



The energy transition and renewable energy in Chile: Top points for foreign investors

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Chile has been an oil import-dependent country for more than 50 years, but now is in the midst of an energy transition away from fossil fuels to a new order. Green energy is gaining momentum and a new picture of the energy matrix is emerging.

Today in Chile, renewable electricity from solar and wind power represents nearly 20 percent of the country's energy supply, and the volume of renewables is expected to increase every year. This shift has involved some risks. But more than 10 years ago, Chile took some legal steps to foster renewable energy, building the foundation for optimism about the country's energy future.

Most notably, in the past electricity prices were driven by a few big actors with very little competition. In contrast, Chile's energy future will be determined by many competitors and gradual efficiency gains.

Non-conventional renewable energy capacity

The National Electric System in Chile has an installed generation capacity of 25,000MW, which corresponds to more than 99 percent of the national installed capacity (medium systems such as Aysén and Magallanes and isolated systems are less than 1 percent). Of the total installed capacity, nearly 50 percent corresponds to generation technology based on

renewable resources, particularly large scale hydroelectric (28 percent), solar PV (11 percent), wind (9 percent), biomass (1.8 percent) and geothermal (0,2 percent), and 50 percent corresponds to natural gas (19 percent), coal (20 percent) or petroleum derivatives (11 percent) power plants. The size of non-conventional renewable energy projects varies, from small projects of nearly 1MW now being constructed or already operating, up to large-scale plants over 100MW (mainly wind and solar PV).

Chilean legislation on electricity describes "renewable energy" or "clean energy" by using the term "non-conventional renewable energy" (NCRE). The Chilean legal framework defines this concept as the electrical energy generated by non-conventional renewable means of generation, which are those whose primary source is biomass energy, hydraulic energy below 20MW, geothermal energy, solar energy, wind energy, ocean energy and other means of generation determined by the National Commission of Energy that use renewable energies for the generation of electricity, contribute to diversify the sources of energy supply in the electrical system and cause low environmental impact.

In Chile, a quota system established by law requires electrical companies that have an installed capacity of more than 200MW and that withdraw energy from the electrical systems for trading with distribution companies and final consumers to certify that a certain percentage of their energy withdrawal comes from NCRE sources. The law mandates that this percentage should increase every year, to reach 20 percent in 2025. However, this goal was already attained in 2020, almost five years ahead of the legal deadline.

Further, the government recently launched its decarbonization program, which aims to completely replace coal with other sources of energy by 2040, when 100 percent of the country's energy will come from NCRE. This process may imply a greater development of hydroelectric plants and energy storage solutions.

Incentives and support for NCRE projects

- Among other relevant incentives, the current regulation provides several advantages for NCRE projects over conventional sources. One of those advantages is the exemption from paying tolls for using the main electrical transmission system. NCRE plants that generate less than 9MW are completely exempt from paying the tolls, and NCRE plants that generate more than 9MW but less than 20MW are partially exempt. Additionally, measures were established to facilitate connection of the electrical system to NCRE plants with a capacity of less than 9MW, guaranteeing their access to distribution facilities. In addition to that, an annual tax on the polluting emissions of MP, NOx, SO2 and CO2 produced by facilities that reach a thermal capacity equal to or greater than 50 MWt was approved in 2014.
- In May 2017, to promote the development of NCRE projects on public land, the Public Property Ministry published several general instructions regarding concessions for onerous use of fiscal property. The Public Property Ministry may take necessary steps to ensure that NCRE projects make up 60 per cent of generated electricity by the year 2035 and at least 70 per cent of generated electricity by the year 2050.
- Another relevant factor in Chile's green energy development is the fact that private companies may enter into power purchase agreements (PPAs) with NCRE generators, without the intervention of the authorities. Notwithstanding the foregoing, the Ministry of Energy has enabled public biddings organized by private companies, qualified as "free clients" with relevant consumption, to satisfy their energy demand. As a result, the latest auctions there are public bidding processes called by distribution concessionaires, enable the possibility of bidding in hourly blocks in order to promote the purchase of energy coming from wind and solar power plants.
- Foreign investors seeking to invest in renewable energy projects have found that Chile is one of the countries that has attracted significant foreign investment from overseas financiers since 2010. In order to protect foreign investment, Law No. 20,848 of 2015 states that foreign investors who make investments in Chile can request a Foreign Investor Certificate from Invest Chile, which allows them to access the benefits established in that law for the investment.

Challenges

As Chile continues working to develop utility-scale renewable energy projects, some of the challenges it faces relate to the fact that these projects do not have storage capacity. All the energy that is generated must immediately be injected into the electrical system, producing an oversupply of energy during defined time blocks of low demand. This impacts the price of

energy and generates a dependency on conventional sources of energy that are able to provide energy in higher-demand time blocks.

Another difficulty involves financing, where electricity bids have been awarded for low prices. The lower margins and flows associated with the energy prices offered will affect the debt component, particularly in project finance. Renewable merchant projects are currently difficult to finance.

Fostering successful development of renewable energy projects

Climate change and the energy transition away from fossil fuels are a huge challenge for the world and for Chile as well. We can proudly say that Chile has been taking this challenge seriously for more than a decade and is actively moving towards a greener and more efficient energy system by fostering at all levels the successful development of renewable energy projects.

Learn more about investment in green energy projects in Chile by contacting the author.

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