

Environmentally related taxes Taxes on energy use

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Centre for Tax Policy and Administration

Revenue from environmentally related taxes in Luxembourg¹

As a share of GDP, Luxembourg has the 20th lowest environmentally related tax revenue among 34 OECD and 5 partner economies. In 2014, environmentally related tax revenues were at 2% of GDP, compared to 2.0% on average among the 39 countries.

In Luxembourg, taxes on energy represented 93% of total environmentally related tax revenue, compared to 70% on average among the 39 countries.

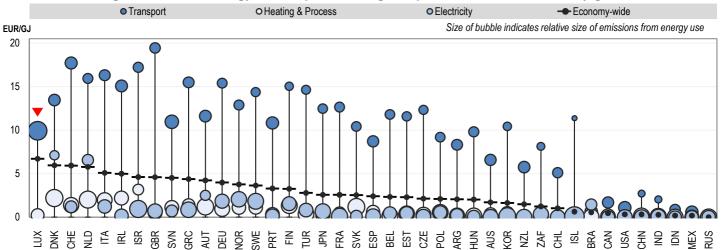
¹Data from OECD.Stat include all OECD countries (except Latvia) and Argentina, Brazil, China, India and South Africa. Please see OECD.Stat for country specific notes.

Taxes on energy use in Luxembourg²

The OECD's Taxing Energy Use (2015) publication compares taxes on energy use (excise and carbon taxes) across 34 OECD and 7 partner economies. The chart below shows average tax rates, expressed in EUR per GJ, by sector across all fuels and the economy-wide average. The bubble size represents the weight of the sector in total energy use.

- Luxembourg has higher average tax rates on transport fuels (9.92 EUR/GJ) than on fuels used for heating and process purposes (0.22 EUR/GJ) or electricity generation (0.12 EUR/GJ);
- Luxembourg has the highest tax rate on energy on an economy-wide basis, at EUR 6.71 per GJ, compared with EUR 2.7 per GJ on a simple-average basis across the 34 OECD and 7 partner economies.

Average tax rates on energy in transport, heating and process use, and electricity generation



²Data from Taxing Energy Use are for 2012 and include all OECD countries (except Latvia) and Argentina, Brazil, China, India, Indonesia, Russia and South Africa.

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Effective Carbon Rates

Pricing CO₂ through taxes and emissions trading systems

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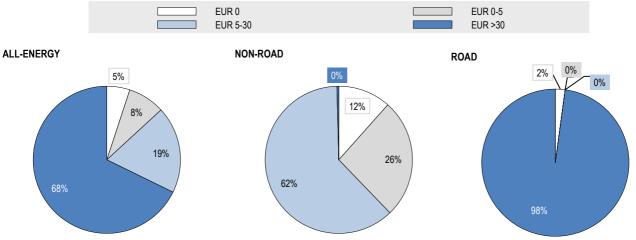
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Effective carbon rates in Luxembourg

The OECD's Effective Carbon Rates (2016) publication presents the combined price signal on CO_2 emissions from taxes on energy and emissions trading systems (ETS), or the effective carbon rate (ECR).³ The charts below show shares of CO_2 emissions subject to different price ranges, for road, non-road and all emissions from energy use. EUR 30 is a conservative estimate of the climate damage from one tonne of CO_2 emissions.

- In Luxembourg, 5% of carbon emissions from energy use face no price signal at all; 87% face a price at or above EUR 5 per tonne of CO₂; and 68% face a price at or above EUR 30 per tonne of CO₂. This compares to a zero price for 60% of emissions across all countries, a price at or above EUR 5 per tonne for 30% and at or above EUR 30 per tonne for 10% of emissions.
- Excluding road use, 12% of carbon emissions from energy use in Luxembourg face no price signal at all; 62% face a price at or above EUR 5 per tonne of CO₂; and 0% face a price at or above EUR 30 per tonne of CO₂. This compares to a zero price for 70% of emissions across all countries, a price at or above EUR 5 per tonne for 19% and at or above EUR 30 per tonne for 4% of emissions.

Distribution of Effective Carbon Rates (ECR) on CO₂ emissions from energy use in Luxembourg



Figures shown in the charts may not add up to 100% due to rounding.

³Notes on the interpretation of effective carbon rates: Box 3.1 (p.38-40), OECD's Effective Carbon Rates (2016), or consult http://oe.cd/ECRinterpretation

CO₂ emissions priced and average rates in Luxembourg

The table below shows the average price signals from taxes and trading systems, and the share of emissions priced by these instruments.

- » Luxembourg is subject to the EU ETS, which had an average permit price of EUR 7.24 per tonne of CO₂ in 2012.
- In total, taxes in Luxembourg price 91% of CO₂ emissions from energy use; and the EU ETS prices 8%. The sectors with the highest tax coverage are offroad transport & electricity (both at 100%). The sectors with the highest price coverage by the ETS are electricity (85%) and industry (61%).

Share of emissions priced and average price signals from tax & ETS, Luxembourg

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	CO ₂ emissions by sector (in t CO ₂)	Tax		ETS			Emissions not
		Average price (in EUR/tCO ₂)	Share of emissions priced	Average price (in EUR/tCO ₂)	Share of emissions priced	Overlap of tax and ETS ⁵	priced by tax or ETS
Agriculture & Fishing	63	7.9	85%	0.0	0%	0%	15%
Electricity	53	2.1	100%	7.2	85%	85%	0%
Industry	1 246	2.7	51%	7.2	61%	32%	20%
Offroad transport	13	125.9	100%	0.0	0%	0%	0%
Residential & Commercial	1 646	5.1	95%	0.0	0%	0%	5%
Road transport	6 757	138.5	98%	0.0	0%	0%	2%
Total ⁴	9 778	94.8	91%	0.6	8%	5%	5%

Access the data for all 41 countries:

http://oe.cd/emissionsdata

⁴Total average prices are weighted by the share of emissions in each sector that is priced in the country.

⁵Tax and ETS can apply to the same emissions base. The overlap describes the percentage of emissions in a sector that is priced by both tax and ETS.