21.8% Share of electricity generation from hydropower in total production

HYDROPOWER: THE KEY TO CHIL CLIMATE STRATE

Chile – More than 130 years have already passed since the arrival of electric power in Chile and in 1908 ANDRITZ successfully commissioned its first plant in the country. Since then, ANDRITZ has delivered more than 140 generating units in Chile with a combined capacity of more than 2,400 MW.

In recent decades ANDRITZ has also modernized more than 50 units with a total output of more than 1,450 MW. Among these references are large hydropower plants that continue to play an essential role in Chile's electricity system. These plants include Pangue (568 MW), El Toro (484 MW), Alfalfal I (188 MW), Higuera (182 MW), Rucue (180 MW), and Chacayes (130 MW). ANDRITZ has also successfully participated in numerous small hydroelectric power plant development projects, as well as in hybrid irrigation and generation projects like Embalse Ancoa, Embalse Convento Viejo, and Embalse Digua where the water supply for farm irrigation is combined with power generation for the grid. ANDRITZ has also participated in the construction of substations for the national grid and in tenders for equipment to support grid stability and strengthening.

Despite the lack of new hydroelectric investment projects in Chile in recent years, ANDRITZ has had many successes in the modernization of existing plants. These include projects such as the hydropower stations Antuco, Pangue and Pehuenche, Blanco, and Queltehues, new butterfly valves for Ralco, spherical valves to protect the penstocks of the Alto Maipo complex, and the centralized remote monitoring and control systems for all the plants in the Aconcagua Valley for one of our customers. These successes came alongside service activities to support customers in scheduled and emergency maintenance of their plants, component recovery and restoration in our Colina workshop. In addition, predictive monitoring services were delivered from our Operations and Maintenance division to support customer operations.

PROJECT REFERENCES:

Pehuenche: Maule Region; 568 MW; contract won in 2023 for the rehabilitation of one vertical Francis turbine with major new components. Completion: August 2025.

Pangue: Biobío Region; 466 MW; contract won in 2023 for the rehabilitation of one vertical Francis turbine with major new components. Completion: April 2026.

Hornitos: Los Andes, Valparaiso Region; 61 MW; contract won in 2023 for one new Automatic Voltage Regulator (AVR) using ANDRITZ HIPASE-E. Completion: first quarter of 2024.

Ralco: Municipality of Los Angeles, BioBio Region; 689 MW; contract won in 2022 for the supply of one butterfly valve. Completion: second quarter of 2024.

Substation Guindo: Biobío region; 220 kV; contract won in 2019; ANDRITZ signed a contract for the supply of the electromechanical equipment for the Guindo Substation, which will connect the 220 kV system to the 66 kV system to strengthen the electrical system in Chile.

Francis turbine, Central Ancoa hydropower project

E'S GY

Alto Maipo: Colorado and Rio Maipo; 531 MW; contract won in 2020 for the supply two new spherical valves (DN3400 PN22 and DN2200 PN73).

Embalse Digua: Longavi, Perquilauquén; 20 MW; contract won in 2018 for the supply of two new 10 MW Compact Francis turbines, Howell Bunger valves for irrigation; generators, mechanical auxiliaries, electrical power systems, transformers, as well as a substation and plant automation.

SCADA Aconcagua: Aconcagua valley; > 200 MW; contracts won in 2016, 2019, and 2020 for the supply of the SCADA control system for the control and supervision of the Aconcagua valley cascade power plants (Hornitos, Juncalito, Los Quilos, Aconcagua, Chacabuquito). All the power plants can now be controlled from the Los Quilos Telecontrol system developed with our 250 SCALA platform.

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RENEWABLE ENERGY PROGRESS TRACKER

KEY ELECTRICITY INDICATORS

53%
Share of renewable energy in power generation, 2022

93%
Share of renewable energy in power generation, 2028

25%
Share of VRE in power generation, 2022

69%
Share of VRE in power generation, 2028

Source: IEA

CHILE

Total population: 19.60 million

GDP per capita: 15,166 USD

Total installed hydro capacity: 7,289 MW

Hydropower capacity added: 477 MW

Hydro capacity under construction: ~ 202 MW

Share of generation from hydropower: 21.8%

Hydro generation per year: 19.620 GWh

Technically feasible hydro generation potential: 162,232 GWh

All figures concern 2022;
Sources: TheWorldBank, IMF, IHA, Hydropower & Dams World Atlas 2023