

CHILE

AMBITIOUS GOALS FOR THE ENERGY TRANSITION

Chile seems to have made more progress with the energy transition than most Latin American countries. The combination of a favourable geography, significant resources, the aspirations of public opinion and political will has favoured implementation of a number of measures for almost 25 years. Since he came to power in 2022, Gabriel Boric has undertaken to exceed the goals set up to that point, on a country level, by achieving carbon neutrality before 2050, and on an international level, by developing lithium and green hydrogen production and export capacities.

STATE OF PLAY

Chile's contribution to greenhouse gases (GHG) is marginal in global terms (less than 0.25% of total in 2021). However, this contribution has grown over the past three decades (standing at just 0.15% of the total in 1990). Furthermore, although the impact of renewable energies has been steadily increasing since the early 2000s, the primary energy mix remains highly carbon-intensive: according to data from the International Energy Agency (IEA), in 2021, around 44% of the energy supply came from oil, 16% from coal, 14% from natural gas and only 6% from renewable energies.

The energy sector remains the largest contributor to greenhouse gas emissions (i.e., more than 75% of the country's total emissions), mainly due to the consumption of coal required for electricity generation, as well as the consumption of diesel fuel in transport. In terms of emissions caused by humans, these are slightly below the global average (4.4 and 4.7 tonnes of CO2 per capita respectively in 2021, according to data provided by the Global Carbon Project), but well below the OECD average (10.2 tonnes in 2021).

THE SHIFT SEEN IN THE 2010s

In the early 2010s, successive governments implemented increasingly demanding energy transition policies. The introduction of these policies followed several decades of policies aimed at reducing dependence on imported energy without any environmental considerations. As a result, while the country had focused its energy policy on hydroelectric power since the 1940s, several episodes of drought in the 1990s led to a very sharp increase in natural gas imports, mainly from Argentina. According to data from the World Bank, imported fossil fuels rose from 43% of total energy consumption in 1990 to almost 65% in 2000 (of which, more than half in oil and natural gas). In the 2000s, the sudden shutdown of the natural gas supply in Argentina (causing a number of power outages and penalising several major cities, and above all the mining industry) led the government to build five new coal-fired power plants, bringing their number to 28.

The trend was not reversed (again) until the early 2010s. Driven by broad public and political support, a national energy strategy set targets for 2012 and 2030. In the long term, the government is therefore planning to ultimately stop using conventional fossil fuels, to reduce dependence on imported energy and, to achieve this, to favour the use of renewable energy (geothermal energy, biomass, wind, solar, tidal energy). In 2015, as part of the Paris Agreement, Michelle Bachelet's government committed to defining and regularly updating long-term goals, known as Nationally Determined Contributions (NDCs).

Chile has therefore committed to achieving carbon neutrality by 2050. The strategy is detailed in a five-year plan entitled "Long-Term Energy Planning" (PELP, first published in 2015). Since 2017, the country has also had a single interconnected national electricity grid (previously,

FORECASTS					
	2020	2021	2022	2023e	2024e
Real GDP growth (%)	-6.0	11.7	2.7	-1.0	1.0
Inflation (CPI, year average, %)	3.0	4.5	11.6	8.3	4.1
Central Gov. balance / GDP (%)	-7.1	-7.5	1.3	-1.8	-2.1
Public debt / GDP (%)	32.5	36.3	37.9	39.6	41.1
Current account balance / GDP (%)	-1.4	-6.6	-8.7	-4.0	-4.1
External debt / GDP (%)	82.6	75.0	77.6	82.8	87.8
Forex reserves (USD bn)	39.2	51.3	39.1	44.7	44.1
Forex reserves, in months of imports	5.5	5.3	4.1	4.9	4.8

TABLE 1

e: ESTIMATES & FORECASTS
SOURCE: BNP PARIBAS ECONOMIC RESEARCH

CHILE: ENERGY MIX

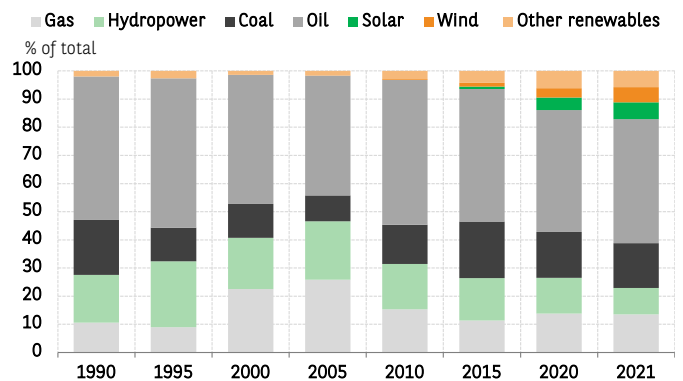


CHART 1

SOURCE: ENERGY INSTITUTE, STATISTICAL REVIEW OF WORLD ENERGY, BNP PARIBAS

the Chilean electricity grid was operated exclusively by private operators, from production to distribution).

NEW, MORE AMBITIOUS GOALS

Since taking up his position in March 2022, Gabriel Boric has undertaken to significantly accelerate the energy transition. In a new version of the PELP, the NDCs have been adjusted: Chile's target is now to achieve GHG emissions of 95 MtCO2eq in 2030 (with a peak in emissions in 2025), i.e., a 15% reduction from their 2018 level (112 MtCO2eq), and still achieving carbon neutrality by 2050.

Three scenarios are detailed in the new PELP, which can be summarised as follows¹: 1/ exact repetition of the goals announced by the previous government; 2/ closure of two thirds of coal-fired power plants by 2025; and 3/ closure of all coal-fired power plants by 2030 and implementation of green² hydrogen production systems and incentives to promote the development of electric mobility. Favoured by the government, the last scenario is particularly ambitious since, on the one hand, the assumptions of GDP growth, and therefore energy consumption, are significantly higher and, on the other hand, the goal is to reach no less than 80% of renewable energies in electricity production by 2030 (while these represented less than 50% in 2020), a completely decarbonised electricity mix by 2050, and a share of 70% in zero-emission fuels in non-electric end uses. In addition, the government plans to use 45% renewable energy for heat and cooling by 2030 and 80% by 2050. And lastly, in its roadmap, the government also indicates that it wants to strengthen the electrification of uses and combat fuel poverty.

All these goals are included in a law passed in June 2022 (Framework Law for the Energy Transition). Beyond these goals, the Law proposes decentralisation of climate policy. Climate action no longer depends solely on the Ministry of the Environment, but also on other ministries, regional governments, several government “climate agencies” and also, to a large extent, on the private sector. The Law, in fact, sets out a financial framework for public-private partnerships for environmental projects and sector-based plans for adapting to energy transition strategies. Rather than setting a national cap on GHG emissions, caps on GHG emissions can be set per sector, for individual installations or groups of installations. The details are yet to be defined in an amendment to the Law which should be published in the coming months.

TWO-WAY OPPORTUNITIES, LITHIUM AND GREEN HYDROGEN

And lastly, the Law outlines a strategy for public-private partnerships in the field of green hydrogen operation and production, notably with funding of USD 50 million for six industrial projects in this sector; several agreements with international companies (including GNL Quintero, CAP and Air Liquide), bilateral partnerships, with Germany and the United States in particular (pooling of research programmes and production techniques). According to the latest PELP, the country intends to set up an electrolysis capacity of 5 GW (in operation or under development) by 2025, and become a major exporter by 2030 with a production capacity of 25 GW.

At the same time, and paradoxically, the Chilean government intends to position itself as a leader on the lithium market. Lithium extraction and refining, in fact, require a lot of water and polluting chemicals, and also weaken ecosystems around mines. According to figures provided by BP, Chilean production accounted for 26% of total global production in 2021 (just behind Australia), and the country had more than 45% of total known reserves.

In mid-June, President Boric clarified his “national lithium strategy”. The details are yet to be determined, but the government wants to create a national lithium company and set up partnerships with private companies present throughout the ore production cycle. The Law also provides for an increase in the taxation of mining companies (implementation scheduled for early 2024).

GLOBAL PRODUCTION AND RESERVES OF LITHIUM

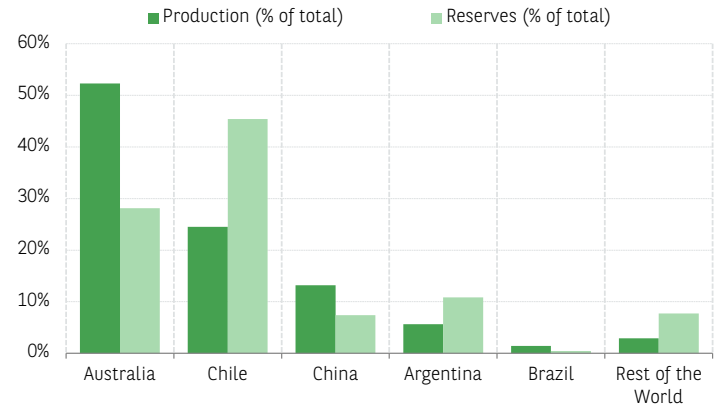


CHART 2

SOURCE: BP, BNP PARIBAS

Revenue should contribute to the financing of the ambitious energy transition programme (in addition to the tax reform proposed by the government, which was rejected by the National Congress last March). In this area too, a number of projects are under discussion (including trade agreements with the European Union and other countries in the region, including Argentina and Bolivia).

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¹ The first two scenarios assume average GDP growth of 2.8% per year between 2021 and 2030, then 1.8% per year between 2031 and 2040, followed by 1.3% per year between 2041 and 2050. The latter scenario assumes more dynamic growth for the three periods, i.e., 3.2%, 2.3% and 1.9% per year, respectively.
² To produce hydrogen, an electrolyser can be used to separate hydrogen and oxygen molecules from water. Green hydrogen refers to when the electrical energy used for this process comes from renewable energy, such as solar and wind.