

# Environmentally related taxes Taxes on energy use

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Centre for Tax Policy and Administration

#### Revenue from environmentally related taxes in India<sup>1</sup>

As a share of GDP, India has the 4th lowest environmentally related tax revenue among 34 OECD and 5 partner economies. In 2014, environmentally related tax revenues were at 0.95% of GDP, compared to 2.0% on average among the 39 countries.

In India, taxes on energy represented 50% of total environmentally related tax revenue, compared to 70% on average among the 39 countries.

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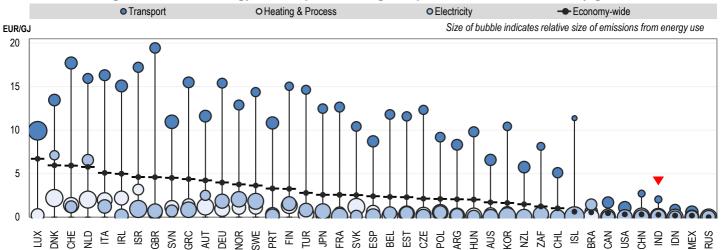
<sup>1</sup>Data from OECD.Stat include all OECD countries (except Latvia) and Argentina, Brazil, China, India and South Africa. Please see OECD.Stat for country specific notes.

### Taxes on energy use in India<sup>2</sup>

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.

- India has higher average tax rates on transport fuels (2.03 EUR/GJ) than on fuels used for heating and process purposes (0.09 EUR/GJ) or electricity generation (0.07 EUR/GJ);
- India has the 4th lowest tax rate on energy on an economy-wide basis, at EUR 0.27 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



<sup>2</sup>Data 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 CO<sub>2</sub> through taxes and emissions trading systems

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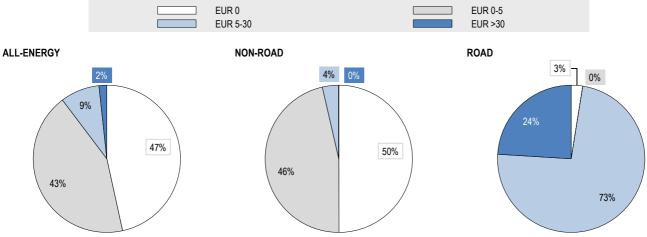
#### Effective carbon rates in India

The OECD's Effective Carbon Rates (2016) publication presents the combined price signal on CO<sub>2</sub> emissions from taxes on energy and emissions trading systems (ETS), or the effective carbon rate (ECR).<sup>3</sup> The charts below show shares of CO<sub>2</sub> 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<sub>2</sub> emissions.

In India, 47% of carbon emissions from energy use face no price signal at all; 10% face a price at or above EUR 5 per tonne of CO<sub>2</sub>; and 2% face a price at or above EUR 30 per tonne of CO<sub>2</sub>. 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, 50% of carbon emissions from energy use in India face no price signal at all; 4% face a price at or above EUR 5 per tonne of CO<sub>2</sub>; and 0% face a price at or above EUR 30 per tonne of CO<sub>2</sub>. 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 CO<sub>2</sub> emissions from energy use in India



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

<sup>3</sup>Notes 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

#### CO<sub>2</sub> emissions priced and average rates in India

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

- » India does not currently have an ETS.
- In total, taxes in India price 53% of CO<sub>2</sub> emissions from energy use. The sectors with the highest tax coverage are agriculture and fisheries (99%) and road transport (97%).

Share of emissions priced and average price signals from tax, India

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	CO <sub>2</sub> emissions by sector (in t CO <sub>2</sub> )	Tax		ETS			Emissions not
		Average price (in EUR/tCO <sub>2</sub> )	Share of emissions priced	Average price (in EUR/tCO <sub>2</sub> )	Share of emissions priced	Overlap of tax and ETS <sup>5</sup>	priced by tax or ETS
Agriculture & Fishing	30 353	19.8	99%	0.0	0%	0%	1%
Electricity	919 705	0.6	81%	0.0	0%	0%	19%
Industry	889 730	2.3	55%	0.0	0%	0%	45%
Offroad transport	15 531	20.2	67%	0.0	0%	0%	33%
Residential & Commercial	796 634	3.3	6%	0.0	0%	0%	94%
Road transport	203 556	29.9	97%	0.0	0%	0%	3%
Total	<sup>4</sup> 2 855 509	3.0	53%	0.0	0%	0%	47%

Access the data for all 41 countries:

http://oe.cd/emissionsdata

<sup>&</sup>lt;sup>4</sup>Total average prices are weighted by the share of emissions in each sector that is priced in the country.

<sup>&</sup>lt;sup>5</sup>Tax 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.