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ESG Strategy and Development

CEM's objective is not only to ensure the safety and stability of power supply and operations, but also, in the context of energy transition and increasing climate risks, to continue creating long-term and resilient value for shareholders, customers and the wider Macau community.

6.1 From Value Chain to ESG Pillars

We conducted a comprehensive assessment of upstream, core operations and downstream activities to identify where CEM creates positive contributions, as well as where its activities may have actual or potential impacts on people and the environment, or are directly linked to such impacts. These actual and potential impacts span environmental, social and governance dimensions, and are assessed in consideration of CEM's business characteristics, regulatory environment and stakeholder expectations.

Following the identification of relevant impacts, the Company mapped them to the United Nations Sustainable Development Goals (UN SDGs) and related targets. This mapping process enables CEM to better understand its areas of greatest responsibility, highest impact and strongest management capability.

Based on the value chain impact assessment and SDG mapping results, CEM further consolidated and defined the core pillars of its ESG strategic framework. Each pillar is derived from key impact areas identified along the value chain, reflecting the Company's core commitments in environmental protection, social responsibility and corporate governance. These pillars are closely aligned with the material topics identified in the 2025 double materiality assessment. This framework ensures that CEM's ESG direction is grounded in its operational realities while aligning with international sustainability agendas, thereby contributing meaningfully to sustainable development outcomes.

6.2 CEM's Five ESG Pillars

[GRI 3-3: Management of Material Topics]

For each primary material topic, CEM has identified key risks and corresponding management actions, as outlined below.

ESG Pillars	Material Topic	Key Risks	Management Approach
Pillar 1: Accelerating Net Zero and Climate Resilience AFFORDABLE AND CLEAN ENERGY CLIMATE ACTION	Climate Change and Energy Efficiency	Climate-related impacts (e.g. prolonged high temperatures, sea-level rise and extreme weather events) increasing system losses and operating costs	• Climate risks have been incorporated into the enterprise risk management framework, with the establishment of a greenhouse gas inventory and disclosure mechanism, and the development of the CEM Low-Carbon Development Strategy (2022–2050). Climate-related disclosures are aligned with IFRS S2, with plans to adopt SBTi targets by 2026 • Priority is given to high-efficiency generation, with the CC1 combined-cycle gas turbine unit at Coloane Power Station B serving as a core facility (accounting for 94.5% of total local generation). The Company continues to optimise its natural gas-based generation strategy. In terms of renewable energy deployment, CEM has launched the floating photovoltaic project at Coloane Power Station and main substation rooftop fixed photovoltaic expansion project
	Pollutant Emissions	Non-compliance with emission standards and potential community concerns	• Strict compliance with the Air Pollutant Emission Standards for Power Plants, with flue gas analysers installed to measure NOx, SO_2, PM, CO and CO_2 emissions every 15 minutes, enabling real-time monitoring by the DSPA • Annual independent testing by China National Accreditation Service for Conformity Assessment (CNAS)-accredited third-party laboratories, with two emission tests conducted each year, consistently achieving results better than regulatory requirements
	Affordable and Sustainable Electricity to Customers	Rising energy and carbon costs affecting electricity affordability and customer satisfaction	• Strict adherence to government-led tariff policies, including the implementation of residential electricity subsidies and other relief measures • Promotion of local green electricity certificate procurement • Signing of green electricity trading agreements with China Southern Power Grid and China Three Gorges Corporation
Pillar 2: Advancing a Circular Value Chain RESPONSIBLE CONSUMPTION AND PRODUCTION	Waste Management (level 2 topic)	Improper handling of hazardous waste leading to environmental violations or cross-border regulatory non-compliance (e.g. Basel Convention)	• Development of the Requirement Guideline for End-of-Life (EOL) Plan and Waste Management Report, extending waste management responsibilities upstream across the supply chain, and implementing strict classification and compliant handling procedures for hazardous waste. All quantities are recorded through the CEM Waste Transfer Manifest to ensure full traceability • In 2025, CEM engaged nine recycling partners and successfully optimised the disposal processes for eight key categories of recyclable materials. General waste management follows the principles of "source reduction" and "sorted recycling", with full adoption of post-consumer waste paper (PWC) recycling and pilot exploration of smart recycling bins

ESG Pillars	Material Topic	Key Risks	Management Approach
Pillar 3: Building Smart and Resilient Infrastructure INDUSTRY INNOVATION AND INFRASTRUCTURE 9	Availability and Reliability	Increased risk of power outages due to grid or equipment failures and extreme weather (e.g. typhoons, storm surges, coastal flooding)	• All planned maintenance works were completed as scheduled during the year • Annual investment in transmission and distribution network amounted to MOP 586 million • Develop comprehensive emergency response plans to ensure efficient repair and power restoration, minimising disruption to the public
	Digitalisation and Innovation	Digital transformation delays or failures affecting operational efficiency	• Deployment of robotic inspection and monitoring systems (integrating infrared thermal imaging, local sensors and high-definition cameras), along with AI-powered voice robots (integrated with large language models), and the launch of smart sensing system projects • Smart meter coverage reached 280,000 units
	Data Privacy and Cybersecurity	Cybersecurity incidents, data breaches and non-compliance with regulatory requirements	• Appointment of a Chief Information Security Officer to lead the cybersecurity team, with strict compliance with Macao's Cybersecurity Law, and certification under ISO 20000-1:2018 • Deployment of real-time monitoring systems and AI-based threat detection technologies (EDR/XDR) for firewalls and behavioural analysis. Threat detection success rate reached 100%, with approximately 1,300 cybersecurity incidents handled daily. Regular network scanning and penetration testing are also conducted
Pillar 4: Fostering Talent Development and Inclusive Growth DECENT WORK AND ECONOMIC GROWTH 8	Employee Health and Safety	Workplace injuries in high-risk operating environments, leading to regulatory actions, and implementation of epidemic prevention measures in response to infectious disease outbreaks in the community	• Achieved ISO 45001 Occupational Health and Safety Management System certification; established the Safety, Health, Environment and Quality (S.H.E.Q.) Policy and set up an Occupational Safety and Health Committee[4] • Strict implementation of high-risk work control requirements, including the Personal Protective Equipment Guidelines, Hot Work Permit System, and Lockout-Tagout Procedures • Closely monitor and comply with the latest epidemic prevention and control guidelines and measures issued by the Macao SAR Government
	Employee Training and Development	Skills gaps affecting operational performance and long-term development	• Established internal policies such as Training and Awareness Management and Manage Competence and training of Employees, building a comprehensive training framework covering core skills, technical capabilities, occupational safety and leadership. All employees are required to complete role-based competency training to ensure professional standards are met across the workforce • During the year, 164 training programmes were delivered, totaling 28,858 training hours, with an average of 40 hours per employee, representing a 14% increase year-on-year
Pillar 5: Building Trust through Partnerships and Integrity PEACE, JUSTICE AND STRONG INSTITUTIONS 16	Compliance and ESG Strategy Management	Non-compliance with regulations and loss of stakeholder trust	• The Executive Committee serves as the highest decision-making body for climate and ESG matters, with the Sustainability Steering Committee providing professional advice and external expert support. ESG working groups have been established across departments to strengthen cross-functional coordination • In accordance with the Code of Ethics, prohibitions against child labour, forced labour and all forms of discrimination are clearly defined, supported by internal monitoring and whistleblowing mechanisms
	Risk Management and Business Continuity	Insufficient risk preparedness leading to operational disruptions and financial losses	• Developed policies such as Crisis Management and Emergency Plan and Response, with departments formulating contingency plans based on risk severity levels, and establishing a comprehensive response framework covering prevention, response and recovery • Adopted a continuous improvement cycle of "Plan-Do-Check-Act" (PDCA) to enhance processes • Established emergency response teams and coordination personnel, and participated in the Macao-Zhuhai power emergency coordination mechanism led by civil defense authorities, with practical validation during Typhoon "Ragasa"

4 The Occupational Safety and Health Committee is composed of representatives from employees.