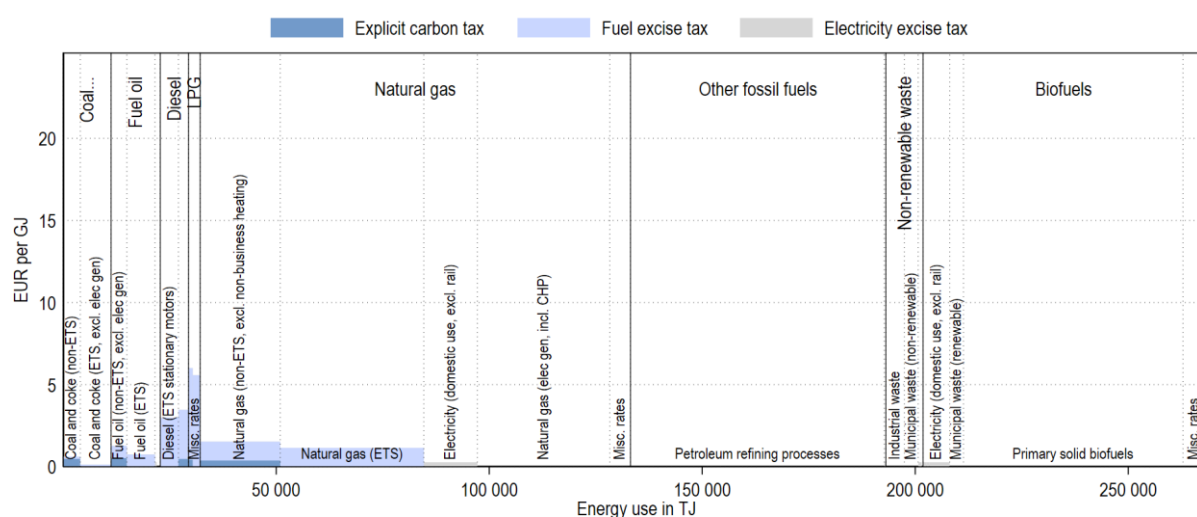
*Note:* Tax rates applicable on 1 July 2018. Energy use data is for 2016 and adapted from IEA (2018<sup>[2]</sup>), *World Energy Statistics and Balances*. Energy categories (labelled at the top) that represent less than 1% of a sector's energy consumption are grouped into "misc. energy use" and may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

### Industry

In the industry sector, the main fossil fuels are generally taxed. However, ETS-covered firms do not have to pay the CO<sub>2</sub> tax. It is assumed the ETS covers 64% of fossil fuel use in the industry sector (OECD, 2018<sup>[1]</sup>). In addition, inputs into CHP plants are not taxed. Other fossil fuels that are used in petroleum refining processes are not taxed. Non-renewable waste and biofuels are not taxed either, as in the other sectors.

Electricity produced by autogeneration plants is generally subject to the electricity excise tax under the same conditions as main-producer electricity plants (see electricity section). However, both rate and base are very low, so the electricity excise tax is barely discernible in the figure.

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

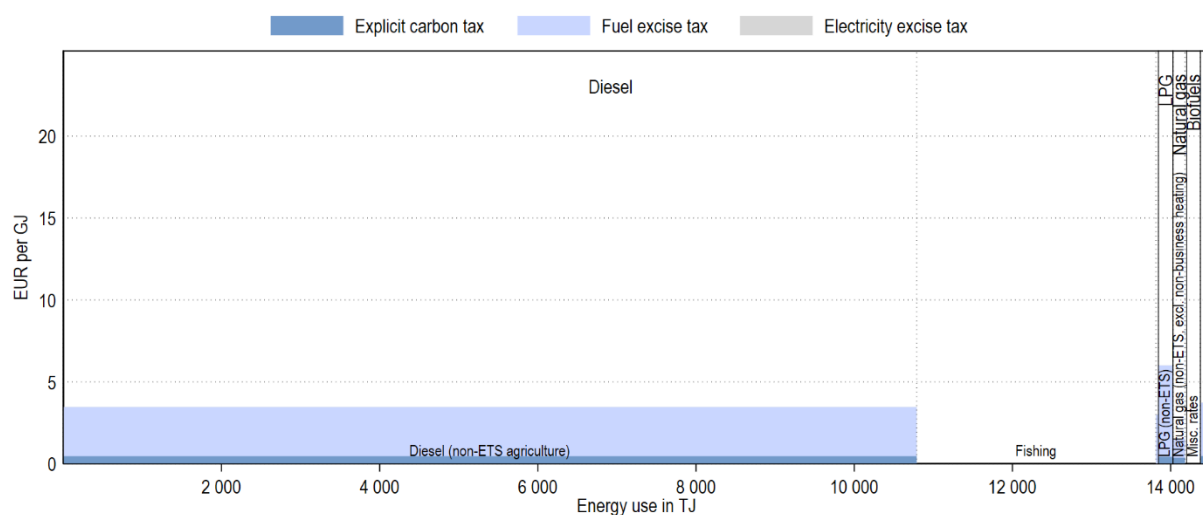


Note: Tax rates applicable on 1 July 2018. Energy use data is for 2016 and adapted from IEA (2018<sup>[2]</sup>), *World Energy Statistics and Balances*. Energy categories (labelled at the top) that represent less than 1% of a sector’s energy consumption are grouped into “misc. energy use” and may not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

### *Agriculture and fisheries*

In the agriculture and fishing sectors, diesel is taxed, albeit at a lower rate than in road transport. Fishing fuels are untaxed. LPG used in agriculture is taxed, and so is natural gas. As the EU ETS is assumed to cover a mere 0.03% of fossil fuel use in the sector (OECD, 2018<sup>[1]</sup>), carbon tax exemptions for ETS facilities are not discernible in the figure.

**Figure 5. Effective tax rates on energy use in agriculture and fisheries**

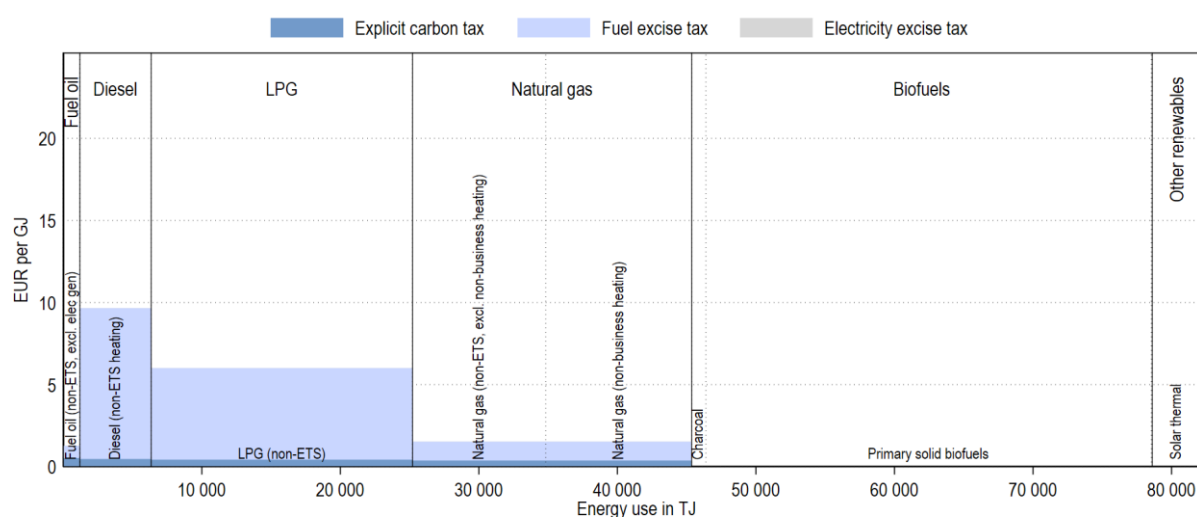


*Note:* Tax rates applicable on 1 July 2018. Energy use data is for 2016 and adapted from IEA (2018<sup>[2]</sup>), *World Energy Statistics and Balances*. Energy categories (labelled at the top) that represent less than 1% of a sector's energy consumption are grouped into "misc. energy use" and may 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 sectors, fossil fuels are taxed. Solid biofuels and other renewables (mainly solar thermal) are not taxed, as in the other sectors.

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

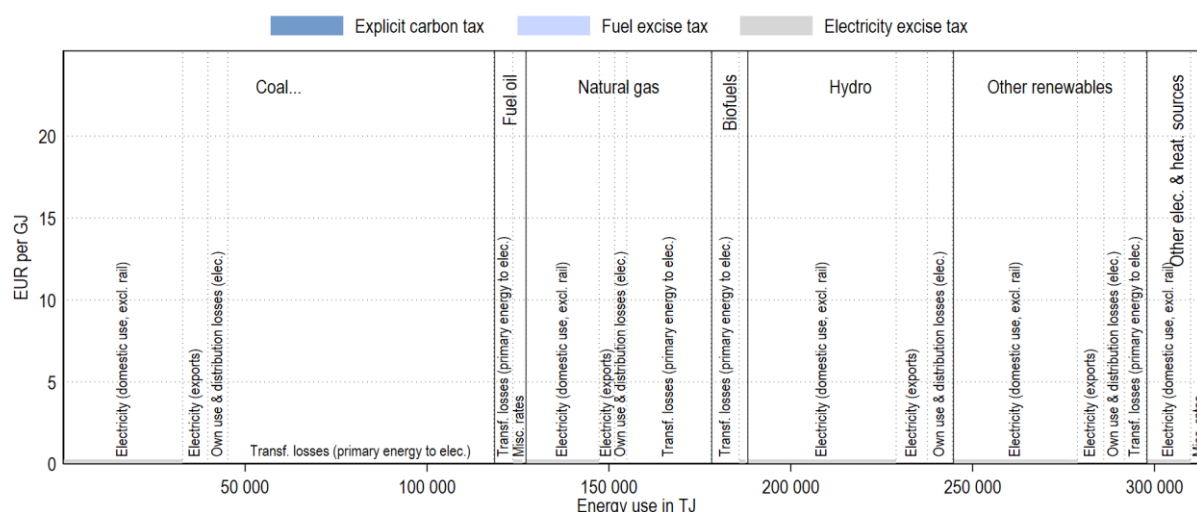


*Note:* Tax rates applicable on 1 July 2018. Energy use data is for 2016 and adapted from IEA (2018<sup>[2]</sup>), *World Energy Statistics and Balances*. Energy categories (labelled at the top) that represent less than 1% of a sector’s energy consumption are grouped into “misc. energy use” and may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

## Electricity

All energy sources used to generate electricity are untaxed. Electricity consumption, on the other hand, is generally subject to an electricity tax (per MWh). The rate is, however, low and barely discernible in the figure. Own use by the electricity industry is not taxed, and neither are exports, which may, however, be subject to electricity taxes in other countries.

**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<sup>[2]</sup>), *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

- 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]