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.

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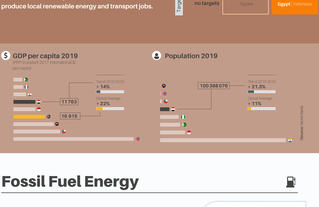
Nexus between Transport and Renewable Energy

Egypt

Egypt has relatively low levels of vehicle ownership and has had modest growth in transport CO_2 emissions in the past decade. However, it lacks detailed transport decarbonisation strategies, and its per-capita transport emissions are roughly double the Africa average. Continued fossil fuel subsidies consume public budgets that could be used to produce local renewable energy and transport jobs.

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 a climate-resilient development.



GDP per capita 2019

PPP (constant 2017 international $) per capita

Population 2019

Source: World Bank

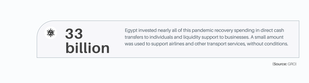
Fossil Fuel Energy

Net import/export oil products (EJ) (2020)
317 659
Net importer
Source: IEA
Trend 2010-2020
+76%

Net import/export crude oil (EJ) (2020)
-134 274
Net exporter
Source: IEA
Trend 2010-2020
-44%

Share of power generation in total fossil fuel CO_2 emissions

Total energy supply per capita (T.J/cap) (2019)
Source: IEA



Fossil fuel consumption subsidies in USD per capita (2019)
143
Share of GDP
4.73%
Source: Fossil Fuel Subsidy Tracker
Trend 2011-2019
-44%

In 2014, Egypt initiated price reforms, mostly through the periodic increase of prices for electricity and other forms of fossil fuels.

In 2019, Egypt committed to cut fuel subsidies by 40% and electricity subsidies by 75% in financial year 2019-2020.

Source: ESMAP, IEA 2020

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)
50
Source: IEA FTSI
Trend 2014-2019
-37%

Subsidies for petrol and diesel were gradually reduced in line with the general subsidy reform in 2014.

Source: ESMAP

33 billion

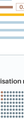
Egypt invested nearly all of this pandemic recovery spending in direct cash transfers to individuals and liquidity support to businesses. A small amount was used to support airlines and other transport services, without conditions.

Source: UNCI

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

including 12% wind, 2% solar and 6% hydropower

Source: EIRR3

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

Carbon intensity of road transport (gCO$_2$/MJ)
Source: IEA

Motorisation rate 2015 (vehicles* per 1 000 inhabitants)

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	●	—	●	—

Egypt has exempted tariffs for electric cars and increased tariff discounts for natural gas cars from 25% to 35%.

Source: ITA

Egypt has started operating electric buses, with fleets of 15 buses in Alexandria in 2018 and Cairo in 2019.

Source: TCC-GSR

Egypt's Ministry of Local Development announced in September 2021 a plan to provide 100 new electric buses for Egyptian cities.

Source: ET

EV targets

no targets

BIOFUELS

Mandate biodiesel blend (%)
none

Mandate bioethanol blend (%)
none

Year 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

The Suez Canal is a key transit route for oil and LNG shipments from the Persian Gulf to Europe and North America, and from North African and Mediterranean countries to Asia. Fees collected from these transit routes are significant sources of revenue for the Egyptian government (EIA).

With increasing domestic demand for transport fuel and projected decreasing global demand for oil due to emerging national climate policies, Egypt's oil export revenues could drop further. This poses a challenge for maintaining fossil fuel subsidies while investing in renewable energy to reach national targets.

Electricity generation capacity is now struggling to keep up with growing demand (IRENA). Expanded transport electrification will increase current challenges to provide sufficient power, and added demand will need to be considered in planning generation capacity.

OPPORTUNITIES

Egypt has an abundance of renewable energy resources, and most renewable technologies are already cheaper to implement than conventional alternatives (IRENA). Expanding renewables generation could reduce energy system costs and eliminate the need for fossil fuel subsidies.

Savings from reduced subsidies have previously been redirected to Egypt's health and education systems (ESMAP). Further reform measures could benefit especially low-income households (e.g. through purchase subsidies for electric vehicles, including two- and three-wheelers).

A subsidiary of renewable energy firm Infinity will provide, operate, and maintain 6,000 EV charging points across Egypt by 2023, in cooperation the Ministry of Electricity and Renewable Energy. (ONE)

TRANSPORT

THREATS

Cairo is one of the most congested cities in Africa, with trips taking 40% extra travel time due to vehicle traffic (TCC-GSR). Continued low prices for transport fuels will exacerbate existing congestion.

Increasing motorisation rates and a fast-growing urban population - which is concentrated in about 5% of the country's area - will further deteriorate functioning of Egypt's mobility system.

OPPORTUNITIES

Egypt has produced the first electric bus fully built by Egyptian workers with 60% local components (ONE). In 2019, the Ministry of Petroleum and Mineral Resources mandated electric charging points at all new fuel stations (ONE). Expanding vehicle electrification has the potential to create additional local jobs and economic opportunities.

Egypt is one of only four African countries that has imposed an outright ban on used vehicle imports (TCC-GSR), with an exception for environmentally-friendly imported cars. (ITA)

Combining fossil fuel subsidy removal with expanded renewable power generation will make electric mobility cheaper and more attractive, especially for public transport providers and fleet owners, enabling a faster transition to fleets that reduce local air pollution.

Budget savings from subsidy reform could be used to expand and improve public transport infrastructure, thus reducing congestion and enabling enhanced transport access for all.

Sources

ONE | EBRD | EDGAR | ESMAP | ET | GIRO | IEA | IEA EV | IEA FTS | IEA 2020 | IRENA | ITA | OECD | OICA | REN21 | TCC-GSR | World Bank

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