Nigeria

Macroeconomic and policy context

Key statistics	
GDP growth (annual) (2007-2017)	4.9%
GDP growth (annual, per capita) (2007-2017)	2.1%
CO_2 emissions growth (annual) (2007-2017)	3.1%
CO_2 emissions growth (annual, per capita) (2007-2017)	0.3%
Main combustible energy source; corresponding share of CO2 emissions (2017)	Biofuels, 86.2%
Non-combustible energy sources; share of primary energy use (2017)	0.3%
Total energy self-sufficiency (%) (2017)	159.0%
Share of population with access to electricity (2018) SDG 7.1.1	57.0%
Share of population with access to clean cooking (2018) SDG 7.1.2	10.0%
Tax-to-GDP ratio (2017)	5.7%

Sources as specified in TEU-SD brochure.

Between 2007 and 2017, Nigeria's GDP grew by an average of 4.9% per year in total, and 2.1% per capita. Over the same period, energy-related CO_2 emissions increased by 3.1% per year in total, and 0.3% per capita. Biofuels accounted for 86.2% of CO_2 emissions from energy use in 2017, down from 89.6% in 2007, while gasoline, the main fossil fuel used in Nigeria, accounted for 6.3% in 2017, up from 4.1% in 2007. Non-combustible energy sources, mainly hydropower, accounted for 0.3% of primary energy use in 2017, down from 0.5% in 2007. Nigeria is a net energy and oil exporter. In 2018, 57% of the population had access to electricity with only 10% able to use clean cooking fuels and technologies.

The government of Nigeria has committed to pursuing sustainable economic development policies focused on addressing Nigeria's vulnerability to climate change and expanding domestic renewable energy production in its First Nationally Determined Contribution. In this NDC, Nigeria set an unconditional GHG emissions reduction target of 20% by 2030, relative to the BAU scenario. Nigeria's tax-to-GDP ratio of 5.7% is lower than the OECD, LAC and Africa averages[1] of 33.9%, 22.8% and 17.2%, respectively.

Taxes and subsidies on energy use, 2018

Nigeria does not have an explicit carbon tax, nor a CO_2 emissions trading system. It also does not have other specific taxes on energy use.

TEU-SD classified two subsidies to be in effect in 2018:

♦ Gasoline price regulation to a level below supply costs.

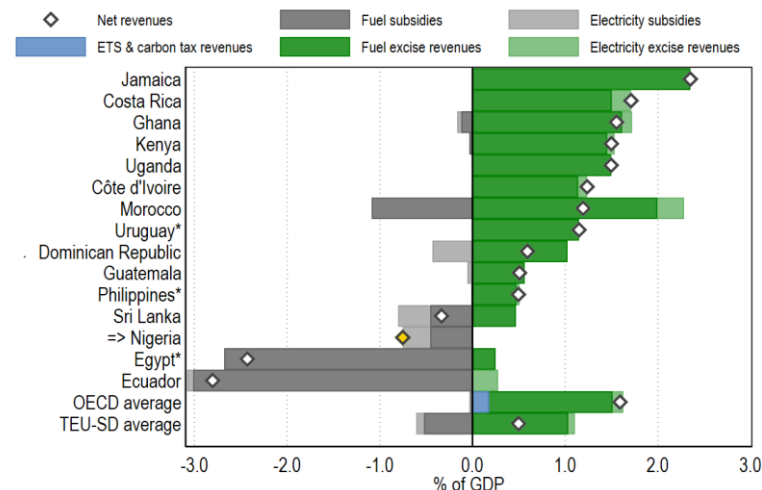♦ Electricity end-user tariffs that distribution companies charge are lower than end-user cost-reflecting tariffs.

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 Nigeria are negative and amount to 0.8% of GDP in 2018, contributing negatively to domestic resource mobilisation as Nigeria subsidises energy use. Compared to the other countries considered in 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.

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

- Revenues from fuel and electricity excise taxes as a share of GDP are lower than the OECD and TEU-SD averages.

- Subsidies for fuel are higher than the OECD average, but lower than the TEU-SD average.

- Subsidies for electricity are higher than the OECD and TEU-SD averages.

Recent developments: The Minister of State for Petroleum Resources announced in mid-2020 that fuel subsidies would be removed, and that fuel prices would be subject to market-based pricing mechanisms.

Average effective carbon rates by fuel, 2018

The Effective Carbon Rate (ECR) is the total price that applies to CO_2 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_2 emissions and local pollution, while taxes and permit auctioning raise public revenue.

Gasoline, mostly used in road transport, faces the only non-zero ECR in Nigeria. It is subject to a negative ECR, which means that gasoline use is subsidised. The road sector accounts for 7.9% of Nigeria's CO_2 emissions from energy use.

- The ECR of all other energy categories, i.e. coal, fuel oil, diesel, kerosene, LPG and natural gas, most of which are used in industry and electricity, is zero. The industrial and electricity sectors are responsible for 13.5% and 1.7% of Nigeria's CO_2 emissions from energy use, respectively.
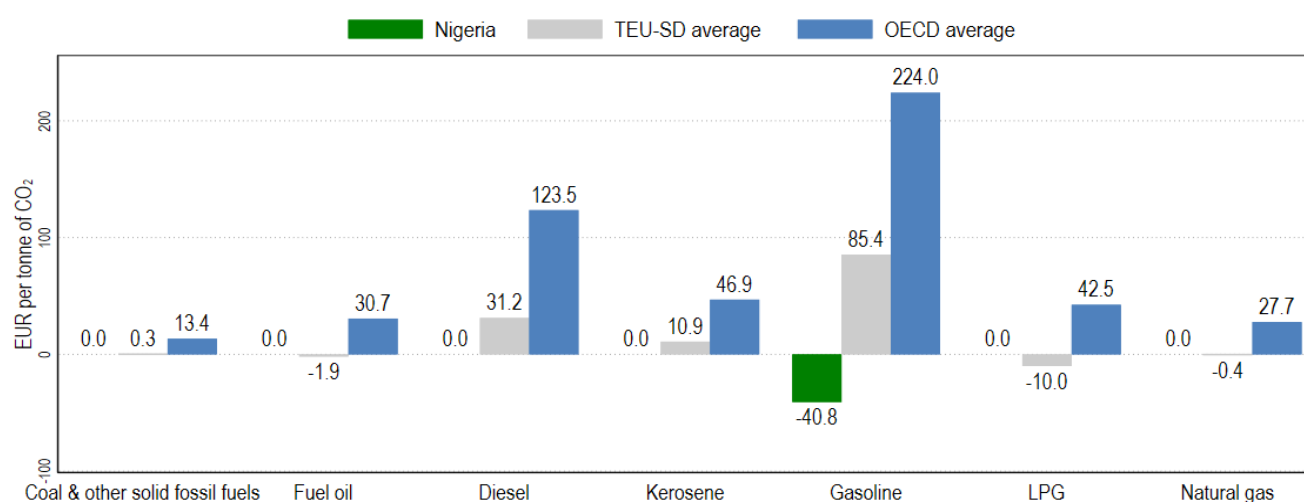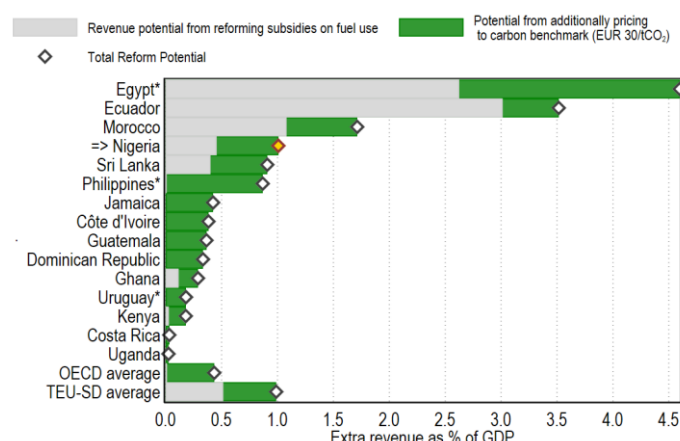

Nigeria has low effective carbon rates relative to the OECD average. Compared to other TEU-SD countries:

- The ECR on kerosene, diesel and gasoline is low relative to the TEU-SD average.

- The ECR on coal, fuel oil and natural gas is similar to the TEU-SD average.

- The ECR on LPG is higher than 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/tCO_2 for all fossil fuels? The benchmark

of EUR 30 is a low-end estimate of the climate damage caused by each tonne of CO_2 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.

Nigeria's tax revenue potential from carbon price reform, if ECRs were raised to the benchmark rate of EUR 30/tCO_2, amounts to 0.6% of GDP. This is higher than the OECD and TEU-SD averages. Nigeria could also benefit from an estimated revenue increase in the magnitude of 0.5% of GDP by reforming subsidies on fuel use, which is higher than the OECD average and similar to the TEU-SD average. Thus, Nigeria's total tax revenue potential from a carbon price reform is an increase of revenue corresponding to 1% of GDP.

* 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.