

Taxing Energy Use 2019: Country Note – Canada

This note explains how Canada 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 Canada can be found in Chapter 2 of the report. Chapter 3 additionally shows effective carbon tax rates per tonne of CO₂, and presents the corresponding carbon tax profiles for all countries. The report also contains StatLinks to the official data.

Structure of energy taxation in Canada

As at 1 July 2018, the general structure of energy and carbon taxation in Canada is the following:

- At the federal level, a fuel excise tax at the rate of CAD 0.10 per litre and CAD 0.04 per litre applies to gasoline and (taxable) diesel use, respectively.
- In addition, provinces and territories levy their own fuel excise taxes on gasoline and diesel. Certain surcharges and reductions apply at the local level.¹
- British Columbia also levies a carbon tax, set at CAD 35 per tonne of CO₂.² In Alberta, a carbon tax also applies at the rate of CAD 30 per tonne of CO₂ (no longer in operation) and large industrial emitters are subject to an output-based system (effectively an emissions trading system), in lieu of the carbon tax.

¹ To model local surcharges on motor fuel taxes, it is assumed that the Vancouver and Victoria areas represent 50% and 10% of provincial motor fuel consumption, respectively. The Montreal area is assumed to account for 50% of provincial gasoline use in the road sector. Reduced motor fuel excise rates that apply in certain remote areas of Quebec, the Northwest Territories and Nunavut are not modelled as the corresponding energy base is negligible.

² In British Columbia, a 0.4% tax applies on the purchase price of a number of energy products to raise revenue for the Innovative Clean Energy (ICE) Fund. This tax is not covered in TEU.

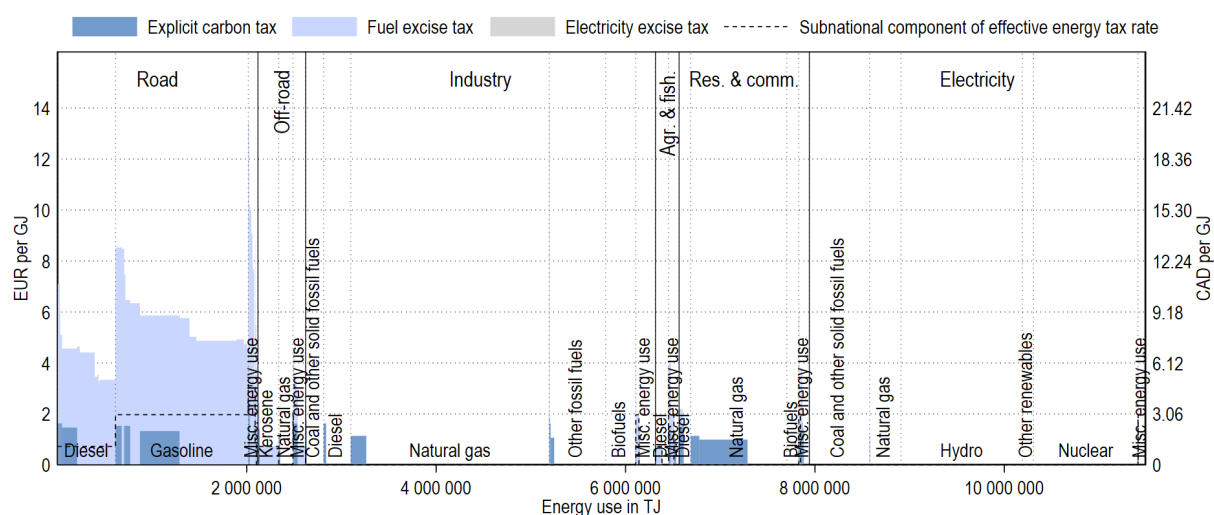
As at 1 July 2018, subnational emissions trading systems were in place in Alberta, Ontario (no longer in operation) and Québec (OECD, 2018^[1]). Permit prices are not shown in the energy tax profiles.

Notice that Canada recently introduced a federal carbon pollution pricing backstop system composed of a regulatory charge on fossil fuels and an output-based pricing system for industrial facilities that applies either in whole or in part in provinces and territories that requested it and in provinces and territories that did not enact their own carbon pricing systems of sufficient stringency. Many provinces and territories have already implemented or are on track to implement a carbon pollution pricing system in 2019, or have asked to adopt the federal system in whole or in part. The federal output-based pricing system came into effect in Ontario, New Brunswick, Prince Edward Island, Manitoba and partially in Saskatchewan in January 2019 and will apply in Yukon and Nunavut starting in July 2019. The federal fuel charge came into effect in Ontario, Manitoba, New Brunswick and Saskatchewan in April 2019 and will apply in Yukon and Nunavut starting in July 2019 and in Alberta starting in January 2020. The backstop is not shown in the energy tax profiles.

Effective tax rates on energy use in Canada

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

Figure 1. Effective tax rates on energy use by sector and energy category

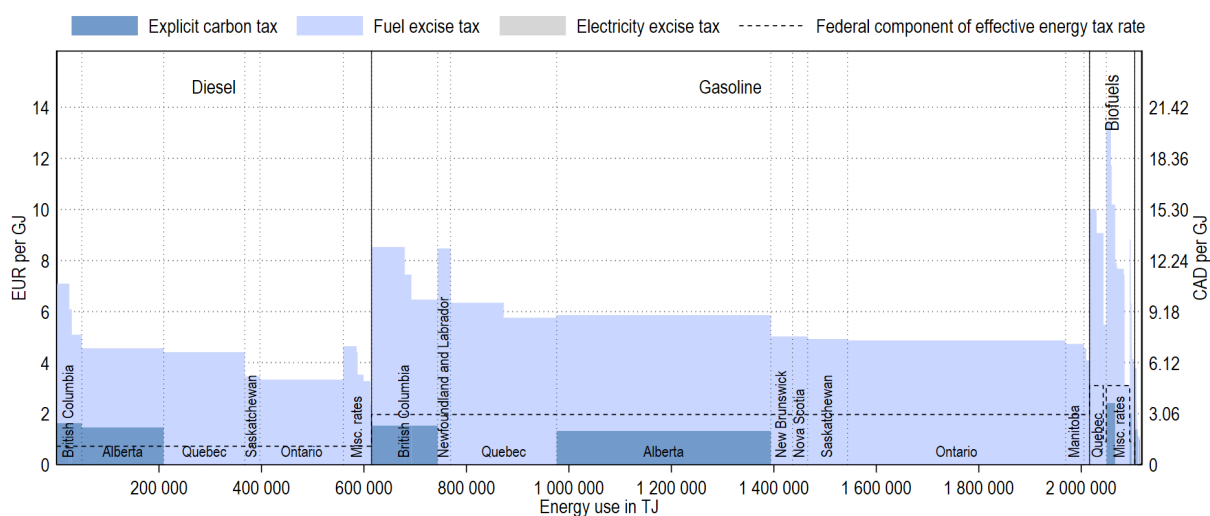


Note: Tax rates applicable on 1 July 2018. Energy use data is for 2016 and adapted from IEA (2018^[2]), *World Energy Statistics and Balances*. Energy categories (labelled at the bottom) that represent less than 1% of a country's energy consumption are grouped into "misc. energy use" and may not be labelled.

Road

Figure 2 shows that within the road sector, gasoline is taxed at a higher effective tax rate than diesel. In the road sector, petrol is taxed at a higher statutory rate than diesel fuel. Biodiesel and biogasoline are taxed at the same statutory rates as their fossil fuel equivalents. However, as biofuels' energy content per litre is lower, their effective energy tax rate per GJ is higher.

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



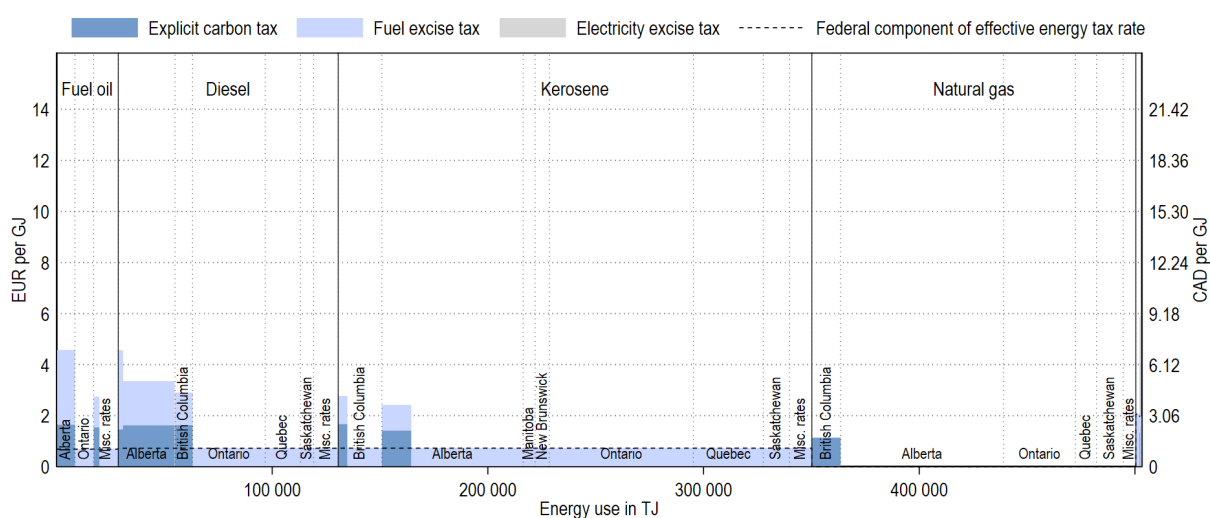
Note: Tax rates applicable on 1 July 2018. Energy use data is for 2016 and adapted from IEA (2018^[2]), *World Energy Statistics and Balances*. Provincial-level data on energy use was calculated using information from Canada's National Energy Board. Energy categories (labelled at the top) that represent 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, diesel (including fuel oil and aviation fuel (kerosene)) and gasoline (not discernible in the figure) are taxed at the federal level, unless the fuels are used in international transport. Natural gas is untaxed at the federal level.

Fossil fuels may additionally be subject to excise and carbon taxes at the subnational level, as shown in the figure.

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



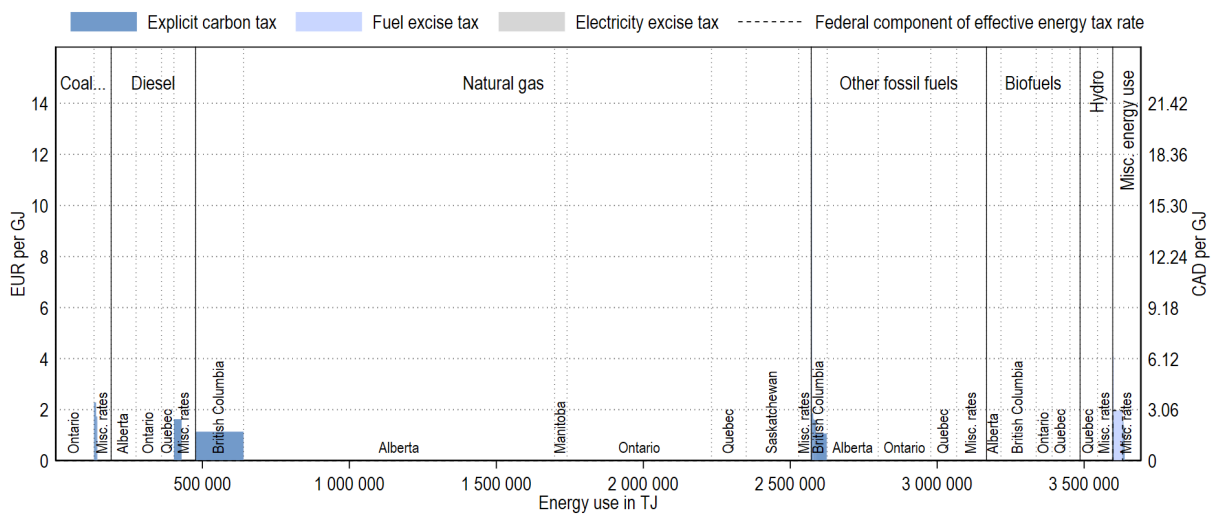
Note: Tax rates applicable on 1 July 2018. Energy use data is for 2016 and adapted from IEA (2018^[2]), *World Energy Statistics and Balances*. Provincial-level data on energy use was calculated using information from Canada's National Energy Board. Energy categories (labelled at the top) that represent 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, energy use is generally not taxed at the federal level (Figure 4) because diesel is not subject to federal excise taxes when used for heating or in power plants.³ Gasoline is taxed as in road transport, but its use is negligible.

Fossil fuels may, however, be subject to carbon taxes at the subnational level. As at 1 July 2018, this concerned the provinces of Alberta and British Columbia. Alberta, is, however, shown as untaxed because TEU assumes that the industry sector is covered by the output-based ETS (not shown in the figure).⁴

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*. Provincial-level data on energy use was calculated using information from Canada’s National Energy Board. 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.

³ TEU assumes that all industrial diesel use is for heating or electricity generation.

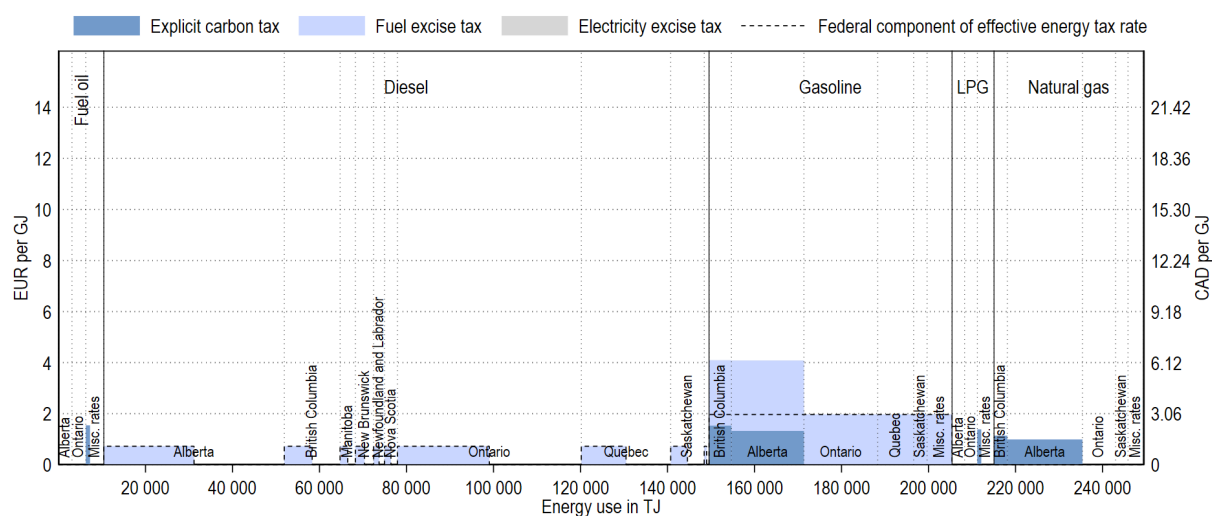
⁴ In Alberta, small facilities that do not participate in the ETS would generally be covered by carbon tax, but as their share in total emissions is rather small, TEU assumes for simplicity that the entire sector is covered by the ETS.

Agriculture and fisheries

In the agriculture and fishing sectors (Figure 5), diesel is subject to the same federal excise tax as in road transport when used in internal combustion engines, but is untaxed if used for heating purposes.⁵ Gasoline is taxed as in the other sectors at the federal level.

In addition, fuel excise and carbon taxes may be imposed by provinces and territories. As at 1 July 2018, this mainly concerned gasoline and natural gas consumption in Alberta and British Columbia.

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*. Provincial-level data on energy use was calculated using information from Canada's National Energy Board. 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.

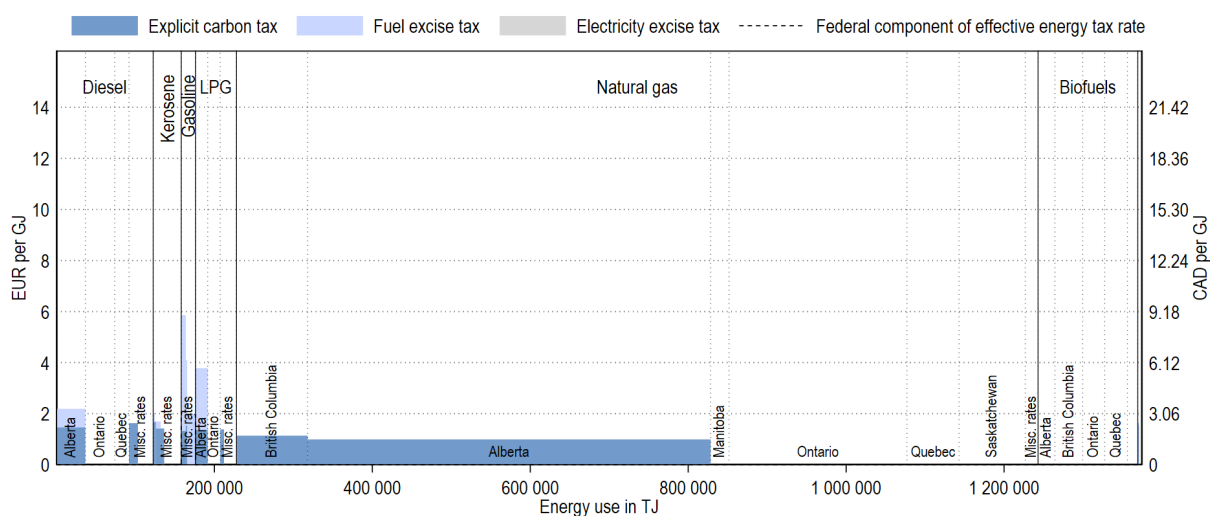
⁵ TEU assumes that 50% of diesel use is for propellant purposes, and the other half for heating purposes.

Residential and commercial

In the residential and commercial sector (Figure 6), diesel used for heating purposes is not subject to the federal fuel excise tax. Gasoline is taxed at the federal level as in the other sectors.

In addition, fuel excise and carbon taxes may be imposed by provinces and territories. As at 1 July 2018, this concerned energy use in Alberta and British Columbia.

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



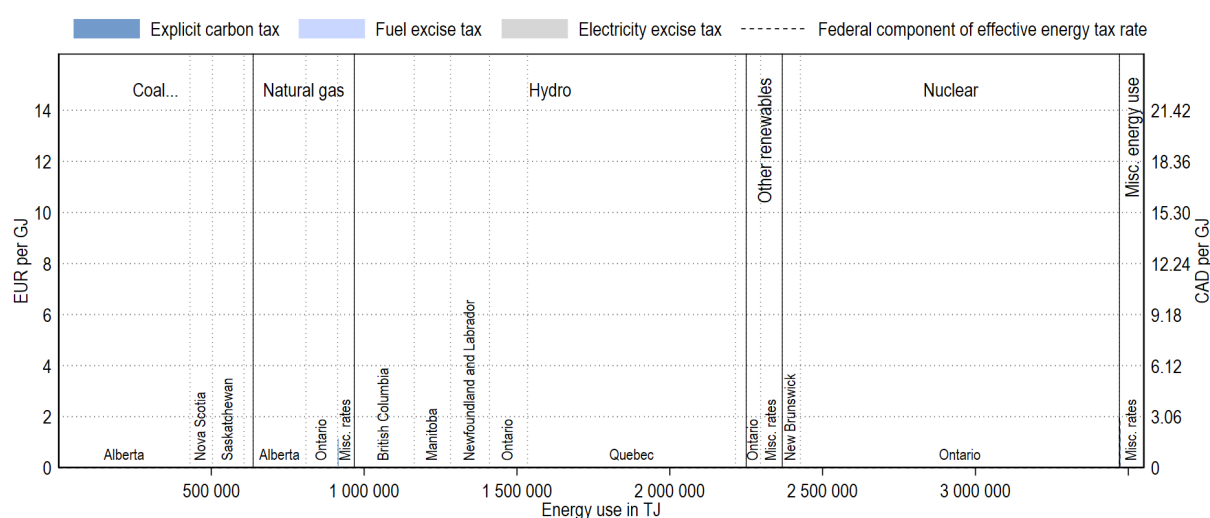
Note: Tax rates applicable on 1 July 2018. Energy use data is for 2016 and adapted from IEA (2018^[2]), *World Energy Statistics and Balances*. Provincial-level data on energy use was calculated using information from Canada's National Energy Board. Energy categories (labelled at the top) that represent 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 Canada. The fuels used to generate electricity are generally not taxed. In the exceptional case where gasoline used for electricity generation (not visible in the figure), it is taxed. The final consumption of electricity is generally not taxed.

Fossil fuels used in electricity generation may be subject to subnational carbon pricing initiatives. An Alberta, the electricity sector is generally covered by the ETS (not shown in TEU).

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, <http://dx.doi.org/10.1787/9789264305304-en>. [1]