

Nexus between Transport and Renewable Energy

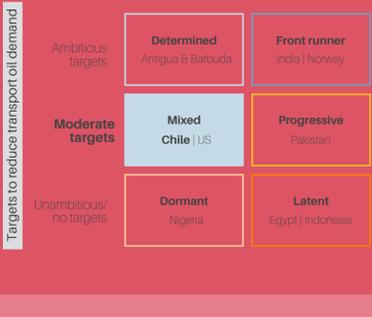


Chile

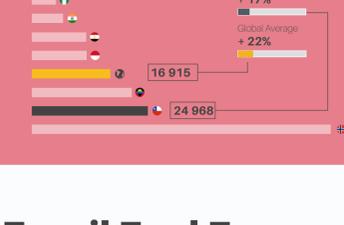
Chile has set ambitious targets to increase renewable energy and transition to more sustainable transport. Existing fossil fuel subsidies send mixed market signals and impede this envisaged transformation. Funds for subsidies could be reallocated to enhance implementation of low-carbon transport measures and to remedy adverse social impacts of unequal transport access.

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.



GDP per capita 2019



Population 2019



Fossil Fuel Energy



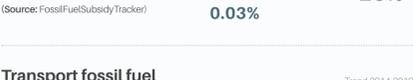
Share of power generation in total fossil fuel CO₂ emissions



Since 2014 a support mechanism buffers consumers from fossil fuel price fluctuations. It replaces a previous scheme which ended in 2010. 84% of the support estimate benefits the transport sector



Production is given to the national oil company ENAP to compensate for lower gas prices compared to cost for sales in the Magallanes and Antartica Chilena region



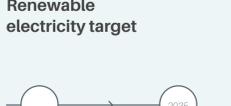
Chile has dedicated a substantial share of its recovery funding to green investments, with a large share going to the extension of public transport networks and bicycle lanes.

Renewable Energy

Share of renewables in:

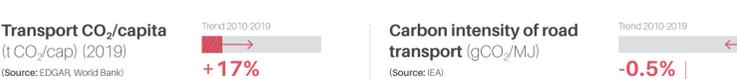


Renewable electricity target



Additionally, Chile has the target of 45-48% of electricity generation from hydropower by 2024

Transport



VEHICLE ELECTRIFICATION

	Total number in use (2019)	Growth (2018-2019)	Number sold (2019)	Growth (2018-2019)
Electric Cars	642	57%	298	68.4%
Electric 2-wheelers	—	—	—	—
Electric 3-wheelers	—	—	—	—
Electric Buses	—	—	—	—

The new Energy Efficiency Law provides accelerated depreciation for electric vehicles.

As of March 2021, Santiago had 400 electric buses, and was one of four Chilean cities with an electric bus fleet.

EV targets



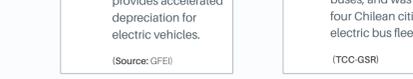
Additionally, 100% of taxis and public transport buses by 2040



BIOFUELS



VEHICLE EFFICIENCY



*Law enacted in 2021, regulation to follow



*Law enacted in 2021, regulation to follow

Other transport targets

Chile among the top three hydrogen exporters by 2040

Threats and Opportunities

ENERGY

Chile's energy system faces a geographic challenge, with renewable energy resources located far from main consumption hubs. While a large share of its renewable potential comes from hydropower, transmission and storage of intermittent wind and solar power remain challenges.

TRANSPORT

Transport accounts for more than one third of total energy demand in Chile (above the global average), signalling the need for greater efficiency and reduced dependency on carbon-intensive transport modes.

Artificially low fuel prices increase negative societal impacts due to multiple cost impacts of excess energy use (e.g. petroleum import costs, subsidy costs, and externality costs due to congestion and air pollution).

Riots in 2019 resulting from a moderate increase in Santiago metro fares show the sensitivity of Chile's population to perceived inequalities. Any fossil fuel subsidy reforms must therefore contain an inclusive participation process as well as mechanisms to compensate low-income households for increased energy costs, while maintaining incentives to reduce fuel use.

Santiago's metro system is powered largely by wind and solar (TCC-GSR) and can serve as a model for the successful integration of local renewable energy generation for other cities and peer countries in the region.

Chile's National Strategy for Green Hydrogen creates an opportunity to generate employment using abundant local renewable energy sources to reduce dependence on imported fuel. The Strategy envisions Chile as one of the top three hydrogen exporters by 2040 (TCC-GSR). Redirecting some of the funds currently used for fossil fuel subsidies could enhance this transformation through investments in renewable energy capacity, hydrogen research and development and support for commercialisation of green hydrogen.

Enhanced electrification can reduce the need for expensive oil imports, thus reducing the need for fuel subsidies. Santiago's electric bus fleet is envisioned to grow from 973 as of 2021 to 5,300 by the end of 2022, with a goal of 100% electric public transport in the country by 2040 (TCC-GSR).

Savings from reduced fuel subsidies could be used to expand electrification to two- and three-wheelers and fleet vehicles, such as taxis and small delivery vans.

Sources

EDGAR | ETT | GFEI | IEA | IEA EV | IEA FFS | IISD | IRENA FS | NCAP | OECD | OECD Recovery | OICA | REN21 | TCC-GSR | UNEP | World Bank



THREATS

OPPORTUNITIES