Specific energy storage applications mongolia

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The First Utility-Scale Energy Storage Project aims to install a large-scale advanced battery energy storage system (BESS) in Mongolia’s Central Energy System (CES) grid. Which is to absorb curtailed renewable energy electricity and smoothen fluctuations caused by the intermittency of renewable energy.

The project will expand the system’s capacity to connect additional renewable energy supply and meet the growing power demand in the CES grid. Of which is to meet the Government of Mongolia’s long-term renewable energy target by 2030.

On successful completion, the project will supply 58.5 gigawatt-hours of clean peaking power annually. And support the integration of an additional 859 gigawatt-hours of renewable electricity into the CES grid annually. Thereby avoiding 842,039 tons of carbon dioxide emissions yearly by 2025.

(4th Aug 2022) The groundbreaking ceremony for the 80MW/200MWh BESS EPC project was held in the presence of Mongolian Prime Minister Mr.L.Oyun-Erdene, Minister of Energy Mr.N.Tavinbekh, Members of Mongolian parliament, the CEO of National Dispatching Center Mr.B. Baljinnyam, ADB representatives, etc. As well as delegates from ZTT Group, the EPC Contractor of this project.

The battery container is 40 feet across, has a capacity of 3.634MWh, and weighs 45 tonnes (over 65% of the battery weight). And the DC side voltage is 1500V, has an internal battery temperature difference of <8 degrees, and an IP54 protection class. Key internal components include HVAC, Current collection, BMS, Battery clusters, Combustible detectors, Combustible exhaust, Extinguishant, and Water interface.

The BESS will be resilient to Mongolia’s extremely cold climate and equipped with a battery energy management system enabling it to be charged entirely by renewable electricity. This will then discharge clean electricity to supply peaking power in the central energy system grid. The project will also provide a regulation reserve to integrate additional renewable energy capacity in the transmission grid.

In 2018, coal-fired combined heat and power plants contributed to 93% of total power generation in the electricity grid. Mongolia’s rich renewable energy potential – such as wind and solar – is about to be equivalent to 2,600 gigawatts, which could fully meet the country’s future power demand. However, this rich potential has not been realized. The government aims to increase the share of renewable energy in total installed capacity from about 12% in 2018 to 20% by 2023 and 30% by 2030, in line with the State Policy on Energy, 2015 – 2030.

ZTT started on Optical Fiber Communications in 1992, accessed Smart Grid in 2002, and commenced work on the Renewable Energy field in 2012. With over 30 years of sustainable innovation, ZTT helps make a wide

variety of products across industries. Ever since it first started developing the Lithium-ion battery and BESS, ZTT has expanded a new era of focusing on power delivery and energy storage optimization.

Insist on technological innovation and respond to green double carbon. ZTT New Energy will continue to move forward with the industry and witness the development and future of energy storage.