Energy storage policy updates chile

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Chile is actively working towards achieving carbon neutrality by 2050, defined under the Ley Marco de Cambio Clim?tico or Framework Law on Climate Change of 2022. Under this, the country has taken various regulatory steps with a focus on making renewable energy sources (RES) the key generation source, streamlining transmission network expansion, and promoting energy storage systems.

To enable further RES penetration, the country has planned to retire 28 installed coal projects with a cumulative capacity of over 5,529 MW by 2040. To support the country"s decarbonisation plans, the government is currently working on two bills--one that prohibits the installation and operation of coal-fired thermal power plants (that are less than 30 years old as of December 31, 2025), and another that prohibits the injection of electricity from fossil fuels into the country"s national electric system from 2030.

In 2023, Chile also enacted a new Law 21505 to promote energy storage and electromobility. It highlights the following measures: participation of pure storage systems in the electricity market, enabling the connection of infrastructure that combines generation and consumption, temporarily lowering the annual tax for electric and clean vehicle permits, and authorising new business models for electromobility.

As one of the early adopters of electricity sector reforms, Chile"s electricity generation, transmission and distribution sectors are completely owned by private companies with the government retaining only a surveillance role and regulatory powers, especially over the determination of certain tariffs.

As of October 31, 2023, the total installed power generation capacity in the country reached 34,345 MW, of which 62 per cent was based on RES, and 38 per cent on conventional sources of energy. In 2022, the 350 MW Bocamina II thermal power plant, and units 14 and 15 of the Tocopilla thermal complex, with a total capacity of 268 MW, were closed.

Chile"s Sistema El?ctrico Nacional (SEN) or National Electric System includes Sistema Interconectado Central (SIC) and the Sistema Interconectado del Norte Grande (SING) (which are connected via a 500 kV line) along with two independent systems, Aysen electric system (including Port Aysen and Coyhaique), and the Magallanes electric system (including Punta Arenas, Port Porvenir and Port Natales). All these are coordinated by Coordinador El?ctrico Nacional (CEN).

As of November 2023, Chile had a total transmission line length of 31,284 km at the 110 kV to 500 kV voltage levels. Of the total installed capacity, 60 per cent of the line length was at the 220 kV level, 15 per cent was at 500 kV, and the rest was at low voltage levels. In December 2022, AES Andes S.A. energised the country"s first 345 kV line.

As per the estimates of the energy ministry, as of September 2023, 85 plants (based entirely on RES) with a

cumulative capacity of 4,352 MW were under construction in the country with a total investment of $6.3 billion.

As per the mandate of LGSE, CNE is required to carry out a process of transmission planning annually, which must consider, at least, a horizon of 20 years. Under this it has recently approved the Annual Transmission Expansion Plan 2022, which contains the proposals presented by the promoters of transmission expansion projects, the CEN expansion proposal, and CEN"s own analysis-based projects.

For the Sistema Nacional de Transmisi?n or National Transmission System, the report includes 15 projects, of which 10 are expansions of existing facilities with an investment of $90 million, and five are new projects of $572 million. For the Zonal Transmission System, 27 expansion works are presented, of which 12 are expansions of existing facilities, with a budget of roughly $58 million, and 15 are new works amounting to approximately $333 million. Construction of these works is estimated to commence in the first half of 2025.

Overall, Chile has been taking various steps to strengthen the electricity sector, with an aim to have a more detailed path towards its decarbonisation plans. Timely implementation of these initiatives will help the country maintain a smoother energy transition.

A new initiative by the Chilean Ministry of Energy and the Ministry of National Assets is expected to cover storage projects with an aggregate capacity of 13 GWh, distributed mainly in the regions from Arica y Parinacota to Atacama.