



01 Comprehensive Commitment to Climate

Climate change is an issue that all human beings need to face together. The Global Risks Report issued by the World Economic Forum (WEF) indicates that climate action failure has been ranked as the number one^{1,2} risk among the top ten long-term risks for two consecutive years. This means that corporations must take faster action in tuning their response to climate changes to effectively address the imminent challenges. As a member of the global industrial community, TCC has clearly declared that it will achieve delivery of carbon neutral concrete in 2050. Driven by the three core businesses, i.e., low-carbon building materials, resource recycling and green energy, and guided by Science Based Targets (SBT), TCC conducts seven carbon reduction strategies, including equipment and process enhancements, power generation by waste heat recovery, alternative raw materials, alternative fuel, renewable energy, energy storage, power cells and charging service, carbon negative technologies of carbon capture and carbon sink. TCC is devoted to reducing emissions of carbon dioxide and enhancing energy efficiency.

In response to the high uncertainty of climate change, TCC re-identified major climate risks and opportunities in 2022, and refined the climate scenario analysis of carbon price, emission control, and extreme climate events. TCC not only updated the financial impact due to carbon price and emission control with the latest scenario data published by the international reports of science and technology, but also assessed the risks of each operational plant brought by flood, drought, typhoon, and high temperature to monitor the climate change and market dynamics in the

external environment and consider the overall operational strategy planning more comprehensively.

On the other hand, TCC focused on the new energy business. We have learned that pollution and greenhouse gas emissions generated by human in the process of energy generation and utilization lead to extreme climate change, which results in threats to human survival, the death of massive creatures, and the ecological damage. If human beings want to develop their civilization sustainably, they must create various methods to generate renewable energy and make proper storage to use the energy more effectively. Therefore, the new energy business is one of the main future directions of the TCC Group.

Facing extreme climate, TCC works hard to construct future development. We respond to Nature with practical actions. Based on the concept of serving for life, we comply with the corporation's sustainable living principles which are closely connected with life, and look forward to sharing co-prosperity and mutual benefit with the society.

For climate issues, TCC continues its communication and interaction with associations. For example, TCC participates in the Global Cement and Concrete Association's (GCCA) discussion on the cement industry's roadmap to carbon neutral and R&D of low-carbon products. It also communicates with public sector regarding the applicable laws and regulations. In response to global trends, TCC proactively participates in initiatives concerning biodiversity, which is closely related to the climate change, and speaks out on the biodiversity issue together with industry peers.

GCCA Included Application of TCC's Energy Storage Cabinet Introducing TCC's Carbon Reduction Achievement

In 2022, TCC, as a member of Global Cement and Concrete Association (GCCA), participated in over 36 seminars and video conferences, engaged in discussions and amendments to 2050 roadmap for the cement industry, and drew up the guidelines for SBT cement 1.5°C net-zero emissions roadmap. In the report of "2050 Net Zero Roadmap – One Year On" issued by GCCA recently, TCC's self-formulated Ultra-High Performance Concrete (UHPC) was disclosed as a practical example of low-carbon transformation for carbon reduction.



Expanding Application Fields of UHPC Low-Carbon Products



Communication with National Fire Agency Regarding Regulations for Energy Storage Cabinets

TCC formulated UHPC, a sustainable low-carbon building material. The low-carbon and fireproof energy storage cabinet made of UHPC has passed the CNS 12514-1/8 two-hour fireproof certification. TCC took the initiative to communicate with the National Fire Agency to amend the guidelines for outdoor energy storage firefighting. It also collaborated with fire stations to conduct fire drills for energy system and established an industrial (Standard Operating Procedures, SOP) textbook for fire emergency. Additionally, TCC promoted the regulations for installation of indoor energy storage system with industrial and academic peers to expand the application fields of energy storage cabinets.

First Manufacturing Company Participating in TNFD Pilot Program in Taiwan



Commitment to Co-Prosperity and Mutual Benefit with Nature

In 2022, TCC participated in the Taskforce on Nature-related Financial Disclosures (TNFD) Pilot Program of the United Nations. TCC is first manufacturing company to join this plan in Taiwan. During the period of COP15, in response to nature conservation, TCC signed the Business for Nature and joined the Taiwan Nature Positive Initiative, committing to more proactive actions for nature and biodiversity conservation.