

Environmentally-related taxes Taxes on energy use

BETTER POLICIES FOR BETTER LIVES

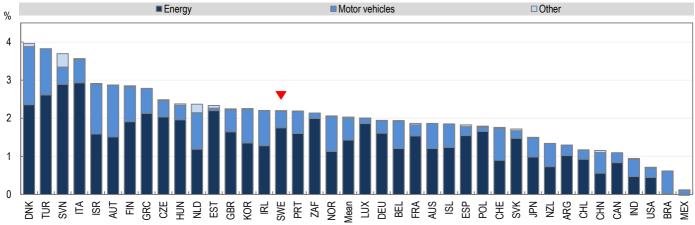
Centre for Tax Policy and Administration

Revenue from environmentally-related taxes in Sweden¹

As a share of GDP, Sweden has the 16th highest environmentally-related tax revenue among 34 OECD and 5 partner economies. In 2014, environmentally-related tax revenues were at 2.2% of GDP, compared to 2.0% on average among the 39 countries.

In Sweden, taxes on energy represented 80% of total environmentally-related tax revenue, compared to 70% on average among the 39 countries.

Environmentally-related tax revenue as a percentage of GDP, 2014



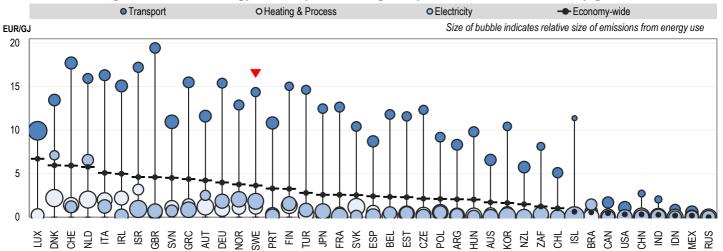
¹Data from the OECD.Stat include all OECD countries (except Latvia) and Argentina, Brazil, China, India and South Africa. Please see source for country specific notes.

Taxes on energy use in Sweden²

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

- Sweden has higher average tax rates on transport fuels (14.37 EUR/GJ) than on fuels used for heating and process purposes (1.12 EUR/GJ) or electricity generation (1.82 EUR/GJ);
- Sweden has the 14th highest tax rate on energy on an economy-wide basis, at EUR 3.63 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.

Contacts

David Bradbury

Centre for Tax Policy and Administration Head, Tax Policy and Statistics Division David.Bradbury@oecd.org

Kurt Van Dender

Centre for Tax Policy and Administration Head, Tax and Environment Unit Kurt.VanDender@oecd.org



Effective Carbon Rates

Pricing CO₂ through taxes and emissions trading systems

BETTER POLICIES FOR BETTER LIVES

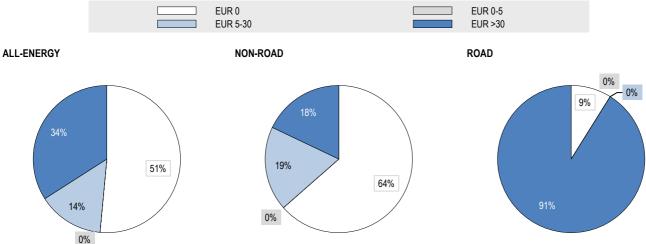
Centre for Tax Policy and Administration

Effective carbon rates in Sweden*

According to the OECD's Effective Carbon Rates (2016) publication, the combined price signal on CO_2 emissions from taxes on energy and emissions trading systems (ETS) gives the effective carbon rate (ECR). 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 Sweden, 51% of carbon emissions from energy use face no price signal at all; 49% face a price at or above EUR 5 per tonne of CO₂; and 34% 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, 64% of carbon emissions from energy use in Sweden face no price signal at all; 36% face a price at or above » EUR 5 per tonne of CO₂; and 18% 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 Sweden



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

CO₂ emissions priced and average rates in Sweden

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

- » Sweden 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 Sweden price 42% of CO₂ emissions from energy use; and the EU ETS prices 16%. The sectors with the highest
- » tax coverage are electricity (100%) and road transport (91%). The sectors with the highest price coverage by the ETS are offroad transport (68%) and electricity (24%).

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

	CO ₂ emissions by sector (in t CO ₂)	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	Emissions not priced by tax or ETS
Agriculture & Fishing	1 501	77.4	33%	0.0	0%	0%	67%
Electricity	5 246	193.1	100%	7.2	24%	24%	0%
Industry	60 176	62.2	24%	7.2	23%	14%	67%
Offroad transport	719	112.4	10%	7.2	68%	7%	29%
Residential & Commercial	7 484	159.4	21%	7.2	0%	0%	79%
Road transport	21 241	226.6	91%	0.0	0%	0%	9%
Total ⁴	96 367	68.3	42%	1.2	16%	10%	51%

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.

^{*}The effective carbon rates shown in the country sheets include emissions from biomass for all countries. Alternatively, these emissions could be excluded, reflecting the assumption that their lifecycle emissions are zero. The effective carbon rates report presents both sets of results.