

## Taxing Energy Use 2019: Country Note – Norway

*This note explains how Norway 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 Norway 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

As at 1 July 2018, the main specific taxes on energy use in Norway are the following:

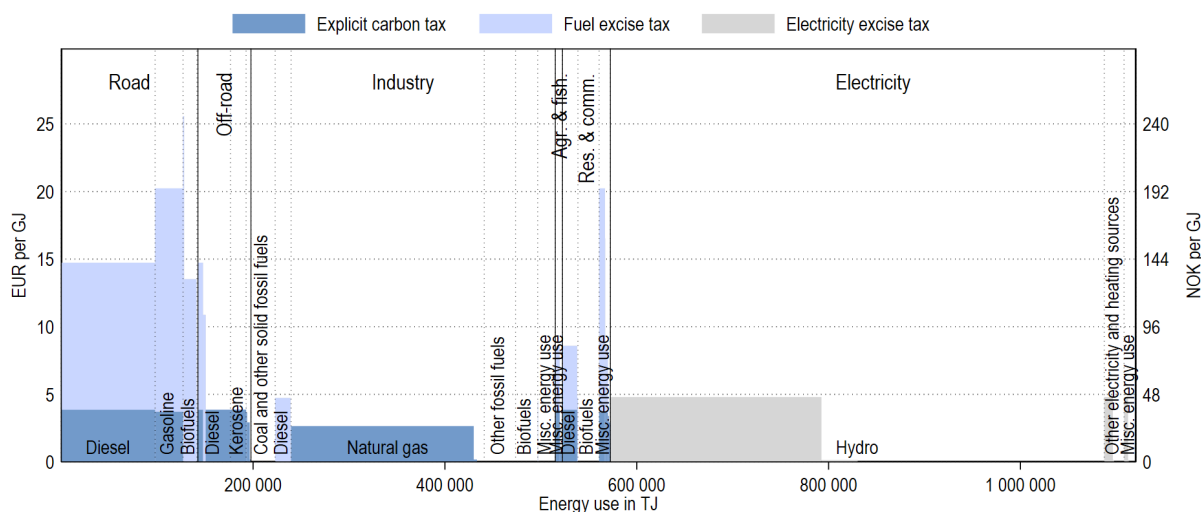
- The Road Usage Tax on Engine Fuel (*Veibruksavgift på drivstoff*);
- The Base Tax on Mineral Oil (*Grunnavgift på mineralolje*);
- The Tax on Lubricating Oil (*Avgift på smørelje*);
- The CO<sub>2</sub> Tax on Mineral Products (*CO<sub>2</sub>-avgift på mineralske produkter*) with a nominal tax rate of NOK 500 per tonne of CO<sub>2</sub> (approximately EUR 54) levied on liquid and gaseous fossil fuels;
- Tax on the Emission of CO<sub>2</sub> in Petroleum Activities on the Continental Shelf (*Avgift på utslipp av CO<sub>2</sub> i petroleumsvirksomheten på kontinentalsokkelen*);
- The Electricity Tax (*Avgift på elektrisk kraft*).

Norway participates in the European Union (EU) emissions trading system (ETS) (OECD, 2018<sup>[1]</sup>). Energy use that is subject to the EU ETS is generally exempt from the CO<sub>2</sub> Tax on Mineral Products or benefits from a reduced carbon tax rate.

## Effective tax rates on energy use in Norway

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**



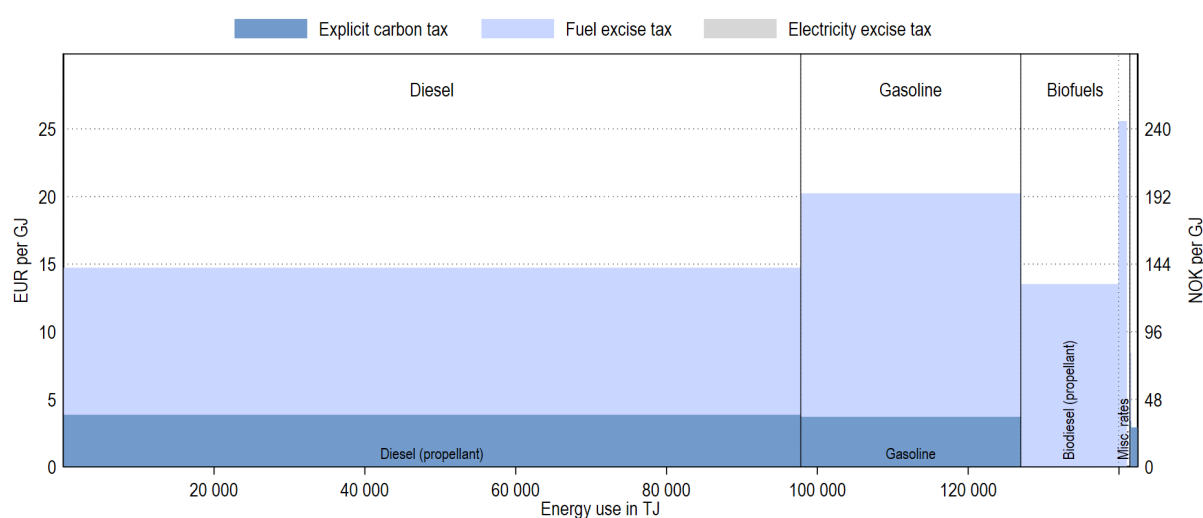
*Note:* Tax rates applicable on 1 July 2018. Energy use data is for 2016 and adapted from IEA (2018<sup>[2]</sup>), *World Energy Statistics and Balances*. Energy categories (labelled at the bottom) that represent less than 1% of a country's energy consumption are grouped into "misc. energy use" and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

## Road

In the road sector, gasoline is taxed at a higher rate than diesel fuel.<sup>1</sup> Liquid biofuels, subject to the sales obligation, are subject to the Road Usage Tax on Engine Fuel at the same statutory rate as their fossil fuel equivalents, but are exempt from the CO<sub>2</sub> tax.<sup>2</sup> Nevertheless, their total effective tax rates per GJ are similar because these biofuels have a lower heating value.

LPG and natural gas (not labelled in the figure due to their low consumption) are taxed at a lower statutory rate than gasoline and diesel, and the Road Usage Tax on Engine Tax on natural gas use is zero-rated.

**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.

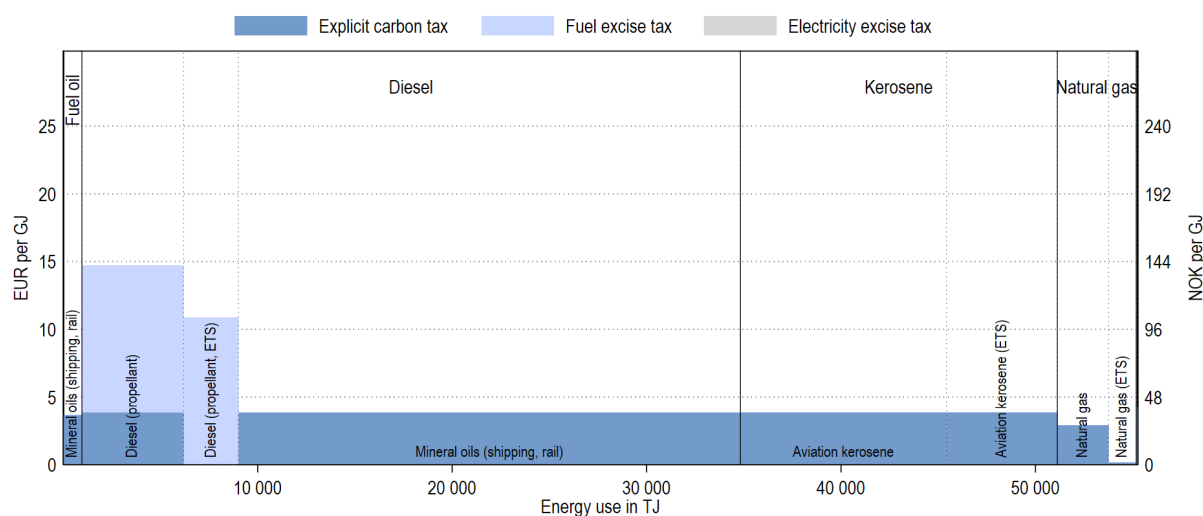
<sup>1</sup> Fuels that are subject to the Road Fuel Tax are not additionally subject to the Mineral Oil Tax.

<sup>2</sup> Norway has a quota obligation for biofuels in road transport. The obligation was 10 percent in 2018, and is 12 percent in 2019. (It is also a specific quota obligation for biofuels from waste and residues.) Biofuels included in the quota are subject to the same road-usage taxation rates as fossil fuels – measured in NOK/litre. Biofuels sold above the quota however, are exempt from road-usage taxation. The road-usage taxation is not a CO<sub>2</sub>-tax, but a tax meant to reflect the external costs that driving on roads entails. Examples of such costs are traffic queues, noise, road wear, hazardous local emissions, etc.

### Off-road

In the off-road sector, energy use is generally taxed. In general, fossil fuel use that is subject to the EU ETS, is wholly exempt from the CO<sub>2</sub>-tax on mineral products. This exemption does not apply to domestic aviation that is subject to both a CO<sub>2</sub>-tax and the EU ETS and to natural gas within the EU ETS that in addition is subject to a reduced carbon tax rate. It is assumed that the EU ETS covers 35% of fossil fuel use in the off-road sector (OECD, 2018<sup>[1]</sup>).

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



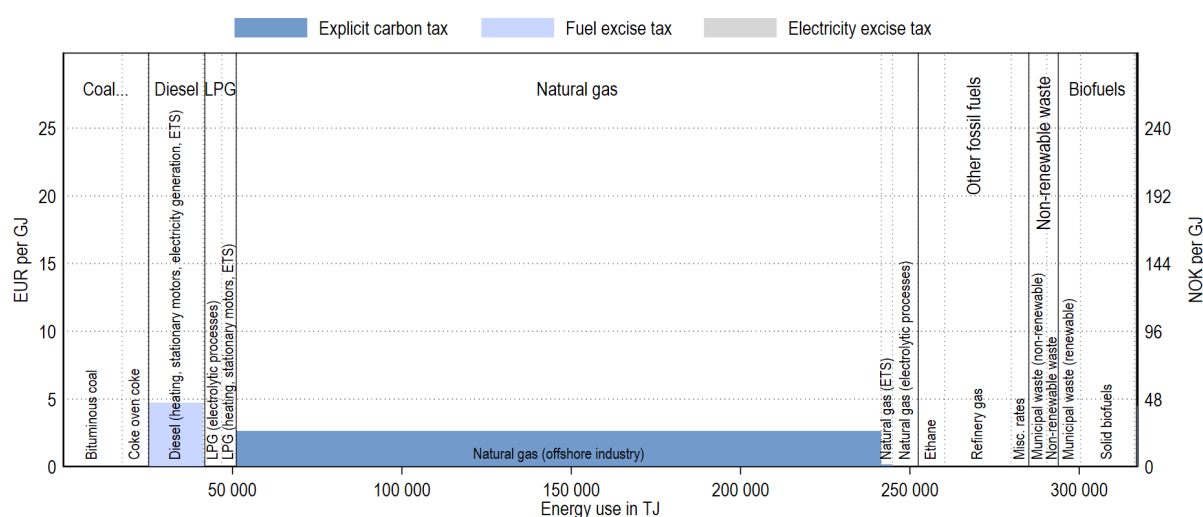
*Note:* Tax rates applicable on 1 July 2018. Energy use data is for 2016 and adapted from IEA (2018<sup>[2]</sup>), *World Energy Statistics and Balances*. Energy categories (labelled at the top) that represent less than 1% of a sector's energy consumption are grouped into "misc. energy use" and may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

### Industry

In the industry sector, coal and other solid fossil fuels are not taxed. Diesel is taxed, albeit at a lower rate than when used for propellant purposes. Fuels used for chemical reduction or electrolysis, metallurgical and mineralogical processes are not taxed (mainly natural gas, LPG). Other fossil fuels, mainly ethane and refinery gas, are not taxed. Non-renewable waste and biofuels are not taxed.

Energy users covered by the EU ETS are either exempt from the carbon tax (diesel) or pay a strongly reduced carbon tax rate (natural gas), with the exception of the bulk of natural gas that is used by the offshore industry which is subject to both a carbon tax (with a rate of NOK 453 per tonne of CO<sub>2</sub>) and EU ETS. It is assumed that the EU ETS covers 100% of fossil fuel use in the industry sector (OECD, 2018<sup>[1]</sup>).

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

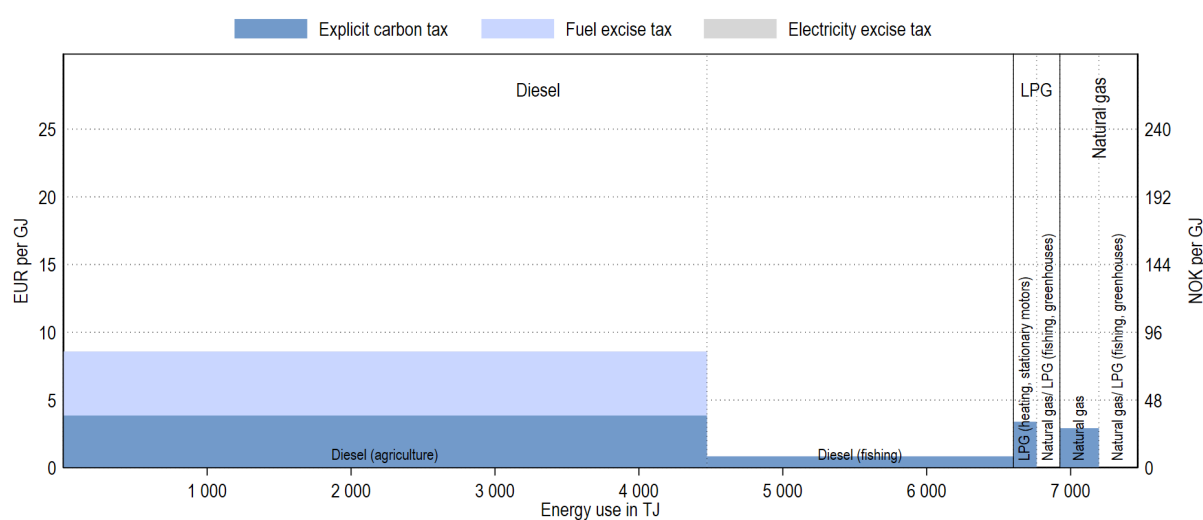


Note: Tax rates applicable on 1 July 2018. Energy use data is for 2016 and adapted from IEA (2018<sup>[2]</sup>), *World Energy Statistics and Balances*. Energy categories (labelled at the top) that represent less than 1% of a sector's energy consumption are grouped into "misc. energy use" and may not 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 fisheries sector, diesel used for fishing in domestic water is subject to the CO<sub>2</sub>-tax with a reduced rate (NOK 109 per tonne of CO<sub>2</sub>) but exempted from other energy taxes. By contrast, diesel used in agriculture is subject to the CO<sub>2</sub>-tax with the general rate (NOK 500 per tonne of CO<sub>2</sub>) and the Base tax on mineral oil. Natural gas and LPG used for fishing and in greenhouses is untaxed, but other uses of natural gas and LPG in the agricultural sector is subject to the CO<sub>2</sub>-tax.<sup>3</sup>

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



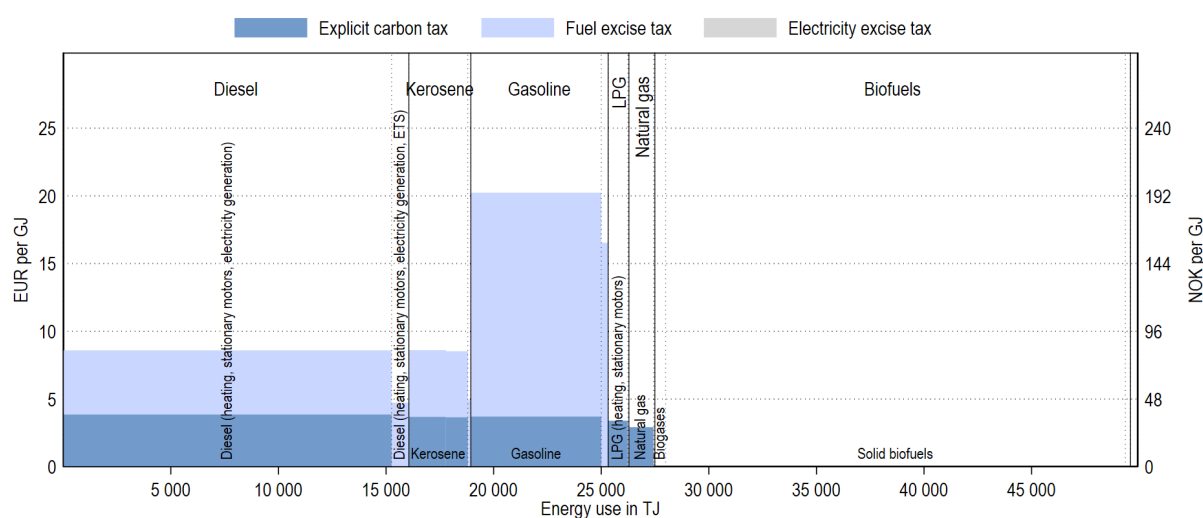
*Note:* Tax rates applicable on 1 July 2018. Energy use data is for 2016 and adapted from IEA (2018<sup>[2]</sup>), *World Energy Statistics and Balances*. Energy categories (labelled at the top) that represent less than 1% of a sector's energy consumption are grouped into "misc. energy use" and may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

<sup>3</sup> TEU assumes that half of natural gas and LPG use benefits from this exemption.

### Residential and commercial

In the residential and commercial sector, fossil fuels are generally taxed at lower rates than in road transport, with the exception of gasoline that is taxed at the same rate as in road transport. EU ETS participants are generally exempt from the carbon tax, with the exception of natural gas (where the rate is strongly reduced, however). The EU ETS is assumed to cover 5% of fossil fuel use in the residential and commercial sector (OECD, 2018<sup>[1]</sup>). Biofuels are not taxed.

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

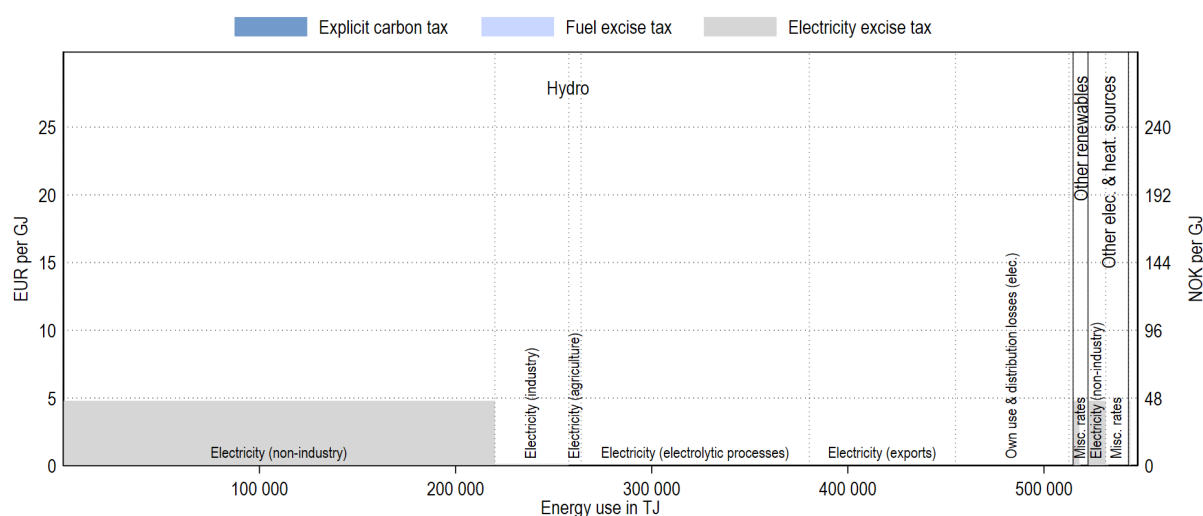


*Note:* Tax rates applicable on 1 July 2018. Energy use data is for 2016 and adapted from IEA (2018<sup>[2]</sup>), *World Energy Statistics and Balances*. Energy categories (labelled at the top) that represent less than 1% of a sector's energy consumption are grouped into "misc. energy use" and may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

## Electricity

In the electricity sector, fuels used to generate electricity are untaxed. Electricity consumption, on the other hand, is taxed. Non-industry users pay a higher rate than industry users. The electricity tax does not apply if the electricity is consumed in agriculture, railways, chemical reduction or electrolysis, metallurgical and mineralogical processes, or the greenhouse industry. Exported electricity is not taxed in Norway, but may be subject to electricity taxes elsewhere. Conversion losses and own use by the electricity industry are not taxed.

**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]