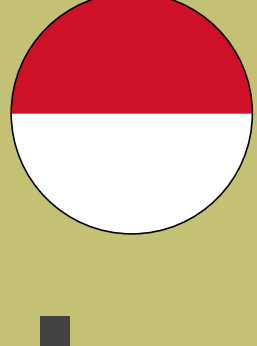


Nexus between Transport and Renewable Energy

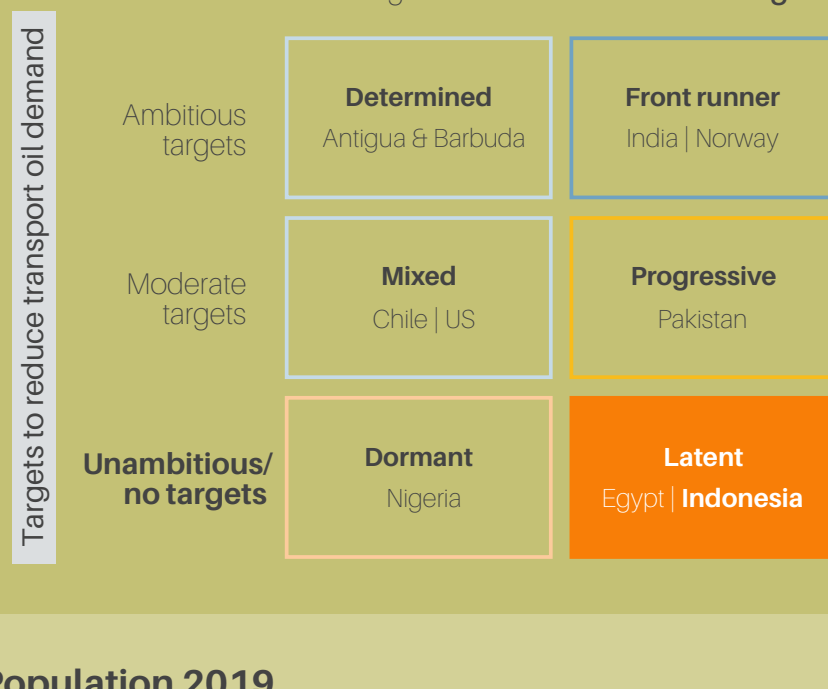


Country Typology Framework

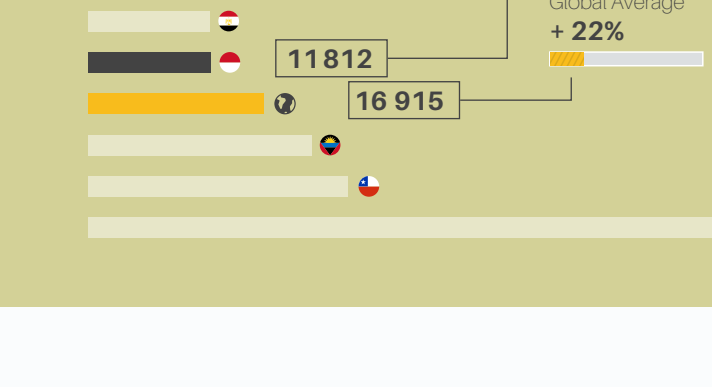
This framework is the basis for an analysis of fossil fuel subsidy reform and renewable energy scale up in the transport sector, which can reduce carbon emissions and generate tax revenues for sustainable development.

Indonesia

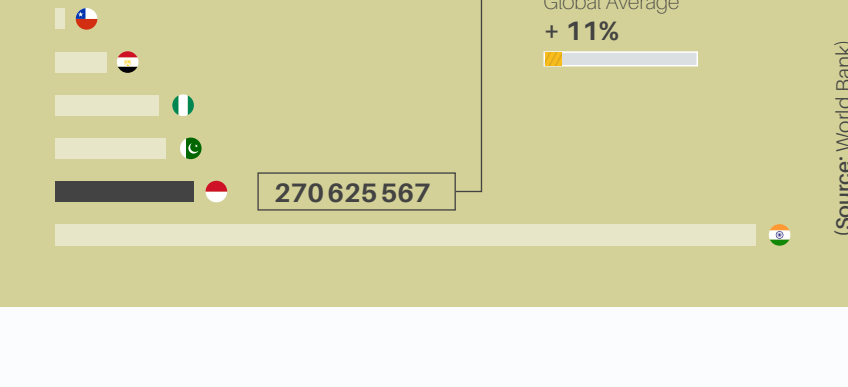
Indonesia has traditionally focused on biofuels for low-carbon transport and has recently started to embrace electric mobility to boost local economies and reduce fuel imports. Successful fossil fuel reforms during the last decade are now under threat amid rebounding fuel prices and a weak currency. A rebound would dampen new EV support mechanisms and consume budget needed for public and non-motorised transport investments to reduce urban congestion.



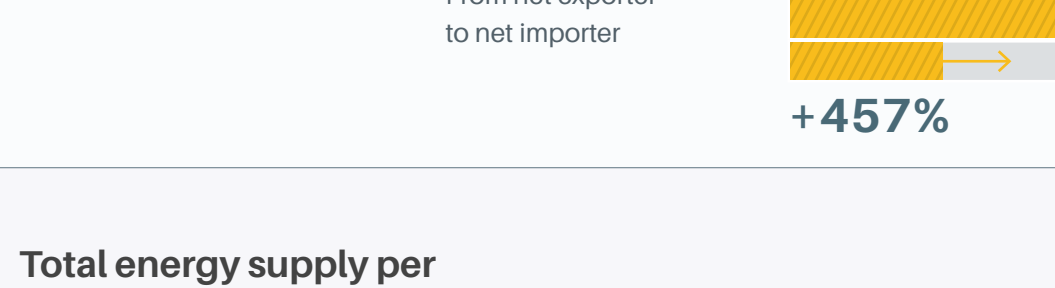
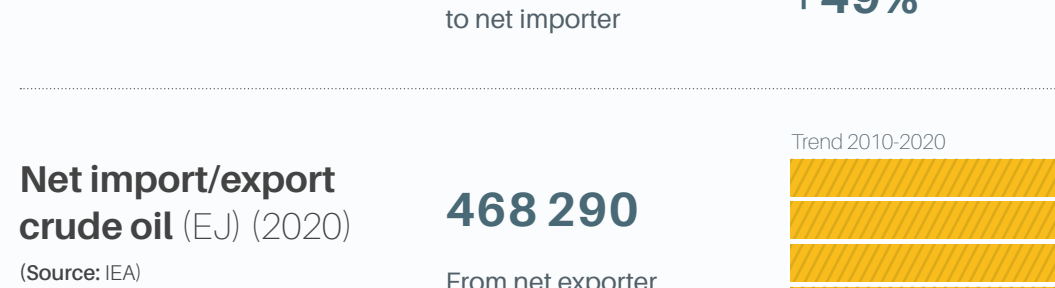
GDP per capita 2019



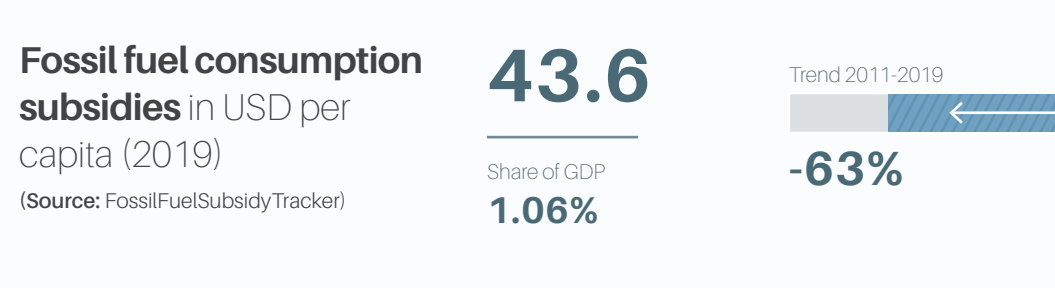
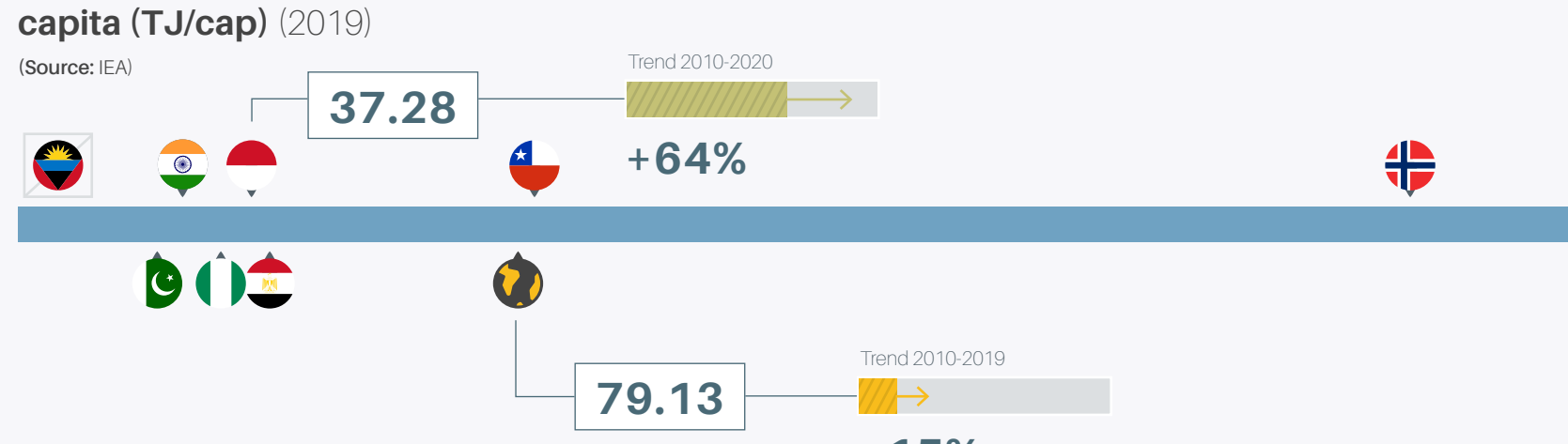
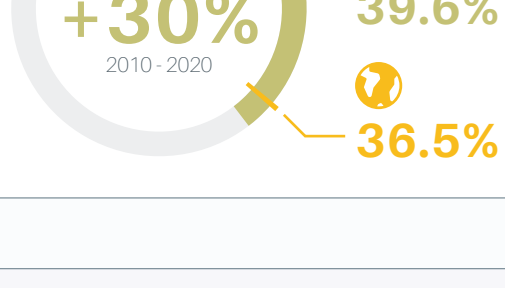
Population 2019



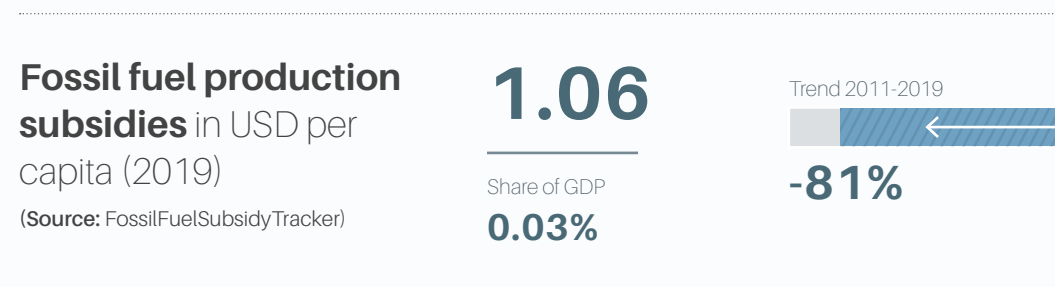
Fossil Fuel Energy



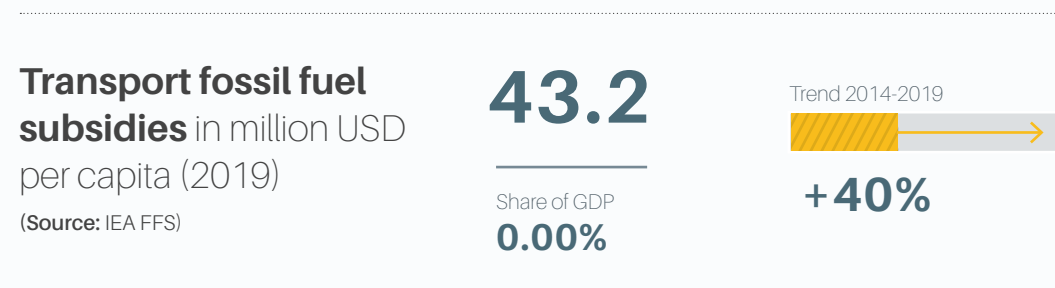
Share of power generation in total fossil fuel CO₂ emissions



In 2015, Indonesia cut subsidies to gasoline by 75% and for electricity by almost 50%, with the remaining subsidies supporting LNG, diesel and kerosene. From historic low levels in 2017 and 2018, subsidies increased by almost 50% between 2018 and 2019 due to a freeze in fuel and electricity prices.



Producer subsidies have been small and almost equally divided between natural gas and petroleum products between 2017 and 2019.

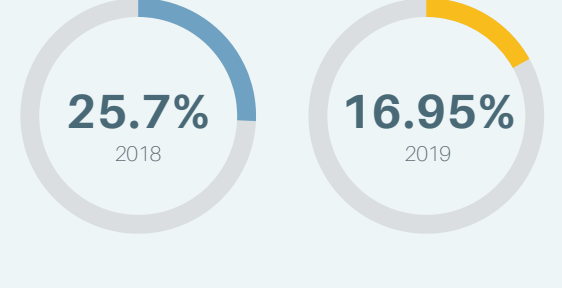


The energy-market reforms started in 2015 were very successful in reducing transport subsidies up to 2018, when prices were retained at lower levels despite increasing world market prices for oil.

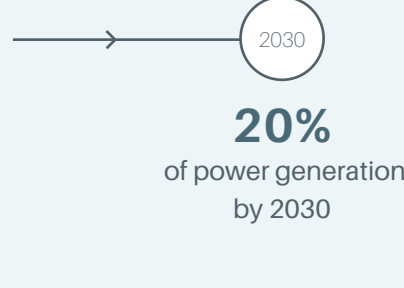
Since the beginning of the COVID19 pandemic in early 2020, Indonesia has committed at least USD 6.78 billion to supporting different energy types through new or amended policies (Source: Energy Policy Tracker). In 2020, subsidies for coal production have been reinstated in the wake of the pandemic, skyrocketing at over USD 3 billion, and production subsidies for oil and gas increased by a factor of 10, compared to 2019 levels. (Source: OECD)

Renewable Energy

Share of renewables in:

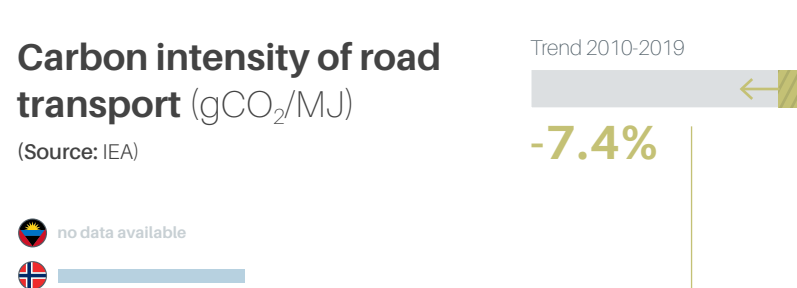
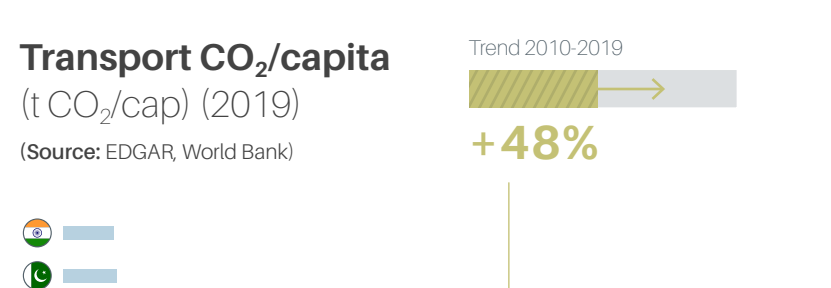
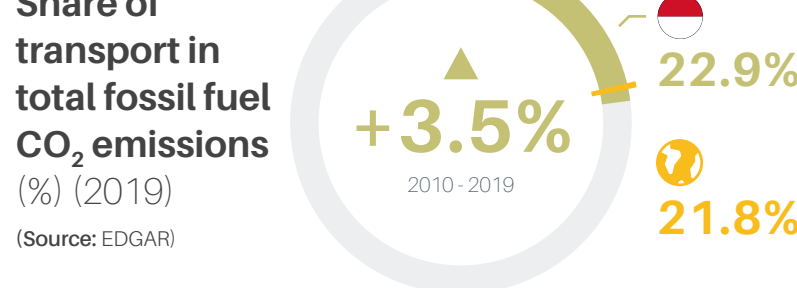
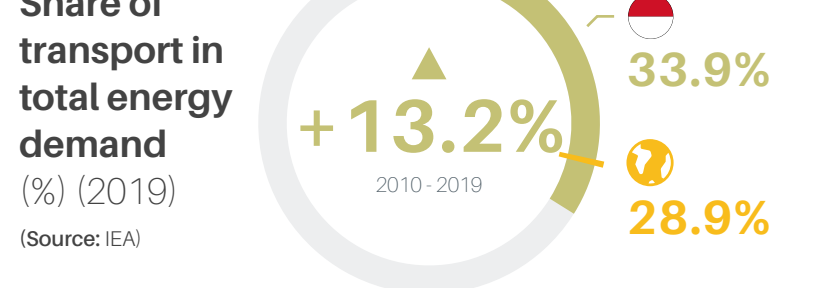


Renewable electricity target

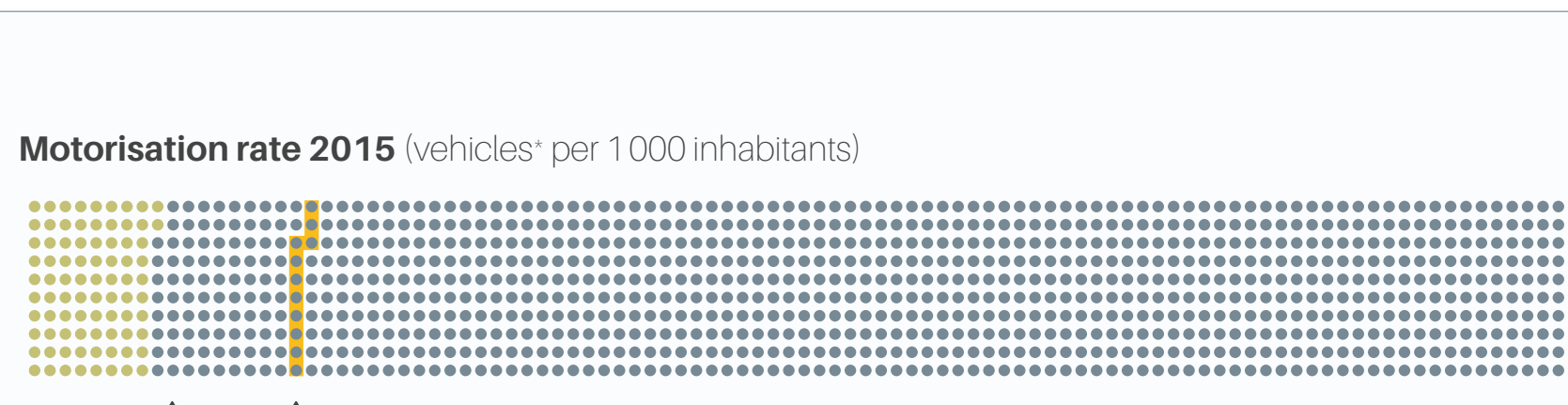


*Primary energy refers to all energy used in a country before transformation and encompasses all uses, including all non-electricity use of energy.

Transport



Motorisation rate 2015 (vehicles* per 1000 inhabitants)



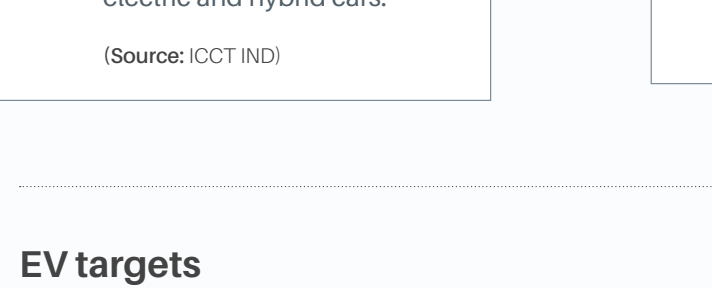
VEHICLE ELECTRIFICATION

	Total number in use (2019)	Growth (2018-2019)	Number sold (2019)	Growth (2018-2019)
Electric Cars	229	—	20	—
Electric 2-wheelers	1947	—	—	—
Electric 3-wheelers	100	—	—	—
Electric Buses	3	—	—	—

The Low-Carbon Emission Vehicle program, effective since October 2021, provides tax incentives for electric and hybrid cars. (Source: ICCT IND)

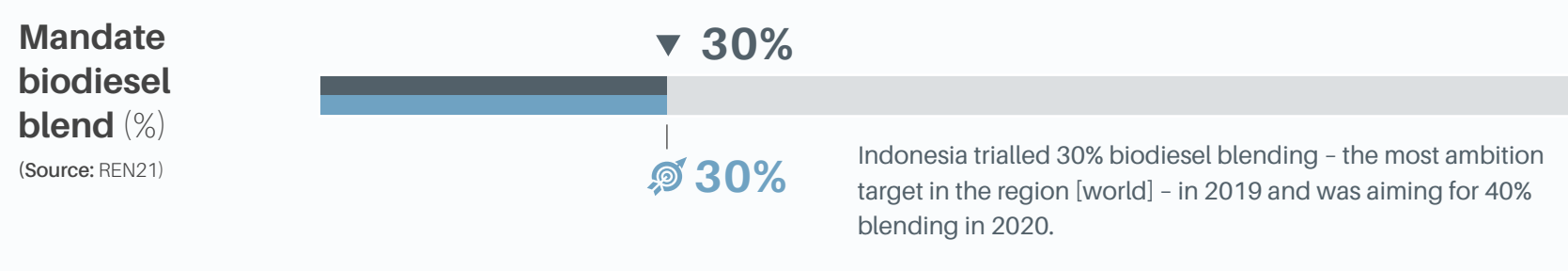
TransJakarta, the bus rapid transit system in Jakarta, Indonesia, set an ambitious target in 2019 to shift to a 100% zero-emission fleet by 2030. (Source: TCC-GSRI)

EV targets



Unlike other countries, Indonesia has a target for domestic production of vehicles. This translates to around 400,000 cars and 877,000 e-motorbikes annually. (Source: CWI)

BIOFUELS

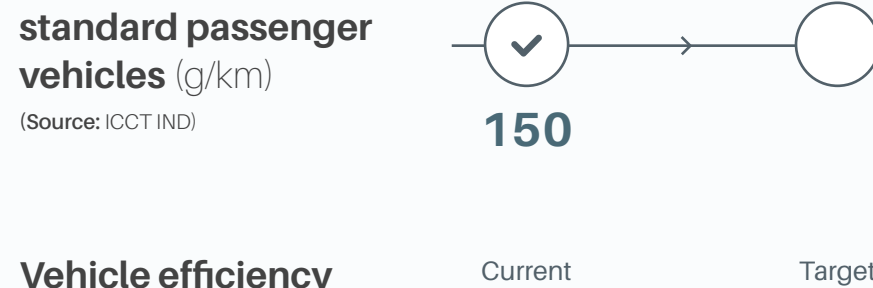


VEHICLE EFFICIENCY



Other transport targets

none



The Low-Carbon Emission Vehicle program, effective since October 2021, provides tax incentives for small cars. For non-electric small cars the emission standard is 120 g/km CO₂ to qualify for the incentives. (Source: ICCT IND)

Threats and Opportunities

ENERGY

THREATS

With an updated NDC setting minimum shares for coal and gas, Indonesia could be faced with stranded assets as new power plants are built to meet increasing energy demand. The country may also face comparatively higher electricity prices in the future, giving its industry a competitive disadvantage with Asian countries that are following lower-cost renewable energy strategies.

Indonesia's continued focus on coal and gas for power generation reduces the mitigation potential of its fleet electrification targets. Per *Vision Indonesia 2045*, an executive order is poised to reduce oil imports and enhance domestic oil production through additional refineries (Source: ICCT IND)

TRANSPORT

While car sales in Indonesia are down 21% compared to 2019, motorisation growth rate over the last decade is above the Asia average (Focus2move, TCC GSRI).

The Indonesia Ministry of Industry is targeting production of 4 million LDVs, with 2.5 million LDVs slated for the local market (ICCT IND).

Average fuel economy of LDVs in Indonesia is lower than in other regional markets such as China and India (ICCT IND).

OPPORTUNITIES

Indonesia's updated NDC targets a primary energy supply mix with new and renewable energy shares of at least 23% in 2025 and at least 31% in 2050, and oil shares of less than 25% in 2025 and less than 20% in 2050; (ROI)

Indonesia has reallocated a share of its fossil fuel subsidies for education, health, social assistance and infrastructure projects, including renewable energy and public transport. (Source: ROI)*

With a vehicle fleet that is lighter than the Asian average, Indonesia has a high potential for increased fuel efficiency policies (ICCT IND).

Indonesia has banned second-hand vehicle imports to support its domestic vehicle manufacturing industry. Allowing imports of efficient EVs could accelerate electrification of Indonesia's vehicle fleet.

Indonesia's General Plan for National Energy targets a fleet of 2,200 electric and hybrid passenger cars and 2.1 million electric 2-wheelers by 2025 (ICCT 2021).