

GLOSSARY OF TECHNICAL TERMS

This glossary contains definitions of certain terms used in this document in connection with our Company and our business. Some of these may not correspond to standard industry definitions or usage of these terms.

“Antimony”	a silvery-white metalloid element used in flame retardants, batteries, and alloys
“Antimony oxide”	antimony trioxide, an inorganic oxide of antimony; in the context of this document and our business, it primarily refers to antimony trioxide products recovered and processed from antimony-bearing materials
“Base metals”	commonly used metals with broad applications and relatively high levels of consumption across the economy, mainly including iron, manganese, copper, aluminum, lead, zinc, tin, nickel and antimony. In the context of our business, base metals mainly comprise copper, lead, antimony and nickel
“Blister copper”	an intermediate copper product with a blistery surface, produced by smelting copper concentrate, typically containing 96% to 99% copper
“BOT”	build-operate-transfer
“Centrifugal extraction”	a separation technique that uses centrifugal force to rapidly mix and separate immiscible liquids, commonly employed in solvent extraction processes in hydrometallurgy
“Copper matte”	an intermediate sulfide product formed during smelting of copper concentrate, primarily composed of a eutectic formed by cuprous sulfide and ferrous sulfide
“Critical metals”	metals that are essential to strategic emerging industries, which include bismuth and antimony in the context of our business
“Crude lead”	an impure lead intermediate product generated from the initial smelting of lead-bearing materials, requiring further refining to remove impurities
“Dual Carbon”	China’s national strategic goals of achieving peak carbon dioxide emissions before 2030 and carbon neutrality before 2060
“Electrolytic Copper”	a high-purity copper product, typically with a purity of 99.99% or above, produced through electrolytic refining
“Electrolytic lead”	high-purity lead, typically with a purity of 99.9% or above, produced through an electrolytic refining process
“Flue gas”	exhaust gas from combustion processes
“Flue gas purification”	removing pollutants from exhaust gases before release
“Fly ash”	fine particulate matter of ash that is carried up and out by the flue gases during the combustion of solid fuels

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“Furnace”	a type of industrial thermal equipment that heats metallic raw materials at high temperatures to drive a series of physical and chemical reactions, thereby enriching the desired metals
“g”	gram
“Hazardous waste”	the solid wastes that are listed in the National Hazardous Waste Catalogue or identified as having hazardous characteristics in accordance with the national hazardous waste identification standards and methods
“Hydrometallurgical refining”	a process of extracting and purifying metals from ores, concentrates, or secondary materials using aqueous chemical solutions, as opposed to pyrometallurgical methods
“Incineration”	burning waste at high temperatures to reduce volume and generate energy
“iridium”	a very dense, corrosion-resistant platinum group metal used in high-performance alloys, spark plugs, and electrochemical applications
“ISO”	International Organization for Standardization
“ISO 14001”	the Environmental Management System published by the ISO
“ISO 45001”	the Occupational Health And Safety Management System published by the ISO
“ISO 9001”	the International Quality Management System published by the ISO
“ISO 50001”	the Energy Management System published by the ISO
“kg”	kilogram
“Kilowatt-hour (kWh)”	is a unit of electricity consumption, where 1 kWh equals one unit of electricity
“Leachate”	contaminated liquid that drains from waste, which is a part of sewage
“Leachate treatment”	processing contaminated liquid from waste to make it safe for discharge or reuse
“Load rate”	the ratio of actual waste treated to the facility’s design capacity
“Low-grade nickel matte”	an intermediate nickel-copper-iron sulfide product with a relatively lower nickel content, produced during the smelting of nickel sulfide ores or concentrates
“m ² ” or “sq.m.”	square meter

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“m ³ ”	cubic meter
“National Green Factories”	manufacturing plants officially recognized and certified by Chinese authorities for achieving excellence in resource conservation, environmental friendliness, and low-carbon operations throughout their lifecycle
“Nickel sulfate”	a key inorganic compound (NiSO ₄) primarily used as an essential raw material in the production of precursors for lithium-ion battery cathodes
“Non-ferrous metal”	a collective term referring to all metals other than ferrous metals (mainly including iron, chromium, manganese and their alloys)
“Oxygen-enriched side-blowing furnace”	a smelting furnace where oxygen-enriched air is injected through tuyeres on the side wall, enhancing reaction intensity and thermal efficiency for processing non-ferrous metal concentrates or secondary materials
“Palladium”	a precious silvery-white platinum group metal widely used in catalytic converters, electronics, jewelry, and hydrogen purification
“Platinum”	a dense and malleable platinum group metal highly valued for its catalytic properties, used in automotive catalysts, jewelry, and industrial applications
“Platinum-group metals”	a family of precious metals which, in the context of our business, comprise platinum, palladium, rhodium, ruthenium and iridium
“Precious metals”	a category of rare, naturally occurring metallic elements with high economic value, which include gold, silver, and platinum-group metals in the context of our business
“Pyrometallurgical enrichment”	a process that uses high-temperature operations (e.g., smelting, converting) to concentrate valuable metals from complex raw materials into intermediate products like mattes or crude metals
“Refined bismuth”	high-purity bismuth metal obtained through refining processes, meeting specified commercial or industrial grade standards
“Rhodium”	a rare, highly reflective and corrosion-resistant platinum group metal, primarily used in catalytic converters and as an alloying agent
“Ruthenium”	a hard, brittle platinum group metal used in electronics, as a catalyst, and in alloys to enhance hardness and corrosion resistance
“SHFE”	the Shanghai Futures Exchange
“Slag”	in the context of our business, refers to the solid residues discharged from the bottom of incinerators after municipal household waste is subjected to high-temperature incineration

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“Sludge treatment”	processing semi-solid waste from sewage for safe disposal or reuse
“Smelting”	the process of extracting metallic elements from ores through methods such as roasting, smelting, electrolysis and the use of chemical reagents, with the objective of recovering metals from ores and reducing impurities or adjusting the composition of metals to produce metals meeting the required specifications
“SMM”	the Shanghai Metals Market
“SNCR”	selective non-catalytic reduction i.e., a method to reduce nitrogen oxides in flue gas using urea or ammonia
“Steam turbine generator”	a device that converts steam energy into electricity
“TOT”	transfer-operate-transfer
“Waste heat boiler”	a boiler that uses heat from flue gas to generate steam
“Zero-Waste City”	an urban development model promoted in China aimed at minimizing solid waste generation, maximizing resources recycling, and ensuring safe disposal of residuals throughout the city