

### Ecuador

#### Macroeconomic and policy context

Between 2007 and 2017, Ecuador’s GDP grew by an average of 3.4% per year in total, and 1.7% per capita. Over the same period, energy-related CO<sub>2</sub> emissions increased by 2.1% per year in total, and 0.5% per capita. Diesel, the main source of CO<sub>2</sub> emissions from energy use in Ecuador, accounted for 36.1% of emissions in 2017, the same as in 2007. Non-combustible energy sources, mainly hydropower in Ecuador, accounted for 12.3% of primary energy use in 2017, up from 7.9% in 2007. Ecuador is a net energy and crude oil exporter, but a net importer of oil products. The whole of the population has access to electricity and 95% to clean cooking.

Key statistics	
GDP growth (annual) (2007-2017)	3.4%
GDP growth (annual, per capita) (2007-2017)	1.7%
CO <sub>2</sub> emissions growth (annual) (2007-2017)	2.1%
CO <sub>2</sub> emissions growth (annual, per capita) (2007-2017)	0.5%
Main combustible energy source; corresponding share of CO <sub>2</sub> emissions (2017)	Diesel, 36.1%
Non-combustible energy sources; share of primary energy use (2017)	12.3%
Total energy self-sufficiency (%) (2017)	207.0%
Share of population with access to electricity (2018) SDG 7.1.1	100.0%
Share of population with access to clean cooking (2018) SDG 7.1.2	94.0%
Tax-to-GDP ratio (2017)	19.9%

The government of Ecuador has committed to pursuing sustainable economic development policies focused on addressing Ecuador’s vulnerability to climate change and expanding domestic renewable energy production in its First Nationally Determined Contribution. In this NDC, Ecuador set an unconditional GHG emissions reduction target for the energy sector of between 20.4-25%, relative to the BAU scenario, by 2025. Ecuador’s tax-to-GDP ratio of 19.9% is lower than the OECD and LAC averages<sup>1</sup> of 33.9%, 22.8%, respectively, but higher than the Africa average of 17.2%.

Sources as specified in TEU-SD brochure.

#### Taxes and subsidies on energy use, 2018

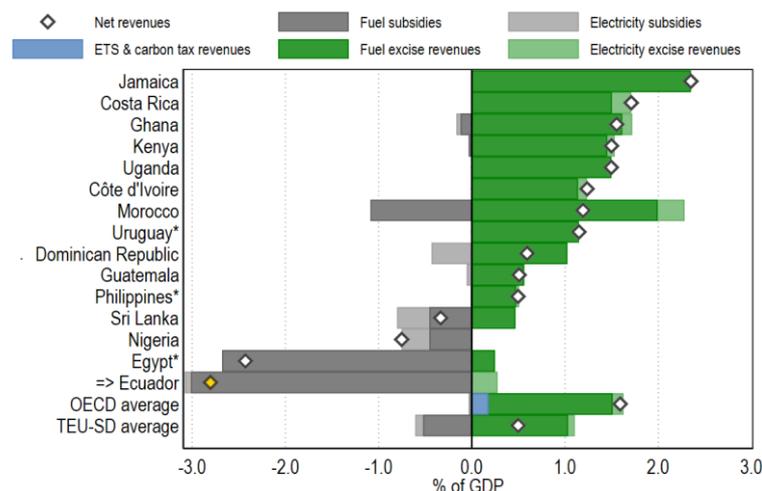
Ecuador does not have an explicit carbon tax, nor a CO<sub>2</sub> emissions trading system. However, it collects energy taxes including:

- ◆ A public lighting charge on electricity; TEU-SD classified two kinds of subsidies to be in operation in 2018:
- ◆ Fossil fuel subsidies on gasoline, diesel, fuel oil, aviation fuel, LPG and natural gas, including the road, aviation, agriculture & fishing, generation, industry, residential and commercial sectors.
- ◆ Subsidies on electricity for residential consumers subject to various consumption thresholds. People with disabilities and senior citizens above 65 years of age receive additional subsidies.

#### Net energy tax revenues, 2018

Net energy tax revenues are a bottom-up estimate of the net revenues resulting from taxes and subsidies on energy use.

Net energy tax revenues in Ecuador are negative and equal to 2.8% of GDP in 2018, putting a strain on domestic resource mobilisation as subsidies exceed taxes. Compared to other TEU-SD and OECD countries:



\* Since 2018, Egypt has phased out most subsidies on energy use and the Philippines have implemented a major tax reform. In Uruguay, certain fuels like diesel attract VAT but not an excise.

<sup>1</sup> Averages across countries refer to the simple, unweighted average.

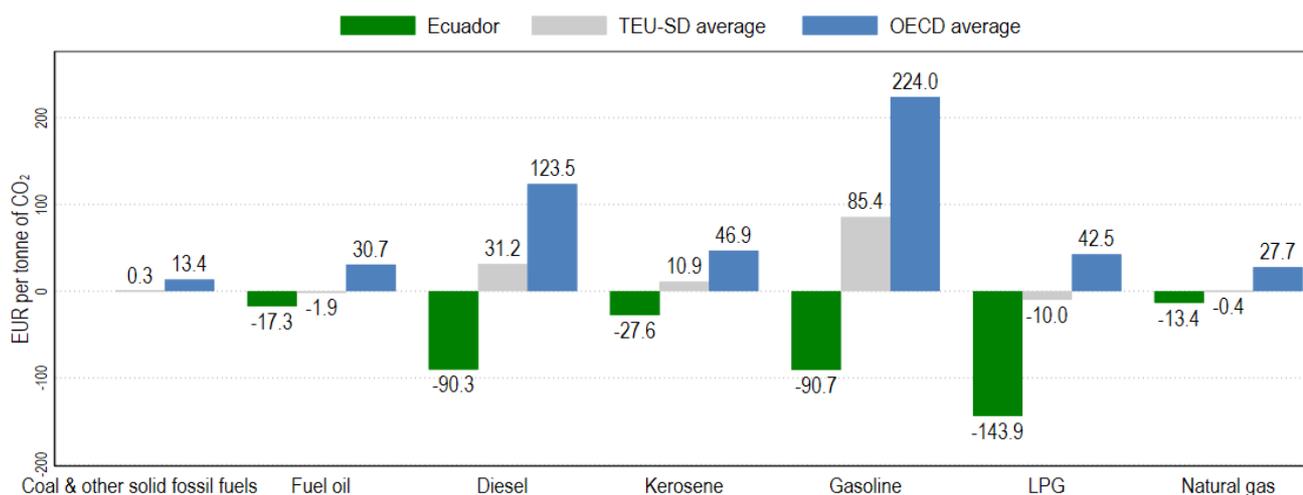
- ◆ Revenues from fuel excise taxes as a share of GDP are below the OECD and TEU-SD averages.
- ◆ Revenue from electricity excise taxes as a share of GDP are above the OECD and TEU-SD averages.
- ◆ Fuel subsidies as a share of GDP are substantially higher than both OECD and TEU-SD averages.
- ◆ Electricity subsidies as a share of GDP are similar to the TEU-SD average, and above the OECD average.

Recent developments: In 2019, a decree was passed to remove Ecuador's gasoline and diesel subsidies, but was quickly reversed. The current government has committed to develop another reform package that includes benefits for those most vulnerable to fuel price increases.

### Average effective carbon rates by fuel, 2018

The Effective Carbon Rate (ECR) is the total price that applies to CO<sub>2</sub> emissions from energy use as a result of taxes and emissions trading, net of fuel subsidies. A higher ECR encourages consumers and producers to use cleaner energy sources or reduce energy use, avoiding CO<sub>2</sub> emissions and local pollution, while taxes and permit auctioning raise public revenue.

- ◆ All ECRs are negative, with the exception of coal. However, coal use in Ecuador is negligible. This implies that fossil forms of energy consumed in Ecuador are de facto subsidised.
- ◆ Kerosene and natural gas, mainly used in the off-road sector and power generation respectively, face the highest ECRs. The former sectors account for 3.3% and 6.7% of Ecuador's CO<sub>2</sub> emissions from energy use.
- ◆ Fuel oil, mainly used for power generation and diesel, gasoline and LPG, mostly used in the road and residential & commercial sectors, face the lowest ECRs. The former sectors represent 46.8% and 17.5% of Ecuador's CO<sub>2</sub> emissions from energy use, respectively.

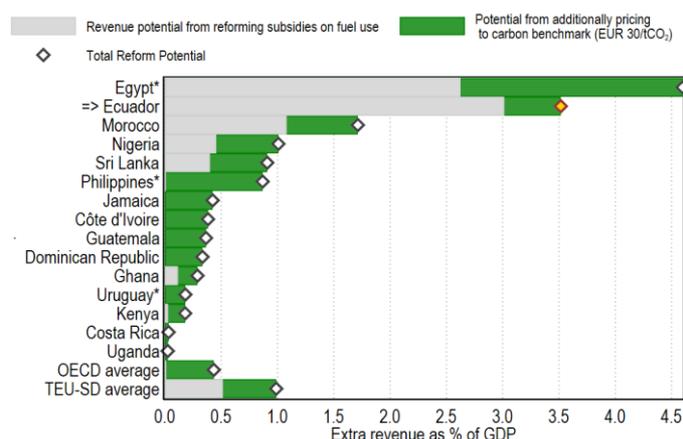


Ecuador has low effective carbon rates relative to the OECD and TEU-SD averages.

### Revenue potential from carbon price reform

By how much would tax revenues increase if ECRs were raised to reach EUR 30/tCO<sub>2</sub> for all fossil fuels? The benchmark of EUR 30 is a low-end estimate of the climate damage caused by each tonne of CO<sub>2</sub> emitted. An equitable reform package is critical to ensuring that vulnerable groups, which also tend to be those that are disproportionately affected by climate change, will be able to access clean energy.

Ecuador's tax revenue potential from carbon price reform is an increase of revenue worth 3.5% of GDP, which is substantially higher than both the OECD and TEU-SD averages. The potential increase of 0.5% of GDP if ECRs were raised to reach the benchmark rate of EUR 30/tCO<sub>2</sub> for all fossil fuels, is above the OECD average and similar to the TEU-SD average. Most significantly, Ecuador could gain 3.0% in GDP from phasing out subsidies on fuel use, which is the highest potential gain of all TEU-SD countries.



\* Since 2018, Egypt has phased out most subsidies on energy use and the Philippines have implemented a major tax reform. In Uruguay, certain fuels like diesel attract VAT but not an excise.