This is one of a series of country factsheets which summarise trends in fossil fuel and renewable energy use, transport energy targets, and threats and opportunities in the energy and transport sectors.

Nexus between Transport and Renewable Energy

Nigeria

Transport GHG emissions in Nigeria have grown slower than population and GDP, generally due an under-supply of transport options. Reducing future growth in emissions will require enhanced efforts to implement low-carbon mobility solutions and increase transport efficiency. Successful subsidy reforms are currently threatened, straining budgets that could be used to improve mobility and advance sustainable development in coming decades.

Country Typology Framework

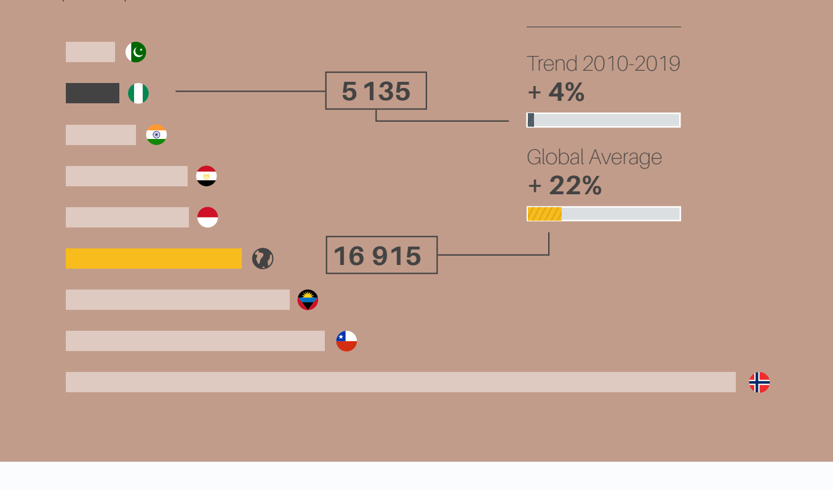
This framework is the basis for an analysis of fossil fuel subsidy reform and renewable energy scale up in the transport sector, which can reduce carbon emissions and generate tax revenues for sustainable development.

Fossil fuel subsidy trends

Targets to reduce transport oil demand	Growing / 'rebound'	Decreasing
Ambitious targets	**Determined** Antigua & Barbuda	**Front runner** India | Norway
Moderate targets	**Mixed** Chile | US	**Progressive** Pakistan
Unambitious/ no targets	**Dormant** **Nigeria**	**Latent** Egypt | Indonesia

GDP per capita 2019

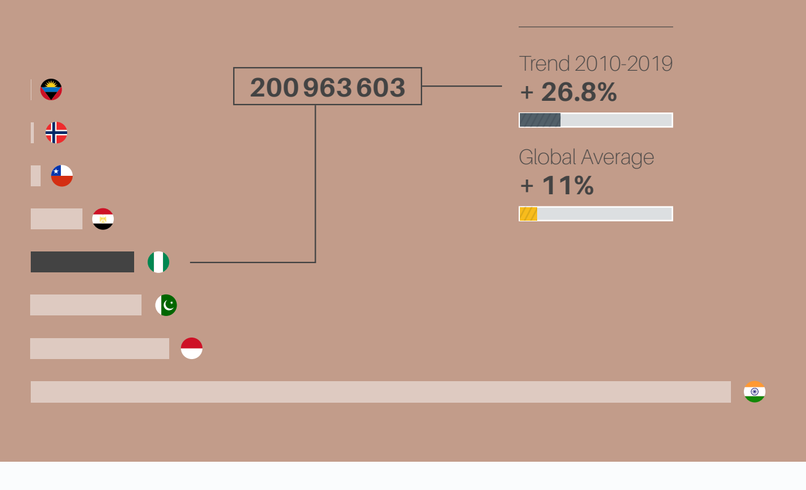
(PPP (constant 2017 international $) per capita)



Trend 2010-2019
+ 4%

Global Average
+ 22%

Population 2019



Trend 2010-2019
+ 26.8%

Global Average
+ 11%

(Source: World Bank)

Fossil Fuel Energy

Net import/export oil products (EJ) (2019)
(Source: IEA)

893 794
From net exporter to net importer

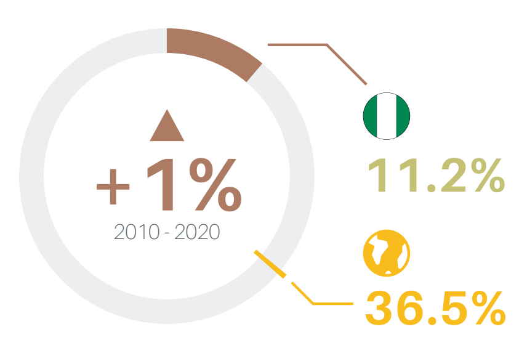
Trend 2010-2020
+38%

Net import/export crude oil (EJ) (2019)
(Source: IEA)

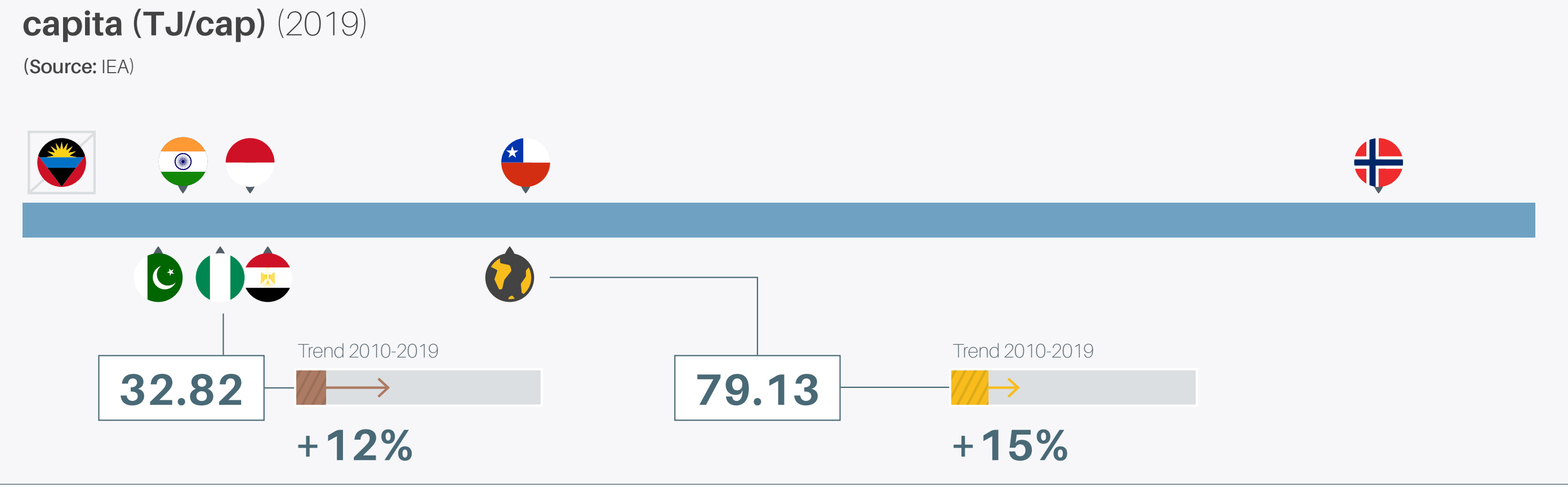
-3 939 522
Exporter

Trend 2010-2020
-18%

Share of power generation in total fossil fuel CO_2 emissions
(Source: EDGAR)



Total energy supply per capita (TJ/cap) (2019)
(Source: IEA)



Fossil fuel consumption subsidies in USD per capita (2019)
(Source: FossilFuelSubsidyTracker)

8.7
Share of GDP
0.39%

Trend 2011-2019
-78%

Most consumption subsidies in Nigeria focus on oil products. The steep decrease in subsidies was driven by a 2014 reform, using low market prices to phase out subsidies .

(Source: Idrisu)

Fossil fuel production subsidies in USD per capita (2019)

—
Share of GDP
—

Trend 2011-2019
no data
—

Transport fossil fuel subsidies in million USD per capita (2019)
(Source: IEA FFS)

8.2
Share of GDP
0.0000004%

Trend 2014-2019
-34%

Subsidies were nearly eliminated by 2016, but fuel prices were kept stable despite increasing oil prices, leading to a revival of subsidies from 2018.

(Source: Idrisu)

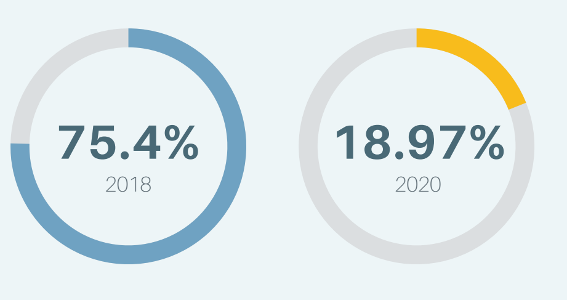
Nigeria's federal government approved the $5.9 billion Nigerian Economic Sustainability Plan in July 2020. This pandemic recovery plan includes investments in clean energy, agriculture and infrastructure. The plan is intended to increase energy access and equity and is one of the largest renewable energy recovery packages from a middle- or low-income country to date.

(Source: WRI).

Renewable Energy

Share of renewables in:

Primary energy* (%) | Electricity generation (%)



(Source: REN21)

*Primary energy refers to all energy used in a country before transformation and encompasses all uses, including all non-electricity use of energy

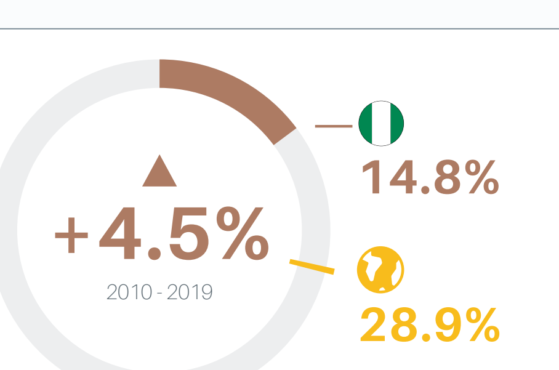
Renewable electricity target
(Source: REN21)

2030
30%
of on-grid generation by 2030

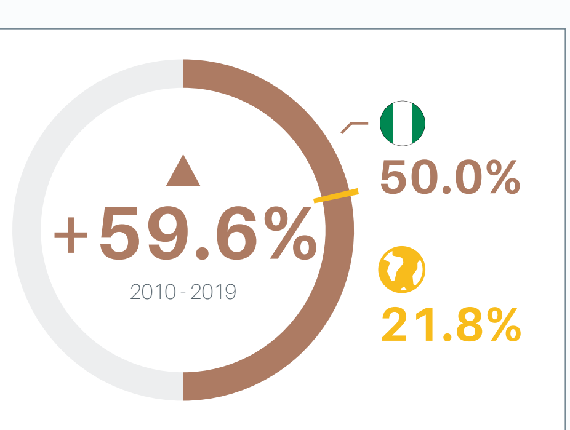
Nigeria has additional targets to install 13 GW of off-grid renwable capacity, eliminate diesel and gasoline generators, and replace diesel and single cycle steam turbines with combined cycle by 2030.

Transport

Share of transport in total energy demand (%) (2019)
(Source: IEA)

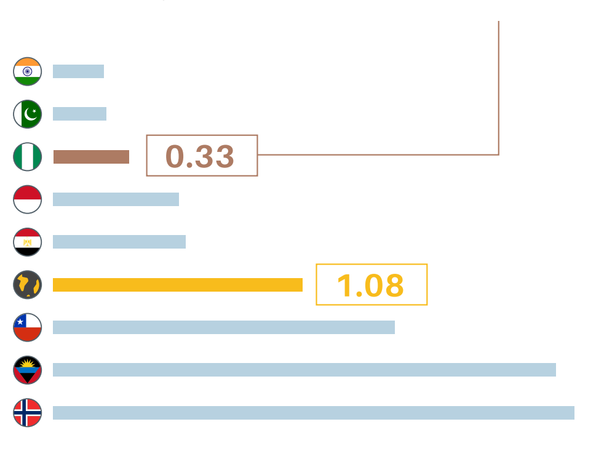


Share of transport in total fossil fuel CO_2 emissions (%) (2019)
(Source: EDGAR)



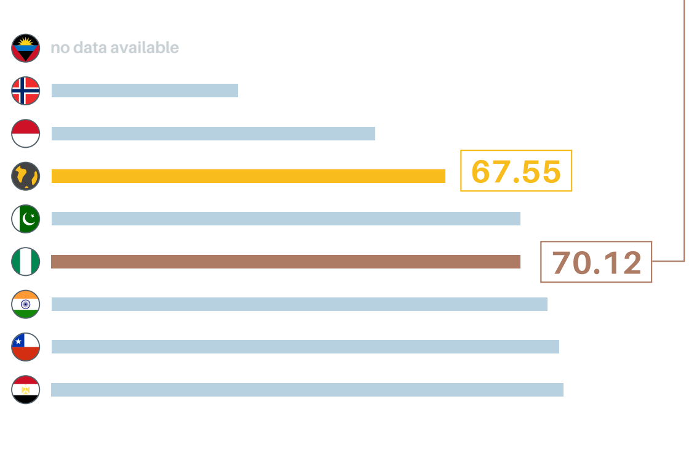
Transport CO_2/capita (t CO_2/cap) (2019)
(Source: EDGAR, World Bank)

Trend 2010-2019
+86%

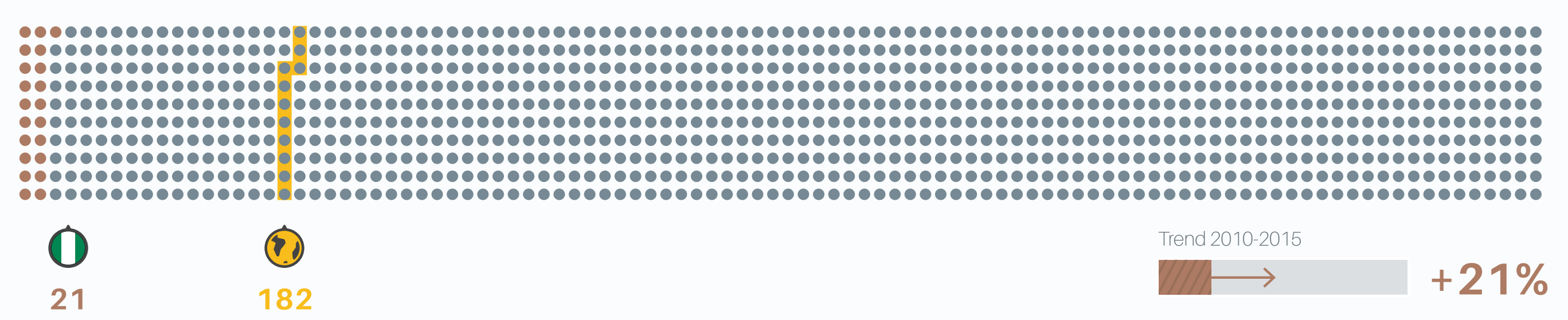


Carbon intensity of road transport (gCO_2/MJ)
(Source: IEA)

Trend 2010-2019
+0.4%



Motorisation rate 2015 (vehicles* per 1 000 inhabitants)



Trend 2010-2015
+21%

(Source: OICA) *passenger cars and commercial vehicles

VEHICLE ELECTRIFICATION

	Total number in use (2019)	Growth (2018-2019)	Number sold (2019)	Growth (2018-2019)
Electric Cars	—	—	—	—
Electric 2-wheelers	—	—	—	—
Electric 3-wheelers	—	—	—	—
Electric Buses	—	—	—	—

Nigeria does not currently have any support policies for electric vehicles.

MAX.ng, is a Nigeria-based motorcycle ridehailing and delivery service. The company has introduced a fleet of domestically-manufactured electric motorcycles in partnership with a domestic renewable energy company, to provide motorcycle charging stations.

(Source: Nation)

EV targets

none

BIOFUELS

Mandate biodiesel blend (%)

none

The National Renewable Energy Action plan outlines targets of a share of 57.34% of bioethanol and 17.45% of biodiesel by 2030.

(Source: GoN)

Mandate bioethanol blend (%)

none

▼ Use (2019) Target (2030)

VEHICLE EFFICIENCY

Fuel efficiency standard passenger vehicles (g/km)

Current → Target
none

Vehicle efficiency standards HDVs (l/100 km)

Current → Target
none

Other transport targets

none

Threats and Opportunities

ENERGY

THREATS

Nigeria is Africa's leading oil producer, with average daily production of roughly 1.8 million barrels in 2020. The petroleum industry accounts for about 9% of Nigeria's GDP and for almost 90% of its export value (Statista). Reduced oil demand through global climate action could reduce revenues in Nigeria in the medium term.

OPPORTUNITIES

Nigeria's National Renewable Energy Action Plan provides opportunities for Nigeria to build its renewable energy strategy with local resources (Source: GoN). Off-grid renewables offer potential to provide clean energy to the nearly 50% of the population that did not have access to electricity in 2019 (Source: World Bank).

TRANSPORT

THREATS

Nearly half of Nigeria's population resides in cities and relies on informal transport solutions, which are often unregulated. The national government does not provide financial or institutional support to secondary cities, which is needed to establish more widespread and intergrated public transport systems (SSTAP).

Nigeria has one of the highest second-hand vehicle import rates in the world, representing 16% of Africa's imports between 2015 and 2018 (UNEP). The high emissions and low efficiency of second-hand vehicles contribute to greater pollution and higher energy consumption. Increasing support for zero-emission vehicles - combined with stricter import standards - could reduce costs to individuals and society.

OPPORTUNITIES

Nigeria's current low car ownership rate offers potential to transition to more sustainable transport systems without replacing a large stock of existing vehicles.

A large part of Nigeria's population relies on non-motorised, shared and public transport solutions. Further measures are needed to enhance the quantity and quality of these modes and to prevent the unsustainable spread of private cars and SUVs.

The Regional Fuel Economy Roadmap, agreed by the Economic Community of West African States, offers an opportunity to reduce fuel imports if decisively implemented at national levels (TCC-GSR).

Sources

EDGAR | ETT | GoN | ICCT LDV | Idrisu | IEA | IEA EV | IEA FFS | NDC | OECD | OICA | REN21 | TCC-GSR | World Bank | WRI | NDC draft | SEA4ALL | Stratas Advisors (2018) | SSATP | ICCT | Statista

LEDS GLOBAL PARTNERSHIP
Advancing climate-resilient low emission development around the world

SLOCAT
Partnership on Sustainable, Low Carbon Transport