



# TAXATION, ENERGY & THE ENVIRONMENT

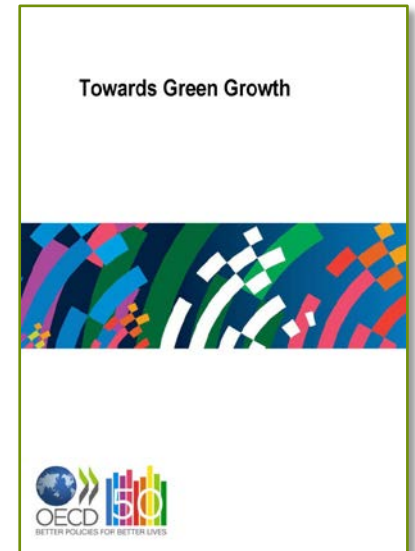
Tax & the Environment Unit  
Centre for Tax Policy & Administration

LAC Tax Policy Forum  
3-4 July 2014



# Taxes & green growth

- The OECD adopted a Green Growth Strategy in May 2011
- Practical framework to help countries foster strong economic growth while preserving the environmental assets on which our well-being relies & to find new sources of economic growth
- A key part of the strategy is the use of environmentally-related taxes to incorporate health and environmental costs into market prices



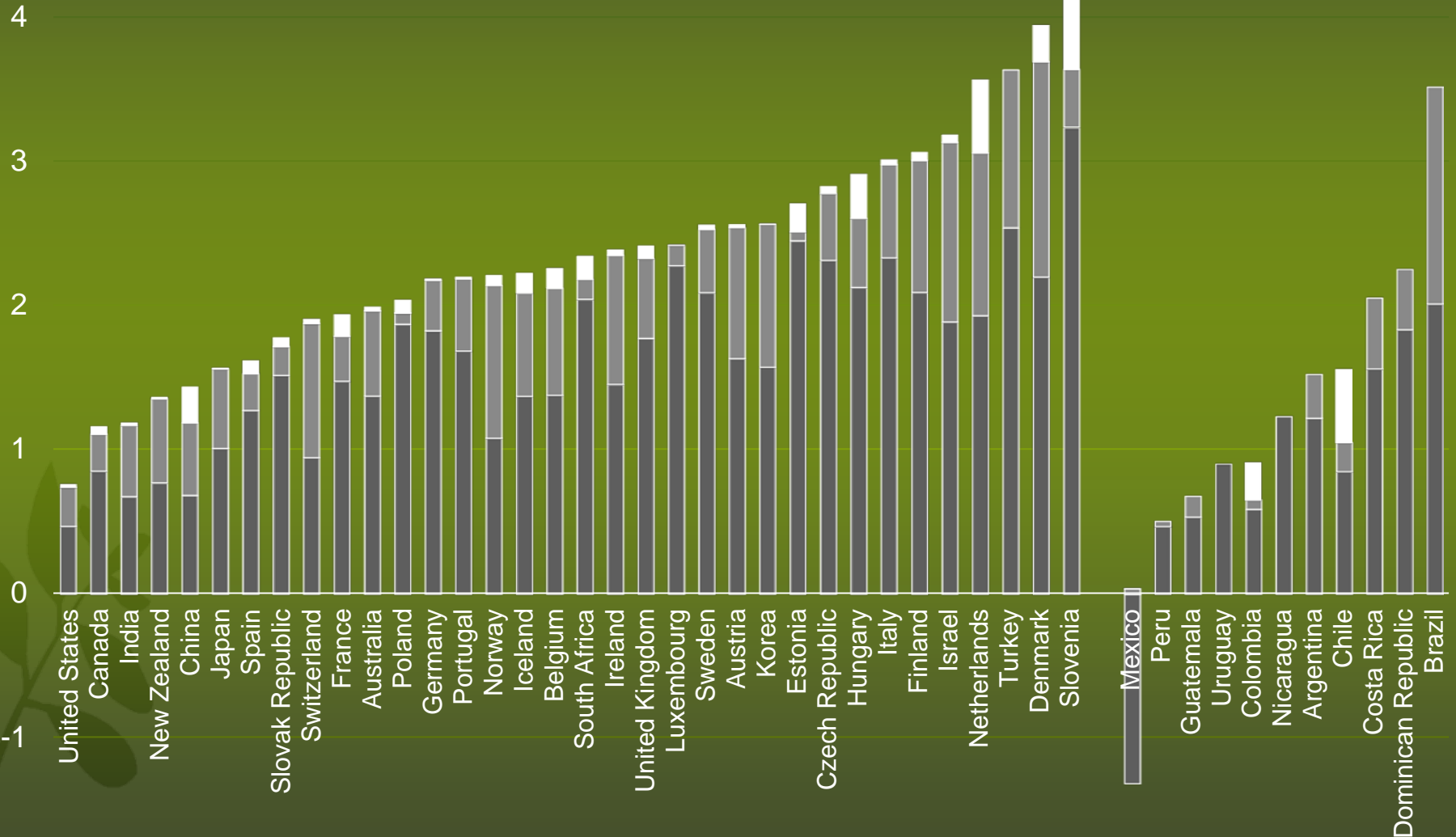
[www.oecd.org/greengrowth](http://www.oecd.org/greengrowth)



# Environmentally-related tax revenues, 2012

■ Energy ■ Motor vehicles ■ Other

% of GDP



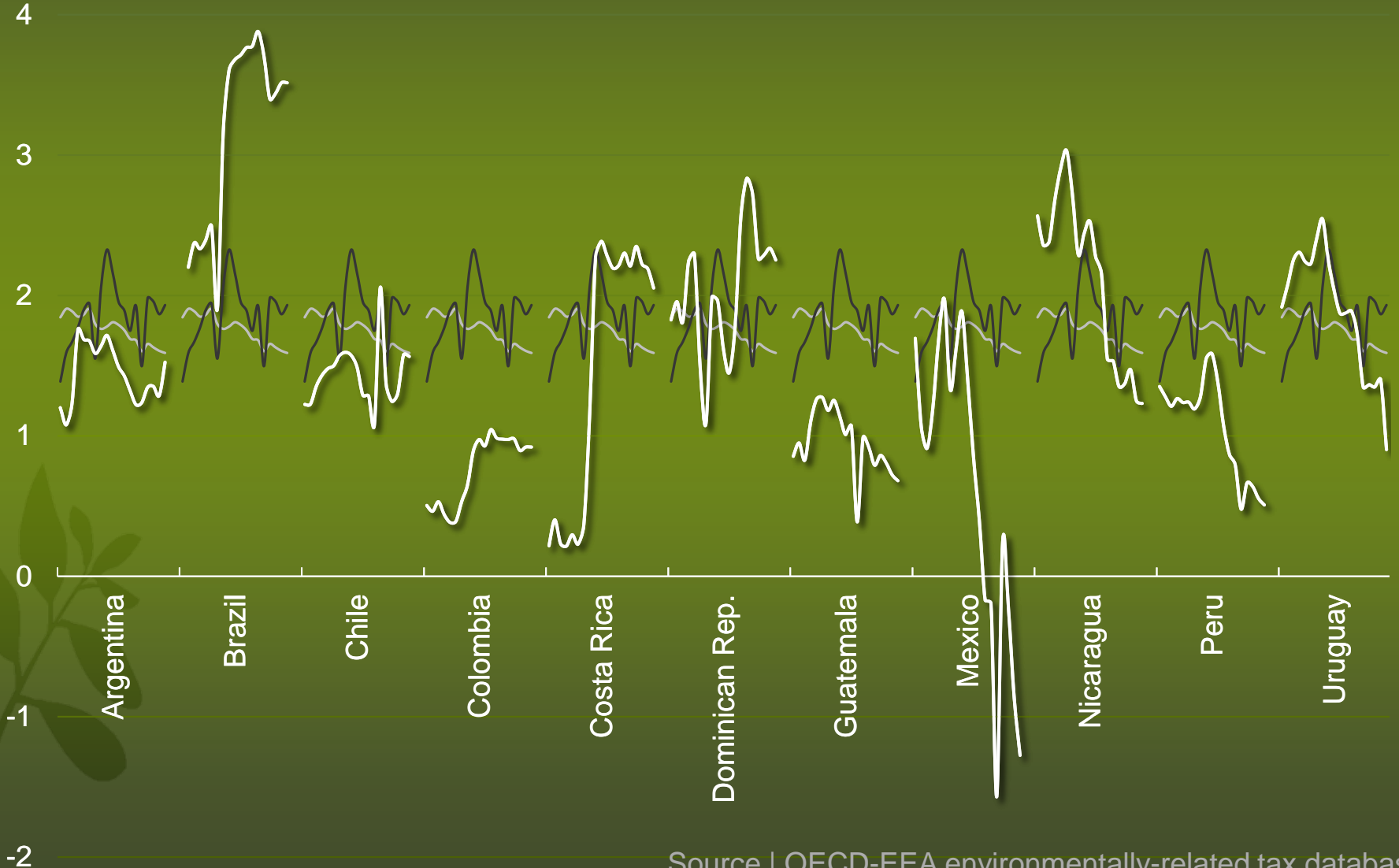


# Environmental tax revenues : 1994 - 2012

— OECD weighted average

— Weighted average of LAC countries shown

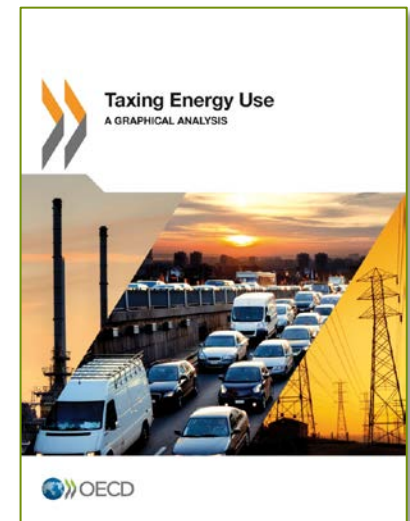
% of GDP





# *Taxing Energy Use: A Graphical Analysis*

- Energy taxation:
  - Tool to influence energy use & therefore greenhouse gas emissions, air pollution, other external costs of energy use
  - Source of many explicit & implicit fossil fuel tax expenditures
  - Important source of government revenue
- *Taxing Energy Use: A Graphical Analysis:*
  - Systematically describes taxes on all energy use in the OECD using a graphical profile
  - Highlights the price signals sent by taxes on different fuels & fuel uses within & across countries
  - Work underway to incorporate new countries, including Argentina & Brazil



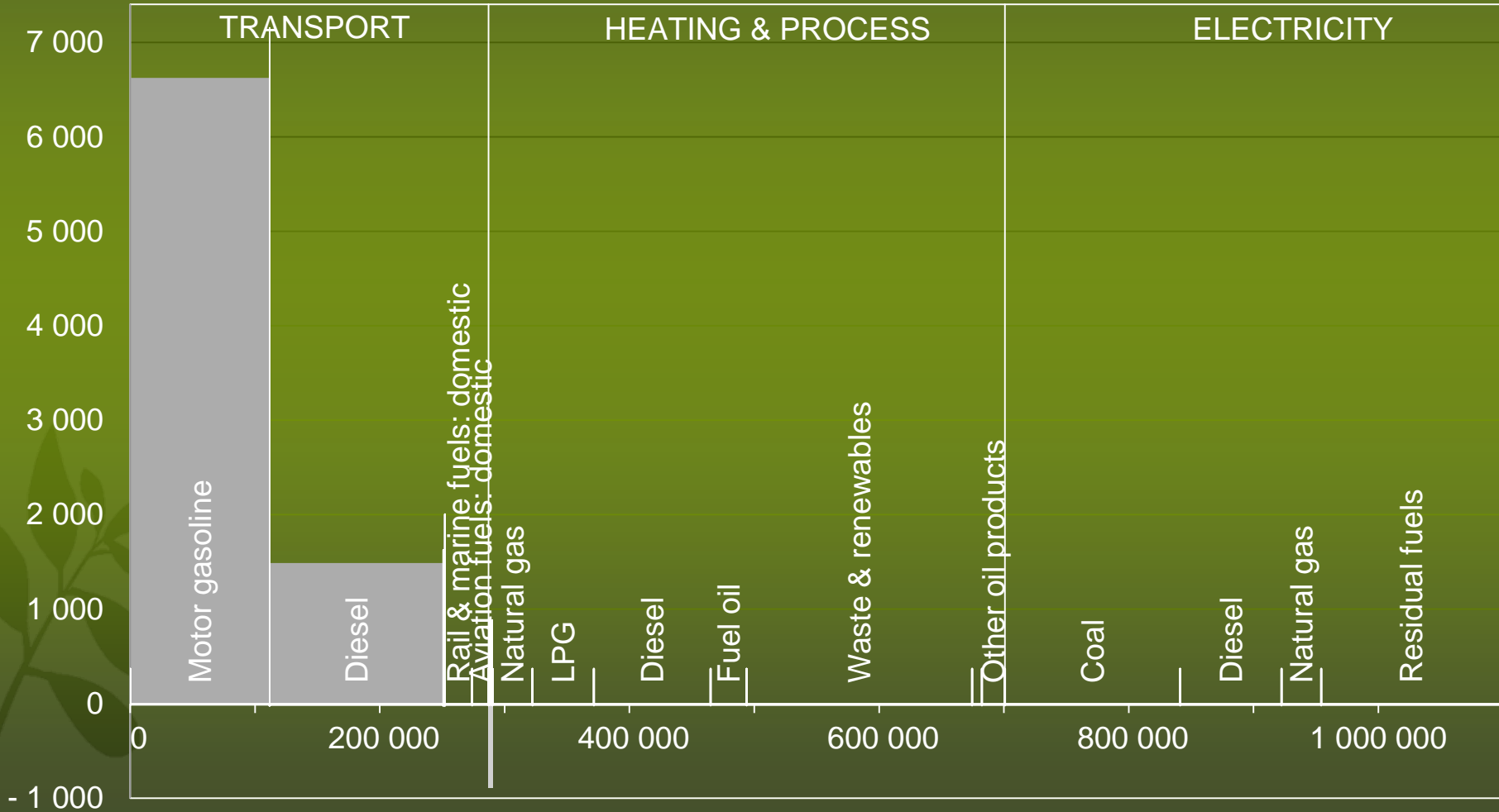
[www.oecd.org/tax/tax-policy/taxingenergyuse.htm](http://www.oecd.org/tax/tax-policy/taxingenergyuse.htm)



# Energy use & taxation in Chile

■ Tax ■ Tax expenditure or rebate

Tax rate (CLP per GJ)

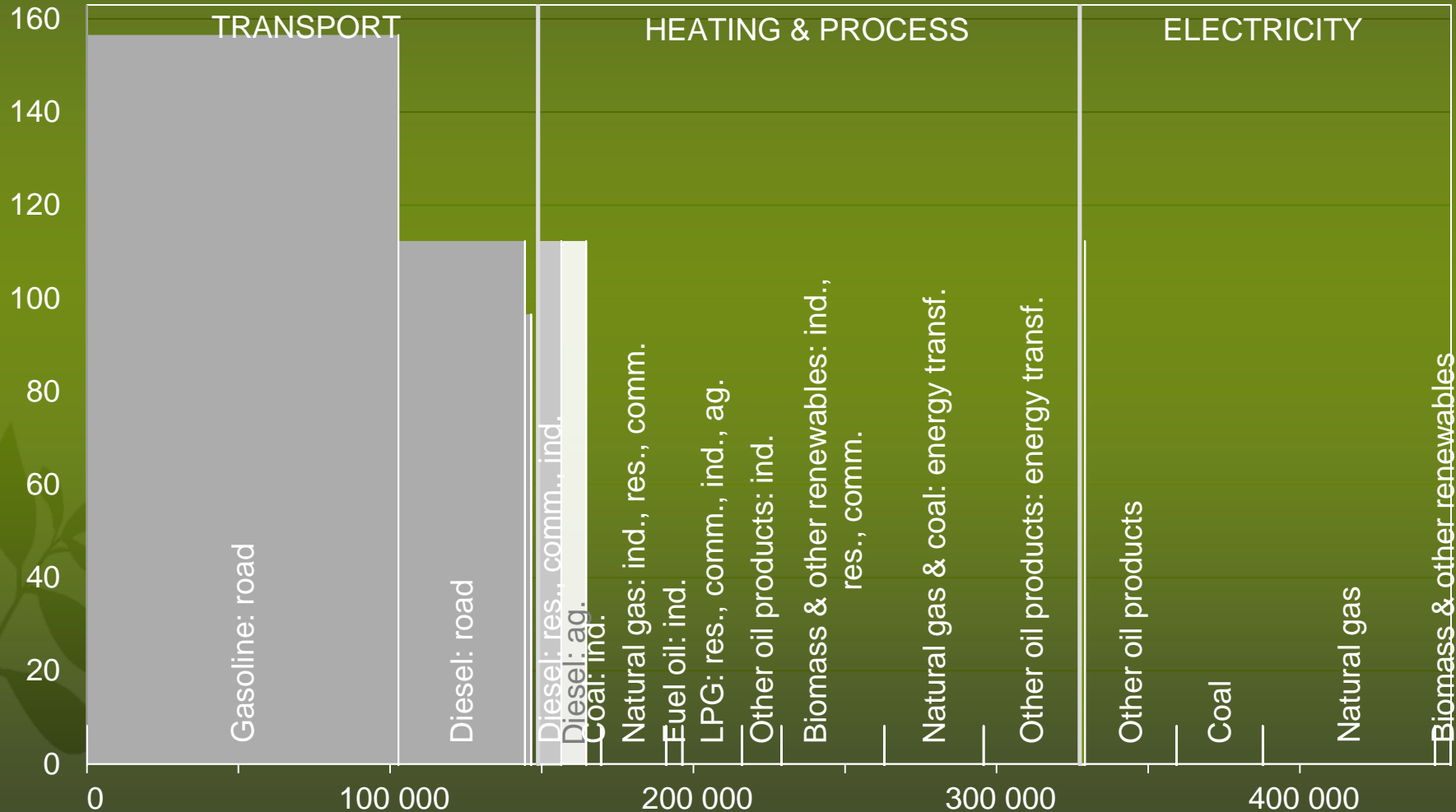




# Energy use & taxation in Mexico

■ Tax ■ Tax expenditure or rebate

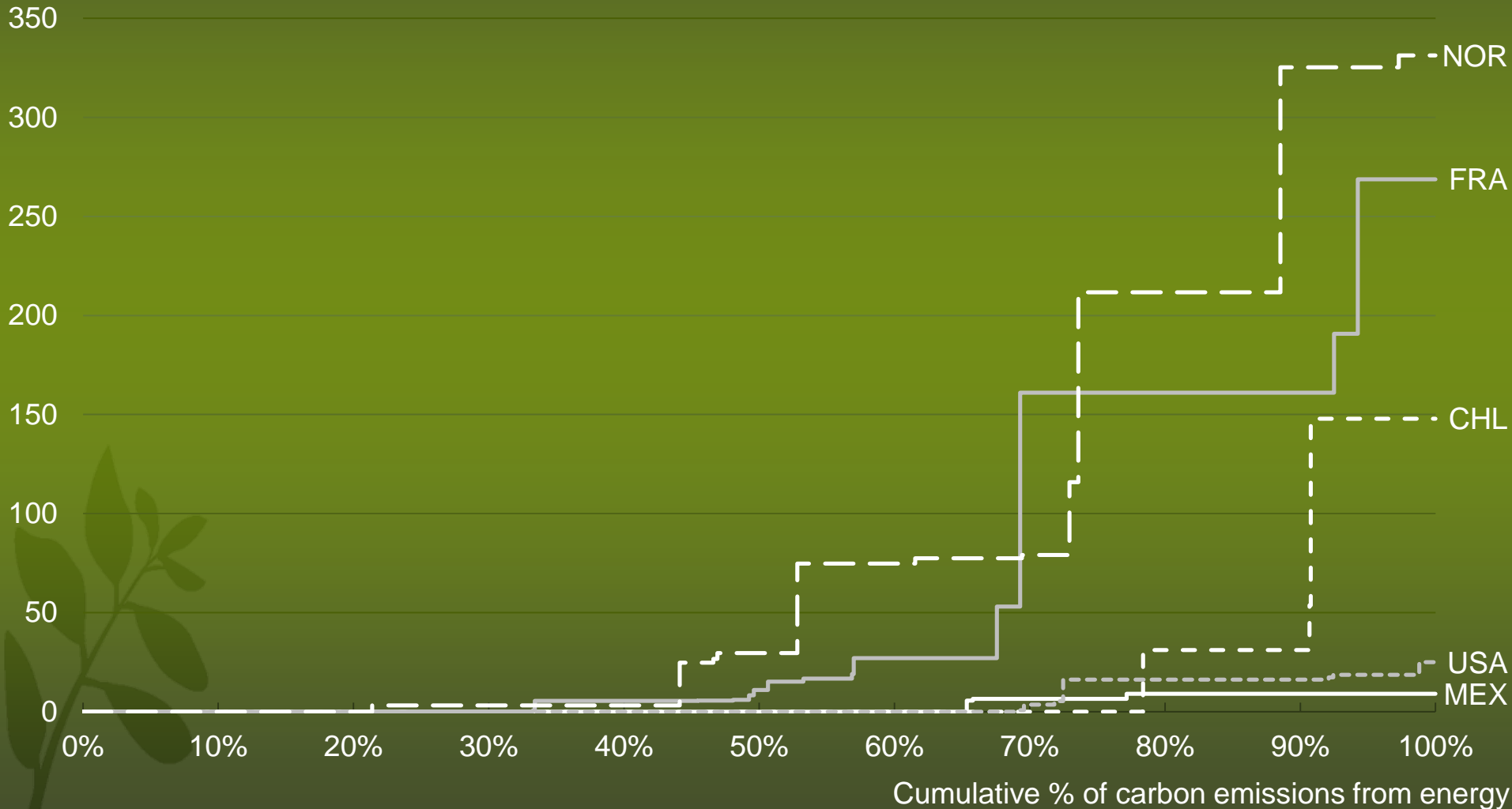
Tax rate (MXN per tonne of CO<sub>2</sub>)





# Snapshot of energy taxation

Effective tax rate (EUR per tonne CO<sub>2</sub>)

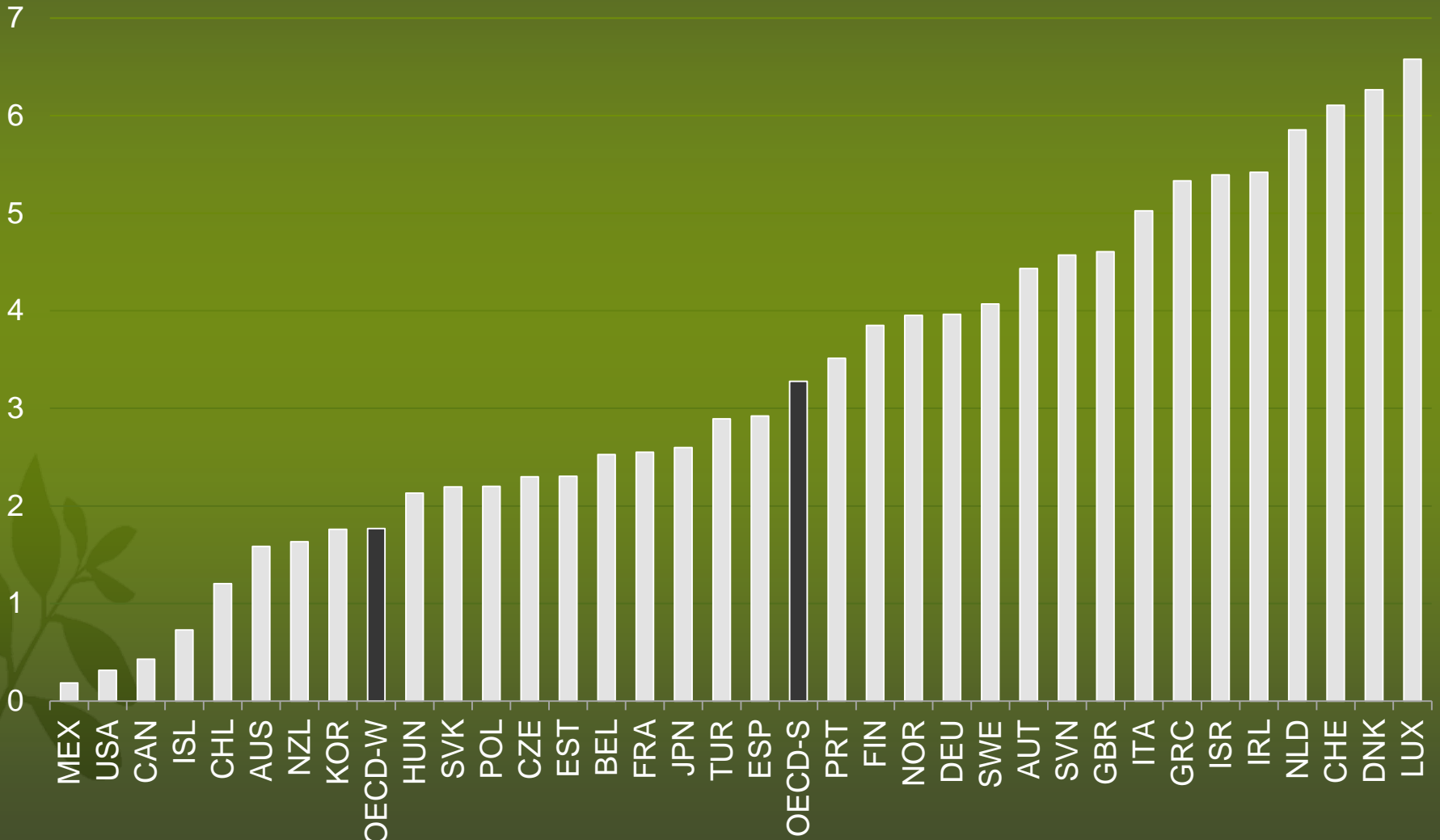






# Effective tax rates on energy use

Tax rate (€per GJ)





# Effective tax rates on different fuels & uses of energy

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- Transport fuels are most commonly taxed & are taxed most heavily across the OECD – on average, more than 10 times as much
- Heating & process use & electricity generation are taxed at lower rates & are in some cases entirely untaxed
- Substantial variations in tax rates exist within each category of fuel use, based on:
  - The fuels used (e.g. coal vs. natural gas);
  - The users of fuel (e.g. road vs. non-road transport)





# OECD average effective tax rates on fuels & fuel uses

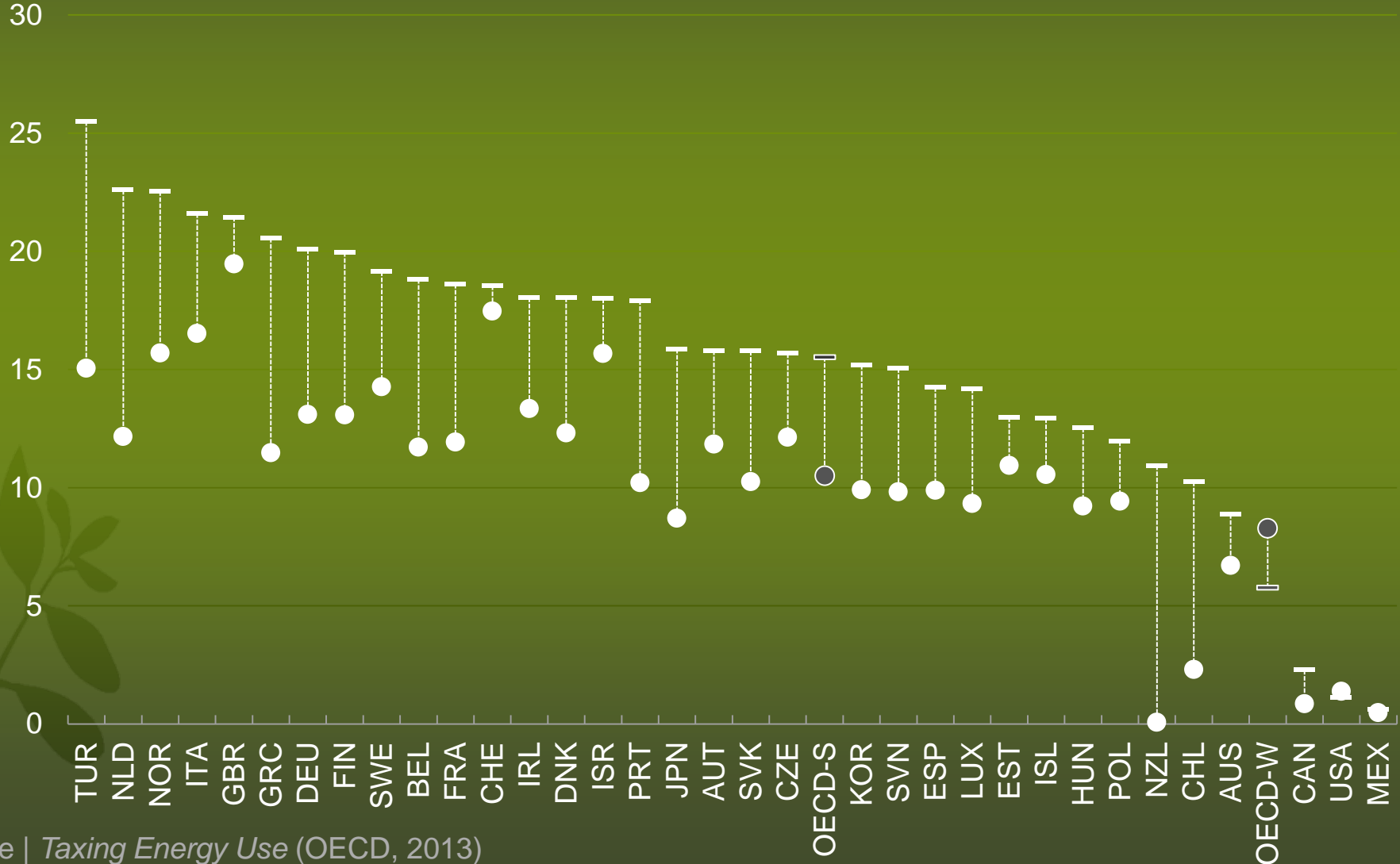
| EUR per GJ        | Oil products | Coal & peat | Natural gas | All fuels |
|-------------------|--------------|-------------|-------------|-----------|
| Transport         | 11.8         | -           | 0.6         | 11.5      |
| Heating & process | 1.7          | 0.5         | 0.7         | 0.9       |
| Electricity       | 0.9          | 0.7         | 1.2         | 0.9       |
| All uses          | 7.9          | 0.8         | 0.8         | 3.3       |



# Transport fuels: gasoline & diesel

– Gasoline (road use) ● Diesel (road use)

Tax rate (€per GJ)





# External costs of transport fuel use

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- Climate change
  - Diesel contains roughly 18% more carbon per litre than gasoline
- Local air pollution
  - Not directly tied to the amount of fuel use: fuel & vehicle standards can reduce air pollutant emissions from fuel use
  - On average, diesel vehicles emit higher levels of particulate matter & nitrogen oxide per litre
- Congestion, road wear, accidents, noise,...
  - Not directly linked to fuel use, so fuel taxes are only an indirect way to internalise these costs





# Fuel efficiency & diesel tax rates

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- Even if a diesel car is more fuel efficient & produces less CO<sub>2</sub> per km driven, this does not justify a tax preference for diesel
- Tax rates are set per litre, so should reflect differences in social costs per litre: climate & air pollution costs per litre are higher for diesel
- Gasoline & diesel should “compete” based on prices that internalise the relevant externalities:
  - If diesel is sufficiently fuel efficient, it will still have a price advantage & consumers will have an incentive to choose diesel;
  - Subsidising diesel via a concessionary tax rate provides an incentive for diesel users to drive more, exacerbating the rebound effect & increasing social costs



# Policy implications for transport fuel taxes

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- From an environmental perspective, lower taxation of diesel is not warranted due to its higher emissions of carbon & local air pollutants
- The increased fuel efficiency of diesel vehicles does not provide a basis for lower taxation on environmental grounds
- Country-specific regulatory & policy settings will be relevant to the question of the appropriate tax rates
- A gradual approach to any changes could mitigate the impact of any tax increases on households & heavy vehicle transport
- Working paper due for publication in 2014



# Distributional impacts of environmental tax changes

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- The OECD is analysing the distributional impact of energy taxes
  - taxes on transport fuels, heating fuels, & electricity
  - impact on households across income & expenditure distribution & by socio-demographic characteristics
- Emerging insights: impacts differ between fuels
  - regressive for some, but proportional to progressive for others
- **Publication of results expected in 2015**





# Taxation of company car benefits

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- Tax settings relating to company car benefits & commuting can provide an implicit subsidy to fossil fuels & driving
- The use of a company car for personal purposes is a form of income, that most countries tax under fringe benefit tax rules
- If the amount of the benefit is not fully captured by the tax system, there is an implicit subsidy for the use of company cars





# The benchmark tax treatment

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- For 27 countries, we compared tax settings against a consistent benchmark, designed to capture the full benefit of company car use.
- The benchmark has two parts:

## A capital component:

- % of vehicle value (on declining basis)
- Reflects the fixed costs of company car ownership (financing costs, depreciation, taxes & registration charges)

## A distance component:

- EUR per kilometre driven for personal purposes
- Reflects the variable costs related to driving (fuel costs, maintenance, tyres)



# Headline results

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- The amount of the benchmark benefit captured by country tax systems was estimated at 50% (low estimate: 44%; high estimate, 58%)
- Most country tax systems do not increase tax payable for distance driven, meaning employees face no cost of driving further
- This represents a tax expenditure in 2012 of EUR 27 billion (low estimate EUR 19 billion; high estimate, EUR 34 billion)
- On average, each company car receives a tax expenditure of EUR 1 600 per year.





# Policy implications for company car taxation

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- Company car tax settings represent a significant tax expenditure as country tax systems do not fully capture the benefit to the employee of company car use
- The lack of increase in taxes from additional driving gives individuals an incentive to drive more, which has negative environmental impacts
  - These environmental impacts are likely to be significantly larger than the level of tax expenditures (forthcoming ENV working paper)
- Revisiting company car tax settings can therefore contribute to fiscal & environmental goals
- Working paper due for publication in 2014



# THANK YOU

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