Taxing Energy Use 2019: Country Note – Spain

This note explains how Spain 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 Spain can be found in Chapter 2 of the report. Chapter 3 additionally shows effective carbon tax rates per tonne of CO_2 , and presents the corresponding carbon tax profiles for all countries. The report also contains StatLinks to the official data.

Structure of energy taxation in Spain

Energy taxes in Spain 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 Spain are the following:

- The Tax on Hydrocarbons (*Impuesto sobre Hidrocarburos*) applies to liquid and gaseous fuels, including biofuels, as well as to coal tar, crude oil, waste oils and coal and coke-related gases.
- The Special Tax on Coal (*Impuesto Especial sobre el Carbón*) applies to coal and coke products (excluding peat).
- The Special Tax on Electricity (*Impuesto Especial sobre la Electricidad*) is an advalorem tax applied to electricity consumption by end users. ¹

Spain does not have a carbon tax, but participates in the EU emissions trading system (ETS) (OECD, 2018_[1]). Permit prices are not shown in the energy tax profiles.

¹ The rate is 5.11269632%. The tax base is the taxable amount as determined for the purposes of the value added tax.

Effective tax rates on energy use in Spain

Tax rates can differ across energy products and users, as described below. Figure 1 provides an overview of how energy 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.

Fuel excise tax Explicit carbon tax Electricity excise tax Road Industry Res. & comm. Electricity Off-road 20 electricity and heating sources energy use EUR per GJ energy use and other solid fossil fuels Soal and other solid fossil fuels 10 use renewables Other fossil fuels 5 Vatural gas **Biofuels** Fuel oil Natural gas Nuclear 0 2 500 000 Energy use in TJ 500 000 2 000 000 1 000 000 1 500 000 3 000 000 3 500 000 4 000 000 4 500 000

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 higher effective tax rate than diesel. Natural gas is also taxed. Biodiesel and biogasoline are taxed at the same statutory rate as their fossil fuel equivalents. However, as biofuels' energy content per litre is lower, effective tax rates per GJ are higher.

Explicit carbon tax Fuel excise tax Electricity excise tax Gasoline Diesel 20 EUR per GJ 15 Natural gas (propellant, agriculture) 10 5 600 000 Energy use in TJ 200 000 800 000 1 000 000 400 000

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

Fossil fuels used in the off-road sector are untaxed when used for commercial navigation ("marine"), commercial aviation, or rail, as shown in Figure 3.² Fossil fuels used for other purposes are generally taxed at their propellant rate.

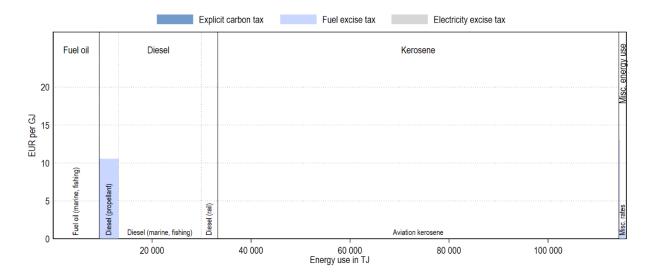


Figure 3. Effective tax rates on energy use in the off-road sector

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.

² Diesel and kerosene used in private pleasure craft and private planes are taxed (not modelled in TEU due to a lack of consumption data).

Industry

Fossil fuels are taxed in principle, albeit sometimes at low rates that are not discernible in Figure 4 (coal). Energy used in certain energy-intensive industrial processes benefit from exemptions (e.g. electrolytic processes, chemical reduction). Energy used in certain industrial transformation processes (e.g. coking coal to coke) is not taxed either. Biofuels are not subject to input taxes.

Electricity from industrial cogeneration is subject to the general electricity tax (called "electricity excise tax" in TEU) (see electricity section below).

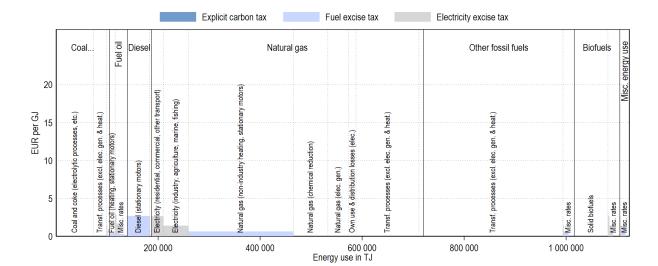


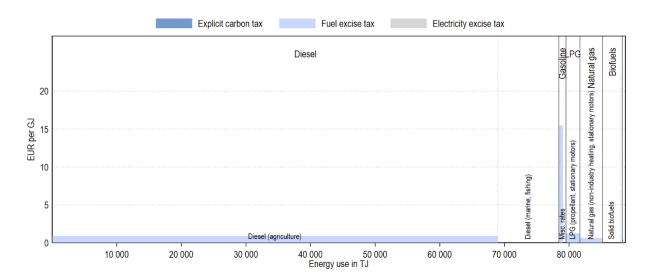
Figure 4. Effective tax rates on energy use in the industry sector

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

Fossil fuels used in agriculture (Figure 5) are taxed. Fishing fuels and biofuels are not taxed.

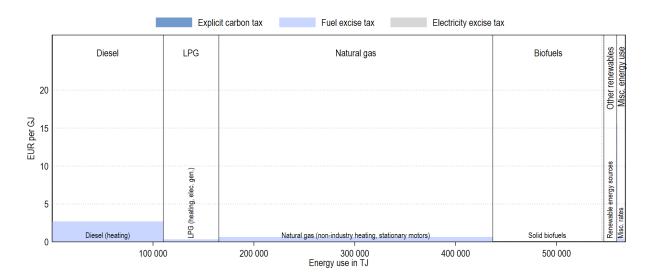
Figure 5. Effective tax rates on energy use in the agriculture & fisheries sector



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.

Fossil fuel use in the residential and commercial sector (Figure 6) is taxed. Biofuels are not taxed.

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

Electricity

Figure 7 shows how the electricity sector, as defined in TEU, is taxed in Spain. As at 1 July 2018, fuel oil and diesel were taxed when used for electricity generation.³ For electricity generation, coal gases and biogases are exempt. The use of electricity, on the other hand, is taxed.⁴

Explicit carbon tax Fuel excise tax Electricity excise tax Fuel oil Coal. Natural gas Hydro Other renewables Nuclear sonrces Electricity (residential, commercial, other transport)
Electricity (industry, agriculture, motherfieleg) & heat. 20 (residential, commercial, other transport other transport ctricity (industry, agriculture, marine, fishing) ctricity (industry, agriculture, marine; fishing) commercial, other tran EUR per GJ losses (primary energy to elec.) ransf. losses (primary energy to elec. (elec.) Own use & distribution losses (elec. Own use & distribution losses (elec.) 10 ctricity (industry, 00 1 000 000 Energy use in TJ 200 000 1 200 000 1 800 000 400 000 600 000 1 400 000 1 600 000 800 000

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

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]

³ Since 1 January 2019, all hydrocarbons that are used to produce electricity in power plants or to cogenerate electricity and heat in combined power plants are exempted. This tax exemption is not reflected in TEU, which shows tax rates applicable on 1 July 2018.

⁴ The ad-valorem rate is translated into effective rates based on information from the European Commission's TEDB database.