

Kenya

Macroeconomic and policy context

Key statistics	
GDP growth (annual) (2007-2017)	5.0%
GDP growth (annual, per capita) (2007-2017)	2.3%
CO ₂ emissions growth (annual) (2007-2017)	3.3%
CO ₂ emissions growth (annual, per capita) (2007-2017)	0.6%
Main combustible energy source; corresponding share of CO ₂ emissions (2017)	Biofuels 83.2%
Non-combustible energy sources; share of primary energy use (2017)	16.4%
Total energy self-sufficiency (%) (2017)	80.0%
Share of population with access to electricity (2018) SDG 7.1.1	75.0%
Share of population with access to clean cooking (2018) SDG 7.1.2	10.0%
Tax-to-GDP ratio (2017)	18.2%

Sources as specified in TEU-SD brochure.

lower than the OECD and LAC averages¹ of 33.9% and 22.8%, respectively, and higher than the Africa average of 17.2%.

Taxes and subsidies on energy use, 2018

Kenya does not have an explicit carbon tax, nor a CO₂ emissions trading system. However, it does collect energy taxes, including:

- ◆ Excise taxes apply to petroleum products.
- ◆ A levy on electricity consumption, passed on to the Energy and Petroleum Regulatory Authority and a levy on rural electrification, passed on to the Rural Electrification Authority are both classified as electricity excise taxes in TEU.

TEU-SD classified one subsidy to be in effect in 2018:

- ◆ An LPG subsidy programme targeting low-income households.

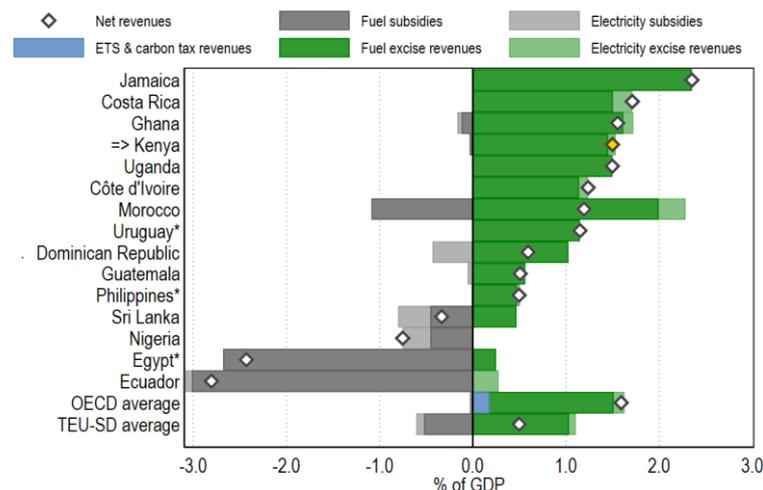
Net energy tax revenues, 2018

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 Kenya represent 1.5% of GDP in 2018, contributing positively to domestic resource

Between 2007 and 2017, Kenya's GDP grew by an average of 5.0% per year in total, and 2.3% per capita. Over the same period, energy-related CO₂ emissions increased by 3.3% per year in total, and 0.6% per capita. Biofuels accounted for 83.2% of CO₂ emissions from energy use in 2017, down from 88.0% in 2007. Diesel, the main fossil fuel used, accounted for 7.3% in 2017, up from 5.3% in 2007. Non-combustible energy sources, mainly hydropower in Kenya, accounted for 16.4% of primary energy use in 2017, up from 6.9% in 2007. Kenya is a net energy and oil importer. Electricity has reached 75% of the population but only 10.0% have access to clean cooking.

The government of Kenya has committed to pursuing sustainable economic development policies focused on addressing Kenya's vulnerability to climate change and expanding domestic renewable energy production in its First Nationally Determined Contribution. In this NDC, Kenya set a GHG emissions reduction target of 32% by 2030, relative to the BAU scenario. Kenya's tax-to-GDP ratio of 18.2% is



* 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.

¹ Averages across countries refer to the simple, unweighted average.

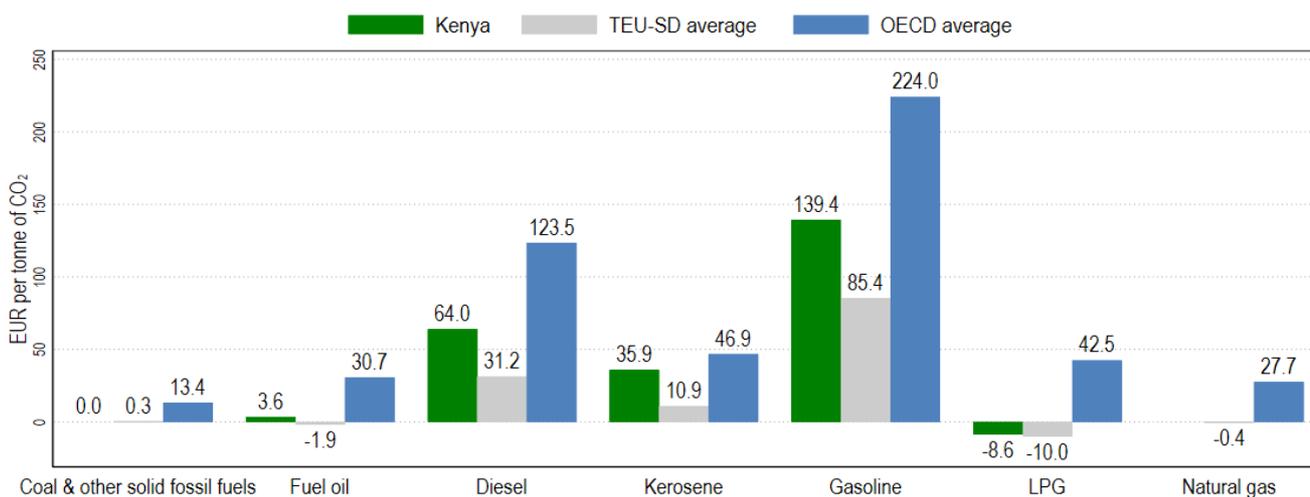
mobilisation as taxes exceed subsidies. Compared to other countries considered in TEU-SD and OECD countries:

- ◆ Revenue from fuel excise taxes as a share of GDP is above the OECD and TEU-SD averages.
- ◆ Revenue from electricity excise taxes as a share of GDP is below the OECD average, and above the TEU-SD average.
- ◆ There are negligible (barely visible on the chart) fuel and electricity subsidies, similar to the OECD average and a majority of TEU-SD countries.

Average effective carbon rates by fuel, 2018

The Effective Carbon Rate (ECR) is the total price that applies to CO₂ 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 CO₂ emissions and local pollution, while taxes and permit auctioning raise public revenue.

- ◆ Coal, fuel oil, and LPG, mainly used in industry and electricity, face the lowest ECRs. No natural gas consumption is reported. The industry and electricity sectors represent 32.0% and 2.0% of Kenya's CO₂ emissions from energy use, respectively. Electricity emissions are low because Kenya produces most of its electricity from renewable sources, including geothermal energy, hydropower, as well as wind and solar.
- ◆ Diesel, kerosene and gasoline face the highest ECRs. The road and residential & commercial sectors, where the bulk of these fuels is consumed, represent 8.9% and 57.0% of Kenya's CO₂ emissions from energy use, respectively. Most CO₂ emissions in the residential & commercial sector are not from fossil fuels however, but from the combustion of biofuels, including charcoal.



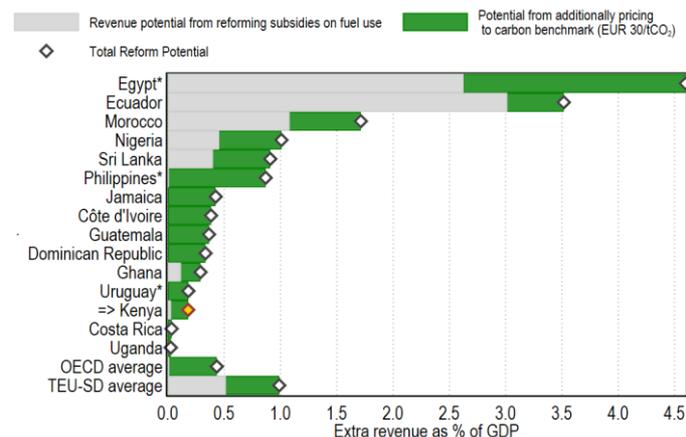
Kenya has low effective carbon rates relative to the OECD average. Compared to other TEU-SD countries:

- ◆ The ECR is high for fuel oil, diesel, kerosene and gasoline relative to the TEU-SD average.
- ◆ The ECR on coal, LPG and natural gas is similar to the TEU-SD average.

Revenue potential from carbon price reform

By how much would tax revenues increase if ECRs were raised to reach EUR 30/tCO₂ for all fossil fuels? The benchmark of EUR 30 is a low-end estimate of the climate damage caused by each tonne of CO₂ 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.

Kenya's tax revenue potential from carbon price reform, if ECRs were raised to the benchmark rate of EUR 30/tCO₂, is an increase of revenue worth 0.2% of GDP. This is lower than the OECD and TEU-SD averages. There is no significant potential gain from reforming subsidies on fuel use, which is consistent with the OECD average and the majority of TEU-SD countries.



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