



Driving low carbon investment and innovation

Florens Flues

Economist

Centre for Tax Policy and Administration, OECD

Policy Solutions for a Climate Friendly Materials Sector, UNFCCC
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Opinions expressed and arguments employed are those of the
presenter



Backdrop

- » Paris Agreement: two degrees or less – zero net emissions in the second half of the century
 - » Requires **deep cuts** now, especially where **long-lived assets** are concerned (or face much higher costs later)
- What are the incentives to invest in long-lived assets from carbon taxes and from emissions trading systems?

effective marginal carbon rates

effective average carbon rates (*work in progress*)

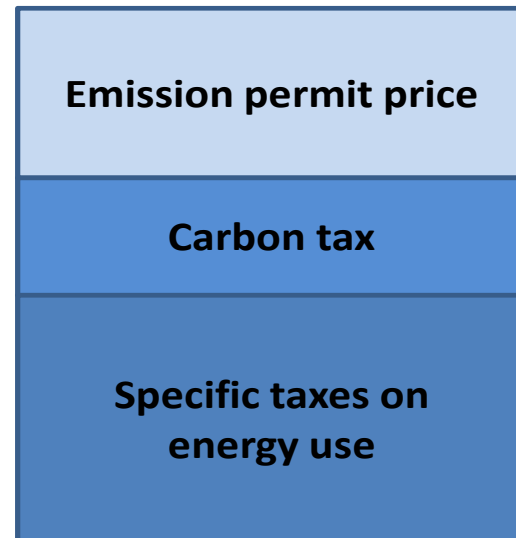


Effective (Marginal) Carbon Rates

- » Effective carbon rates (ECRs) are the total price on CO₂ emissions from energy use as a result of market-based policy instruments.



Effective Carbon Rate (EUR per tonne of CO₂)





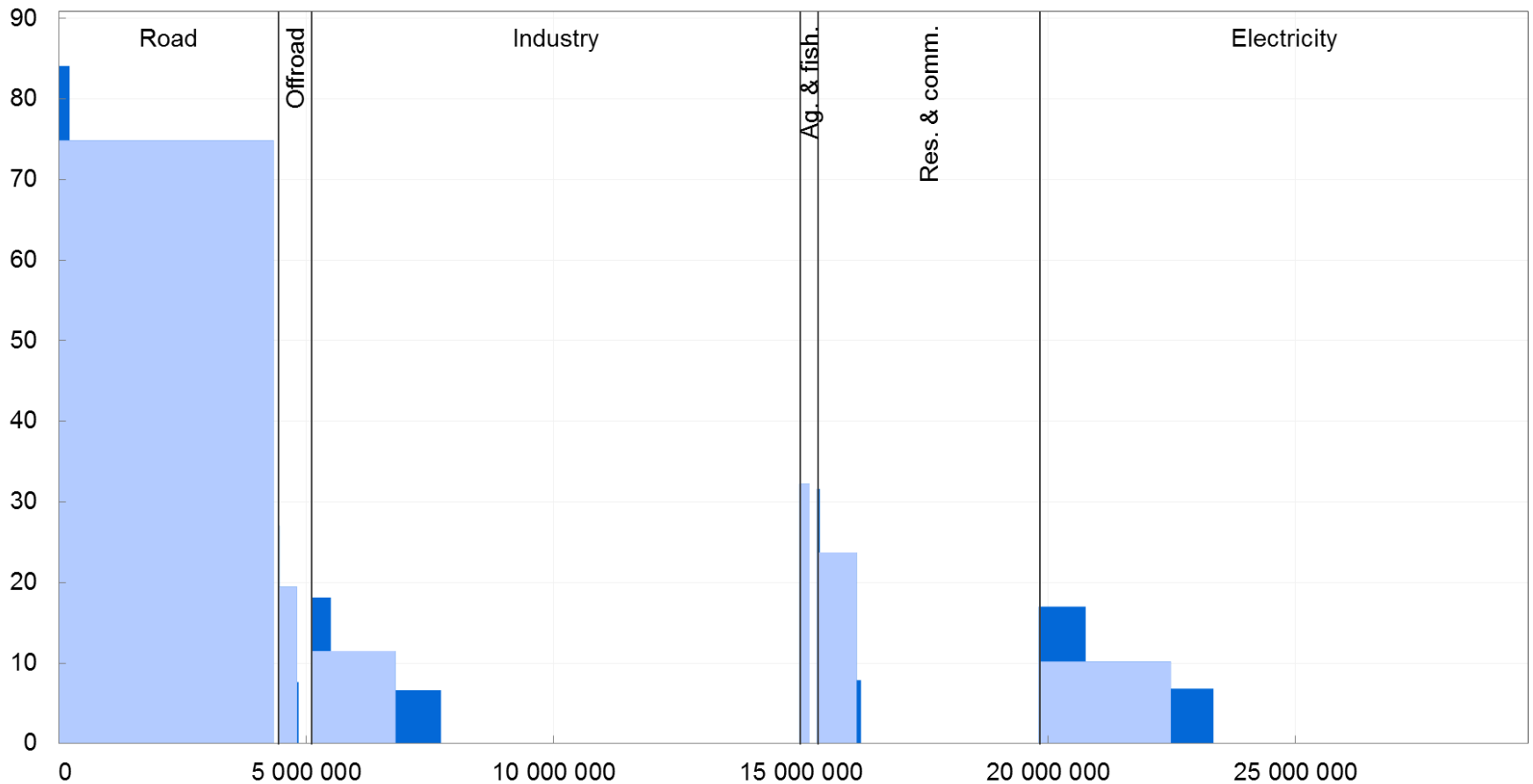
Effective (Marginal) Carbon Rates

Average ECRs across 41 countries by sector, showing ETS and Tax component

Average ECR in EUR per tonne CO₂

■ ETS

■ Taxes



Emissions from energy use in thousands of tonnes of CO₂

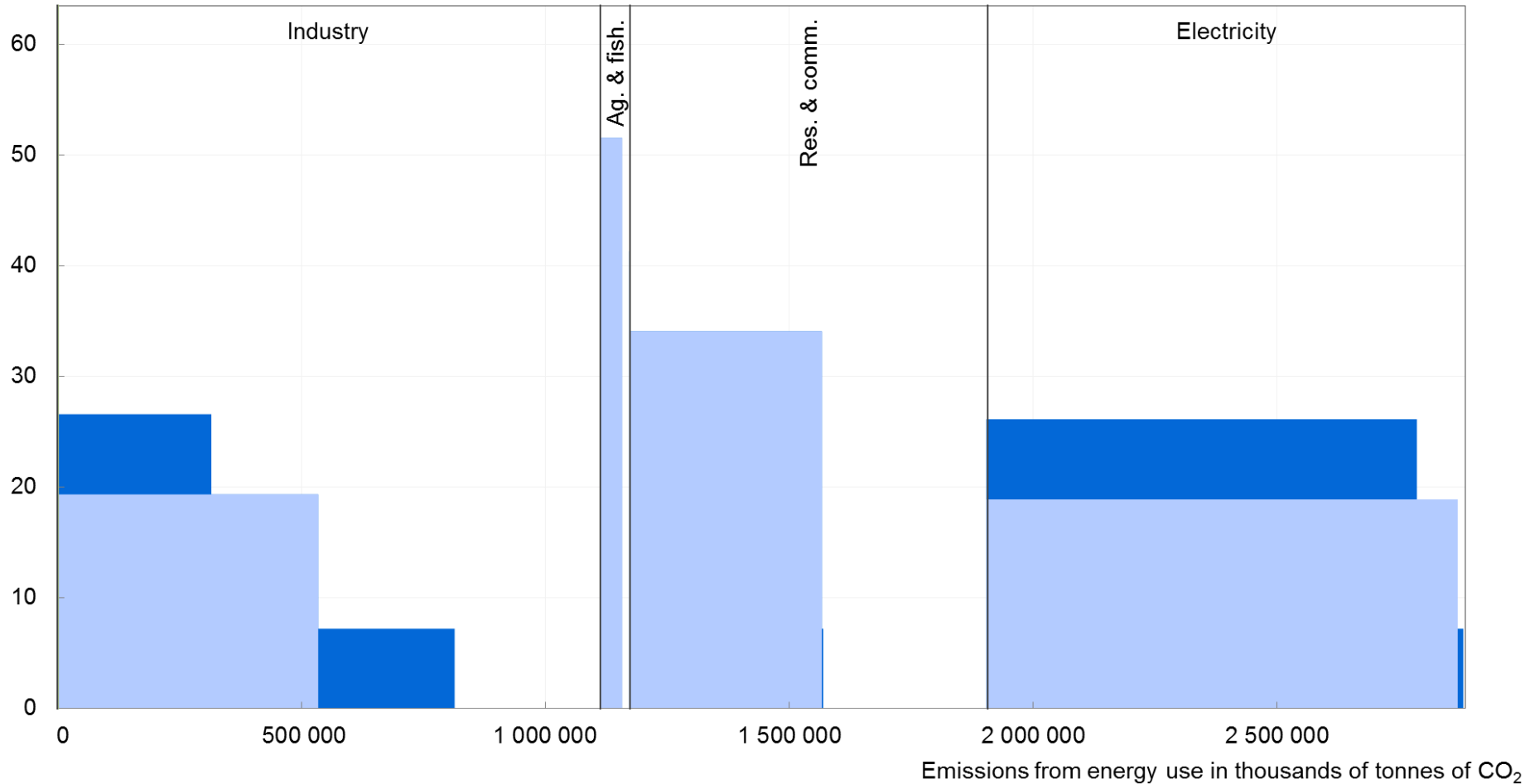


Effective (Marginal) Carbon Rates, EU 21, non-transport

Average ECR in EUR per tonne CO₂

■ ETS

■ Taxes



Average ECRs, EU 21, showing ETS and Tax component



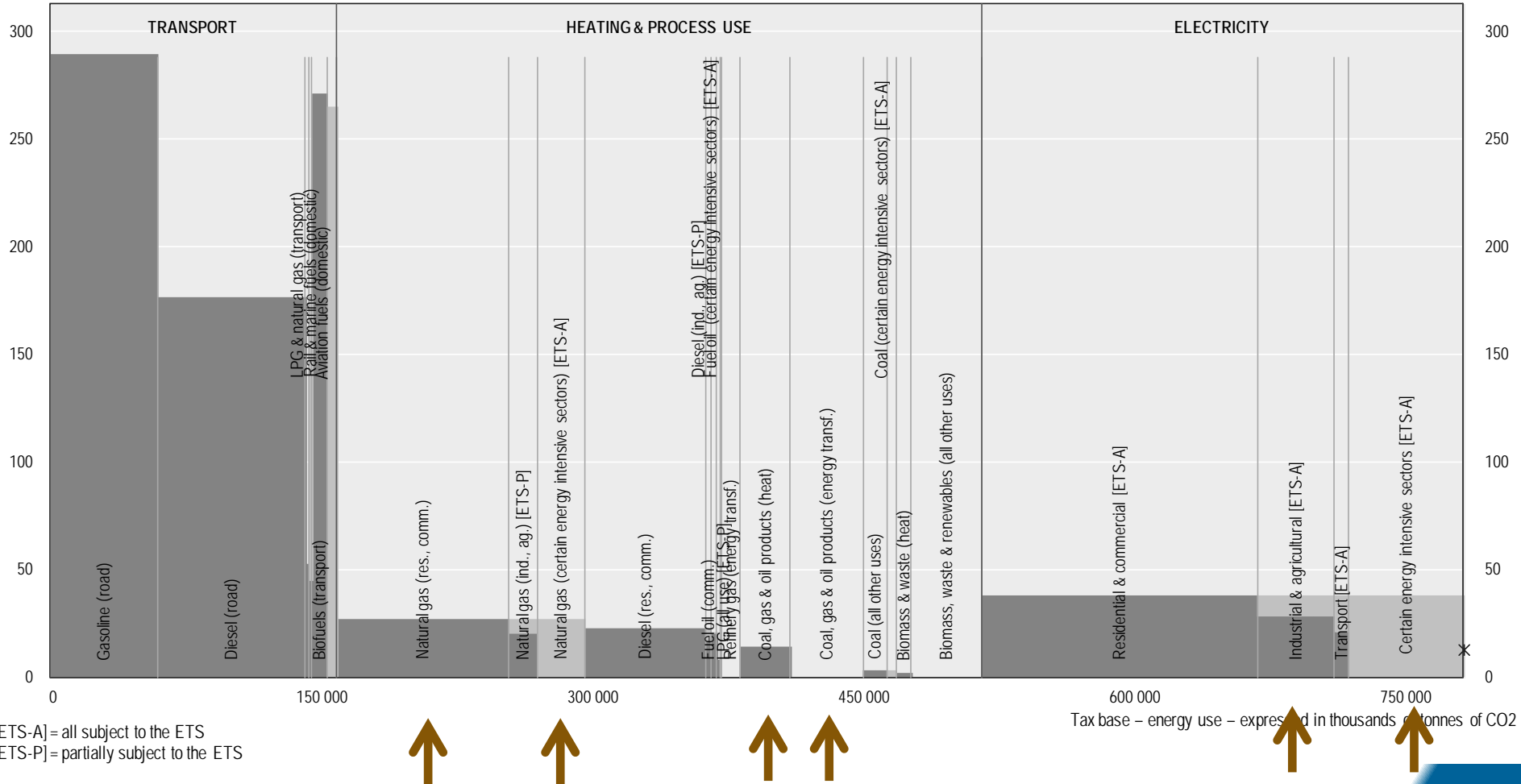
Tax component of Effective Carbon Rates, Germany

Tax
 Fuel tax credit or tax expenditure
 x Average 2010-11 ETS price

DEU

Taxrate expressed in EUR per tonne of CO2

Taxrate expressed in EUR per tonne of CO2





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Florens.Flues@oecd.org