

GLOSSARY

In this document, unless the context otherwise requires, explanations and definitions of certain terms used in this document in connection with our Group and our business shall have the meanings set out below. The terms and their meanings may not correspond to standard industry meanings or usage of these terms.

“3D printing”	a cutting-edge technology that enhances battery design, prototyping, and production by building complex structures layer by layer with high precision
“5G+”	the integration of 5G technology with advanced digital innovations to enhance R&D, battery manufacturing and others
“AB battery system”	a single battery system that combines two different types of battery cells
“battery electric vehicle” or “BEV”	a type of vehicle propelled solely by battery-powered electric motors, without using internal combustion engines
“behind-the-meter” energy storage or “BTM” energy storage	a type of energy storage system installed on the load side of the grid
“BMS”	Battery Management System
“C” or “C-rate”	charge and discharge rate, an indicator for battery charge and discharge speed. A 1C rating means a battery can be charged or discharged completely in one hour at its rated capacity; a 4C rating means a battery can be charged or discharged completely in 15 minutes at its rated capacity
“cascade utilization”	the reuse (which may or may not involve additional limited processing) of retired rechargeable batteries in another application
“cell”	battery cell
“condensed battery”	a type of lithium-ion battery with electrolyte containing condensed matter
“CTC”	cell-to-chassis, a technology that integrates battery cells directly into the vehicle chassis without modules nor packs

GLOSSARY

“CTP”	cell-to-pack, a technology that integrates battery cells directly into the battery pack without modules
“CV”	commercial vehicles
“digital twin simulation”	the virtual mirroring of a physical battery system, integrating technologies such as real-time data monitoring, analysis, and advanced simulation technologies to optimize battery design, manufacturing, and performance
“DPPB”	defective parts per billion, a quality control measurement in manufacturing
“DPPM”	defective parts per million, a quality control measurement in manufacturing
“E-Bus”	buses fully or partially propelled by battery-powered electric motors
“E-LCV”	light commercial vehicles, including vans and light-duty trucks, fully or partially propelled by battery-power electric motors
“E-Truck”	medium- and heavy-duty trucks fully or partially propelled by battery-powered electric motors
“electric vehicle” or “EV”	vehicles powered fully or partially by battery, comprising of BEV and PHEV
“electrochemical phase-field methods”	computational modeling techniques that simulate and predict the behavior of electrochemical systems at a microscopic or mesoscale level by describing the evolution of different phases (solid, liquid, or gaseous states) and chemical compositions over time through the solution of thermodynamic and kinetic equations
“energy density”	the amount of energy that can be stored within a given volume or given mass
“ESS”	energy storage system
“ESS battery”	a battery used for energy storage system

GLOSSARY

“EV battery”	a battery used in EV and other hybrid vehicles, machinery, vessel, aircraft and other mobility applications
“extreme manufacturing”	a concept proposed by CATL for the intelligent manufacturing of lithium-ion batteries. Specifically, lithium-ion battery manufacturing requires strong interconnection of multiple physical fields, multi-scale control, and strict shape and performance control. To address the challenges of large-scale, high-quality manufacturing of lithium-ion batteries, CATL leverages digitalization and intelligent technologies to optimize systematic design, simulation, and key processes, significantly improving production efficiency, yield rate, and consistency
“front-of-the-meter” energy storage system or “FTM” energy storage system	a type of energy storage system installed on the utility or grid side
“GW”	Gigawatt, a unit for measuring power, 1 GW=1 billion watts
“GWh”	Gigawatt-hours, a unit of electric energy, 1 GWh=1 billion Wh
“kW”	kilowatt, a unit for measuring power, 1 kW=1,000 watts
“kWh”	kilowatt-hours, a unit of electric energy, 1 kWh=1,000 Wh
“L2” and “L3”	two of the five levels of driving automation, classified by SAE International
“LFP battery”	a lithium-ion battery that uses lithium iron phosphate (LiFePO ₄) as the cathode material
“life cycle”	the number of times (or cycles) a battery can charge and discharge until its retirement
“lighthouse factory”	World Economic Forum-recognized factories, showcasing best practices in the application of Fourth Industrial Revolution (4IR or Industry 4.0) technologies and representing the highest level of global intelligent manufacturing and digitalization

GLOSSARY

“Lithium and Sodium AB”	a single battery system that combines both lithium-ion battery cell and sodium-ion battery cell
“lithium-ion battery”	rechargeable batteries that utilize lithium ions as conductive ions that move between the anode and cathode, and charge and discharge through the mutual conversion of chemical energy and electrical energy
“M3P battery”	a lithium-ion battery that incorporates phosphate, manganese or other metals in its cathode materials
“machine vision inspection”	an advanced automated optical inspection technology that uses cameras, sensors, image processing algorithms and other technologies to detect defects, ensure quality, and optimize production processes in battery manufacturing
“microgrid”	a local power generation and distribution system integrating distributed energy sources, storage devices, energy conversion equipment, loads, and monitoring and protection devices, etc., which is able to operate on and off grid
“molecular dynamics”	a research method based on computer simulation that tracks the movements and interactions of atoms and molecules over time, providing insights into the dynamic evolution of a system
“MWh”	Megawatt-hours, a unit of electric energy, 1 MWh=1 million Wh
“NCM”	nickel-cobalt-manganese ternary materials, which can be used as cathode materials for ternary batteries. Given different ratios of nickel, cobalt and manganese, it can be classified into NCM523, NCM622, NCM811, etc.
“Net Zero Tracker”	a global database and analytical tool that monitors net zero commitments from countries, regions, cities, and major companies
“NEV”	new energy vehicles, including EV, hydrogen and other new type of fuel cell vehicles

GLOSSARY

“phase diagram theory”	a scientific framework used to describe the stable and metastable phases of a material under varying temperature, pressure, and composition conditions, which helps understand how materials transition between different states (solid, liquid, gas) and phases (such as crystalline structures or alloy compositions)
“PHEV”	plug-in hybrid electric vehicles (including REV)
“PV”	passenger vehicles
“REV”	extended-range electric vehicles
“SGS”	SGS is a Swiss multinational company headquartered in Geneva, which provides inspection, verification, testing and certification services
“sodium-ion battery”	batteries that utilize sodium ions as conductive ions that move between the anode and cathode, and charge and discharge through the mutual conversion of chemical energy and electrical energy
“solid-state battery”	a type of rechargeable lithium-ion batteries that use solid-state electrolyte
“ternary battery”	a type of batteries that integrates a cathode composed of three metallic elements, such as nickel, cobalt and manganese
“TWh”	Terawatt-hours, a unit of electric energy, 1 TWh=1 billion kWh
“unit economics”	profitability at the battery product unit level, calculated by deducting battery cost of sales from battery revenue and then dividing by battery sales volume
“W”	watt, a unit for measuring power
“Wh/kg”	Watt hour per kilogram